D.6: West Angelas Development Envelope Vegetation Condition Assessment

Biologic Environmental Survey Pty Ltd
PO Box 179
Floreat, WA, 6014

28 October 2022

Attn: Elizabeth Mason and Stephanie Stack

Rio Tinto Iron Ore

Dear Elizabeth and Stephanie,

Please find below a memo summarising the desktop vegetation condition assessment for the West Angelas Project Envelope completed by Biologic Environmental Survey Pty Ltd (Biologic).

If you have any queries, please do not hesitate to contact me.

Yours sincerely,

Clinton van den Bergh
Principal Botanist | Manager of Botany
Clinton@biologicenv.com.au
(08) 6365 5066 | 0439 910 881

1. INTRODUCTION AND OBJECTIVES

Biologic were commissioned to undertake a desktop assessment to assign condition ratings to the vegetation units mapped across the West Angelas Project Envelope (herein referred to as the Study Area). The Study Area covers a total area of 41,483.05 ha (Figure 1.1).

West Angelas has previously been surveyed at various times, scales and intensities (Biota, 2020; ecologia, 2013; ENV, 2012; Trudgen & Ecaus, 1998), resulting in a patchwork of vegetation mapping and condition. Biologic reviewed the historical vegetation mapping to create a consolidated vegetation dataset (Biologic, 2021), however, vegetation condition was not reviewed, mapped and updated across the Study Area. To assist future development and environmental approvals within the West Angelas Revised Proposal Development Envelope, it was determined that the condition of the vegetation present within the Study Area needed to be assessed and mapped.

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LEGEND

- West Angelas Project Envelope
- Operating Mine
- State Road
- Rail

IBRA Region
- Pilbara

IBRA Subregion
- Chichester
- Fortescue
- Hamersley
- Roebourne

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Scale 1:120,000

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Transverse Mercator Created: 11/10/2022

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Karratha
Tom Price
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West Angelas Vegetation Condition Assessment

Figure 1.1: West Angelas Project Envelope

2. METHODS

The condition of the vegetation within the Study Area was mapped based on a desktop assessment and limited on-ground observations. The existing consolidated vegetation mapping (Biologic, 2021) and the recent revisions (Biologic, 2022a, 2022b, 2022c, 2022d) formed the basis of the condition assessment, with the existing vegetation unit polygons assigned a condition rating.

2.1. Desktop Review

The assessment of vegetation condition across the Study Area involved the review of numerous flora and vegetation survey reports, including:

- Biota (2020): West Angelas Beyond 2020 detailed flora and vegetation survey phases 1 and 2.
- ecologia (2013): Greater West Angelas vegetation and flora assessment.
- ENV (2012): Angelo River flora and vegetation assessment.
- Trudgen and Ecaus (1998): Flora and vegetation surveys of Orebody A and Orebody B in the West Angela Hill area, an area surrounding them, and of rail route options considered to link them to the existing Robe River Iron Associates rail line.
- Biologic (2022d): West Angelas Infrastructure Area reconnaissance and targeted flora and vegetation survey.
- Biologic (2022b): West Angelas Deposit H Infrastructure Area reconnaissance and targeted flora and vegetation survey.
- Biologic (2022c): Mt Ella East and Deposit J detailed flora and vegetation assessment.

The reports reviewed are of varying ages and intensity, with the older reports providing historical context and the younger reports providing more up to date condition assessments.

2.2. Vegetation Condition Rating Scale

The vegetation of the Study Area was rated based on the condition scale developed by Trudgen (1988) and presented in EPA (2016) (Table 2.1). It is a six-point rating scale that relate to vegetation structure, the level of disturbance at each structural layer and the ability of the vegetation unit to regenerate (EPA, 2016).

Table 2.1: Vegetation condition scale (adapted from Trudgen (1988) and presented in EPA (2016))

Condition scale	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.

Condition scale	Description
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

2.1.1. Limitations

The majority of the reports that were reviewed to assess vegetation condition are considered outdated, so it is likely that the condition of the vegetation across the Study Area may have changed over time, especially near the mining operations. As such, a conservative approach to the vegetation condition assessment was employed. Broadly, this conservative approach meant that the larger hills, summits and upper slopes were in better condition, while the lower landscapes and drainage lines were in poorer condition. This conservative approach is supported by recent on-ground survey work completed by Biologic (2022b, 2022c, 2022d), which noted a high incidence of disturbances on the lower landscapes with higher weed densities in the drainage lines. While the large hills, upper slopes and summits were in excellent condition with exploration tracks and pads the main disturbance.

The vegetation condition assessment involved assigning a condition ranking to existing vegetation unit polygons and mapping. No new linework or polygons were digitised to 'split' or 'separate' a unit with different condition ranking. As such, there are likely situations were a polygon that is mapped as excellent may also have smaller portions of vegetation in very good condition. However, the dominant vegetation condition has been chosen for each polygon.

3. RESULTS

The vegetation of the Study Area ranged from excellent to poor, with a substantial area not assessed as it has been cleared of native vegetation for approved mining purposes (Table 3.1 and Figure 3.1). Broadly the hills, summits, crests and mid to upper slopes were mapped in excellent condition due to limited signs of disturbances. Disturbances were limited to exploration drill lines, while weed diversity and density was non-existent to low in these landforms.

The low undulating hills, upper catchment drainage lines and valleys were mapped in very good condition. Evidence of weeds and disturbances from mining and exploration were present, although in low densities (Figure 3.1).

The major drainage lines (i.e., Turee Creek East) and plains near the West Angelas operations were in a good condition with these areas supporting high weed loads, especially **Cenchrus ciliaris*. Furthermore, impacts from cattle and hydrological changes were also evident in these areas. A small portion of the Study Area was mapped as poor due to fragmentation, high dust loads and weeds (Figure 3.1).

The remainder of the Study Area was mapped as cleared and has not been assigned a condition ranking as no native vegetation is present (Figure 3.1).

Table 3.1: Vegetation condition extent in the Study Area

Condition	Area (ha)	Extent of Study Area (%)	Comment
Excellent	188865.98	45.48	Mostly occurred in the hills and summits of the Study Area where disturbances were non-existent or limited.
Very Good	12958.75	31.24	Occurred across the stony plains, undulating low hills and minor drainage lines where weed densities were low and evidence of cattle or mining/exploration related disturbances were observed.
Good	1724.03	4.16	Mostly occurred along Turee Creek East and associated floodplains. Disturbance from cattle and weeds were more prevalent.
Poor	15.49	0.04	Located in association with fragmented vegetation near the main West Angelas mine. The vegetation is heavily impacted by dust, hydrological changes and weeds.
Cleared	7918.80	19.09	Mapped within the approved vegetation clearing boundaries (i.e., West Angelas camp, airport, mine pits)
Total	**41,483.05**	**100.00**	

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Vegetation Condition

- Excellent
- Very Good
- Good
- Completely Degraded

- Cleared/ Disturbance Footprint

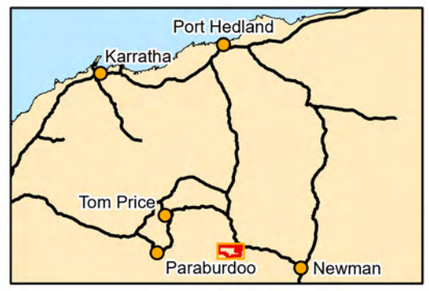
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Scale 1:100,000

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Coordinate System: GDA2020 MGA Zone 50
Transverse Mercator Created: 28/10/2022



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West Angelas Vegetation Condition Assessment

Figure 3.1: Vegetation condition of the Project Envelope

4. REFERENCES

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Biologic. (2022a). *Deposit G Targeted Flora and Vegetation Survey*. East Perth, WA:

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Biologic. (2022c). *Mt Ella East and Deposit J Detailed Flora and Vegetation Survey*. East Perth, WA:

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Trudgen, M. E. (1988). *A report on the flora and vegetation of the Port Kennedy Area*.

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D.7: West Angelas Development Envelope Vegetation Significance Assessment

Biologic Environmental Survey Pty Ltd
PO Box 179
Floreat, WA, 6014

7 December 2022

Attn: Elizabeth Mason and Stephanie Stack

Rio Tinto Iron Ore

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1. INTRODUCTION AND OBJECTIVES

Biologic were commissioned to undertake a desktop assessment to assign significance ratings to the vegetation units mapped across the West Angelas Project Envelope (herein referred to as the Study Area). The Study Area covers a total area of 41,483.05 ha (Figure 1.1).

Rio Tinto Iron Ore Pty Ltd (Rio Tinto) have developed a broad framework/guidance to assign significance rankings to vegetation units based on the biological features and values present within the vegetation units. The biological significance guidance (Appendix A) provides a broad guidance on how to attribute a hierarchy of importance to features of potential biological significance at two broad scales, local and regional.

Biologic was commissioned by Rio Tinto to assess the significance of the vegetation units previously mapped by Biologic during the consolidation of the vegetation mapping (Biologic, 2021). Since commissioning, the vegetation unit mapping has been amended and altered, with the significance assessment detailed in this memorandum utilising the current, up to date mapping (dated 27 October 2022).

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Figure 1.1: West Angelas Project Envelope

2. METHODS

The consolidated vegetation units mapped and described within the Study Area were assessed against the Biological Significance Guidance table (Appendix A). The Biological Significance Guidance table ranks vegetation units based on whether the unit supports significance environmental values, including, but not limited to:

- Threatened (TECs) and Priority Ecological Communities (PECs);
- Threatened and Priority listed flora;
- Aquatic and terrestrial Groundwater Dependent Ecosystems (GDEs);
- Formal conservation estates (i.e., National Park);
- Groundwater Dependent Vegetation (GDV);
- Major drainage features (i.e., Robe River); and
- Ecosystems at Risk (EAR).

It is noted that the guidance table (Appendix A) is not intended to be overly prescriptive. It is acknowledged that there may be additional detail and knowledge on a feature which is not discussed or detailed in the guidance table. This additional detail/ knowledge may need to be further discussed/ explored in the context of features and where they sit in the hierarchy. This flexibility in the guidance table allows room for the significance rankings to be applied differently with respect to the on-ground observations and features. However, multiple lines of evidence supporting the change and context for the altered assessment should be provided to justify the alternative outcomes.

2.1. Significant Environmental Values

As detailed above, the biological significance guidance table relies on the assessment and presence of significant environmental values to determine the significance ranking of each vegetation unit. Each of the vegetation units described and mapped during the consolidated vegetation unit mapping completed by Biologic (2021), and recently updated, was assessed to determine if the units are representative or support key significant environmental values. Each vegetation unit was visualised on a Geographic Information System platform (QGIS) with the following environmental layers and datasets:

- Department of Biodiversity, Conservation and Attractions (DBCA) Threatened and Priority Listed flora database (DBCA, 2022b);
- DBCA Threatened and Priority Listed ecological communities database (DBCA, 2022a);
- Rio Tinto significant flora database search outputs (Rio Tinto, 2022a);
- Rio Tinto significant vegetation database search outputs (Rio Tinto, 2022b); and
- DBCA managed lands and waters (i.e., National Parks, Nature Reserves).

In addition to the above databases and spatial datasets, the vegetation unit descriptions were reviewed to determine the presence of key phreatophytic or riparian flora, suggesting the presence of GDVs. The vegetation descriptions for each unit were also reviewed in association with recent aerial imagery to identify significant landform features, including major and/or medium drainage lines, surface water pools or restricted landforms.

Finally, the vegetation descriptions, aerial imagery and broad landforms across the Study Area were reviewed against the Ecosystems at Risk detailed in Kendrick (2001) for the Hamersley subregion. The determination of EAR presence can be difficult as the information provided by Kendrick (2001) for each EAR is limited, so some 'guesswork' is required. The relevant EARs from Kendrick (2001) that could be present in the Study Area include:

- Grove/inter-grove mulga, eastern Hamersley Range;
- Valley floor mulga;
- Lower-slope mulga;
- Hill-top floras, Hamersley Range;
- All major ephemeral water courses; and
- West Angelas Cracking-clays.

2.2. Limitations

The assessment of vegetation significance has been undertaken using the information currently available. There is the possibility that not all significant flora values have been defined and located within the West Angelas Project Envelope. However, a substantial number of surveys and significant flora data is available and the assessment of significance against this value, significant flora, is suitable for the purposes of future environmental assessments and approvals.

The remaining significant environmental values, for example significant vegetation values and hydrological values, across the West Angelas Project Envelope are well understood and sufficient to assess the significance of the vegetation mapped across the Study Area.

3. RESULTS

Fifty-one (51) vegetation units have been mapped across the Study Area, with each unit assessed against the biological significance guidance table to assign a significance ranking.

3.1. Known Significant Environmental Values

The Study Area is known to support a substantial number of significant environmental values, including significant flora, ecological communities and GDVs. The Study Area occurs adjacent to Karijini National Park, with no extent of the Study Area within the National Park. No major watercourses, for example the Robe River, traverse through the Study Area. The most dominant hydrological feature is Turee Creek East, which flows through the Study Area, across Karijini National Park before migrating into Turee Creek.

Significant Flora

At the time of the vegetation significance assessment, a total of 25 Priority Listed flora have been recorded from the Study Area (Figure 3.1), six Priority 2 (P2) listed flora, 16 Priority 3 (P3) listed flora, and three Priority 4 (P4) listed flora. A total of 2,831 individual point locations, totalling an estimate of 120,128 individuals, including 7,621 P2 individuals, 111,869 P3 individuals and 638 P4 individuals.

A high proportion of the Priority listed flora recorded from the Study Area have been recorded from the large hills, gullies, breakaways and summits in the north-west, north-east and south/south-east of the Study Area (Figure 3.1). A lower proportion of Priority listed flora have been recorded through the central portion of the Study Area.

Significant Vegetation

One PEC is known to occur in the Study Area (Figure 3.1), the West Angelas Cracking-Clay, which is a Priority 1 ecological community. The PEC occurs through the central portion of the Study Area, associated with basalt derived cracking-clay loam depressions and flowlines. The PEC supports an open tussock grassland of *Astrebla pectinata, A. elymoides, Aristida latifolia*, in combination with low scattered shrubs of *Sida fibulifera*.

The West Angelas Cracking-Clay PEC is well understood within the Study Area, however, recent botanical survey work in the east near Deposit H has re-defined the extent to map the boundary (Biologic, 2022) more accurately.

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Priority Flora
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P2
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West Angelas Cracking-Clays - Priority 1

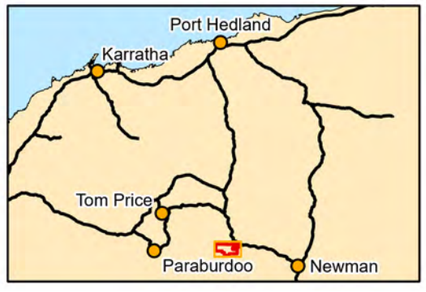
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West Angelas Vegetation Significance Assessment

Figure 3.1: Priority Flora of the Project Envelope

Groundwater Dependent Ecosystems/ Vegetation

The Study Area has been well surveyed in the past, with several flora and vegetation surveys concentrating on the ephemeral drainage lines (Biota, 2020; ecologia, 2013; ENV, 2012; Trudgen & Ecaus, 1998), including the dominant hydrological feature Turee Creek East (Rio Tinto, 2018). The results and floristic data from these surveys and the associated mapping were reviewed to identify any known GDEs or GDVs. In addition, the consolidated vegetation unit descriptions (Biologic, 2021) were reviewed to identify any potential GDVs.

There are no known GDEs that occur within the Study Area, while three vegetation units from Biologic (2021) are considered to support a GDV or potential GDV, namely due to the presence of *Eucalyptus victrix* and/ or *Eucalyptus camaldulensis*. The three vegetation units are:

- D1: *Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland *Petalostylis labicheoides, Acacia pyrifolia* var. *pyrifolia* tall open shrubland over *Gossypium sturtianum* var. *sturtianum* open shrubland *Themeda triandra*, *Cymbopogon ambiguus, Eulalia aurea, Aristida lazaridis* open tussock grassland.
- D2: *Eucalyptus victrix* low open woodland over *Acacia citrinoviridis* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses to very open hummock grassland
- D12: *Eucalyptus xerothermica* and/or *E. victrix* scattered low trees to low open woodland over *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Androcalva luteiflora* open shrubland over *Themeda triandra* tussock grassland over *Triodia longiceps, T. pungens* very open hummock grassland.

3.2. Vegetation Significance Assessment

The 51 vegetation units have been variously assigned to the following vegetation significance rankings:

- Regionally Significant – one unit.
- High Local Significance – three units.
- Moderate Local Significance – 20 units.
- Low Local Significance – 19 units.
- Low to Negligible Local Significance – three units.
- Negligible Local Significance – five units.

A detailed breakdown of the vegetation significance assessment is provided in Appendix B and presented on Figure 3.2.

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Significance Ranking

- Regionally Significant
- Local: High
- Local: Moderate
- Local: Low
- Local: Low to Negligible
- Local: Negligible
- Disturbed

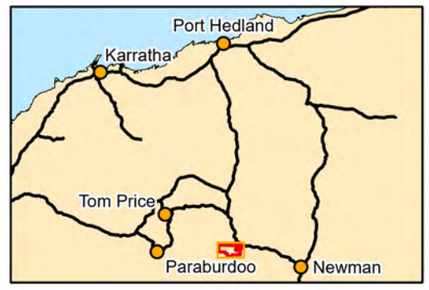
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West Angelas Vegetation Significance Assessment

Figure 3.2: Vegetation significance of the Project Envelope

Regionally Significant

Following the assessment of vegetation significance, unit P15 is Regionally Significant (Figure 3.3) as it is associated with the West Angelas Cracking-Clay PEC. The entirety of the P15 vegetation unit is wholly located within the mapped extent of the P1 PEC, while it is also mostly consistent with the mapping extent of the PEC as held by the DBCA. The unit is also representative of an EAR, West Angelas Cracking-Clay, while several occurrences of the P3 *Themeda* sp. Hamersley Station (M. E. Trudgen 11431) occurs across the unit.

High Local Significance

A further three units, D11, H15, P8, have a High Local Significance as they support extensive populations of Priority 2 taxa. Furthermore, vegetation unit H2 is consistent with the lower-slope mulga EAR as it supports a mulga (*Acacia aneura* and close allies) low woodland with a diverse mid-storey of *Eremophila* species, including the Priority listed *Eremophila* sp. West Angelas (S. van Leeuwen 4068).

Vegetation unit D11 supports an extensive population of the P2 *Aristida lazaridis*, with occurrences of other Priority listed flora including *Vittadinia* sp. Coodenwanna Flats (S. van Leeuwen 4684), *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Triodia* sp. Mt Ella (M. E. Trudgen 12739).

Vegetation unit H15 supports extensive records of P2 taxa *Tetratheca fordiana, Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) and *Oxalis* sp. Pilbara (M.E. Trudgen 12725), In addition, vegetation unit H15 also supports extensive records of P3 taxa *Eremophila naaykensii, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Indigofera gilesii, Solanum kentrocaule, Acacia subtiliformis* and *Pilbara trudgenii* and some occurrences of the P4 Taxon *Acacia bromilowiana*.

Vegetation unit P8 supports extensive records of P2 taxon *Eremophila pusilliflora*, with an occurrence of *Aristida lazaridis* (P2). Vegetation unit P8 also supports numerous occurrences of *Aristida jerichoensis* subsp. *subspinulifera* (P3) and a single occurrence of *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3).

Moderate Local Significance

A total of 20 vegetation units were ranked as Moderate, with three of the units, D1, D2 and D12, ranked as Moderate due to the presence of potential GDVs. In addition, D12 supports a population of *Aristida lazaridis* (P2) and D2 is representative of an EAR, major ephemeral water course. The remaining 15 vegetation units were ranked as moderate due to the presence of Priority listed flora, mostly extensive populations of P3 taxa.

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Significance Ranking

Regionally Significant
Local: High

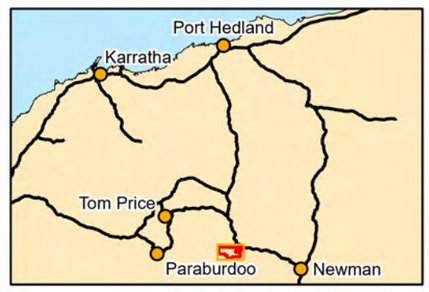
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West Angelas Vegetation Significance Assessment

Figure 3.3: Vegetation Significance
- Regional and High

Vegetation unit H1 is ranked as Moderate as it is representative of the EAR, lower-slope mulga. Vegetation unit H1 is represented by a mulga low woodland occurring along the slopes of the hills in the east, with several Priority listed taxa present. Vegetation unit P3 is representative of the EAR valley floor mulga, and occurs mostly in close proximity to the West Angelas Cracking-Clay PEC. Furthermore, the vegetation patterning of P3 indicates some grooving and intergroving is present, resulting in a potential high diversity of annuals and ephemerals, which is subjected to higher incidences of disturbance from fires, grazing and weeds.

Vegetation unit H8 supports numerous Priority listed flora, including of P2 taxa *Eremophila pusilliflora*. A second P2 taxon, *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) occurs as a single location along the boundary of vegetation unit H8. In addition to the P2 taxa, vegetation unit H8 supported populations of P3 taxa including *Isotropis parviflora, Themeda* sp. Hamersley Station (M.E. Trudgen 11431), *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Solanum kentrocaule*, *Eremophila naaykensii* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).

Vegetation units H2 and H16 support isolated occurrences of P2 taxa, including *Eremophila* sp. West Angelas (S. van Leeuwen 4068), *Oxalis* sp. Pilbara (M.E. Trudgen 12725) and *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708), with extensive occurrences of P3 taxa. The P3 taxa include *Aristida jerichoensis* subsp. *subspinulifera, Eremophila naaykensii, Grevillea saxicola, Indigofera gilesii, Pilbara trudgenii, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Solanum kentrocaule*, and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).

The gorge/gully vegetation units, G1, G2 and G3, supports occurrences of P2 taxa, including *Tetratheca fordiana*, *Oxalis* sp. Pilbara (M.E. Trudgen 12725), and *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). In addition, the gorge/gully vegetation types supported extensive occurrences of P3 taxa, while G2 supports the fire killed *Callitris columellaris*, indicating that it may be a refuge habitat that is not subject to wildfires often.

The remaining nine vegetation types with a Moderate local significance supported extensive populations of Priority 3 taxa, resulting in the ranking of Moderate local significance. These vegetation types included D14, G1, G2, G3, H5, H6, H7, H9, H13, H14, H16, M1, P2, and P3.

Low Local Significance

A total 19 vegetation units were ranked as Low, with the majority of the units from the drainage (‘D’ prefix) and plains (‘P’ prefix) landforms. Only four units occurred in the hills (‘H’ prefix) landform. The 19 vegetation units have mostly been ranked as Low due to the presence of P3 and P4 taxa in scattered or low occurrences. Some of the plains units (‘P’ prefix) have some affinities with the EAR valley floor mulga, however, the similarities are limited.

Low to Negligible and Negligible Local Significance

The remaining eight vegetation units were ranked Low to Negligible (three) or Negligible (five) as they supported limited to no significant environmental values.

4. SUMMARY

The review of the significance of the 51 vegetation units mapped across the Study Area indicated that one vegetation unit, P15, was of Regional Significance, while a further three units were of High Local Significance. A total of 20 vegetation units were of Moderate Local Significance, while the remaining 27 vegetation units were ranked either Low, Low to Negligible or Negligible Local Significance.

The significant environmental values present within the Study Area include:

- West Angelas Cracking-Clay Priority 1 Ecological Community;
- Priority Listed flora, including extensive populations of P2 and P3 taxa;
- Groundwater Dependent and potential Groundwater Dependent Vegetation; and
- Vegetation representative of Ecosystems at Risk for the Hamersley subregion.

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Appendix A: Rio Tinto Biological Significance Guidance

Provided by Rio Tinto.

Broad guidance on how to attribute a hierarchy of importance to features of potential biological significance at appropriate scales of consideration for the purpose of standardising outcomes for management and potential conservation discussions.

Scale	Ranking	Broad scope and features of relevance
Regional Broadly defined by IBRA Bioregions and their included subregions.	**"Regionally Significant"** (i.e.)	**Environment Values (species / communities / ecosystems) directly protected under State and Commonwealth legislation; including features which potentially warrant this level of recognition.** i.e. features which are CR Critically endangered, EN Endangered, VU Vulnerable, IA Migratory, includes RAMSAR and IUCN redlist. • Vegetation representative of TEC's; • Threatened flora populations and associated habitat; • Significant permanent aquatic GDE features and wetlands or significant and highly restricted obligate Terrestrial GDE features. • Flora and vegetation values in a Formal Conservation reserve • Priority 1 & 2 PEC's, or high cluster/population densities (and associated vegetation) of Priority 1 & 2 flora species;
Local **to sub-regional/ regional scale** **(acknowledging potential overlap with regionally significant features)**	**High local significance** **(and potential Sub-regional to regional significance).**	**Environment Values (species / communities / ecosystems) recognised as being of conservation interest.** Includes regulatory or policy-backed conservation values, and listed values Because regionally significant features are also highly significant at the local scale there is significant overlap with the above class i.e. overlap includes • TEC vegetation (and similar), Threatened flora, significant aquatic and terrestrial GDE's, Priority 1 & 2 PEC's and vegetation supporting Priority 1 flora species. In addition, High local significance includes: • GDV associated with Major Drainage • Clearly obligate GDV on Moderate (or lower drainage), or core riparian vegetation on major drainage. • High density P2 flora populations and communities similar to P1 & P2 PEC's.
Local **"Local Scale" being broadly defined here as:** the scope of the study area/project area, and/or (depending on the scope/context) up to a 50-kilometre radius around a central location	**Moderate local significance**	**Environment Values with no formal recognition for conservation purposes** Generally, includes values considered high interest, quality representation, and potential new taxa to Rio Tinto or regulators, such as; • Priority 3 and 4 PEC's or vegetation types *similar to listed PEC's • Priority 2 and high density P3 flora; • Significantly restricted vegetation/flora; • 'Potential GDV' on Major or Moderate drainage and 'GDV' on moderate drainage; • Clearly representative of an EAR
	Low local Significance	• P3 and P4 flora • Riparian vegetation on minor drainage and other vegetation flora with limited representation.
	Low to negligible local significance	All remaining vegetation/flora with no informal or formal significance. Acknowledging that all biological values possess environmental value and potential significance.

*Similar: refers to a number of situations, but predominantly where a relevant portion of the described floristic assemblage and dominant species for a listed community (i.e. TEC or PEC) are recorded as present in a community of similarity.

Its noted that the following table is not intended to be overly prescriptive. It is acknowledged that there may be further knowledge and detail which is not included in this table which may need to be discussed in the context of features and where they sit in the hierarchy. There is room for practitioners to attribute significance slightly differently, but in such cases, lines of evidence supporting the change and context as to why should be provided to justify the alternative outcomes.

GDV/ GDE terminology – 2 key types

Groundwater dependent vegetation refers to plant communities that require the input of groundwater to maintain composition, structure and function, and may include terrestrial ecosystems that show reliance on groundwater, river base flow systems and wetlands (Murray *et al.*, 2003) Two classifications of GDV are referred to in this assessment as:

- 'Potential GDV': refers to riparian vegetation which has typically been identified and flagged purely by establishing the presence of known keystone phreatophytes in the drainage system. This is a typically a relatively simplistic determination, and as such confidence is low and the determination only infers the potential for the vegetation to be groundwater dependent. Alternatively, in some situations, this term can refer to features, which have received an elevated level of investigation (See below), but groundwater heights and vegetation characteristics are such that groundwater dependence is less clear and potentially only important in drought or at key life stages.
- 'GDV': refers to riparian vegetation which is more clearly representative of GDV and thus more likely reliant on groundwater. This can be determined via three key scenarios;
    - The vegetation has been demonstrated to possess key obligate phreatophytic species such as *Melaleuca argentea* and to a lesser degree *Sesbania formosa*.
    - The riparian vegetation in question has been the subject of a more rigorous level of investigation, and as such the GDV determination has been made by considering multiple lines of evidence including the presence of; obligate phreatophytes, obligate phreatophytic vegetation, complex vegetation structure, surface water regime, and likely proximity of groundwater.
    - Groundwater levels demonstrated as shallow and consistent occurring approximately 0-5 m below ground level (and up to 8 mbgl), typically in conjunction with riparian vegetation formations.

'Non GDV' generally refers to situations where riparian vegetation is present, however; phreatophytes are either absent, uncommon or common but consistently low density (i.e., typically 0-2% cover or intermittently up to 2-10% cover). This type of vegetation typically represents low risk potential GDV at best.

With respect to identifying aquatic GDE's and more generally when identifying wetlands and pools, determinations of the presence of permanent surface water features should generally be supported by hydrological and/or hydrogeological data. Permanent water features are generally supported by groundwater or specific hydrological regimes and are not reliably able to be determined by basic irregular observations or the presence/absence of indicator species.

Appendix B: Vegetation Significance Assessment and Justification

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
D1	Local	Moderate	Occurs in isolation in the NE, associated with a minor to moderate drainage feature/gully.	An Open Woodland of *Eucalyptus camaldulensis* subsp. *refulgens* over a Low Open Woodland of *Eucalyptus victrix* and *Eucalyptus xerothermica*. Also supports other key mesophytic taxa (*Gossypium sturtianum* var. *sturtianum*).	Not representative of any TECs, PECs or restricted vegetation.	No known records, but *Aristida lazaridis* (P2) in the lower stratum description (open tussock grassland)	Presence of *Eucalyptus camaldulensis* as an open woodland, while also only occurring in one isolated location
D2	Local	Moderate	Occurs along the incised channel of Turee Creek East	low open woodland of *Eucalyptus victrix* over key riparian features. Receives discharge water in the east, which has resulted in an altered community structure near the West Angelas airport	Not representative of any TECs, PECs or restricted vegetation.	No known records.	A Moderate ranking has been assigned due to the presence of *Eucalyptus victrix* and potential GDV on moderate drainage. Also representative of an Ecosystem at Risk (EAR), "All major ephemeral water courses"
D3	Local	Low	Occurs along minor tributaries of Turee Creek and minor drainage features in the south of the development envelope	Riparian features present, but considered to be low risk features (i.e., *Corymbia hamersleyana, Eucalyptus xerothermica*)	Not representative of any TECs, PECs or restricted vegetation.	One P2 taxon, *Aristida lazaridis*, occurs in low densities/numbers. Seven P3 taxa: *Indigofera gilesii, Rostellularia adscendens* var. *latifolia, Solanum kentrocaule, Acacia subtiliformis, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Themeda* sp. Hamersley Station (M.E. Trudgen 11431), occur along the boundary or as isolated occurrences. Several species are likely to occur as a result of the drainage line occurring near rocky features.	Low ranking assigned as the presence of the P2 taxon is limited. The numerous P3 taxa are either common or are occurring in the vegetation unit as a result of migration from rocky slopes into the drainage feature (i.e., *Solanum kentrocaule, Triodia* sp. Mt Ella (M.E. Trudgen 12739)).
D4	Local	Low to Negligible	Very minor Acacia flow lines. Occurs in three isolated occurrences in the north west of the DE	No GDV, potential GDV, or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No known records.	No significant values present within the vegetation unit. Although restricted in extent across the DE, the unit has similarities to other minor draiange features and *Acacia* dominated plains.
D5	Local	Negligible	Minor drainage feature. Located along one feature in the north west of the DE	No GDV, potential GDV features present. Some riparian taxa present, including *Corymbia hamersleyana, Tephrosia* sp. Fortescue Creeks (M.I.H. Brooker 2168)	Not representative of any TECs, PECs or restricted vegetation.	One individual of P3 *Rhagodia* sp. Hamersley (M. Trudgen 17794)	No significant values present. One individual of a P3 taxon present, however, is known to occur more extensively in the local landscape.
D6	Local	Low	Minor drainage features. Occurs throughout the DE	No GDV or potential GDV features present. Low level riparian features present (*Corymbia hamersleyana, Petalostylis labicheoides*)	Not representative of any TECs, PECs or restricted vegetation.	One P3 taxon: *Isotropis parviflora* present in isolated occurrences and numbers. Two P3 taxa: *Eremophila naaykensii* and *Rhagodia* sp. Hamersley (M. Trudgen 17794) present in isolated occurrences and numbers.	One P2 taxon present, however the unit does not represent core habitat, while the records are on the boundary of the unit. The records of the P3 taxa occur either on the boundary of the unit or represent individuals occurring 'downstream' from rocky habitats.
D7	Local	Low	Minor drainage features. Occurs in the east and south of the DE	No GDV, potential GDV or strong riparian features present. The unit supports a low open woodland of *Corymbia hamersleyana* which can occur in riparian habitats.	Not representative of any TECs, PECs or restricted vegetation.	Two P3 taxa present: *Indigofera gilesii* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739). Generally associated with minor gullies within the unit, and close to deeper, rocky gullies.	Low ranking due to the presence of two P3 taxa that are widespread in the DE and local landscape.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
D8	Local	Low	Minor isolated drainage feature in the north-east	Upper drainage feature with vegetation consistent with small upper catchments on hills. No GDV or potential GDV present, while some riparian taxa present (*Gossypium robinsonii, Petalostylis labicheoides*).	Not representative of any TECs, PECs or restricted vegetation.	One P2 taxon present: *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708); one P3 taxon present: *Indigofera gilesii* and one P4 taxon present: *Sida* sp. Barlee Range (S. van Leeuwen 1642).	Low ranking due to the presence of the P2 taxon, although not restricted to the unit and only 11 or so individuals present.
D9	Local	Low	Minor isolated drainage feature in the east	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One occurrence of P3 *Aristida jerichoensis* subsp. *subspinulifera* (10 individuals)	Low ranking due to one occurrence of a Priority 3 taxon.
D10	Local	Negligible	Minor, broad gully or drainage feature located in the north	No GDV, or potential GDV vegetation present. Riparian features present (*Eucalyptus xerothermica, Themeda triandra*, *Androcalva luteiflora*)	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Negligible ranking as vegetation unit does not support any significant environmental values.
D11	Local	High	Minor drainage features and gullies located in the east of the DE	No GDV or potential GDV features present. Supports riparian flora/vegetation features.	Not representative of any TECs, PECs or restricted vegetation.	One P2 taxon, *Aristida lazaridis*. Three P3 taxa, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Vegetation unit supports the only location of the P3 *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684), although, only one individual was recorded from 2014, so may not persist. More importantly, supports an extensive population of the P2 *Aristida lazaridis* within one of the mapped polygons
D12	Local	Moderate	Minor drainage feature located in the north-east	Potential GDV present with the scattered to low open woodland of *Eucalyptus victrix* and *Eucalyptus xerothermica*. Supports occurrences of *Eucalyptus victrix* and other mesophytic taxa, including *Melaleuca bracteata* and *Melaleuca glomerata*.	Not representative of any TECs, PECs or restricted vegetation.	Supports a sizeable occurrence (approx. 50 plants) of the P2 *Aristida lazaridis*.	Moderate ranking due to the single occurrence of the P2 *Aristida la*zaridis and potential GDV present.
D13 (from the DepJ-AngRiver overlap)	Local	Low	Floodplain of a minor drainage feature in the south of the DE near Deposit J	Supports mostly riparian flora or low level mesophytic taxa (i.e., *Eucalyptus xerothermica)*	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	A Low ranking has been applied as the unit does not support any significant flora values, while it also supports riparian flora and vegetation along the floodplain of a minor drainage feature.
D14 (extracted from D2)	Local	Moderate	Located along the floodplains of Turee Creek and associated tributaries	Supports mostly riparian flora or low level mesophytic taxa (i.e., *Eucalyptus xerothermica*)	Not representative of any TECs, PECs or restricted vegetation.	Numerous occurrences of *Aristida lazaridis* (P2) and a single occurrence of *Eremophila pusilliflora* (P2). Numerous occurrences of P3 taxa *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Themeda* sp. Hamersley Station (M.E. Trudgen 11431).	A Moderate ranking has been assigned due to the numerous occurrences of *Aristida lazaridis* (P2).
G1	Local	Moderate	Broad gully/gorge located in the north west of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two occurrences of P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) occurs along the boundary of the unit. Three P3 taxa occur, *Eremophila naaykensii* (numerous occurrences), *Solanum kentrocaule, Rhagodia* sp. Hamersley (M. Trudgen 17794).	Moderate ranking due to the extensive occurrence of *Eremophila naaykensii* (P3) and the isolated occurrences of *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
G2	Local	Moderate	Open gully/gorge and breakaways located throughout the larger hills in the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs or PECs. Supports *Callitris columellaris*, which is generally restricted to tight gullies in the Pilbara that do not often experience fire.	Two P2 taxa, *Oxalis* sp. Pilbara (M.E. Trudgen 12725), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Five P3 taxa, Pilba*ra trudgenii, Eremophila naaykensii, Solanum kentrocaule, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Grevillea saxicola*.	Moderate ranking applied due to the extensive occurrences of the five P3 taxa. The unit supports P2 taxa, although these are more isolated with occurrences not restricted to the unit. The presence of *Callitris columellaris* indicates and Low to Moderate ranking, however, the presence of the priority taxa bump it to a standalone Moderate ranking.
G3	Local	Moderate	Tight gullies and gorges located lower down in the large hills in the south of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two P2 taxa, *Tetratheca fordiana* and *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Two P3 taxa, *Indigofera gilesii* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	Moderate ranking applied, mostly due to the presence of the two P2 taxa, although the occurrences are limited and not restricted to the unit. Also includes numerous occurrences of P3 taxa, warranting a Moderate ranking.
H1	Local	Moderate	Occurs on low to moderate hill systems in the east of the DE. Also includes some small breakaways or steeper slopes.	No GDV, potential GDV or riparian features present	Not representative of any TECs or PECs. Vegetation structure and location in the landscape indicates that it may be representative of the EAR lower-slope mulga	Isolated occurrences of two P3 taxa: *Aristida jerichoensis* subsp. *subspinulifera* and *Rhagodia* sp. Hamersley (M. Trudgen 17794), and one P4 taxa: *Sida sp.* Barlee Range (S. van Leeuwen 1642).	Moderate ranking due to the scattered/isolated occurrences of two P3 and one P4 flora taxa. Vegetation is also representative of the EAR lower-slopes mulga
H2	Local	Moderate	Located across the hills in the north-west, occupying mid to upper slopes	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Supports the only population of the P2 *Eremophila* sp. West Angelas (S. van Leeuwen 4068) in the DE. Two P2 taxa, *Oxalis* sp. Pilbara (M.E. Trudgen 12725) and *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Five P3 taxa, *Grevillea saxicola, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Aristida jerichoensis* subsp. *subspinulifera, Eremophila naaykensii, Triodia* sp. Mt Ella (M.E. Trudgen 12739).	Moderate local significance ranking as the unit supports the only current known occurrence of *Eremophila* sp. West Angelas (S. van Leeuwen 4068) in the DE. The occurrences are limited to one mapped polygon of the unit, located to the north of the West Angelas camp.
H3	Local	Low	Located in the south of the DE and occupies mid to upper slopes.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two isolated occurrences of P2 taxa, *Tetratheca fordiana* and *Oxalis* sp. Pilbara (M.E. Trudgen 12725). Three P3 taxa, *Indigofera gilesii, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Eremophila naaykensii*,	A low ranking has been assigned to the unit as the two P2 taxa only occur on the boundaries and in two separate isolated occurrences. More substantial occurrences of these two P2 taxa occur outside of the unit. Numerous occurrences of the three P3 taxa occur across the unit.
H4	Local	Low	Occurs extensively across the low undulating hills through the central portion of the DE.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One isolated occurrence of P2 taxon *Eremophila pusilliflora*. Two P3 taxa, *Acacia subtiliformis, Themeda* sp. Hamersley Station (M.E. Trudgen 11431), in isolated occurrences	Low local significance ranking due to the limited occurrences of the two P3 taxa. Only one plant of the P2 *Eremophila pusilliflora* occurs in the DE.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
H5	Local	Moderate	Occurs in the south of the DE, associated with the hills and slopes near Deposit J.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Three occurrences of the P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Two P3 taxa, *Indigofera gilesii* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739) One occurrence of P4 taxon *Acacia bromilowiana*.	Moderate local significance ranking due to the extensive occurrences of the two P3 taxa, while the the P2 taxon is limited in the unit and occurs more extensively in other units.
H6	Local	Moderate	Occurs in the north-west of the DE, associated with one hill.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One occurrence of the P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) along the boundary of the unit. Four P3 taxa, *Grevillea saxicola, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Eremophila naaykensii* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Moderate local significance ranking due to the extensive occurrences of the four P3 taxa, while the P2 taxon is limited to the boundary of unit and occurs more extensively in other units.
H7	Local	Moderate	Occurs on low to moderate hills through the central portion of the DE.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two P3 taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Indigofera gilesii*, One P4 taxon, *Acacia bromilowiana*.	Moderate local significance ranking due to the extensive records of the two P3 taxa.
H8	Local	Moderate	Occurs on the lower slopes of the hills across the northern and western portions of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One P2 taxa *Eremophila pusilliflora*, with a second (*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)) occurring as one location on the boundary. Six P3 taxa: *Themeda* sp. Hamersley Station (M.E. Trudgen 11431), *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Solanum kentrocaule, Eremophila naaykensii, Triodia* sp. Mt Ella (M.E. Trudgen 12739) and *Isotropis parviflora*.	Moderate local significance ranking due to the scattered occurrences of *Eremophila pusilliflora* (P2) and the numerous Priority 3 taxa.
H9	Local	Moderate	Occurs in the south of the DE, associated with lower slopes and undulating hills	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Five P3 taxa, *Indigofera gilesii, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Isotropis parviflora* and *Aristida jerichoensis* subsp. *subspinulifera* One P4 taxa, *Acacia bromilowiana*.	A Moderate ranking has been assigned to the unit mostly due to the numerous locations of the Priority 3 and 4 taxa.
H10	Local	Low	Occurs in the north-weast of the DE, associated with undulating low hills	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two isolated occurrences of P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708), with additional occurrences just outside. Three P3 taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Indigofera gilesii, Rhagodia* sp. Hamersley (M. Trudgen 17794). Two P4 taxon, *Sida* sp. Barlee Range (S. van Leeuwen 1642) and *Lepidium catapycnon*	A Low ranking has been assigned to the unit as the P2 taxon only occurs in two isolated locations, with substantially more occurrences outside. The P3 taxa are the key factor for the Low ranking.
H11	Local	Low	Occurs as three separate occurrences in the north-east of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Three P3 taxa, *Indigofera gilesii, Triodia* sp. Mt Ella (M.E. Trudgen 12739) and *Sida* sp. Barlee Range (S. van Leeuwen 1642), occur in isolation or along the boundary of the unit	A Low ranking has been assigned to the unit, although the occurrences of the P3 taxa are isolated or occur along the boundary.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
H12	Local	Negligible	Occurs in isolation in the north west of the DE.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Negligible ranking as vegetation unit does not support any significant environmental values.
H13	Local	Moderate	Occurs in the south of the DE, in association with moderate hill slopes and crests.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Numerous occurrences of the P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Two P3 taxa, *Solanum kentrocaule, Triodia* sp. Mt Ella (M.E. Trudgen 12739)	A moderate ranking has been assigned to the unit due the numerous occurrences of the P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708).
H14	Local	Moderate	Occurs along moderate to steep slopes in the north east of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Several occurrences of P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708). Three P3 taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Aristida jerichoensis* subsp. *subspinulifera* (and others adjacent to the boundary).	A moderate ranking has been assigned to the unit due the occurrences of the P2 *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708).
H15	Local	High	Occurs extensively in the south, associated with the large hills and ranges	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Extensive records of P2 taxa *Tetratheca fordiana, Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) and *Oxalis* sp. Pilbara (M.E. Trudgen 12725), Extensive records of P3 taxa *Eremophila naaykensii, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Indigofera gilesii, Solanum kentrocaule, Acacia subtiliformis* and *Pilbara trudgenii* P4 Taxon *Acacia bromilowiana*	A High local significance ranking has been assigned to the unit due to the extensive records of P2 taxa, as well as the extensive records of P3 taxa.
H16	Local	Moderate	Occurs extensively in the north and west, associated with large hills.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Three P2 taxa, *Eremophila* sp. West Angelas (S. van Leeuwen 4068), *Oxalis* sp. Pilbara (M.E. Trudgen 12725), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) Extensive records of P3 taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739), , *Eremophila naaykensii, Indigofera gilesii, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Grevillea saxicola, Solanum kentrocaule, Pilbara trudgenii* Two P4 taxa, *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Lepidium catapycnon.*	A moderate local significance ranking has been assigned due the presence of numerous locations of P2 taxa, while the key value is the extensive and high density of P3 taxa throughout the range of the unit.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
M1	Local	Moderate	An extensive mosaic across the northern and western portions of the DE. Generally located on the flats and lower slopes	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Occurrences of P2 taxa *Eremophila pusilliflora,* and *Aristida lazaridis*. Extensive occurrences of P3 taxon *Rhagodia* sp. Hamersley (M. Trudgen 17794), with isolated (or on boundaries) occurrences of *Aristida jerichoensis* subsp. *subspinulifera, Eremophila naaykensii, Isotropis parviflora* and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)	A Moderate ranking has been assigned to the unit as a substantial number of *Eremophila pusilliflora* (P2) records occur across the unit. A High ranking was not assigned as further records are located across the DE in other mapped units.
M2	Local	Negligible	Occurs in one location in the north-east, associated with a lower slope/valley.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Negligible ranking as vegetation unit does not support any significant environmental values.
P1	Local	Low	Occurs in the east of the DE, near Deposit F.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One occurrence of P2 *Aristida lazaridis*. Five occurrences of P3 taxa, *Aristida jerichoensis* subsp. *subspinulifera*	Low ranking has been assigned as there is only one P2 record, while there are only limited P3 records.
P2	Local	Moderate	Occurs in association with mulga woodlands, sometimes forming bands	No GDV, potential GDV or riparian features present	The banding of mulga trees and shrubs may be consistent with overland flow, which can be restricted, or of importance to ecological function	One occurrence of P2 *Aristida lazaridis*. Several occurrences of *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3).	A Moderate ranking has been assigned to the unit as it may be representative of an EAR (valley floor mulga). Supports limited records of P3 taxa, only one P2 taxa record and the potential the unit supports overland flow and ecological function.
P3	Local	Moderate	Occurs through the central to western portion of the DE.	No GDV, potential GDV or riparian features present	Not representative of any TECs or PECs. Vegetation structure and position in landscape indicates that it may be representative of an EAR, valley floor mulga	One occurrence of P2 *Eremophila pusilliflora*. Occasional occurrences of two P3 taxa, *Aristida jerichoensis* subsp. *subspinulifera* and *Rhagodia* sp. Hamersley (M. Trudgen 17794). One occurrence of P4 *Goodenia nuda*	A Moderate local significance ranking has been applied as it may be representative of an EAR. There is only a single occurrence of the P2 *Eremophila pusilliflora* present in the unit, while the key environmental values are the occasional occurrences of the two P3 taxa.
P4	Local	Low	Occurs in the east of the DE, near Deposit F.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Two occurrences of P2 *Aristida lazaridis* located on the boundary of the unit. Numerous occurrences of two P3 taxa, *Aristida jerichoensis* subsp. *subspinulifera* and *Rhagodia* sp. Hamersley (M. Trudgen 17794). A single occurrence of P3 taxon *Solanum kentrocaule*, however on the boundary of the unit and outside of the normal habitat, likely to be erroneous.	A low local significance ranking has been applied as there are only two occurrences of *Aristida lazaridis* (P2) in the unit, with these two occurrences located on the boundary. The key environmental value is the numerous occurrences of P3 taxa.
P5	Local	Low to Negligible	Occurs sporadically through the central and eastern portion of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Three occurrences of the P3 taxon *Rhagodia* sp. Hamersley (M. Trudgen 17794).	A Low to Negligible ranking has been applied as only three occurrences of a P3 taxon occurs, with extensive records of *Rhagodia* sp. Hamersley (M. Trudgen 17794) occurring more extensively in the DE.
P6	Local	Low to Negligible	Located along the western boundary of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Low to negligible ranking as vegetation unit does not support any significant environmental values.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
P7	Local	Low	Occurs through the central portion of the DE, associated with minor valleys between undulating low hills	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One occurrence of P2 *Aristida lazaridis*. Occurrences of P3 taxa *Themeda* sp. Hamersley Station (M.E. Trudgen 11431), *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Aristida jerichoensis* subsp. *subspinulifera*. Several occurrences of P4 taxon *Goodenia nuda*	A low local significance ranking has been applied due to the occurrences of the P3 and P4 taxa. Only a single occurrence of the P2 taxon *Aristida lazaridis* is known from the unit. The occurrences of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) are assumed to be correct, although it is likely that they are erroneous.
P8	Local	High	Occurs sporadically in the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Extensive records of P2 taxon *Eremophila pusilliflora*, with an occurrence of *Aristida lazaridis*. Numerous occurrences of *Aristida jerichoensis* subsp. *subspinulifera* and a single occurrence of *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	A High ranking has been assigned due to the extensive records of *Eremophila pusilliflora* (P2) in this unit in the north west of the DE.
P9	Local	Low	Located in the north of the DE on the foot slopes and adjacent flats of moderate hills	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Numerous occurrences of the P3 taxon *Rhagodia* sp. Hamersley (M. Trudgen 17794).	The Low ranking has been assigned due to the numerous occurrences of *Rhagodia* sp. Hamersley (M. Tudgen 17794) (P3).
P10	Local	Low	Located in isolation in the east of the DE	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One P3 taxon, *Triodia* sp. Mt Ella (M.E. Trudgen 12739) and one P4 taxon *Sida* sp. Barlee Range (S. van Leeuwen 1642) occur in the unit, but mostly along the boundary of adjacent units	A Low ranking has been assigned due to the occurrences of P3 taxa.
P11	Local	Low	Located across the valleys and slopes in the hills to the north of West Angelas camp.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	A single occurrence of P2 *Isotropis parviflora*. Two occurrences of P3 taxon *Rhagodia* sp. Hamersley (M. Trudgen 17794)	A low local significance has been assigned due to the sporadic occurrences of a P3 taxon, plus the addition of a single P2 record.
P12	Local	Low	Located in the south of the DE, associated with the footslopes and flats below an extensive range.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	Several occurrences of the P2 taxon *Aristida lazaridis*. Occurrences of P3 taxa *Acacia effusa*, *Triodia* sp. Mt Ella (M. E. Trudgen 12739) and *Rhagodia* sp. Hamersley (M. Trudgen 17794).	A low local significance ranking applied to reflect the higher occurrences of P3 taxa, compared to the scattered occurrences of the P2 taxon *Aristida lazaridis*.
P13	Local	Negligible	Located in the north east of the DE, associated with undulating low hills	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Negligible ranking as vegetation unit does not support any significant environmental values.
P14	Local	Low	Located in the east and south of the DE, associated with stony plains and slopes.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	One occurrence of P2 taxon *Hibiscus* sp. Gurinbiddy (M.E. Trudgen MET 15708) on the boundary of the unit. Several occurrences of P3 taxa, , *Rostellularia adscendens* var. *latifolia, Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Olearia mucronata, Acacia subtiliformis, Solanum kentrocaule, Indigofera gilesii*. Scattered occurrences of three P4 taxa *Lepidium catapycnon, Sida* sp. Barlee Range (S. van Leeuwen 1642)and *Acacia bromilowiana.*	A low local significance ranking has been assigned to reflect the numerous records of P3 taxa. The single occurrence of the P2 taxon occurred on the boundary of the unit.

Vegetation Code	Scale	Ranking	Comment				Justification
			Location/ Extent	GDV	Vegetation	Flora	
P15	Regional	Regionally Significant	Occurs across the central portion of the DE, associated with the mapped PEC West Angelas Cracking-Clays	No GDV, potential GDV or riparian features present	Representative of the Priority 1 ecological community West Angelas Cracking-Clays. Also an EAR. "West Angelas Cracking-Clays"	One P3 taxon, *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) occurs sporadically through the unit.	The unit has been assigned as Regionally Significant as it wholly incorporates the Priority 1 Ecological Community West Angelas Cracking-Clays. The mapped unit is consistent with the DBCA mapped extent.
P16	Local	Low	Occurs in isolation in the north of the DE.	No GDV, potential GDV or riparian features present	Not representative of any TECs, PECs or restricted vegetation.	No significant flora present	Low to negligible ranking as vegetation unit does not support any significant environmental values.

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D.8: West Angelas Beyond 2020 Deposit G Reconnaissance and Targeted Survey

Biologic Environmental Survey Pty Ltd
PO Box 179
Floreat, WA, 6014

26 October 2022

Attn: Elizabeth Mason and Stephanie Stack

Rio Tinto Iron Ore

Dear Elizabeth and Stephanie,

Please find below a memo summarising the targeted flora and vegetation survey completed by Biologic Environmental Survey (Biologic) within unsurveyed areas of the Deposit G area for the West Angelas Project Envelope.

If you have any queries, please do not hesitate to contact me.

Yours sincerely,

Clinton van den Bergh
Principal Botanist | Manager of Botany
Clinton@biologicenv.com.au
(08) 6365 5066 | 0439 910 881

1. INTRODUCTION AND OBJECTIVES

Biologic were commissioned to undertake a targeted flora and vegetation survey of unsurveyed areas of the Deposit G area within the West Angelas Project Envelope (herein the Study Area) (Figure 1.1). The Study Area is located centrally within the West Angelas Development Envelope and comprises a single area covering a total of 330.20 hectares (ha) (Figure 1.1).

The overarching objective of this assessment was to undertake a targeted flora and vegetation survey to identify the occurrence of significant species and ecological communities (as per EPA (2020)), to inform future development and environmental approvals within the area. Significant species that were the focus of this survey are based on species identified in a previous desktop assessment completed for the broader West Angelas Revised Proposal Development Envelope, which encompasses the Study Area (Biota, 2020).

1.1. Conformance and Licensing

This assessment was carried out in a manner consistent with the following guidelines and recommendations from the Environmental Protection Authority (EPA), relevant survey-specific license conditions and, where relevant, Rio Tinto guidelines and standards:

- DoE (2013) Matters of National Environmental Significance: Significant impact guidelines 1.1;
- EPA (2018) Statement of Environmental Principles, Factors and Objectives;
- EPA (2016a) Environmental Factor Guideline: Flora and Vegetation;
- EPA (2016b) Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment; and
- Rio Tinto (2021a) for targeted flora surveys and data collection.

Flora specimen collections were conducted under a DBCA Regulation 62 “Flora Taking (Biological Assessment) Licences issued to Clinton van den Bergh (FB62000105) and Emma Marsh (FB62000233-4). In accordance with Section 40 of the *Biodiversity Conservation Act 2016* (BC Act), threatened species sampling was completed under a DBCA “Authorisation to Take or Disturb Threatened Species” (authorisation number TFL 59-1819) issued to Clinton van den Bergh

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Legend

Study Area — Pilbara Region

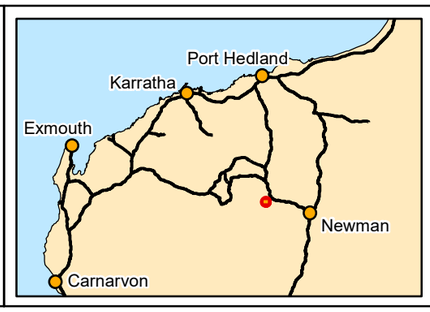
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Projection: Transverse Mercator
Datum: GDA2020 Created 07/07/2022



RIO TINTO IRON ORE

Mt Ella, Deposit J and Deposit G Flora and Fauna Survey

Figure 1.1: Study Area and regional context

1.2. Background to Protection of Flora and Ecological Communities

Within Western Australia, native flora and ecological communities are protected under the BC Act and at a national level under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Any action that has the potential to impact on native flora or ecological communities needs to be approved by relevant state and/or federal departments as dictated by the state *Environmental Protection Act 1986* (EP Act) and the EPBC Act.

While all native flora and ecological communities are protected under these Acts, some species of flora and ecological communities that are determined to be at risk of extinction or decline are afforded extra protection under these Acts. These include species that are considered Threatened (Critically Endangered, Endangered and Vulnerable) under the EPBC Act and/or BC Act.

The EPBC Act identifies Threatened Ecological Communities (TECs) as ecological communities at risk of extinction. The BC Act provides for the statutory listing of TECs by the WA Minister for Environment (the Minister). The Minister has endorsed 69 ecological communities as Threatened under Critically Endangered (20), Endangered (17), Vulnerable (28) and Presumed Totally Destroyed (four).

Furthermore, any species or ecological communities that may be threatened but for which there is insufficient information available to allocate a threatened status under the BC Act, can also be listed as Priority species (Priority 1–4) or ecological communities (Priority 1-5) by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA).

For the purposes of this memo, these species are deemed to be significant species. A summary of applicable legislation and status codes is provided in Table 1.1.

Table 1.1: Conservation significance assessment guidelines

Agreement, Act or List	Status Codes
FEDERAL	
Environment Protection and Biodiversity Conservation Act 1999 DAWE lists threatened flora, which are determined by the Threatened Species Scientific Committee (TSSC) according to criteria set out in the Act. The Act lists flora that are considered to be of conservation significance under one of eight categories (listed under 'Status Codes'). TECs are those that are at risk of extinction.	• Extinct (EX) • Extinct in the Wild (EW) • Critically Endangered (CE) • Endangered (EN) • Vulnerable (VU) • Conservation Dependent (CD) • Critically Endangered (CE) • Endangered (EN) • Vulnerable (VU)
STATE	
Biodiversity Conservation Act 2016 The BC Act provides for the listing of threatened native flora and ecological communities that need protection as critically endangered, endangered or vulnerable species or ecological communities because they are under identifiable threat of extinction (species) or collapsed (ecological communities).	• Schedule 1 (Critically Endangered) (S1 or CR) • Schedule 2 (Endangered) (S2 or EN) • Schedule 3 (Vulnerable) (S3 or VU) • Schedule 4 (Extinct) (S4 or EX)
DBCA Priority list DBCA produces a list of Priority species and ecological communities (e.g., PECs) that have not been assigned statutory protection under the BC Act. This system gives a ranking from Priority 1 to Priority 4 for flora and Priority 1 to Priority 5 for ecological communities	• Priority 1 (P1) • Priority 2 (P2) • Priority 3 (P3) • Priority 4 (P4) • Priority 5 (PECs) (P5)

2. METHODS

2.1. Taxonomy and Nomenclature

Flora nomenclature used in this *memo* is consistent with the WAH's plant census, provided on Florabase© (WAH, 1998-). All species are current at the time of report preparation.

Plant taxa that could not be identified during the field survey were collected, assigned a unique number for tracking purposes, and pressed for subsequent identification. Identifications were carried out by Biologic's taxonomists, Mr Samuel Coultas and Dr Rachel Meissner, utilising Western Australian Herbarium's reference collection, taxonomic keys, and reference material. All taxa were checked against FloraBase© (WAH, 1998-) to ensure their currency and validity.

A representative specimen of all significant flora observed in the Survey Area was collected and submitted to the Rio Tinto sponsored botanist, Steve Dillon, for confirmation, in accordance with Rio Tinto's chain of custody requirements. The submitted specimens list and their confirmed identification is included in Appendix A.

2.2. Desktop Assessment

A desktop assessment was undertaken utilising information collated from the desktop assessment and field survey conducted by Biota (2020) for the broader West Angelas Beyond 2020 Development Envelope, which encompasses the Study Area. This assessment also reviewed aerial photography (Scale 1:30,000) of the Study Area and Google Earth Pro© imagery, along with data provided by Rio Tinto from their internal database (Rio Tinto, 2021b).

The desktop assessment was used to further refine sampling methods to ensure appropriate sampling was undertaken for all target species and to allow an accurate assessment of their occurrence or likelihood of occurrence within the Study Area.

2.3. Field Survey

2.3.1. Survey Timing and Personnel

The field survey was undertaken over two days on the 22nd and 23rd of February 2022 by Principal Botanist Clinton van den Bergh and Botanist Emma Marsh, whom collectively have over 18 years of experience undertaking flora surveys within the Pilbara region, including targeted surveys for the significant species that were the focus of this assessment (Table 2.1).

Table 2.1: Project Team and experience

Personnel	Position and Role	Qualification	Experience
Clinton van den Bergh	Principal Botanist • project management • field survey • reporting	BSc (Hons) Environmental Biology Post Graduate Diploma (Environmental Assessments Management)	• 16 years, experience field survey • 15 years' experience EIA (consulting) • 16 years' experience botanical • 15 years' Pilbara botanical/field experience
Emma Marsh	Botanist • field survey • Identifications	BSc Biological Science & Conservation & Wildlife Biology (minor in Australian Indigenous Studies)	• 3 years' experience field survey • 2 years' experience EIA (consulting) • 3 years' experience botanical • 3 years' Pilbara botanical/field experience

2.3.2. Climate and Weather

Observed weather conditions prior to and during the survey are shown in Figure 2.1, alongside long-term climatic data for Newman Airport (station #007176). In the 12 months prior to the survey (March 2021–February 2022), mean minimum and maximum temperatures recorded at Newman Airport were similar to the long-term averages for most months (Figure 2.1). Rainfall in the 12 months preceding the survey was variable, with below long-term averages recorded through most months, except for April 2021, which recorded well above the annual long-term average (56 mm v 21 mm), and November 2021 (14 mm v 12 mm) and February 2022 (73 mm v 72 mm), which had rainfall consistent with long-term averages Figure 2.1. In total, the rainfall received in the 12 months prior to the survey (March 2021 to February 2022; 191.60 mm) was well below the annual long-term average (324.4 mm) (BoM, 2021).

Observed minimum temperatures during the survey were similar to the long-term average, while maximum temperatures were slightly higher (Table 2.2) (BoM, 2021). No rainfall was recorded during the survey (Table 2.2); however, a total of 73.0 mm was recorded in the two weeks prior (BoM, 2021).

Table 2.2: Climatic conditions recorded for Newman Airport during the field survey

Date	Min. temp (°C)	Max. temp (°C)	Rainfall (mm)
22/02/2022	20.1	40.7	0
23/02/2022	22.8	42.1	0
Average/ total	**21.5**	**41.4**	**0**

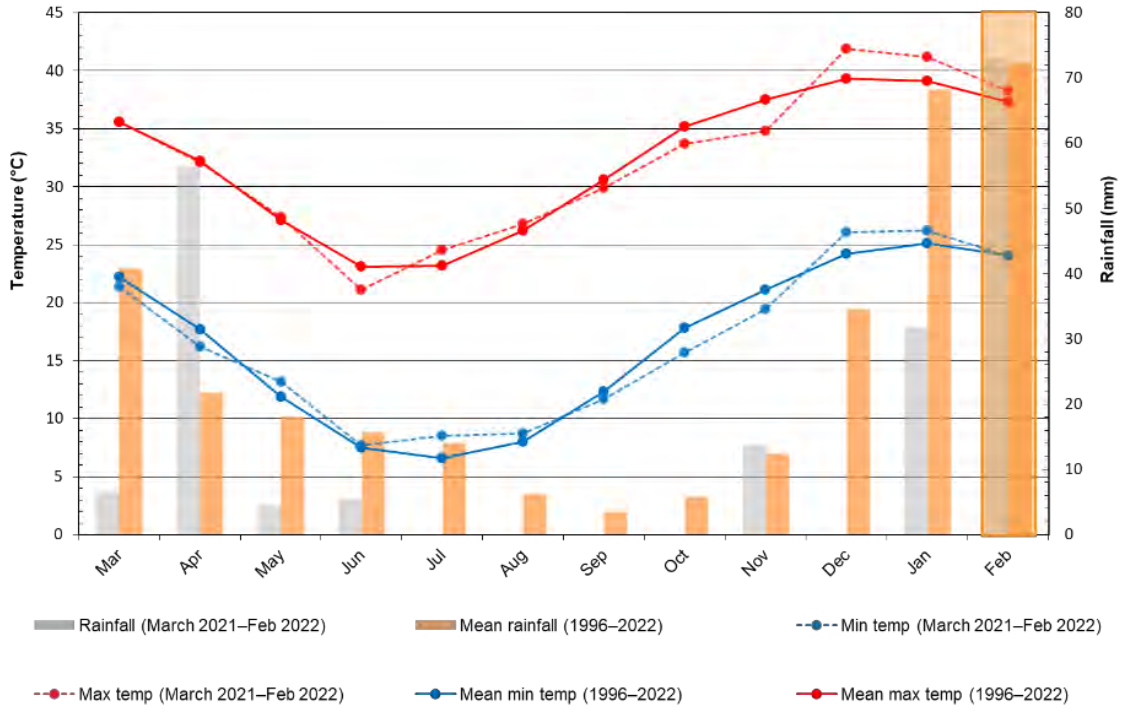


Figure 2.1: Monthly rainfall and long-term average rainfall for Newman Aero (Station ID 007176) (BoM, 2021) with approximate survey timing shown in shaded box

2.3.3. Sampling and Survey Methods

Following the desktop assessment, survey plans were designed to ensure the Study Area was appropriately traversed and targeted, particularly key habitat for significant flora, to capture the data required for a targeted survey. Due to constraints associated with deep water and thick *Typha* thickets, the entirety of the Study Area was not intensively traversed. However, search effort was concentrated on habitats that were likely to support significant flora, where safe to do so, thus the survey is considered sufficient to meet EPA requirements (EPA, 2016b).

Prior to the survey, a list of significant flora previously recorded, or with the potential to occur within the Study Area was compiled (refer to Section 2.3.4). Field personnel familiarised themselves with photographs, reference samples and descriptions of these taxa prior to mobilisation. An understanding of which significant flora were expected to occur in which locations was established based on aerial photography, location of known records, potential habitat and knowledge of the area and plants. This was reviewed each day in the field or when commencing searches in a new area. Aerial imagery, known locations and botanical references were available and utilised during the field assessment.

Comprehensive parallel targeted traverses of 30–50 m spacing were conducted where terrain permitted (Figure 2.2). At times, the parallel traverses were wider apart to allow for changes in terrain and habitat across the Study Area (i.e., crossing the water bodies). The targeted traverses were intensified where plants were recorded to more accurately capture the population extent. Where habitat was deemed

unsuitable for the target species, searching intensity was reduced to maximise field survey efficiency in suitable habitat.

Upon encountering significant taxa, a GPS coordinate of the individual was taken when occurring in isolation, or a central GPS coordinate was taken for a small population (central coordinate with an approximate 20 m radius). Once an individual / population was located, the surrounding area was searched to define the population extent.

The information collected on at each location where significant species was recorded was consistent with Rio Tinto data standards (Rio Tinto, 2021a). Any deviation from the standards was detailed during the field survey.

Threatened and Priority Flora Report Forms (TPRFs) will be provided to the Parks and Wildlife Division (Parks and Wildlife) of DBCA, as required under the flora collecting permits. Significant flora specimens were vouchered with the Western Australian Herbarium (WAH), where required and appropriate.

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Legend

Study Area

Heritage site

Sampling Type

Traverse

Vegetation mapping note

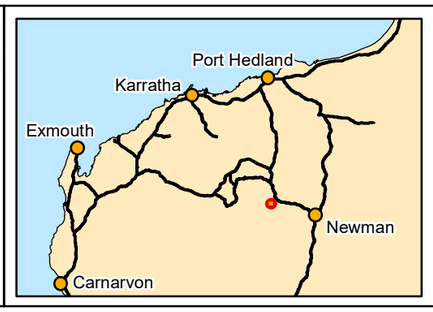
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Scale: 1:12,500

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Projection: Transverse Mercator
Datum: GDA2020 Created 07/07/2022



RIO TINTO IRON ORE

Mt Ella, Deposit J and Deposit G Flora and Fauna Survey

Figure 2.2: Sample sites and traverses

2.3.4. Likelihood of Significant Flora Occurrence

The significant flora taxa identified from the database searches and literature review were assessed and ranked on the likelihood of occurring within the Study Area (Appendix B). The rankings were assigned using the following definitions presented in Table 2.3 and are intended to be an indicative guide only.

Table 2.3: Flora likelihood of occurrence decision matrix

Occurrence categories	Habitat categories (within the Study Area)			
	Core/ critical habitat present	Suitable habitat present/ within known distribution	Marginal habitat present/ adjacent to known distribution	No suitable habitat present/ outside of known distribution
Recorded in the Study Area	Confirmed	Confirmed	Confirmed	Confirmed
Recorded within <5 km	Highly Likely	Likely	Possible	Possible
Recorded within 5-15 km	Likely	Possible	Possible	Unlikely
Recorded within 15 - 50 km	Possible	Possible	Unlikely	Unlikely
Recorded >50 km	Possible	Unlikely	Unlikely	Highly Unlikely
Species considered locally/ regionally extinct	Unlikely	Unlikely	Highly Unlikely	Highly Unlikely

2.3.5. Limitations

No potential limitations which are expected to have significantly impacted the results of the survey and/or the determined likelihood of occurrence assessments for significant species within the Study Area, as outlined by EPA (2016b), were encountered during the survey.

3. RESULTS AND DISCUSSION

3.1. Desktop Assessment

A total of 49 significant vascular flora species were identified following a review of the desktop assessment completed for the West Angelas Beyond 2020 Detailed Flora and Vegetation Survey (Biota, 2020). Two significant flora taxa have previously been recorded within the Study Area according to data provided by Rio Tinto (Rio Tinto, 2021b) and DBCA (DBCA, 2021) (Figure 3.1):

- *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3) (formerly *Oldenlandia* sp. Hamersley Station (A.A. Mitchell PRP 1479); and
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)

The spatial data on significant flora held by Rio Tinto indicates that there are five records of *Themeda* sp. Hamersley Station (M. Trudgen 11431) (P3) within the Study Area. In addition, there are numerous other records further downstream of Turee Creek, outside of the Study Area. The DBCA spatial data indicates that one location of *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3) occurs in the north-west of the Study Area.

The current taxonomy for the genus *Themeda* is complex, with more recent studies indicating that callus hairs are a more reliable determining factor for the identification of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431). Historically, callus hairs were not always used to identify *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) so the true status and presence from earlier records may have resulted in errors.

The flora taxa of significance identified by the desktop assessment were assessed and ranked on the likelihood of occurring within the Study Area. The full list is presented in Appendix B. The two taxa mentioned above have been previously recorded within the Study Area and are therefore considered confirmed. Of the remaining taxa, five are considered Highly Likely to occur, two Likely, and seven Possible (Table 3.1). The remaining 33 taxa were considered Unlikely (two) or Highly Unlikely (31) to occur within the Study Area (Appendix B).

Table 3.1: Significant flora likelihood of assessment results (confirmed to possible)

Taxon	Description (WAH, 1998-)	Location
Confirmed		
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)	Stony undulating clay plains.	Within Study Area
Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)	Clay plains.	Within Study Area
Highly Likely		
Aristida lazaridis (P2)	Major drainage areas through clayey flats.	0.9 km to the west
Eremophila pusilliflora (P2)	Alluvial plains.	0.9 km to the south

Taxon	Description (WAH, 1998-)	Location
Aristida jerichoensis var. *subspinulifera* (P3)	Hardpan clay plains.	0.4 km to the east
Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	Mulga (*Acacia aneura*) and Snakewood (*A. xiphophylla*) vegetation on clay plains.	0.2 km to the east
Likely		
Isotropis parviflora (P2)	Undulating ironstone plains.	2.0 km to the west
Rostellularia adscendens var. latifolia (P3)	Various; creeks, plains, low hills.	8.3 km to the south
Possible		
Acacia effusa (P3)	Stony red loam; scree	8.1 km to the south-east
Euphorbia clementii (P3)	Gravelly hillsides, stony ground.	5.0km to the south-east
Euphorbia stevenii (P3)	Clay soils.	2.2 km to the south-west
Goodenia lyrata (P3)	Near claypans.	12.2 km to the north
Swainsona thompsoniana (P3)	Creekline, claypan.	2.2 km to the south
Xerochrysum boreale (P3)	Loamy, sandy or gravelly soils on plains.	11.1 km to the north-west
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 3835) (P3)	Mainly on red clay on plains, low in the landscape.	6.1 km to the north-west

600000
640000
680000
720000
7440000
7400000

Packsaddle Rd
West Angelas Rd
MAC-E
MAC-C
Hope Downs 1
South Flank
Great Northern Hwy
Snowy Mount
Turee Creek Rd

Legend

- Study Area
- Operating Mine
- Local Road
- State Road

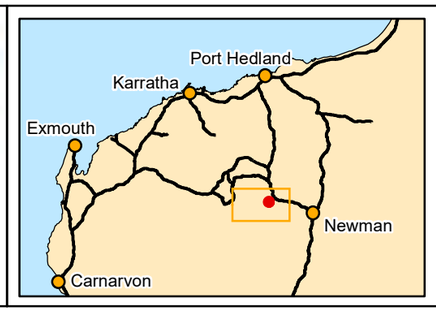
N

biologic Environmental Survey

Scale: 1:350,600

0 10 20 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 08/07/2022



RIO TINTO IRON ORE

Mt Ella, Deposit J and Deposit G Flora and Fauna Survey

Figure 3.1 Significant flora recorded in the desktop assessment

DBCA

T

- *Thryptomene wittweri*

P1

- *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068)
- *Rhodanthe ascendens*
- *Triodia* sp. Karijini (S. van Leeuwen 4111)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684)

P2

- *Aristida lazaridis*
- *Eremophila pusilliflora*
- *Euphorbia inappendiculata* var. *queenslandica*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- *Isotropis parviflora*
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725)
- *Tetratheca fordiana*
- *Teucrium pilbaranum*

P3

- *Acacia daweana*
- *Acacia effusa*
- *Acacia subtiliformis*
- *Aristida jerichoensis* var. *subspinulifera*
- *Dampiera metallorum*
- *Eremophila magnifica* subsp. *velutina*
- *Eremophila rigida*
- *Eremophila* sp. Hamersley Range (K. Walker KW 136)
- *Euphorbia clementii*
- *Euphorbia stevenii*
- *Goodenia lyrata*
- *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727)
- *Grevillea saxicola*
- *Indigofera gilesii*
- *Oldenlandia* sp. Hamersley Station (A.A. Mitchell PRP 1479)
- *Olearia mucronata*
- *Pilbara trudgenii*
- *Rhagodia* sp. Hamersley (M. Trudgen 17794)
- *Rostellularia adscendens* var. *latifolia*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)
- *Sida* sp. Hamersley Range (K. Newbey 10692)
- *Solanum kentrocaule*
- *Stackhousia clementii*
- *Swainsona thompsoniana*
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)
- *Triodia basitricha*
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739)
- *Xerochrysum boreale*

P4

- *Acacia bromilowiana*
- *Eremophila magnifica* subsp. *magnifica*
- *Goodenia nuda*
- *Lepidium catapycnon*
- *Ptilotus mollis*

RIO TINTO

P1

- *Hibiscus* sp. Mt Brockman (E. Thoma ET 1354)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684)

P2

- *Aristida lazaridis*
- *Eremophila pusilliflora*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- *Isotropis parviflora*
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725)
- *Tetratheca fordiana*

P3

- *Acacia daweana*
- *Acacia effusa*
- *Acacia subtiliformis*
- *Aristida jerichoensis* var. *subspinulifera*
- *Dampiera metallorum*
- *Eremophila* sp. Hamersley Range (K. Walker KW 136)
- *Euphorbia clementii*
- *Geijera salicifolia*
- *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727)
- *Grevillea saxicola*
- *Indigofera gilesii*
- *Olearia mucronata*
- *Pilbara trudgenii*
- *Rhagodia* sp. Hamersley (M. Trudgen 17794)
- *Rostellularia adscendens* var. *latifolia*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)
- *Sida* sp. Hamersley Range (K. Newbey 10692)
- *Solanum kentrocaule*
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739)

P4

- *Acacia bromilowiana*
- *Eremophila magnifica* subsp. *magnifica*
- *Goodenia nuda*
- *Lepidium catapycnon*
- *Ptilotus mollis*

biologic Environmental Survey

3.2. Field Survey

During the current targeted survey, no significant flora was observed in the Study Area. Several collections of a *Themeda* was collected to determine the occurrence of the priority listed *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3), however, the taxonomic identifications indicated that the characters sit within the variation of the common *Themeda triandra* (APPENDIX). As such, *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) is not considered to occur in the Study Area.

The previous known locations (Figure 3.1) were traversed and no individuals representative of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) were observed. No comment can be made on the occurrence of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) outside of the Study Area, but it is not considered to occur within the Study Area.

The location of *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3) was traversed, and no individuals were observed. Current knowledge on *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) suggests that it occurs in association with cracking clay soils. The Study Area supported clay soils, however, they were not cracking, or self-mulching clays. There is the potential that individuals of *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) occur in the Study Area, but just were not identifiable at the time of the survey. *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) is an annual and would be visible following the wet season. The timing of the field survey (late February following variable rainfall; see Figure 2.1) may have been too early to record individuals as sufficient time for germination, growth and flowering may not have passed, while the rainfall across West Angelas area may have been limited and not sufficient for germination.

4. SUMMARY

No significant flora was recorded from within the Dep G Study Area, while the continued occurrence of *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3) is unlikely based on the current knowledge on each taxon and the targeted field survey.

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Appendix A: Rio Tinto Sponsored Botanist Chain of Custody

RioTinto

Chain of Custody: Significant Specimens to Herbarium

Company	Biologic Environmental Survey	**Date Collections Submitted to RTIO Sponsored Botanist**	05/04/2022
Consultant Contact Name	Carmel Winton	**Consultant Contact Number**	08 6365 5066
Rio Tinto Contact Name	Hayden Ajduk, Anthea Jones	**Rio Tinto Contact Number**	_____
Study Area	West Angelas - Mt Ella, Dep J & Dep G	**RTIO AR Number**	_____
Senders Internal Job Name / Number	21082 RTIO Mt Ella, Dep J & Dep G Flora & Fauna	**Number of Collections Submitted**	7
Collections From (Named location and distance & direction to nearest town)	In deposits within the West Angelas mining lease		
Datum & Zone of Study Area	_____		
Central GPS Co-ords of study area	-23.179868°, 118.773998°	**Dates of Field Survey**	21-25 Feb 2022
RTIO Required Date (RTIO to inform)	____ / _____ / _____		

RioTinto

Chain of Custody: Significant Specimens to Herbarium

Collection Number	Consultant ID	Cons Status	Easting / Latitude	Northing / Longitude	Plant Habit	Habitat	Consultant Comment	Photos (if applic)	Steve Dillon ID	Steve Dillon Comment
WAE-17	*Seringia exastia*	T	-23.14086702	118.6415554	Shrub	Rocky hills				
EM-opp06	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	P3	-23.18687066	118.8572386	Hummock Grass	Steep sides of gully			*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	P3.
CV-opp08	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	P3	-23.184307	118.8543552	Hummock Grass	Rocky hill			*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	P3.
CVopp06	*Eremophila pusilliflora*	P2	-23.1417421	118.6605483	Shrub	Stony plain			*Eremophila pusilliflora*	P2.
CVopp.01	*Themeda* ? sp. Hamersley Station (M.E. Trudgen 11431)	?P3	-23.1413681	118.7162632	Tussock grass	Drainage area/floodplain	Tall, robust and blue suggesting *T*. sp. Hamersley Station. However, characters well within the described range of *T. triandra*		*Themeda triandra*	
WAE10-02	Malvaceae sp.		-23.1421678	118.6671979	Shrub	Drainage area/floodplain	Immature leaves and old fruits throwing me off		*Abutilon amplum* (fruit only); GOK (rest of plant)	The fruit is definitely *Abutilon amplum*, the rest of the plant definitely isn't. The lack of glandular hairs suggests it's not an *Abutilon* – I'm leaning towards *Sida.* Material is sterile so haven't been able to take it any further (I tried, probably spent way more time than I should have).
Cvopp10	*Indigofera fractiflexa* subsp. *fractiflexa*		-23.1815203	118.8517694	Shrub	Rocky gully of hill	Nuytsia key a bit difficult when it gets to the hairiness step. Matches fractiflexa subsp. fractiflexa specimen best		*Indigofera gilesii*	P3. Has stipules that are relatively large with a broad, persistent base; stems not "zig-zag"; indumentum, especially on the leaflets, denser than typical *I. fractiflexa*. The stipules are probably the most reliable of those three characters.

Rio Tinto

Chain of Custody: Significant Specimens to Herbarium (Indicate Study Area Location)



Appendix B: Dep G Flora Likelihood of Occurrence

Species	Conservation Status			Habitat	Likelihood of Occurrence		Comments
	EPBC Act	BC Act	DBCA		Pre-survey	Post-survey	
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)			P3	Stony undulating clay plains.	Confirmed	Possible	A DBCA record occurs within the Study Area. Location was visited, but no individuals were observed. Still possible for individuals to persist, but just not identifiable during the field survey
Themeda sp. Hamersley Station (M.E. Trudgen 11431)			P3	Clay plains.	Confirmed	Unlikely	Several Rio Tinto records within the Study Area. Individuals collected from the Study Area were identified as Themeda triandra. Habitat present within the Study Area is marginal (i.e., no cracking clay), as such, it is unlikely that Themeda sp. Hamersley Station (M.E. Trudgen 11431) occurs.
Aristida jerichoensis var. *subspinulifera*			P3	Hardpan clay plains.	Highly likely	Possible	Nearest record located 0.4 km to the east. Suitable habitat present and individuals may have been missed during the targeted searches.
Aristida lazaridis			P2	Major drainage areas through clayey flats.	Highly likely	Unlikely	Nearest record located 0.9 km to the west. Potential to occur along the floodplains and banks of Turee Creek. Unlikely to occur following field survey, but surface water and dense tussock grasses and Typha may have obscured individuals.
Eremophila pusilliflora			P2	Alluvial plains.	Highly likely	Unlikely	Nearest record located 0.9 km to the south. Individuals would have been identifiable if present.
Rhagodia sp. Hamersley (M. Trudgen 17794)			P3	Mulga (Acacia aneura) and Snakewood (A. xiphophylla) vegetation on clay plains.	Highly likely	Unlikely	Nearest record located 200 m to east. Occurs in a variety of habitats. Highly likely to occur across the mulga woodlands/ Acacia shrublands. No individuals recorded during survey, however, some individuals may have been missed, but considered unlikely.
Rostellularia adscendens var. *latifolia*			P3	Various; creeks, plains, low hills.	Likely	Possible	Nearest record located 8.3 km to the south. Suitable habitat present, however no individuals recorded, but may have been missed due to stature of plant
Isotropis parviflora			P2	Undulating ironstone plains.	Likely	Highly unlikely	Nearest record located 2.0 km to the west. Potential for suitable habitat along eastern edge of Study Area, however, no individuals recorded.
Euphorbia stevenii			P3	Clay soils.	Possible	Unlikely	Nearest record located 2.2 km to the south west. Prior to survey, marginal habitat present, which is now considered to be unsuitable.
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 3835)			P3	Mainly on red clay on plains, low in the landscape.	Possible	Unlikely	Nearest record located 6.1 km to the north west. Occurs on red clay plains, with marginal habitat present, although no individuals were recorded.
Xerochrysum boreale			P3	Loamy, sandy or gravelly soils on plains.	Possible	Unlikely	Nearest record located 11.1 km to the north west. Suitable habitat present, but no individuals were recorded.

Species	Conservation Status			Habitat	Likelihood of Occurrence		Comments
	EPBC Act	BC Act	DBCA		Pre-survey	Post-survey	
Acacia effusa			P3	Stony red loam; scree	Possible	Highly unlikely	Nearest record located 8.1 km to the south east. Marginal habitat present, however, no individuals recorded.
Euphorbia clementii			P3	Gravelly hillsides, stony ground.	Possible	Highly unlikely	Nearest record located 5.0 km to the south east. Marginally habitat present along eastern boundary of Study Area. No individuals observed
Goodenia lyrata			P3	Near claypans.	Possible	Highly unlikely	Nearest record located 12.2 km to the north. No suitable habitat present
Swainsona thompsoniana			P3	Creekline, claypan.	Possible	Highly unlikely	Nearest record located 2.2 km to the south. Marginal habitat present but no individuals identified
Acacia daweana			P3	Stony red loamy soils on low rocky rises and along drainage lines.	Unlikely	Highly unlikely	Nearest record located 19.2 km to the south. Marginal habitat present, however no individuals recorded
Acacia subtiliformis			P3	Calcrete platforms.	Unlikely	Highly unlikely	Nearest record located 6.1 km to the east. No calcrete soils present within the Study Area
Thryptomene wittweri	VU	VU		Breakaways and stony creek beds on high mountains (>1,000 m in elevation).	Highly unlikely	Highly unlikely	Nearest record located 20.7 km to the north west. Occurs very high in the landscape and restricted to Mt Meharry in the Pilbara region. No suitable habitat present.
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)			P2	Red-brown skeletal soils, ironstone; steep slopes, summits of tall hills.	Highly unlikely	Highly unlikely	Nearest record located 18.7 km to the north east. Restricted to Mt Robinson, and poorly understood. No suitable habitat present
Eremophila sp. West Angelas (S. van Leeuwen 4068)			P2	Skeletal red-brown soil on hill summits high in the landscape.	Highly unlikely	Highly unlikely	Nearest record located 2.6 km to the west. Occurs high in the landsacpe.
Euphorbia inappendiculata var. *queenslandica*			P2	Heavy clay soils on open plains and gentle slopes.	Highly unlikely	Highly unlikely	Nearest record located 30.0 km to the north west. No suitable habitat present
Hibiscus sp. Mt Brockman (E. Thoma ET 1354)			P1	Gorges, rocky areas.	Highly unlikely	Highly unlikely	Nearest record located 9.2 km to the south. Occurs in gorges and rocky areas high in the landscape
Rhodanthe ascendens			P1	Cracking clay.	Highly unlikely	Highly unlikely	Nearest record located 15.5 km to the east. No suitable habitat, cracking clay soils, is present in the Study Area
Triodia sp. Karijini (S. van Leeuwen 4111)			P1	Skeletal dark orange-brown to red-brown soil on upper slopes and summits of mountains.	Highly unlikely	Highly unlikely	Nearest record located 198.9 km to the north east. Occurs on top of summits, high in the landscape. No suitable habitat present
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)			P2	Hilltops, upper hillslopes.	Highly unlikely	Highly unlikely	Nearest record located 8.5 km to west. Occurs high in the landscape.
Oxalis sp. Pilbara (M.E. Trudgen 12725)			P2	Red-brown loam on rocky hillslopes and in gorges.	Highly unlikely	Highly unlikely	Nearest record located 8.8 km to the west. Generally occurs in shaded gullies, gorges and breakaways high in the landscape

Species	Conservation Status			Habitat	Likelihood of Occurrence		Comments
	EPBC Act	BC Act	DBCA		Pre-survey	Post-survey	
Tetratheca fordiana			P2	Shale pockets amongst ironstone on free rock faces.	Highly unlikely	Highly unlikely	Nearest record located 4.7 km to the south west. Likely to be erroneous as it occurs on mulga flats. Nearest record on suitable habitat is 6.0 km to the south. Occurs on free rock faces high in the landscape
Teucrium pilbaranum			P2	Crab hole floodplains; margins of calcrete tables.	Highly unlikely	Highly unlikely	Nearest record located 10.8 km to the north. No suitable habitat present in the Study Area
Dampiera metallorum			P3	Skeletal red-brown gravelly soil over banded ironstone; steep slopes and hill summits at high elevation.	Highly unlikely	Highly unlikely	Nearest record located 2.2 km to the south, although, likely to erroneous (occurs on wrong habitat). Nearest record on suitable habitat is 9.5 km to the south. No suitable habitat present.
Eremophila magnifica subsp. *velutina*			P3	Skeletal soils over ironstone on summits and breakaways.	Highly unlikely	Highly unlikely	Nearest record located 11.1 km to the north. Occurs on rocky hillslopes and breakaways, high in the landscape.
Eremophila naaykensii			P3	Skeletal red-brown silty loam on hill crests, cliff tops, gorges.	Highly unlikely	Highly unlikely	Nearest record located 2.5 km to the east. Occurs in rocky gullies, gorges, hillslopes and crests. Suitable habitat not present.
Eremophila rigida			P3	Red sand alluvium. Hardpan plains and stony clay depressions.	Highly unlikely	Highly unlikely	Nearest record located 45.1 km to the south. No suitable habitat present, with known records mostly in the Gascoyne bioregion
Geijera salicifolia			P3	Skeletal and stony soils in massive rock scree, rockpiles and gorges.	Highly unlikely	Highly unlikely	Nearest record located 9.2 km to the south. Occurs on massive rock screes, rockpiles and gorges. No suitable habitat present
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)			P3	Red-brown clay soil, typically on calcrete platforms.	Highly unlikely	Highly unlikely	Nearest record located 14.2 km to the south west. No calcrete platforms or soil present in the Study Area
Grevillea saxicola			P3	Upper scree slopes on banded ironstone, usually with Mulga.	Highly unlikely	Highly unlikely	Nearest record located 1.9 km to the north. Occurs high in the landscape with banded ironstone. No suitable habitat present
Indigofera gilesii			P3	Skeletal red-brown loam on rocky slopes, gorges, and creeklines.	Highly unlikely	Highly unlikely	Nearest record located 1 km to east. Occurs in rocky gorges, creeklines and high in the landscape
Olearia mucronata			P3	Hills and rocky drainage channels.	Highly unlikely	Highly unlikely	Nearest record located 2.4 km to the north west. Occurs high in the landscape. No suitable habitat present
Pilbara trudgenii			P3	Skeletal red stony soil over ironstone; hill summits, steep slopes, screes, cliff faces.	Highly unlikely	Highly unlikely	Nearest record located 2.3 km to the north east. Occurs high in the landscape, with no suitable habitat present
Sida sp. Barlee Range (S. van Leeuwen 1642)			P3	Steep slopes, rocky gullies and breakaways.	Highly unlikely	Highly unlikely	Nearest record located 5.9 km to the south. Occurs on steep slopes, breakaways and rocky gullies. No suitable habitat present.
Sida sp. Hamersley Range (K. Newbey 10692)			P3	Base of rocky cliff habitats in red skeletal stony soils or ironstone.	Highly unlikely	Highly unlikely	Nearest record located 8.7 km to the south. Occurs on rocky cliff habitats. No suitable habitat present.

Species	Conservation Status			Habitat	Likelihood of Occurrence		Comments
	EPBC Act	BC Act	DBCA		Pre-survey	Post-survey	
Solanum kentrocaule			P3	Hillsides and mountain crests, creek beds; skeletal red-brown soil over ironstone on basalt or scree.	Highly unlikely	Highly unlikely	Nearest record located 8.8 km to the west. Occurs high in the landscape and in rocky gullies and flowlines.
Stackhousia clementii			P3	Skeletal soils, sandstone hills.	Highly unlikely	Highly unlikely	Nearest record located 26.2 km to the north. No suitable habitat present in the Study Area
Triodia basitricha			P3	Slopes or crests of rocky hills.	Highly unlikely	Highly unlikely	Nearest record located 28.8 km to the north east. No suitable habitat present
Triodia sp. Mt Ella (M.E. Trudgen 12739)			P3	Light orange-brown to red-brown pebbly loam on hill slopes and in gullies.	Highly unlikely	Highly unlikely	Nearest record located 4.7 km to the east. Occurs on hill slopes and gullies.
Acacia bromilowiana			P4	Skeletal loam soils on rocky hills, breakaways, scree slopes, gorges and rocky creek beds.	Highly unlikely	Highly unlikely	Nearest record located 9.1 km to the south east. Occurs high in the landscape on rocky breakaways, screes and gorges.
Eremophila magnifica subsp. *magnifica*			P4	Rocky hillslopes, breakaways.	Highly unlikely	Highly unlikely	Nearest record located 9.1 km to the south. Occurs on rocky hillslopes and breakaways, high in the landscape.
Lepidium catapycnon			P4	Skeletal soils on hill slopes.	Highly unlikely	Highly unlikely	Nearest record located 7.0 km to the north. Occurs on skeletal soils on hillsides. No suitable habitat present.
Ptilotus mollis			P4	Stony hills and screes.	Highly unlikely	Highly unlikely	Nearest record located 19.2 km to the north east

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D.9: West Angelas Development Envelope Consolidated Vegetation Mapping (Angelo River)

Biologic Environmental Survey Pty Ltd
24-26 Wickham Street, East Perth 6004

2 November 2022

Attn: Elizabeth Mason
Senior Advisor, Environmental Approvals
State Agreements and Approvals
Rio Tinto Iron Ore
Level 12, Central Park, 152-158 St Georges Terrace
PERTH, WA 6000

Dear Elizabeth,

Please find attached the short memorandum for the revision of the consolidated vegetation mapping across the Deposit J area. The consolidated mapping covers the overlap between the Beyond 2020 development envelope and the Angelo River Stage 2 study area.

If you have any queries regarding the content of the attached, please do not hesitate to contact me. Thank you in advance.

Yours sincerely,

Clinton van den Bergh
Principal Botanist | Manager of Botany
Clinton@biologicenv.com.au
(08) 6365 5066 | 0439 910 881







West Angelas Development Envelope

Consolidated Vegetation Mapping

Biologic Environmental Survey

Report to Rio Tinto Iron Ore Pty Ltd

November 2022

1 INTRODUCTION

1.1 Background

Biologic Environmental Survey Pty Ltd (Biologic) were commissioned to review and revise, if appropriate, the existing consolidated vegetation mapping for the West Angelas Development Envelope (herein the Development Envelope) in the general Deposit J locality. An area of the Development Envelope that overlaps the Angelo River Study Area (more specifically, Stage 2) (Figure 1.1, herein the Study Area) has previously been poorly sampled, so an opportunity arose to review the mapping utilising the floristic data collected by Biota across Stage 2 of Angelo River (Biota, 2021). The Study Area is 1,568.03 hectares (ha) in size.

The vegetation mapping of the Development Envelope was recently consolidated and corrected to create one overarching vegetation layer with consistent vegetation codes, descriptions and structures (Biologic, 2021b) (Figure 1.2). The consolidated vegetation mapping completed across the Development Envelope utilised the vegetation survey work from the Beyond 2020 scope completed by Biota (2020).

1.2 Scope of Works

The overarching objective was to review and revise the mapping across the Study Area to provide greater confidence and certainty in the consolidated vegetation mapping. The overarching objective was achieved via:

- Reviewing the existing consolidated vegetation mapping of the Study Area against:
    - Recent aerial imagery;
    - Floristic data collected by Biota (2021) in, and adjacent to, the Study Area;
    - Preliminary vegetation mapping completed by Biota (2021) in, and adjacent to, the Study Area;
    - Vegetation mapping completed in, and adjacent to, the Study Area (Biologic, 2021a; Biota, 2020);
- Revising the existing consolidated vegetation mapping of the Study Area;
- Preparing a short memorandum detailing the methods and outcomes of the revision; and
- Providing the spatial data for the revised consolidated vegetation mapping.

660000
670000
680000
690000
7440000
7430000
Great Northern Hwy

LEGEND

- Study Area
- WANG Development Envelope
- State Road

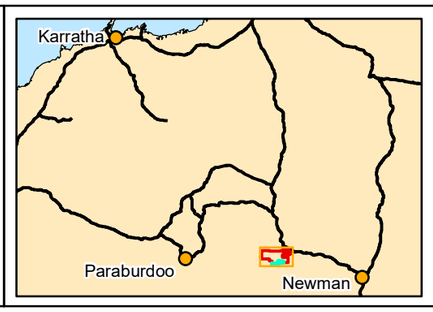
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biologic Environmental Survey

Scale: 1:99,500

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Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 02/11/2022



RIO TINTO IRON ORE

West Angelas - Angelo River Consolidated Mapping

Figure 1.1: Study Area

676000 680000 684000 688000

7432000

7428000

LEGEND

Study Area

WANG Development Envelope

Vegetation Type

D3
H3
H5
H9
H13
H15
P5
P12
P14
Disturbed

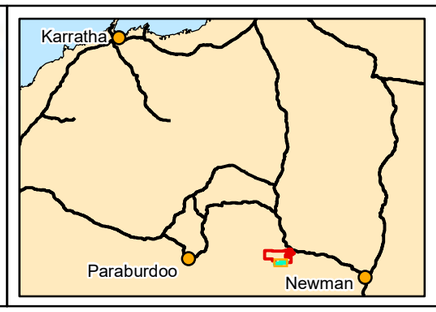
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Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 02/11/2022



RIO TINTO IRON ORE

West Angelas - Angelo River Consolidated Mapping

Figure 1.2: Existing consolidated mapping

2 METHODS

2.1 Review of previous reports and mapping

The previous consolidated vegetation mapping completed by Biologic (2021b) reviewed four main surveys (Biota, 2020; ecologia, 2013; ENV, 2012; Trudgen & Ecaus, 1998) which formed the core of the consolidated mapping, while an additional 14 surveys/ reports were reviewed to provide supporting information and detail (Biologic, 2021b). One further report, Deposit J Riparian Vegetation Survey, completed by Biologic (2021a) was reviewed during the current revision as it partially occurred within the Study Area.

Consolidated vegetation mapping is a process of reviewing recent vegetation surveys, vegetation mapping, floristic data, aerial imagery, and contextual information (i.e., landforms, geology, soil, topography) to consolidate disparities in mapping and descriptions into one overarching dataset. As no one single survey covered the whole extent of the Study Area and the Angelo River survey work has not yet been finalised, the current consolidation reviewed the suite of reports which were also reviewed by Biologic (2021b), with the addition of Biologic (2021a) and Biota (2021).

2.2 Consolidation of previous survey mapping

2.2.1 Classification of vegetation type mapping

As requested in the previous scope from Rio Tinto (Biologic, 2021b), the vegetation types described and delineated by Biota (2020) formed the basis of the consolidated mapping, as it was the most recent and comprehensive mapping to date. As such, the vegetation type descriptions from Biota (2020) was compared to vegetation types and mapping from Biologic (2021a) and Biota (2021). The preliminary vegetation type mapping completed by Biota (2021) for Stage 2 Angelo River was more detailed than the Development Envelope consolidation. As such, the Stage 2 Angelo River mapping was simplified to ensure consistency with the existing consolidation for the Development Envelope.

The riparian vegetation mapping by Biologic (2021a) was very detailed compared to the existing consolidation. As with the Stage 2 Angelo River mapping, the mapping by Biologic (2021a) as simplified to ensure consistency with the existing consolidation vegetation mapping.

The breakdown in the vegetation type similarities across the two new surveys (Biologic, 2021a; Biota, 2021) with the existing vegetation types from the consolidation (Biologic, 2021b) is presented in Appendix A.

2.2.2 Delineation of vegetation type mapping

Following the consolidation of vegetation type descriptions, the delineation of the existing vegetation mapping across the Study Area was reviewed and updated. The linework adjacent was carried into the Study Area to maintain consistency and accuracy, with amendments identified based on the new updated floristic data.

To assist in the vegetation type mapping, recent high resolution aerial imagery, coupled with historical aerial imagery, was reviewed to visualise the variation and nuances in the vegetation types present within the Development Envelope. The review of the aerial imagery was undertaken with and without the previous mapping to ensure the linework was accurate, or alternatively, revised to ensure it is consistent with the landforms, land systems, geology and vegetation observed on the aerial imagery.

The consolidated mapping of the vegetation types was undertaken at a scale of 1:10,000 to ensure the mapping was accurate at a fine scale and consistent with Biologic (2021b).

2.3 Limitations

The following limitations were identified in relation to the accuracy of the vegetation type mapping consolidation and extrapolation mapping completed within the Development Envelope:

- The confidence in the vegetation descriptions and in general terms the mapping, was relatively high, however the descriptions and mapped extent of several vegetation types would benefit from ground-truthing to confirm the extent and description. Several vegetation types within the Study Area were difficult to assign, and have lower confidence:
    - Vegetation types G2/ H3 was difficult to assign based on previous work, resulting in lower confidence and would benefit from ground truthing;
    - Vegetation types H5/ H15 was difficult to assign on the lower slopes, and generally followed the Biota (2021) work but would benefit from ground truthing;
- The alignment and matching of the existing vegetation types along the boundary of the Study Area and Development Envelope was difficult. In general, the Biota (2020) boundary with the Study Area was retained, but this area would benefit from ground-truthing.

3 RESULTS AND CONCLUSION

The review and revision of the consolidated mapping of the Study Area resulted in the amendment of the existing mapping. A total of 10 vegetation types were mapped from the existing consolidated work, while a new vegetation type was mapped in the west of the Study Area, D13, from the Biologic (2021a) survey work. The 11 vegetation types are detailed in Table 3.1 and presented in Figure 3.1.

Table 3.1: Vegetation types mapped in the Study Area

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
Drainage Lines					
D3	ExChPlApyTErTHtTp	*Eucalyptus* open woodland	*Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland *Petalostylis labicheoides*, *Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses.	62.07	3.96
D7	ChAmoTHtTp	*Corymbia* low open woodland	*Corymbia hamersleyana* low open woodland *Acacia monticola* tall shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.	22.55	1.44
D13	ExPlAppTtEmu	*Eucalyptus* open woodland	*Eucalyptus xerothermica* low open woodland *Petalostylis labicheoides, Acacia pyrifolia* tall sparse shrubland *Themeda triandra, Eriachne mucronata* tussock grassland.	68.50	4.37
Gullies and Gorges					
G2	AanCALcCfCAPmPToERImARbTp	*Acacia* low woodland	*Acacia 'aneura', Callitris columellaris* and/or *Corymbia ferriticola* low woodland *Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses.	54.19	3.46
Stony Hillslopes, Hillcrests and Foothills					
H3	AcaElAanTp	*Acacia* low open forest	*Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia, A. 'aneura'*) low open forest *Triodia pungens* open hummock grassland.	88.77	5.66
H5	ChElAmHAgTpTw	*Acacia* open heath	*Corymbia hamersleyana, Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland *Triodia pungens, T. wiseana* hummock grassland.	140.00	8.93
H9	ElCdEgTv	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland *Triodia vanleeuwenii* open hummock grassland.	598.56	38.17
H13	ElEsppTwTsm	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eucalyptus* spp. low open mallee woodland *Triodia wiseana, T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.	180.77	11.53
H15	ElTpTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Triodia pungens* and/or *T. wiseana* open hummock grassland.	345.05	22.01

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
Stony Plains, Sand Plains and Clay Plains					
P5	AanApERfoTp	*Acacia* low woodland	*Acacia 'aneura'* and/or *A. pruinocarpa* low woodland to low open forest *Eremophila forrestii* subsp. *forrestii* open shrubland *Triodia pungens* very open hummock grassland.	7.39	0.47
P12	EgTpTv	*Triodia* open hummock grassland	*Eucalyptus gamophylla* low open mallee woodland *Triodia pungens* and/or *T. vanleeuwenii* open hummock grassland.	0.17	0.01
Total				**1,568.03**	**100**

676000 680000 684000 688000

7432000

7428000

LEGEND

- Study Area
- WANG Development Envelope

Vegetation Type

- D3
- D7
- D13
- G2
- H3
- H5
- H9
- H13
- H15
- P5
- P12
- Disturbed

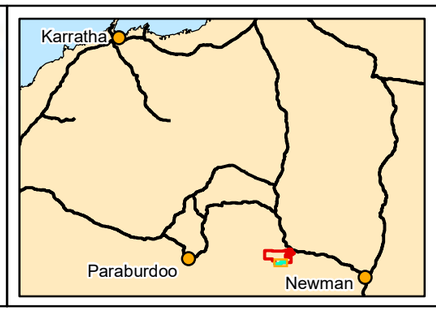
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biologic Environmental Survey

Scale: 1:37,500

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Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 02/11/2022



RIO TINTO IRON ORE

West Angelas - Angelo River Consolidated Mapping

Figure 3.1: Revised consolidated mapping

4 REFERENCES

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Biota. (2020). *West Angelas Beyond 2020 Detailed Flora and Vegetation Survey: Phases 1 and 2*. Unpublished report prepared for Rio Tinto.

Biota. (2021). *Angelo River Stage 2 Phase 1 and Phase 2 Botanical Survey*. Project Number 1449. Leederville, WA:

ecologia. (2013). *Greater West Angelas vegetation and flora assessment*. West Perth, WA:

ENV. (2012). *Angelo River flora and vegetation assessment*. Perth, WA:

Trudgen, & Ecaus. (1998). *Flora and vegetation surveys of Orebody A and Orebody B in the West Angela Hill area, an area surrounding them, and of rail route options considered to link them to the existing Robe River Iron Associates rail line*.

Appendix A: Comparison of Biota (2021)Biota (2021) vegetation types with Biota (2020)Biota (2020)

Landforms	Biota (2021)				Biota (2020)		
	Code	Description	Landform/ Habitat	Notes	Match	Confidence Level	Notes
Minor Drainage Lines	D2	*Corymbia hamersleyana* low open woodland over *Eucalyptus gamophylla* scattered low mallees over *Acacia pyrifolia* var. *pyrifolia* open shrubland over *Triodia pungens* open hummock grassland over mixed scattered tussock grasses	Minor drainage	With mallees and open shrubs, more hummock than tussock	D3	High	Biota 2021 included more minor branching in drainage lines than in either the adjacent Biota 2020 mapping or the previous consolidated mapping. The Biota 2021 veg description doesn't have *Eucalyptus xerothermica* as a dominant, but it is a dominant (1%) in the one site installed in the overlap area (ANG32), and this site also does not have *Eucalyptus gamophylla* presence
	D3	*Corymbia hamersleyana* low open woodland over *Acacia monticola*, (*Gossypium robinsonii*) tall open scrub over *Triodia pungens* very open hummock grassland over *Themeda triandra* open tussock grassland	Minor drainage	With closed shrubs, more tussock than hummock	D7?	Low	Occurs in one area, mapped as a broad run-on area with feeding drains connecting with local D2 (Biota 2021) drainage. Vegetation description appears to have been taken from site ANG-REL02 (which is at the base of a hill and has ecotone characteristics). Pulled back and mapped as D7 (Biota 2020) which is a pretty good match but only mapped around Deposit F North (see notes about D5/D7/D8 (Biota 2020) all being similar units in different area from my previous consolidated mapping notes). Would benefit from ground truthing
Gullies and Gorges	G1	*Acacia catenulata* subsp. *occidentalis, A. pruinocarpa, A. aneura, A. aptaneura, Callitris columellaris* low open forest over *Ptilotus obovatus* var. *obovatus* low open shrubland over *Eriachne mucronata* very open tussock grassland	Sheltered gullies and steep scree slopes in tall hills	Mulga on high sheltered slopes, *Corymbia ferriticola* in top 5 indicator species (floaters out of adjacent gullies?)	G2	Fairly high	This is a fairly typical unit in locality, sheltered upland Mulga over tussocks, often south facing upper slopes, *Dodonaea pachyneura* is a good shrub layer indicator as well. General note - assigning G2/H3 based on previous work and aerials is very difficult and needs ground truthing to increase confidence
	G2	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia ferriticola, C. hamersleyana* low open woodland over *Triodia pungens, T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland	Open gullies in tall hills	Generally occurs lower on slope than G1, more open overstorey with hummock dominated. *Acacia hamersleyensis* in top 5 indicator species	H3	Fairly high	H3 (Biota 2020) has no dominant *Triodia* sp. Mt Ella but otherwise pretty good, H3 was used in adjoining areas in Biota 2020
Clay Plains and Stony Plains	P1	*Eucalyptus leucophloia* subsp. *leucophloia, Corymbia deserticola* subsp. *deserticola* scattered low trees to low open woodland over *E. gamophylla* scattered low mallees over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland.	Gravelly lower hill slopes, pediments and plains	*Triodia vanleeuwenii* dominance, occasional presence of Acacia shrublands as well?	H9	High	Typical in locality - undulating plains/low hills/pediment slope unit, usually species poor (outside of minor drains) and burnt often, *Triodia vanleeuwenii* dominant. Would have been better defined as a Plains unit ('P' alpha-prefix) in Biota 2020
Stony Hillslopes, Hillcrests and Foothills	H1	*Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *E. kingsmillii* low open mallee woodland over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland over *Eriachne mucronata* scattered tussock grasses	Summits of ranges, occasionally upper slopes of tall hills	Mallees distinct? *Triodia* sp. Mt Ella distinct?	H13	High	Mountain top unit, in my experience the mallee species come and go a bit in these upland units. There are also affinities with H11 but that unit was only recorded by Biota 2020 at Dep H and has a different hummock grassland mix
	H2	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Mirbelia viminalis* low open shrubland over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) hummock grassland	Mid and upper slopes of tall hills	Species poor, hummock cover high	H15	Medium to high	H15 (Biota 2020) covers more of the slope, from lower slope right up to upper slopes in some spots, also the Biota 2020 H15 vegetation description should probably have *Corymbia hamersleyana* as a dominant
	H3	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia maitlandii, Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Triodia pungens* open hummock grassland over *Eriachne mucronata* scattered tussock grasses	Low hills and lower slopes of ranges	*Triodia pungens* would likely be associated with gullies and adjacent slopes, and lower nearer to the floodplains	H5, (also H6?, H7?, P12?)	Medium to low	Appears to be best captured under H5 (Biota 2020), where they had used this unit in only one spot in similar landscape position near Dep J. H6 and H7 are broad structural matches but were only used at Western Hill and Dep F North respectively. P12 was used on the northern pediments near Mt Ella but is more of a *Eucalyptus gamophylla* unit and not a great match

Landforms	Biota (2021)				Biota (2020)		
	Code	Description	Landform/ Habitat	Notes	Match	Confidence Level	Notes
Mosaics	M1c	*Acacia catenulata* subsp. *occidentalis, A. pruinocarpa, Corymbia deserticola* subsp. *deserticola* low open woodland over *Eremophila forrestii* subsp. *forrestii* scattered shrubs over *Triodia pungens* open hummock grassland	Undulating gravelly/SCL plains	Gravelly flats intermingled with drainage	P5	Medium to high	Hard to assign units described as mosaics but this one matches the previous use in Biota 2020 at Dep J pretty well

D.10: West Angelas Development Envelope Consolidated Vegetation Mapping

Biologic Environmental Survey Pty Ltd
PO Box 179
Floreat, WA, 6014

12 August 2021

Attn: Elizabeth Mason

Rio Tinto Iron Ore

Level 12, Central Park

152-158 St Georges Terrace

Perth WA 6000

Dear Elizabeth,

Please find below a memo summarising the methods and outcomes of the West Angelas Development Envelope vegetation mapping consolidation undertaken by Biologic Environmental Survey (Biologic).

1. Introduction and Objectives

Biologic were commissioned to consolidate existing vegetation mapping for the West Angelas Revised Proposal Development Envelope (herein the Development Envelope) and extrapolate mapping across additional areas within this boundary where no previous vegetation mapping was available (herein the Extrapolated Area).

Vegetation mapping has previously been undertaken for parts of the Development Envelope as part of the West Angelas Revised Proposal flora and vegetation survey completed in 2019 (Biota, 2020). Additionally, vegetation mapping also exists for various sections of the Development Envelope from numerous surveys, ranging from detailed (formerly Level 2), reconnaissance (Level 1) and native vegetation clearing permit (NVCP) surveys. Combined, previous vegetation mapping has been completed over approximately 98% (40,547.87 hectare (ha)) of the Development Envelope.

Rio Tinto requires mapping of vegetation types within the entirety of the Development Envelope, comprising consolidation of previous mapping and extrapolation of mapping across areas where mapping has not previously occurred to produce a single consolidated mapping layer of vegetation types present.

1.1 Objectives

The overarching objective of this mapping project was to provide a single consolidated mapping layer for vegetation types within the Development Envelope. The key objectives of the mapping were:

- undertake desktop vegetation mapping and provide consolidated vegetation mapping for the entire Development Envelope area. The mapping completed by Biota (2020) is to form the basis of the consolidated vegetation mapping; and
- provide a short technical memo to accompany vegetation mapping data, detailing methods and techniques used and any limitations.

2. Methods

2.1 Review of previous reports and mapping

Vegetation mapping from four surveys (Biota, 2020; ecologia, 2013; ENV, 2012; Trudgen & Ecaus, 1998) previously completed within various parts of the Development Envelope were reviewed and provided source data for the consolidation of mapping across the entire Development Envelope (Table 2.1). These reports dated from 1998 and formed the core of the existing spatial data reviewed. A further 14 reports were also reviewed to provide supporting information and detail with the consolidation mapping. These additional reports were generally smaller in scale, were reconnaissance surveys or only partially covered the Development Envelope (Table 2.1). Consolidated vegetation mapping is a combination of the most recent vegetation surveys covering the West Angelas project area. As no one single survey covered the whole extent of the project area, multiple adjoining surveys were combined, with the most recent survey data taking preference, ensuring no overlap was present. Spatial data was then reviewed to ensure attribute consistency prior to consolidation of vegetation types. A summary of the previous mapping undertaken within the Development Envelope utilised for the consolidation is provided in Table 2.1.

Table 2.1: Previous surveys with vegetation mapping which overlaps the Development Envelope

Report title	Report author	Year	Survey method
West Angelas Beyond 2020 detailed flora and vegetation survey: phases 1 and 2	(Biota, 2020)	2020	Ground-truthed
Greater West Angelas vegetation and flora assessment	(ecologia, 2013)	2013	Ground-truthed
Vegetation and flora survey of West Angelas Deposits E and F	(Biota, 2005)	2005	Ground-truthed
A flora and vegetation survey of the proposed West Angelas gas-fired power station and pipeline corridor	(Biota, 2010)	2010	Ground-truthed
Angelo River flora and vegetation assessment	(ENV, 2012)	2012	Ground-truthed

Report title	Report author	Year	Survey method
West Angelas Deposit G native vegetation clearing permit report	(Biota, 2014b)	2014	Ground-truthed
Desktop Flora, Vegetation and Fauna Habitat Assessment at West Angelas/ Angelo River	(Eco Logical, 2015b)	2015	Ground-truthed
West Angelas gas pipeline native vegetation clearing permit	(Biota, 2019)	2019	Ground-truthed
Flora and vegetation surveys of Orebody A and Orebody B in the West Angela Hill area, an area surrounding them, and of rail route options considered to link them to the existing Robe River Iron Associates rail line	(Trudgen & Ecaus, 1998)	1998	Ground-truthed
West Angelas 2 (AR-14-12516) biological assessment native vegetation clearing permit supporting report	(Eco Logical, 2014)	2014	Ground-truthed
West Angelas deposit F native vegetation clearing permit report	(Biota, 2014a)	2014	Ground-truthed
Western Hill native vegetation clearing permit report	(Biota, 2014c)	2014	Ground-truthed
Flora and vegetation assessment of the proposed West Angelas discharge creekline corridor (WADCC)	Rio Tinto (2009)	2009	Ground-truthed
Statement Addressing the 10 Clearing Principles: West Angelas Deposit C Drill Program	Rio Tinto (2013)	2013	Desktop

2.2 Consolidation of previous survey mapping

2.2.1 Classification of vegetation type mapping

As requested in the scope from Rio Tinto, the vegetation types described and delineated by Biota (2020) formed the basis of the consolidated mapping, as it was the most recent and comprehensive mapping to date. As such, the vegetation type descriptions from Biota (2020) was compared to the remainder of the vegetation mapping (see Table 2.1) to determine similarities. Following review of the vegetation types, the three key reports were used to further assist in the consolidation of the vegetation types mapping, these included ecologia, 2013; ENV, 2012; and Trudgen & Ecaus, 1998.

The vegetation types from these three surveys were compared against the vegetation type description from Biota (2020) to ensure the variation across the vegetation types is captured, including variations in foliage cover of the dominant species within each of the three dominant stratums (i.e., upper, middle, lower). The breakdown in the vegetation type similarities across the four surveys is presented in Appendix A.

2.2.1 Delineation of vegetation type mapping

Following the consolidation of vegetation type descriptions, the delineation of the previous vegetation mapping across the Development Envelope was reviewed and updated. The mapping by Biota (2020) was not altered, with the remainder of the vegetation type mapping extending from this dataset. The linework associated with the previous vegetation mapping within the Development Envelope (outside of the Biota (2020) mapped extent) was reviewed and used as the basis of the mapping. Where relevant the existing linework was utilised in the consolidation mapping, however, more often the linework was altered to ensure consistency with the Biota (2020) mapping and the landforms present.

To assist in the vegetation type mapping, recent high resolution aerial imagery, coupled with historical aerial imagery, was reviewed to visualise the variation and nuances in the vegetation types present within the Development Envelope. The review of the aerial imagery was undertaken with and without the previous mapping to ensure the linework was accurate, or alternatively, revised to ensure it is consistent with the landforms, land systems, geology and vegetation observed on the aerial imagery.

The consolidated mapping of the vegetation types was undertaken at a scale of 1:10,000 to ensure the mapping was accurate at a fine scale.

2.3 Extrapolated vegetation type mapping within previously unmapped areas

Extrapolation of consolidated vegetation type mapping was completed within areas of the Development Envelope where no previous mapping has occurred (the Extrapolation Area). As with the consolidation of previously existing mapping outlined in Section 2.2.1, vegetation type classification was aligned with vegetation types defined by Biota (2020). The scale of mapping was aligned with Biota (2020) and undertaken at a scale of 1:10,000 where possible. This extrapolated mapping was undertaken without any ground-truthing, and as such took also into consideration the following;

- the adjacent vegetation type mapping and associated descriptions;
- aerial imagery – this spatial data can inform broad landforms including the presence of outcropping, gorges and gullies, and mulga-dominant plains.
- topographic data – this data can inform broad landform features such as slope and altitude, which can identify plains, ridges, and gorges.

The attributes of the new mapping were adjusted to reflect the Rio Tinto data standards where possible due to the lack of ground-truthing in these areas.

3. Limitations

The following limitations were identified in relation to the accuracy of the vegetation type mapping consolidation and extrapolation mapping completed within the Development Envelope:

- The consolidation of previous mapping involved a level of interpretation as these processes were done through desktop methods alone, and without ground-truthing via vegetation sampling to verify classification, therefore a degree of error may occur for some areas where

large scale extrapolation has occurred, particularly where landforms and landform features cannot be readily distinguished from aerial imagery (i.e. cracking clay habitat).

- There is a lower confidence in the confirmation of certain vegetation types identified by desktop mapping due to the difficulties in accurately delineating a landform from other landforms of similar appearance in aerial imagery, particularly at the broad scale of mapping implemented (e.g., cracking clay habitat).
- The confidence in the vegetation descriptions and in general terms, the mapping, was relatively high, however, the descriptions and mapped extent of several vegetation types would benefit from ground-truthing to confirm the extent and description.

4. Results and Discussion

The consolidation of the West Angelas vegetation mapping resulted in 49 vegetation types occurring across the Development Envelope (Table 4.1 and Figure 4.1). The 49 vegetation types were delineated from four broad landforms: drainage lines (12 vegetation types); gullies/ gorges (three vegetation types); hills (16 vegetation types); and plains (16 vegetation types), with two vegetation types considered a mosaic of vegetation.

The most extensive vegetation type, M1, covered 5,714 ha (Table 4.1) or 16.46 % of the vegetated extent (34,714 ha) of the Development Envelope. Three vegetation types: M1 (16.46%); H4 (11.27%) and H15 (10.8%), were the most extensive vegetation types covering a total of ~38.5% of the vegetated extent of the Development Envelope, while the remaining 43 vegetation types covered less than 10% each. A total of 23 vegetation types covered less than 1 % of the vegetated extent of the Development Envelope.

Table 4.1: Consolidated Vegetation Types

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
Drainage Lines					
D1	EcEvExPlApyGOsTHtCYaEUaARla	*Eucalyptus* open woodland	*Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland *Petalostylis labicheoides, Acacia pyrifolia* var. *pyrifolia* tall open shrubland over *Gossypium sturtianum* var. *sturtianum* open shrubland *Themeda triandra, Cymbopogon ambiguus, Eulalia aurea, Aristida lazaridis* open tussock grassland.	1.04	0.01
D2	EvAcTErTHtTp	*Eucalyptus* open woodland	*Eucalyptus victrix* low open woodland *Acacia citrinoviridis* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) scattered low shrubs *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses to very open hummock grassland.	564.36	1.35
D3	ExChPlApyTErTHtTp	*Eucalyptus* open woodland	*Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland *Petalostylis labicheoides*, *Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses.	435.36	1.04
D4	AanAcaApTp	*Acacia* woodland	*Acacia 'aneura', A. catenulata* subsp. *occidentalis, A. pruinocarpa* low woodland *Triodia pungens* very open hummock grassland.	6.39	0.02
D5	ChPlAmoTErTHtTp	*Corymbia* low open woodland	*Corymbia hamersleyana* low open woodland *Petalostylis labicheoides, Acacia monticola* tall shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.	17.39	0.04
D6	ChCdAanPlTp	*Corymbia* low open woodland	*Corymbia hamersleyana* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland *Acacia 'aneura', Petalostylis labicheoides* tall open shrubland *Triodia pungens* open hummock grassland.	343.46	0.82
D7	ChAmoTHtTp	*Corymbia* low open woodland	*Corymbia hamersleyana* low open woodland *Acacia monticola* tall shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.	44.94	0.11
D8	ElChPlGOrAmoTHtTp	*Eucalyptus* low open woodland	*Eucalyptus leucophloia* subsp. *leucophloia, Corymbia hamersleyana* low open woodland *Petalostylis labicheoides, Gossypium robinsonii, Acacia monticola* open shrubland *Themeda triandra* tussock grassland over *Triodia pungens* open hummock grassland.	4.96	0.01

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
D9	EtTp	*Eucalyptus* low mallee woodland	*Eucalyptus trivalva* low mallee woodland *Triodia pungens* very open hummock grassland.	28.11	0.07
D10	ExAanANllSsTHt	*Eucalyptus* low woodland	*Eucalyptus xerothermica, Acacia 'aneura'* low woodland *Androcalva luteiflora* open shrubland over *Isotropis* sp. Arid zone (G. Byrne 2775) low open shrubland *Themeda triandra* tussock grassland.	4.48	0.01
D11	ExAanEtPlANlEUsTHtTp	*Eucalyptus* low open woodland	*Eucalyptus xerothermica* and/or *Acacia 'aneura'* low open woodland over *E. trivalva* low open mallee woodland *Petalostylis labicheoides, Androcalva luteiflora* open shrubland *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133) and/or *Themeda triandra* very open tussock grassland with *Triodia pungens* very open hummock grassland.	163.98	0.39
D12	ExEvMbMgANlTHtTloTp	*Eucalyptus* low open woodland	*Eucalyptus xerothermica* and/or *E. victrix* scattered low trees to low open woodland *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Androcalva luteiflora* open shrubland *Themeda triandra* tussock grassland over *Triodia longiceps, T. pungens* very open hummock grassland.	4.74	0.01
Gullies and Gorges					
G1	AanApCfDpHARkPToTp	*Acacia* low open forest	*Acacia 'aneura', A. pruinocarpa, Corymbia ferriticola* low open forest *Dodonaea pachyneura* tall open shrubland over *Harnieria kempeana* subsp. *muelleri*, (*Ptilotus obovatus*) low shrubland *Triodia pungens* very open hummock grassland.	4.77	0.01
G2	AanCALcCfCAPmPToERImARbTp	*Acacia* low woodland	*Acacia 'aneura', Callitris columellaris* and/or *Corymbia ferriticola* low woodland *Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses.	50.86	0.12
G3	CfAmoTHtTp	*Corymbia* low open woodland	*Corymbia ferriticola* low open woodland *Acacia monticola* tall open shrubland *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses.	27.43	0.07
Stony Hillslopes, Hillcrests and Foothills					
H1	AanAayElERfoERlaTpTw	*Acacia* low woodland	*Acacia 'aneura'* and/or *A. ayersiana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low woodland *Eremophila forrestii* subsp. *forrestii*, *E. latrobei* subsp. *latrobei* scattered shrubs *Triodia pungens, T. wiseana* very open hummock grassland.	110.05	0.26
H2	AanERsppTp	*Acacia* low woodland	*Acacia 'aneura'* low woodland *Eremophila jucunda* subsp. *pulcherrima, E. phyllopoda* subsp. *obliqua*, (*E. cuneifolia, E. oppositifolia* subsp. *angustifolia*) open shrubland *Triodia pungens* very open hummock grassland.	454.84	1.09

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
H3	AcaElAanTp	*Acacia* low open forest	*Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia, A. 'aneura'*) low open forest *Triodia pungens* open hummock grassland.	150.09	0.36
H4	AiTw	*Triodia* open hummock grassland	*Acacia inaequilatera* scattered tall shrubs *Triodia wiseana* open hummock grassland.	3,895.82	9.33
H5	ChElAmHAgTpTw	*Acacia* open heath	*Corymbia hamersleyana, Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland *Triodia pungens, T. wiseana* hummock grassland.	186.09	0.45
H6	ElAbTp	*Acacia* open shrubland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Acacia bivenosa* open shrubland *Triodia pungens* open hummock grassland.	152.08	0.36
H7	ElAmTvTp	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees *Acacia maitlandii* scattered shrubs *Triodia vanleeuwenii, T. pungens* open hummock grassland.	2,367.61	5.67
H8	ElCdApTvTp	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland *Acacia pruinocarpa* scattered tall shrubs *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.	2,145.84	5.14
H9	ElCdEgTv	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland *Triodia vanleeuwenii* open hummock grassland.	1,734.36	4.15
H10	ElEgAmPlTvTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. gamophylla* low open mallee woodland *Acacia maitlandii, Petalostylis labicheoides* open shrubland *Triodia vanleeuwenii, T. wiseana* open hummock grassland.	1,630.34	3.90
H11	ElEkAhTvTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. kingsmillii* low open mallee woodland *Acacia hamersleyensis* scattered tall shrubs *Triodia vanleeuwenii, T. wiseana* open hummock grassland.	76.12	0.18
H12	ElERfTpTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees *Eremophila fraseri* subsp. *fraseri* low open shrubland *Triodia pungens* and/or *T. wiseana* open hummock grassland.	27.48	0.07
H13	ElEsppTwTsm	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eucalyptus* spp. low open mallee woodland *Triodia wiseana, T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.	156.11	0.37

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
H14	ElTbrTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees *Triodia brizoides*, (*T. wiseana*) open hummock grassland.	261.96	0.63
H15	ElTpTw	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Triodia pungens* and/or *T. wiseana* open hummock grassland.	3,747.82	8.97
H16	ElTvTpTsm	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Triodia vanleeuwenii*, *T. pungens* and/or *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.	1,926.76	4.61
Mosaics					
M1	AanApTp/AanAcaApERfoTp	*Acacia* low woodland	*Acacia 'aneura', Acacia pruinocarpa* low open woodland/*Acacia 'aneura', A. catenulata* subsp. *occidentalis* and/or *Acacia pruinocarpa* low woodland to low open forest - / *Eremophila forrestii* subsp. *forrestii* open shrubland *Triodia pungens* open hummock grassland/*Triodia pungens* very open hummock grassland.	5,711.02	13.67
M2	AiTw/EtErEsTspp	*Triodia* open hummock grassland/ *Eucalyptus* low open mallee woodland	*Eucalyptus trivalva, E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland *Acacia inaequilatera* scattered tall shrubs/- *Triodia wiseana* open hummock grassland/*Triodia wiseana*, (*T. angusta, T. pungens, T. longiceps*) open hummock grassland.	258.11	0.62
Stony Plains, Sand Plains and Clay Plains					
P1	AanAayApTvTp	*Acacia* low open woodland	*Acacia 'aneura', A. ayersiana, A. pruinocarpa* low open woodland *Triodia vanleeuwenii, T. pungens* open hummock grassland.	167.07	0.40
P2	AanAayERfoTm	*Acacia* low open woodland	*Acacia 'aneura', A. ayersiana* low open woodland *Eremophila forrestii* subsp. *forrestii* open shrubland *Triodia melvillei* open hummock grassland.	402.74	0.96
P3	AanAcaApERfoTp	*Acacia* low woodland	*Acacia 'aneura', A. catenulata* subsp. *occidentalis* and/or *Acacia pruinocarpa* low woodland to low open forest *Eremophila forrestii* subsp. *forrestii* open shrubland *Triodia pungens* very open hummock grassland	664.91	1.59
P4	AanApAayTp	*Acacia* woodland	*Acacia 'aneura', A. pruinocarpa, A. ayersiana* woodland *Triodia pungens* open hummock grassland.	357.93	0.86
P5	AanApERfoTp	*Acacia* low woodland	*Acacia 'aneura'* and/or *A. pruinocarpa* low woodland to low open forest *Eremophila forrestii* subsp. *forrestii* open shrubland *Triodia pungens* very open hummock grassland.	360.60	0.86

Code	Species Code	Broad Floristic Formation	Vegetation Type	Extent	
				ha	%
P6	AanApTp	*Acacia* low open woodland	*Acacia 'aneura', A. pruinocarpa* low open woodland *Triodia pungens* open hummock grassland.	79.94	0.19
P7	AanExERfoERloTHtTwTp	*Acacia* low open woodland	*Acacia 'aneura', Eucalyptus xerothermica* scattered low trees to low open woodland *Eremophila forrestii* subsp. *forrestii* and/or *E. longifolia* very open shrubland *Themeda triandra* scattered tussock grasses over *Triodia wiseana* and/or *T. pungens* open hummock grassland.	1307.60	3.13
P8	AanTHtARcTp	*Themeda* open tussock grassland	*Acacia 'aneura'* scattered tall shrubs *Themeda triandra* scattered tussock grasses to tussock grassland with *Aristida contorta* scattered bunch grasses to bunch grassland over *Triodia pungens* scattered hummock grasses.	177.40	0.42
P9	ApAwTvTp	*Triodia* open hummock grassland	*Acacia pruinocarpa* scattered tall shrubs over *A. wanyu* open shrubland *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.	226.91	0.54
P10	ElAtenAdAmTw	*Acacia* open shrubland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Acacia tenuissima, A. dictyophleba, A. maitlandii* open shrubland *Triodia wiseana* hummock grassland.	32.96	0.08
P11	ElTspp	*Triodia* open hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland *Triodia longiceps* and/or *T. wiseana, T. pungens* open hummock grassland.	667.03	1.60
P12	EgTpTv	*Triodia* open hummock grassland	*Eucalyptus gamophylla* low open mallee woodland *Triodia pungens* and/or *T. vanleeuwenii* open hummock grassland.	1618.75	3.88
P13	ErEsMeTwTa	*Eucalyptus* low open mallee woodland	*Eucalyptus repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland *Melaleuca eleuterostachya* low open shrubland *Triodia wiseana, T. angusta* very open hummock grassland.	41.19	0.10
P14	EtErEsTspp	*Eucalyptus* low open mallee woodland	*Eucalyptus trivalva, E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland *Triodia wiseana*, (*T. angusta, T. pungens, T. longiceps*) open hummock grassland.	1,433.07	3.43
P15	ASpASeARla	*Astrebla* open tussock grassland	*Astrebla pectinata, Astrebla elymoides* and *Aristida latifolia* open tussock grassland	429.67	1.03
P16	AanERfoCHf	*Acacia* tall open shrubland	*Acacia 'aneura'* tall open shrubland *Eremophila forrestii* subsp. *forrestii*, *Rhagodia eremaea* open shrubland *Chrysopogon fallax* scattered tussock grasses	51.25	0.12

660000 670000 680000 690000

7440000

7430000

Great Northern Hwy

Legend

State Road

Vegetation Type

Disturbed
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
G1
G2
G3
H1
H2
H3
H4
H5
H6
H7
H8
H9
H10
H11
H12
H13
H14
H15
H16
M1
M2
P1
P2
P3
P4
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P7
P8
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P14
P15
P16

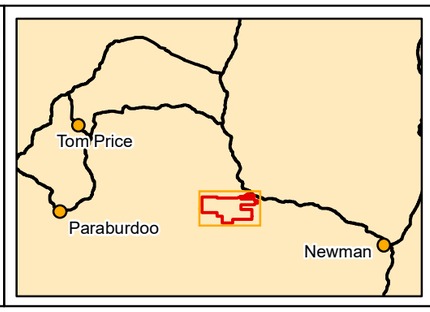
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biologic Environmental Survey

Scale: 1:99,500

0 2 4 Km

Coordinate System: GDA 1994 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA 1994 Created 11/08/2021



RIO TINTO IRON ORE
West Angelas
Vegetation Type Mapping

Figure 4.1: Consolidated vegetation type mapping

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Appendix A: Comparisons across previous vegetation surveys and Biota (2020) vegetation type descriptions

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
Major Drainage Lines	D1	**EcEvExPlApyGOsTHtCYaEUaARla**	*Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* var. *pyrifolia* tall open shrubland over *Gossypium sturtianum* var. *sturtianum* open shrubland over *Themeda triandra*, *Cymbopogon ambiguus*, *Eulalia aurea*, *Aristida lazaridis* open tussock grassland	None					
	D2	**EvAcTErTHtTp**	*Eucalyptus victrix* low open woodland over *Acacia citrinoviridis* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses to very open hummock grassland	**AaPoTt** (part unit equivalent: where mapped over Turee Creek and its smaller tributaries in Deposit C and D; co- dominated by *Eucalyptus victrix*, and dominated by *Acacia citrinoviridis*, *Themeda triandra* and *Triodia pungens*)		split into 3 units: **2cab** **2cac** **6/2ef**	**6/2ef** has Euc vic as dom and Euc cam as ass spp, this is the main Turee Creek; probably more D1 than D2		
	D3	**ExChPlApyTErThtTp**	*Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses	None			**2cab** - page 78 - Ecologia included in D2 but Trudgen's description doesn't have Euc victrix, 2cab may be a better match for D3; areas mapped are the southern 'arm' of Turee Creek and it's tributaries reaching to the north of Deposit J, also the minor feeding creeks into Turee Creek on it's southern side	ExEgPElRUlTHmdCHRf ChPaARcERIp	page 79 page 75; drainage unit in south of Deposit J, some affinity with D3 but is much wider than the drainage line and captures very broad floodplain as well, this is a poorly defined unit
Minor Drainage Lines	D4	**AanAcaApTp**	*Acacia 'aneura', A. catenulata subsp. occidentalis, A. pruinocarpa* low woodland over *Triodia pungens* very open hummock grassland	None					
	D5	**ChPlAmoTErTHtTp**	*Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides, Acacia monticola* tall shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland	None			**5edacl** - page 92 - has one Mulga taxon as ass spp **5edac** - page 91-92 - has Euc gamo as dominant but this may be more of a feature of the location Trudgen used this code for which was mainly draining off the pediment slopes (5eda which is H8)		
	D6	**ChCdAanPlTp**	*Corymbia hamersleyana* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia 'aneura*', *Petalostylis labicheoides* tall open shrubland over *Triodia pungens* open hummock grassland	None			also has affinity with **5edacl** - page 92 - has one Mulga taxon as ass spp **6adb26** - page 108-109 - drains through the Mulga (M1) flood out areas surrounding the main Turee Creek and major creeks to the south		
	D7	**ChAmoTHtTp**	*Corymbia hamersleyana* low open woodland over *Acacia monticola* tall shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland	**EgSggTb** (part unit equivalent: minor drainages with *Triodia pungens* as a dominant and both *Senna artemisioides* subsp. *oligophylla* and *Indigofera monophylla* as associated species)		**5eda**			
	D8	**ElChPlGOrAmoTHtTp**	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Gossypium robinsonii*, *Acacia monticola* open shrubland over *Themeda triandra* tussock grassland over *Triodia pungens* open hummock grassland	**SggTp** (part unit equivalent: where mapped across a minor drainage at Deposit H, and dominated by *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia, Petalostylis labicheoides* etc. and *Triodia pungens*)		**5kdm3**			

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
	D9	**EtTp**	*Eucalyptus trivalva* low mallee woodland over *Triodia pungens* very open hummock grassland	None					
	D10	**ExAanANlSsTHt**	*Eucalyptus xerothermica*, *Acacia* '*aneura*' low woodland over *Androcalva luteiflora* open shrubland over *Isotropis* sp. Arid zone (G. Byrne 2775) low open shrubland over *Themeda triandra* tussock grassland	**AaTt** (part unit equivalent: small section near northern boundary at Deposit H; where middle stratum dominated by *Isotropis* sp. Arid zone (G. Byrne 2775))		**None reported**			
	D11	**ExAanEtPlANlEUsTHtTp**	*Eucalyptus xerothermica* and/or *Acacia 'aneura'* low open woodland over *E. trivalva* low open mallee woodland over *Petalostylis labicheoides*, *Androcalva luteiflora* open shrubland over *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133) and/or *Themeda triandra* very open tussock grassland with *Triodia pungens* very open hummock grassland	**AaTt** (part unit equivalent: where mapped across drainages with *Eucalyptus xerothermica* and/or '*Acacia aneura'* and *E. trivalva*)		**None reported**	**6adb26** - page 108-109 - has Euc trivalva as ass spp		
	D12	**ExEvMbMgANlTHtTloTp**	*Eucalyptus xerothermica* and/or *E. victrix* scattered low trees to low open woodland over *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Androcalva luteiflora* open shrubland over *Themeda triandra* tussock grassland over *Triodia longiceps*, *T. pungens* very open hummock grassland	None					
Gullies and Gorges	G1	**AanApCfDpHARkPToTp**	*Acacia 'aneura', A. pruinocarpa, Corymbia ferriticola* low open forest over *Dodonaea pachyneura* tall open shrubland over *Harnieria kempeana* subsp. *muelleri,* (*Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland	None					
	G2	**AanCALcCfCAPmPToERlmARbTp**	*Acacia 'aneura', Callitris columellaris* and/or *Corymbia ferriticola* low woodland *over Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland over *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses	**AaPoTp** (part unit equivalent: where mapped across gorge habitats with *Callitris* dominant)			**5edbs** - page 94 - doesn't have overstorey, described for rock faces and debris slopes high in landscape, poor fit **5edbr** - page 94 - on steep slopes; lacks Callitris and Cor ferr but has mallees, poor fit, may be more like H3? **5edag -** page 93 - may be more like G3? Trudgen's description lacks Call col and also has Tr melvillei which is unusual to have on the gorges		
	G3	**CfAmoTHtTp**	*Corymbia ferriticola* low open woodland over *Acacia monticola* tall open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses	None					
Clay Plains and Stony Plains	P1	**AanAayApTvTp**	*Acacia 'aneura', A. ayersiana, A. pruinocarpa* low open woodland over *Triodia vanleeuwenii, T. pungens* open hummock grassland	**AaTb** (assuming that *Triodia "basedowii"* refers to *T. vanleeuwenii*) **AaTp** (part unit equivalent: where mapped on stony elevated habitats; e.g. small sections at Deposit F North)					
	P2	**AanAayERfoTm**	*Acacia 'aneura', A. ayersiana* low open woodland over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia melvillei* open hummock grassland	None					
	P3	**AanAcaApERfoTp**	*Acacia 'aneura', A. catenulata* subsp. *occidentalis* and/or *Acacia pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland	**AaTspp** (part unit equivalent: where mapped on stony floodplain habitats) **AaTp**				**6adb231** - page 107 - banded mulga on plains **5edb -** page 93-94 - I've mapped as P3 where there is banded sheet flow vegetation, M1 where it is not clear		
	P4	**AanApAayTp**	*Acacia 'aneura', A. pruinocarpa, A. ayersiana* woodland over *Triodia pungens* open hummock grassland	**AaTp**					

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
	P5	**AanApERfoTp**	*Acacia 'aneura'* and/or *A. pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland	**AaTssp** (part unit equivalent: where mapped on floodplain and low-lying areas with higher clay content and a dense canopy cover of *Acacia* '*aneura*') **PsTp** **AaTt** (part unit equivalent: where mapped on floodplains with *Eucalyptus xerothermica* and *Acacia* '*aneura*' as dominants).			**6adb213** - page 105 - this is the best fit based on the dominant taxa, position in landscape etc		
	P6	**AanApTp**	*Acacia 'aneura', A. pruinocarpa* low open woodland over *Triodia pungens* open hummock grassland	**AaTssp** (part unit equivalent: where mapped on floodplain and low-lying areas with open canopy cover of *Acacia* '*aneura*') **AaTp** (part unit equivalent: where mapped over areas with sparse Acacia 'aneura' and dense spinifex (Triodia pungens) cover				AaApAcaTp	page 69
	P7	**AanExERfoERloT HtTwTp**	*Acacia* '*aneura*', *Eucalyptus xerothermica* scattered low trees to low open woodland over *Eremophila forrestii* subsp. *forrestii* and/or *E. longifolia* very open shrubland over *Themeda triandra* scattered tussock grasses over *Triodia wiseana* and/or *T. pungens* open hummock grassland	**AaTt** (part unit equivalent: where mapped on floodplains with *Eucalyptus xerothermica* and *Acacia* '*aneura*' as dominants).			**2cac -** page 79		
	P8	**AanTHtARcTp**	*Acacia 'aneura'* scattered tall shrubs over *Themeda triandra* scattered tussock grasses to tussock grassland with *Aristida contorta* scattered bunch grasses to bunch grassland over *Triodia pungens* scattered hummock grasses	None					
	P9	**ApAwTvTp**	*Acacia pruinocarpa* scattered tall shrubs over *A. wanyu* open shrubland over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland	None					
	P10	**ElAtenAdAmTw**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia tenuissima*, *A. dictyophleba*, *A. maitlandii* open shrubland over *Triodia wiseana* hummock grassland	**ApTssp** (part unit equivalent: where mapped across the same polygon at Deposit H; and dominated by a mix of *Acacia* taxa and *Triodia wiseana*, together with overstorey of *Eucalyptus leucophloia* subsp. *leucophloia*)					
	P11	**ElTspp**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia longiceps* and/or *T. wiseana, T. pungens* open hummock grassland	None			**11kb** - page 121		
	P12	**EgTpTv**	*Eucalyptus gamophylla* low open mallee woodland over *Triodia pungens* and/or *T. vanleeuwenii* open hummock grassland	**EgSggTb** (part unit equivalent; where mapped over stony plains/floodplains (e.g. small sections of Deposit J/Mt Ella East and Deposit F North)	**SggAbTp -** lacks Euc gamo but is in the correct landscape position; covers large areas of the north and south pediment slopes		**5eda** - page 91	None?? (Dig further)	
	P13	**ErEsMeTwTa**	*Eucalyptus repullulans*, *E. socialis* subsp. *eucentrica* low open mallee woodland over *Melaleuca eleuterostachya* low open shrubland over *Triodia wiseana*, *T. angusta* very open hummock grassland	**AmTw** (part unit equivalent; where mapped over a small calcareous plain dominated by mallee Eucalypt taxa, *Melaleuca eleuterostachya* and *Triodia angusta*)					
	P14	**EtErEsTspp**	*Eucalyptus trivalva, E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Triodia wiseana,* (*T. angusta, T. pungens, T. longiceps*) open hummock grassland	**AmTw** (part unit equivalent; where mapped over a small calcareous plain dominated by mallee Eucalypt taxa, *Triodia angusta*, *T. pungens* and *T. longiceps*)				ErEt(AbMe)Tw	page 64

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
	P15 (new)	ASpASeARla	*Astrebla pectinata, Astrebla elymoides* and *Aristida latifolia* open tussock grassland (**not mapped by Biota, 2020**)		**AlAp**		**8db/8dc** - page 116 - Tussock grassland (Astrebla spp, Aristida latifolia) on cracking clay depressions/plains (this is what was used to describe the cracking clay PEC) 8dd - page 116 - Astrebla squarr TG on floodout, one occurrence, best fit		
	P16 (new)	AanERfoCHf	*Acacia 'aneura'* tall open shrubland *Eremophila forrestii* subsp. *forrestii, Rhagodia eremaea* open shrubland *Chrysopogon fallax* scattered tussock grasses (**not mapped by Biota, 2020**)				**6adb214** - page 106 - Mulga TOS over Erem forr OS over STG, including Astrebla ely, Erag set on cracking clay (more open TG and more shrub cover than P15)		
Stony Hillslopes, Hillcrests and Foothills	H1	**AanAayElERfoERlaTpTw**	*Acacia* '*aneura*' and/or *A. ayersiana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low woodland over *Eremophila forrestii* subsp. *forrestii*, *E. latrobei* subsp. *latrobei* scattered shrubs over *Triodia pungens*, *T. wiseana* very open hummock grassland	**AaPoTp** **AaSaoTp** (part unit equivalent; where mapped on stony elevated habitats with clay loam soils (i.e. not including areas of this unit mapped in drainages and on floodplains with higher clay content)					
	H2	**AanERsppTp**	*Acacia 'aneura'* low woodland over *Eremophila jucunda* subsp. *pulcherrima, E. phyllopoda* subsp. *obliqua,* (*E. cuneifolia, E. oppositifolia* subsp. *angustifolia*) open shrubland over *Triodia pungens* very open hummock grassland	None			**5edbt -** page 95 - where the lower and pediment slopes have been mapped as 5edbr		
	H3	**AcaElAanTp**	*Acacia catenulata* subsp. *occidentalis,* (*Eucalyptus leucophloia* subsp. *leucophloia*, *A.* '*aneura*') low open forest over *Triodia pungens* open hummock grassland	None			**5edbt -** page 95, not sure about this east of Western Hill, I think H2 is a better fit following Biota's use of H2 for the upland Mulga on slopes at Western Hill	ElDvTmeTHmb	page 53
	H4	**AiTw**	*Acacia inaequilatera* scattered tall shrubs over *Triodia wiseana* open hummock grassland	**SgglrTw**			**8bj** - page 115		
	H5	**ChElAmHAgTpTw**	*Corymbia hamersleyana, Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia pungens, T. wiseana* hummock grassland	None				ElChAmHAgTpTw	page 48
	H6	**ElAbTp**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* open shrubland over *Triodia pungens* open hummock grassland	None					
	H7	**ElAmTvTp**	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii* scattered shrubs over *Triodia vanleeuwenii, T. pungens* open hummock grassland	**ElIAmTssp** **SggTp** **ApTssp**	**Tp** in some areas		**5kdm1** - page 98		
	H8	**ElCdApTvTp**	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia pruinocarpa* scattered tall shrubs over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland	None			**5eda** - page 91		

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
	H9	**ElCdEgTv**	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland over *Triodia vanleeuwenii* open hummock grassland	**ApTspp:** (broadly equivalent for the one intersecting polygon at Deposit F North, where mapped across low undulating hills with *Triodia vanleeuwenii* as an associated species) **ElIAmTspp** (part unit equivalent: only where intersecting polygons at Deposit F North, where mapped across low undulating hills and dominated by Eucalyptus gamophylla) **SggTp** (part unit equivalent: only where mapped across low undulating hills at Deposit F North, dominated by Eucalyptus gamophylla)				EgAaAbTsh ElAmTshTw	page 56, on pediment slopes page 42; hilltop unit and incorporates some north facing slopes, some affinity with H9
	H10	**ElEgAmPlTvTw**	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. gamophylla* low open mallee woodland over *Acacia maitlandii*, *Petalostylis labicheoides* open shrubland over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland	**AmTw** (part unit equivalent: where mapped on hillcrests at Deposit H, and dominated by *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia maitlandii* and *Triodia wiseana*) **ApTssp** (part unit equivalent: where mapped on hillcrests) **ElIAmTssp** **ElISggTp** (part unit equivalent: where mapped on hills at Deposit H - with no Acacia marramamba) **SggTp** (part unit equivalent: where mapped at Deposit F North on high hillcrests/hillslopes with Eucalyptus gamophylla)			**5kdm2 -** page 98 - doesn't have Euc gamo or Tr van though		
	H11	**ElEkAhTvTw**	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. kingsmillii* low open mallee woodland over *Acacia hamersleyensis* scattered tall shrubs over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland	None					
	H12	**ElERfTpTw**	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eremophila fraseri* subsp. *fraseri* low open shrubland over *Triodia pungens* and/or *T. wiseana* open hummock grassland	None					
	H13	**ElEsppTwTsm**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eucalyptus* spp. low open mallee woodland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland	None					
	H14	**ElTbrTw**	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia brizoides*, (*T. wiseana*) open hummock grassland	None			**5kdm1** - page 98 - open exposed slopes with had spini at the west of Deposit H		
	H15	**ElTpTw**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* and/or *T. wiseana* open hummock grassland	None				ElCdEgTshTp	page 47

Landforms	Biota 2020			Ecologia 2013		Trudgen 1998		ENV 2012	
	Code	Alpha Code	Description	Equivalent Unit - as reported in Biota 2020	Equivalent Unit - My Notes	Equivalent Unit - as reported in Table 6.6 Ecologia 2013	Equivalent Unit - My Notes	Equivalent Unit - My Notes	
	H16	**ElTvTpTsm**	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia vanleeuwenii, T. pungens* and/or *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland	**Tp** (part unit equivalent; where mapped on hillcrests and hillslopes)			**5edad -** page 92 - abuts Biota mapping at Western Hill, has dense Acacia mid storey and doesn't have Tr sp.ME, poor fit **5ecaa** - page 84 - lower on the slopes/pediment but best fit **5edaf -** page 93 - one hilltop on range south of Western Hill and some upland plains on range west of Deposit J, I've mapped as H15 west of Deposit J to connect with Biota's mapping **5edae -** page 92-93 - describes veg lacking overstorey dominance on gullies and debris slopes, some affinity with H2/H3 or possibly G2 in the tighter gorges **5kd3r** - page 96 - has Tr. sp ME		
Mosaics	M1	**AanApTp/AanAcaApERfoTp**	Mosaic: as per P6 and P3	See individual units above.			**5edb** - page 93-94 - has Erem forr as ass spp; described for colluvial fans and low slopes surrounding Turee Creek near Western Hill; probably more like P3 than P6 **6adb215** - page 106 - open grassland/spini unit, only shrub spp is mulga as ass spp		
	M2	**AiTw/EtErEsTspp**	Mosaic: as per H4 and P14	**SgglrTw** (for the AiTw component of the mosaic only, part unit equivalent: where mapped on areas of basalt dominated by *Acacia inaequilatera* and *Triodia wiseana*, with *Senna* spp. and *Indigofera rugosa* as associated species)					

D.11: West Angelas Beyond 2020 Detailed Flora and Vegetation Survey: Phases 1 and 2

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Biota Environmental Sciences

West Angelas Beyond 2020 Detailed Flora and Vegetation Survey: Phases 1 and 2







Prepared for Rio Tinto

March 2020

© Biota Environmental Sciences Pty Ltd 2020
ABN 49 092 687 119
Level 1, 228 Carr Place
Leederville Western Australia 6007
Ph: (08) 9328 1900 Fax: (08) 9328 6138

Project No.: 1394

Prepared by: P.L de Kock, R. Mason, S. Colwill, R. Warner

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West Angelas Detailed Flora and Vegetation Ph 1 and Ph 2

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1.0 Executive Summary

As part of an Order of Magnitude Study, Rio Tinto is evaluating the potential development of a number of iron ore deposits in the West Angelas locality, near Newman in the Pilbara region of Western Australia (WA). The West Angelas Order of Magnitude Study survey area (the 'study area') covers an extent of approximately 11,570 ha and consists of five deposits: Western Hill, Deposit F North, Deposit H, Deposit J and Mt Ella East (Deposit J and Mt Ella East are adjacent and are addressed together throughout this report).

Botanical surveys had been conducted over parts of the study area, however some did not meet the requirements of a two-phase detailed survey or would not be considered current (i.e. they were conducted more than 6 years ago). As a result, additional survey work was required to elevate the data for the entire study area to meet current Environmental Protection Authority (EPA) expectations for detailed botanical surveys for environmental impact assessment (EIA) (as per EPA 2016a).

Rio Tinto commissioned Biota Environmental Sciences (Biota) to undertake a desktop assessment and a two-phase detailed flora and vegetation survey of the study area. This report documents the two-phases of additional detailed botanical survey work completed in the study area in August/September 2018, and April 2019.

The current survey focused on rationalisation of previously completed mapping, which covered more than half of the study area. A total of 125 quadrats and 55 relevés were assessed in the study area during the current surveys, with 80 of the quadrats and four relevés resampled in 2019. This total comprised 67 sites at Western Hill (47 quadrats and 20 relevés), 19 sites at Deposit F North (12 quadrats and seven relevés) and 42 sites at Deposit J/Mt Ella East (32 quadrats and 10 relevés), together with 52 sites (34 quadrats and 18 relevés) established at Deposit H in Phase 2. The data from 149 sampling sites previously assessed in the study area were also consolidated through the desktop assessment (31 quadrats and 44 relevés at Western Hill, 33 quadrats at Deposit H, 24 quadrats and seven relevés at Deposit F North, and 10 quadrats at Deposit J/Mt Ella East). Further, a total of 438 mapping notes were recorded in the study area in 2018-2019.

A total of 45 vegetation types have been described for the study area, comprising 39 vegetation units described by the current study, in addition to six historical units. Two additional units comprise mosaics that each incorporate two vegetation types. Approximately 513 ha of the study area have been cleared, not including some recently cleared areas that have not been captured digitally. The remaining intact vegetation was in Excellent or Very Good condition. The areas in Very Good condition contained higher numbers of weeds, particularly Bipinnate Beggartick (**Bidens bipinnata*), and were typically confined to drainage lines, gullies and gorges, in addition to clay plains.

None of the vegetation units mapped for the study area represent Threatened Ecological Communities or Priority Ecological Communities, and none are considered to be restricted to the study area, however the following vegetation types were considered to be of elevated conservation significance:

- High local significance:
  - D1 is groundwater dependent vegetation (GDV) dominated by *Eucalyptus camaldulensis* subsp. *refulgens* (Rivergum);
  - D2 represents potential GDV, dominated by *Eucalyptus victrix* (Coolibah).
- Moderate local significance:
  - 15 units supported large numbers of Priority 2 and/or Priority 3 flora species (D8 and D11 in drainage lines; H2, H6, H8, H10, H13, H14, H15 and H16 on hills; P3 and P8 on clay plains; and G1, G2 and G3 in gorges and gullies).
  - Three units appeared to have a limited representation in the locality (D10 in a major drainage line; and P13 and P14 on calcareous plains).

A total of 643 native vascular flora taxa from 188 genera and 58 families have been recorded from the study area to date (based on previous and current surveys combined). The high number of species recorded reflects the large size of the study area, and the diverse array of landforms and geological units included within it. Western Hill in particular appears to have a high species richness for an area of this size.

No Threatened flora species have been recorded from the study area or are expected to occur. Twenty-one Priority flora taxa are known from the study area: 18 species were recorded during the current survey, and the remaining three species were recorded during previous surveys. The species comprised:

- five Priority 2 species: *Aristida lazaridis, Eremophila pusilliflora, Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708), *Isotropis parviflora* and *Oxalis* sp. Pilbara (M.E. Trudgen 12725);
- 13 Priority 3 species: *Acacia effusa, Aristida jerichoensis* var. *subspinulifera, Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola, Indigofera gilesii, Olearia mucronata, Pilbara trudgenii, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Rostellularia adscendens* var. *latifolia, Sida* sp. Barlee Range (S. van Leeuwen 1642), *Sida* sp. Hamersley Range (K. Newbey 10692), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739); and
- three Priority 4 species: *Acacia bromilowiana, Goodenia nuda* and *Lepidium catapycnon.*

In addition, 15 introduced flora species (weeds) are known from the study area; 11 species were recorded in 2018/2019 and the remaining four species were recorded previously. None of the species are listed as declared pests under the WA *Biosecurity and Agriculture Management Act 2007,* however **Rumex vesicarius* (Ruby Dock), **Cenchrus ciliaris* (Buffel Grass), **Malvastrum americanum* (Spiked Malvastrum) and **Setaria verticillata* (Whorled Pigeon Grass) are considered serious environmental weeds.

One other feature of conservation significance is located in the vicinity of the study area: the original boundary of the Hamersley Range National Park (now included within Karijini National Park) was listed on the Register of the National Estate (RNE) and is therefore considered an Environmentally Sensitive Area. The boundary of the RNE area is 600 m west of the Western Hill deposit area, while the current Karijini National Park boundary joins the western boundary of Western Hill.

2.0 Introduction

2.1 Project Background

As part of an Order of Magnitude (OoM) Study, Rio Tinto is evaluating the potential development of a number of iron ore deposits in the West Angelas locality, near Newman in the Pilbara region of Western Australia. The West Angelas OoM Study survey area (hereafter the 'study area') covers an extent of approximately 11,570 ha and consists of five deposits: Western Hill, Deposit F North, Deposit H, Deposit J and Mt Ella East. Deposit J and Mt Ella East are adjacent and are addressed together as 'Deposit J/Mt Ella East' throughout this report.

Botanical surveys had been conducted over parts of the study area, however some did not meet the requirements of a two-phase detailed survey. In addition some of these surveys were no longer considered current (i.e. they were conducted more than 6 years ago). As a result, additional survey work was required, at varying levels, to elevate the existing data for the entire study area to meet current Environmental Protection Authority (EPA) expectations for detailed botanical surveys for environmental impact assessment (EIA) (as per EPA 2016a). A breakdown of the study area by deposit size is provided in Table 2.1, along with the survey requirements for each deposit.

Table 2.1: Summary of deposits and survey effort required for the West Angelas study area.

Deposit	Size (ha)	Survey Required	
		Dry Season (2018; Phase 1)	Wet Season (2019; Phase 2)
Western Hill	4,323	✓	✓
Deposit H	3,705		✓
Deposit J/Mt Ella East	2,898	✓	✓
Deposit F North	644	✓	✓
Total	11,570		

2.2 Scope and Objectives

Rio Tinto commissioned Biota in July 2018 to undertake a two-phase detailed flora and vegetation survey of the study area consistent with the requirements of EPA (2016a). This report documents the methods, results and key findings of both phases of the vegetation and flora survey conducted in the study area.

The specific objectives of the survey were:

1. Undertake a desktop assessment.
2. Undertake a seasonal field survey within Western Hill, Deposit J/Mt Ella East and Deposit F North, and a single-phase dry season survey at Deposit H. The surveys aimed to:
   - describe, photograph and map the dominant vegetation units;
   - assess vegetation condition;
   - identify any vegetation units of conservation significance;
   - compile a list of vascular flora species recorded in the study area;
   - record and photograph flora of particular conservation significance, including Threatened and Priority species and any other species of interest; and
   - record any introduced flora species (weeds) occurring in the study area.

Table 2.2 has been prepared to summarise key information, as required by the scope of works for this study.

Table 2.2: Summarised information for the current study area.

Size of the study area	11,570 ha
Type of survey	Detailed survey: • two-phase survey for Western Hill, Deposit J/Mt Ella East and Deposit F North; • single-phase survey for Deposit H.
Survey timing	Phase 1: • 21 August – 1 September 2018 • 10 – 14 September 2018 Phase 2: • 3 – 12 April 2019
Relevant standards / guidance statements	• EPA "*Technical Guidance – Flora and Vegetation Surveys for* Environmental *Impact Assessmen*t" (EPA 2016a); • EPA "*Environmental Factor Guideline: Flora and Vegetation*" (EPA 2016b); • Rio Tinto Data Standards 2019.
Survey limitations	As detailed in Table 3.5.

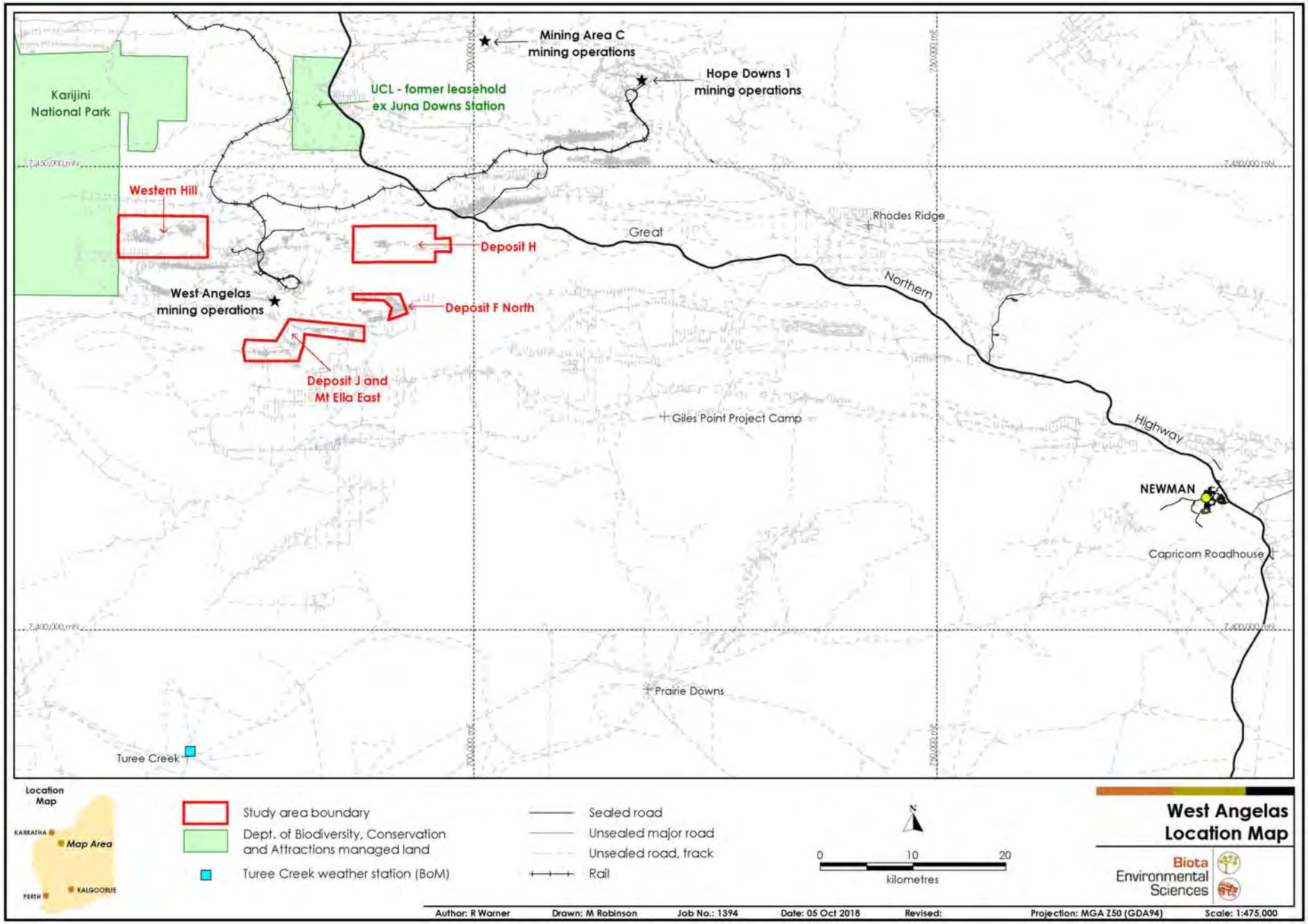


Figure 2.1: Location of the study area.

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3.0 Methodology

3.1 Desktop Review

A desktop review was undertaken to identify flora and vegetation features of conservation significance that had already been recorded within the study area or that were known from the broader locality. Further information regarding the framework for conservation significance ranking of communities and species in WA is presented in Appendix 1. The desktop review was also used to assess the level of biological survey work that had been completed previously in the study area, which informed the design of the current survey, particularly with respect to the survey effort required (see Section 3.2).

The review considered regional information, previous biological surveys in the locality, and the results of various database searches, as discussed in the following sections.

3.1.1 Database Searches

The following databases were searched to assist in the determination of the potential botanical features of significance in the study area:

1. NatureMap[1] was searched to identify flora species that had previously been recorded in the locality. This database is the most comprehensive source of information on the distribution of WA's flora, and comprises records from the WA Threatened and Priority Flora Database and the WA Herbarium Specimen Database (all maintained by the Department of Biodiversity, Conservation and Attractions (DBCA)).
2. A specific search of the DBCA's Threatened and Priority Flora Database was also commissioned to confirm the Threatened and Priority flora species known from the locality.
3. The DBCA's database of Threatened Ecological Communities (TECs), Priority Ecological Communities (PECs) and Environmentally Sensitive Areas (ESAs) was searched to identify significant communities known to occur in the locality.
4. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool was used to identify Federally-listed conservation significant communities and flora species that may occur in the locality.

The searches were conducted using a buffer of 40 km around a centroid of 679586 mE, 7436535 mN. The NatureMap search was conducted on 7/08/2018, the DBCA searches were conducted on 12/08/2018 and the EPBC Act search was conducted on 1/11/2018. Results are provided in Appendix 2 for those searches that were conducted using publicly available tools (i.e. the NatureMap and EPBC Act searches).

In addition, the outputs from Rio Tinto's and Biota's internal databases of conservation significant species and weeds from previous studies in the locality (within 20 km) were reviewed.

3.1.2 Literature Review

Published and unpublished reports relevant to the study area were reviewed. These included several regional-scale reports and datasets, including a summary of information for the biological subregion (Kendrick 2003), land systems mapping (van Vreeswyk et al. 2004) and vegetation description and mapping by Beard (1975a, 1975b).

Additionally, a number of botanical surveys previously undertaken in the locality were reviewed (see Section 4.8).

[1] http://naturemap.dpaw.wa.gov.au

3.1.3 Ranking of Conservation Significant Flora

The results from the literature review and database searches were used to compile a list of conservation significant flora species that had previously been recorded from the locality (see Appendix 3). The likelihood that each species would occur in each deposit within the study area was then assessed using the rankings and criteria provided in Table 3.1. Through the remainder of this report, the term "close proximity" has been defined as being within 20 km of the study area, while the broader "locality" comprises the area up to 40 km from the study area.

Table 3.1: Ranking system used to assign the likelihood that a species would occur in the study area.

Rank	Criteria
Recorded	1. The species has been previously recorded in the study area.
Likely to occur	1. There are existing records of the species in close proximity to the study area (within 20 km); and 2. the species is strongly linked to a specific habitat, which is present in the study area; or 3. the species has more general habitat preferences, and suitable habitat is present.
May potentially occur	1. There are existing records of the species from the locality (within 40 km), however • the species is strongly linked to a specific habitat, of which only a small amount is present in the study area; or • the species has more general habitat preferences, but only some suitable habitat is present. 2. There is suitable habitat in the study area, but the species is recorded infrequently in the locality.
Unlikely to occur	1. The species is linked to a specific habitat, which is absent from the study area; or 2. Suitable habitat is present, however there are no existing records of the species from the locality despite reasonable previous search effort in suitable habitat; or 3. There is some suitable habitat in the study area, however the species is very infrequently recorded in the locality.
Would not occur	1. The species is strongly linked to a specific habitat, which is absent from the study area; and/or 2. The species' range is very restricted and would not include the study area.

Two rankings have been provided:

1. An initial assessment was made during the desktop review (see Appendix 3). This was based on consideration of the overall distribution of the species, the proximity of the study area to known populations, the reliability and age of any historic records, and, if the species was known to be linked to particular habitats, whether suitable habitat appeared to be present in the study area based on inspection of aerial photography and/or existing information.
2. The likelihood rankings were subsequently revised as necessary based on the findings of the field surveys (see Appendix 3). Where the initial and final likelihood rankings were different, the reason was provided.

3.2 Field Survey

3.2.1 Survey Team and Timing

The Phase 1 field survey was conducted by teams of Biota botanists over two separate trips:

- Trip 1: 21st August – 1st September 2018: Michi Maier, Pierre-Louis de Kock, Rebecca Mason, Simon Colwill, Brian Morgan and Calum Irvine.
- Trip 2: 10th – 14th September 2018: Michi Maier, Pierre-Louis de Kock, Rebecca Mason, Michael Greenham, Brian Morgan and Calum Irvine.

The Phase 2 field survey of the study area was conducted over nine days (3rd – 12th April 2019) by a team of four Biota botanists, all of whom, except for Dr Sylvie Schmidt, were present during Phase 1

(Table 3.2). Approximately 38 person days were spent on the Phase 2 survey. Excluding travel time, a total of 122 person days were spent on the field component of this study.

Table 3.2: Summary of personnel involved in the West Angelas Phase 1 flora and vegetation surveys.

Name	Position at Biota	Qualification	Years of Experience	Survey Role	Flora Licence No.
Michi Maier	Director / Principal Botanist	BSc. Hons	27	Project Director Quadrat sampling Rare flora searches	SL012300
Pierre-Louis de Kock	Senior Botanist / Specialist Taxonomist	BSc.	12	Project Manager Vegetation mapping Rare flora searches	SL012303, FB62000034
Brian Morgan	Senior Botanist	BSc. Hons	18	Quadrat sampling Rare flora searches	SL012339, FB62000075
Rebecca Mason	Botanist	BSc.	7	Quadrat sampling Rare flora searches	SL012205
Simon Colwill	Botanist	BSc.	7	Quadrat sampling Rare flora searches	SL012305, FB62000037
Michael Greenham	Senior Biologist	BSc. Hons	17	Rare flora searches (Phase 1 only)	NA†
Dr Sylvie Schmidt	Zoologist	PhD, MBA, BSc. Hons	15	Quadrat sampling Rare flora searches (Phase 2 only)	NA†
Calum Irvine	Graduate Botanist	BSc.	<1	Quadrat sampling	SL012449

† Participated in field trip, but did not collect flora.

3.2.2 Survey Conditions

The weather conditions preceding a field survey are important factors influencing the number and type of flora species that are recorded from an area. To characterise rainfall leading up to the survey, total monthly rainfall data were sourced from Rio Tinto's West Angelas weather station. Long-term (1920-2018) monthly median rainfall data were sourced from the Bureau of Meteorology (BoM) weather station at Turee Creek (no. 7083, situated approximately 40 km south-southwest of the study area, as measured from Deposit J/Mt Ella East). The two sets of data are compared in Figure 3.1.

Although the Phase 1 surveys were timed for the dry season, the total rainfall received in the three months prior to the first field survey (May to July 2018) was almost three times the median rainfall for this period (58 mm compared to 20.1 mm). Most of this total was received from the 5th to the 9th of July 2018, approximately six weeks prior to the first field survey. This also followed very high rainfall between January and March 2018. Given the rainfall received in the months prior to the field surveys, the timing was favourable for the collection of annual and cryptic perennial flora species that would be expected to be present at this time of year (August / September).

The Phase 2 survey in April 2019 was timed to follow the typical wet season in the Pilbara, as the highest rainfall typically occurs from January to March. Unfortunately, rainfall was low over the summer months, with only 8.8 mm received at West Angelas from January 2019 through to March 2019 (just 10% of the long-term median for this period; see Figure 3.1). This resulted in below average sampling conditions for the Phase 2 survey.

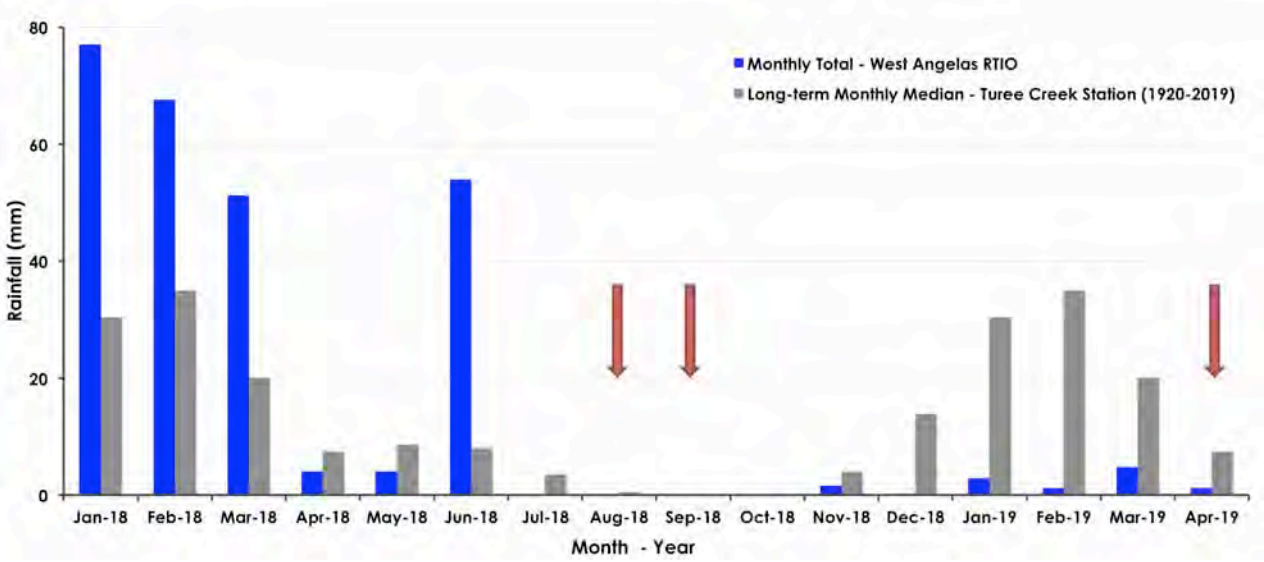


Figure 3.1: Total monthly rainfall for the West Angelas weather station from January to September 2018 compared to the long-term monthly median rainfall for Turee Creek for the same months. Arrows indicates survey timing.

3.2.3 Floristic Data Collection: Assessment of Quadrats and Relevés

Indicative sampling locations were selected prior to the field surveys. The study area boundaries were overlain on aerial imagery, and sampling sites were then selected based on the broad habitats and vegetation types apparent. Once in the field, the actual locations of the sampling sites were adjusted as necessary (e.g. to be placed in an area more representative of the broader vegetation unit). Locations of previously sampled sites situated in the study area (and the vegetation units they related to) were taken into consideration when selecting locations for new sampling sites.

Sampling sites were established as either:

1. Quadrats: bounded floristic sampling sites. The standard for the Pilbara bioregion comprises a 50 m x 50 m square (or a modified shape with an equivalent area). Quadrats were measured using optical squares and measuring tapes, and permanently marked using steel fence droppers at each corner; or
2. Relevés: unbounded floristic sampling sites with a similar search area to a quadrat. Relevés were typically used where the vegetation stand was too small or too narrow to effectively establish a quadrat, or where the terrain was too rugged to allow for safe establishment. The relevés during the current survey were rigorously surveyed for flora, but were not permanently marked.

The following parameters were recorded for all quadrats and relevés:

- location using MGA coordinates (WGS84 datum, Zone 50K, ±5 m) recorded with a handheld Global Positioning System (GPS) unit; coordinates were recorded for all four corners of a quadrat, and at least the central point of a relevé;
- a digital photograph of each site (usually taken from the northwest corner of a quadrat or the central point of a relevé);
- habitat description;
- broad soil type;
- fire history (approximate time since last fire, where applicable);
- vegetation description based on the height and estimated percent foliar cover of dominant species (see Appendix 4);
- vegetation condition ranking according to Trudgen (1988), as presented in EPA (2016a) (see Appendix 4); and

- the estimated percent foliar cover of each flora species present within the quadrat, or in the vicinity of the relevé (within a ~30 m radius of the centre point).

During the 2018/2019 field surveys, a total of 125 new quadrats were established and assessed, along with 55 new relevés (see Table 3.3), with 80 of the quadrats and four of the relevés resampled in Phase 2. In addition, two quadrats from the West Angelas Deposit F survey (Biota 2014a) were resampled during Phase 2. Most of the sampling sites were located in the Western Hill deposit and Deposit H, as these were the largest of the study area components. Sampling effort at Deposit H was increased due to concerns regarding the accuracy of the previously mapped vegetation (see Section 3.2.4).

Quadrats established during the Phase 1 surveys were assigned the prefix 'WNG' and relevés were assigned the prefix 'WNG-REL', followed by consecutive numbers. Quadrats established during Phase 2 were assigned the prefix 'WA' and relevés were assigned the prefix 'WA-REL' followed by consecutive numbers. Locations of sampling sites are provided in Appendix 5 and described in overview in Section 4.8.1. Raw data from the current quadrats and relevés are summarised in Appendix 6.

Table 3.3: Sites sampled during the 2018/2019 surveys at West Angelas.

Phase	Trip	Deposit	Sampling Type				
			New Quadrat	New Relevé	Resample of Quadrat Established During Phase 1	Resample of Relevé Established During Phase 1	Resample of Existing Quadrat[#]
1	1	Western Hill	46	16	-	-	-
		Deposit F North	12	5	-	-	-
	2	Deposit J / Mt Ella East	31	9	-	-	-
2	1	Western Hill	1	4	43	3	
		Deposit F North		2	11	-	2
		Deposit H	34	18	-	-	-
		Deposit J / Mt Ella East	1	1	26	1	-
		Total	125	55	80	4	2

[#] Quadrats established during previous surveys.

Three historical ENV Australia (ENV) (2012) quadrats at Deposit J/Mt Ella East were earmarked for resampling during the Phase 1 survey, however only one coordinate was available for each quadrat, and no marker pegs were found at any of these locations. As a result, these quadrats could not be accurately resampled. Instead, new quadrats were established in similar vegetation in close proximity to each of these original ENV (2012) quadrat locations.

3.2.4 Vegetation Description and Mapping

The current assessment involved mapping of previous unsurveyed areas and rationalisation of all historical mapping at Western Hill, Deposit H, Deposit F North and Deposit J/Mt Ella East. The process for mapping the vegetation of previously unsurveyed areas is described in Section 3.2.4.1.

It was the initial intent that the previous mapping at Deposit H (which covered 95% of the deposit) would simply be rationalised with the current mapping units; and given that the area had been surveyed to a detailed standard and considered 'current', only a small number of additional sites would be required to fill in gaps and ensure vegetation units were adequately sampled. However during the Phase 2 survey, it was determined that the previous mapping required some amendment to match the more recent mapping completed by Biota and additional sites were also completed.

Vegetation maps were created and consolidated using Geographical Information System (GIS) software (QGIS and MapInfo Professional), and subsequently populated with point locations of

sampling sites, mapping notes, conservation significant flora and weeds. All maps in this report were produced by Melissa Robinson (GIS Cartographer, Biota), and Paul Sawers (GIS Manager, Biota) using MapInfo Professional (version 11).

3.2.4.1 Vegetation Description and Mapping of Previously Unsampled Areas

Vegetation descriptions were based on the height and estimated percent foliar cover of dominant species at the association level (level V as per the National Vegetation Information System; NVIS)[2], (see Appendix 4) consistent with the Rio Tinto data standards. The descriptions were collected during the quadrat and relevé sampling, and also through the recording of mapping notes[3] (brief notes recorded during the extensive foot traverses through the study area).

The vegetation descriptions were then compared and grouped by similarity; descriptions that were considered alike shared a suite of perennial species with a similar range of percent foliar cover values. These similar descriptions were then used to generate broader, representative vegetation units for the study area. Although some of the vegetation units were initially defined in the field, the majority of the vegetation mapping was completed in the office following the fieldwork. Results from the floristic analysis (see Section 3.4.2) were investigated as part of this process, to determine the correspondence between floristic groups and the units identified through the survey process.

Field data and aerial imagery were reviewed to determine boundaries of vegetation associations, which were then mapped to an appropriate scale. Each vegetation unit mapped for this assessment was given two unique codes:

1. A detailed alphabetic code represented the dominant flora species from the tallest to lowest stratum. Species names were abbreviated to capital letter(s) for the genus, followed by lower case letter(s) for species, with multiple letters used where necessary (e.g. *Eucalyptus leucophloia* = El; *Themeda triandra* = THt). As various species within Mulga (the *Acacia 'aneura'* species complex) were recorded, these were collectively designated as 'Aan'.
2. To aid interpretation, each vegetation unit was also assigned a simple alphanumeric code as a unique precursor to the species-driven code. This was a short string comprising a character representing the broad landform group (i.e. 'D' for drainage lines, 'G' for gorges and gullies, 'P' for plains, and 'H' for hillslopes, hillcrests and foothills), followed by a number sequence.

The codes and a full description of each vegetation unit are presented in Section 5.0.

Once the vegetation associations were defined, they were compared against the published descriptions of TECs and PECs to determine whether any of the vegetation associations in the study area corresponded to listed community types. The results of the floristic analysis were also used to assist with evaluation of units that may be restricted in distribution. Vegetation types were assigned a conservation ranking as per Table 3.4.

Table 3.4: Ranking system for the conservation significance of vegetation types (as supplied by Rio Tinto).

Local Significance	Features
High	Supports Threatened flora; supports Priority 1 flora; associated with listed TECs or PECs; or associated with major drainage systems supporting riparian vegetation.
Moderate	Supports Priority 2 flora, or high densities of Priority 3 flora and associated habitat; associated with local drainage systems supporting riparian vegetation; or has limited local representation.
Low	Supports scattered records of Priority 3 flora, or locally common Priority 4 flora; associated with minor local drainage systems supporting riparian vegetation.
Negligible	Supports Priority 4 flora that are regionally common; or associated with vegetation common across the Pilbara region.

[2] Level V of the NVIS Information Hierarchy, or association level, comprises the dominant growth form, height, cover and up to three species for the three traditional strata (i.e. upper, mid and ground). http://www.environment.gov.au/erin/nvis/publications/avam/section-2-1.html#hierarchy

[3] A total of 325 mapping notes were recorded during the current surveys.

Similar to mapping of vegetation units, mapping of vegetation condition was completed in the office. Field data (site data, mapping notes, vegetation boundaries and locations of weeds) and aerial imagery were used to determine the boundaries of areas of differing condition, which were then mapped at an appropriate scale. Vegetation condition was ranked using the scale developed by Trudgen (1988) and presented in EPA (2016a) (see Appendix 4).

3.2.5 Searches for Threatened and Priority Flora and Weeds

Targeted, non-systematic searches were conducted on foot in areas considered to be potential habitat for conservation significant flora (i.e. Threatened and Priority listed species). The routes of the foot traverses intersected all major vegetation/habitat units in the study area (see Appendix 5), and survey effort was increased in areas that were recognised as having a high potential to support conservation significant or restricted species (e.g. gullies and gorges, areas of clay, drainage lines, etc.). The distance between observers varied depending on the terrain.

Locations of species of conservation significance or unknown taxa were recorded using a handheld GPS unit (WGS84 datum). The number of individuals and extent of the population were also recorded for each location, along with the habitat and associated species.

Locations of introduced flora species (weeds) were also recorded during the foot traverses, along with an estimate of their population size.

3.3 Specimen Identification, Nomenclature and Data Management

Common taxa that were well known to the survey botanists were confirmed in the field. A voucher specimen was collected if the taxon was either difficult to determine without closer examination, belonged to a recognised species complex, was poorly collected or otherwise unusual, or was in very good condition (healthy specimens with flowers and/or fruits are often useful to submit to the WA Herbarium). Each voucher specimen was assigned a unique internal code to facilitate tracking of data. Specimens were pressed in the field and then returned to Perth for further examination and confirmation.

Voucher specimens were identified using flora keys, consulting appropriate publications and checking reference collections. Biota botanists identified most specimens, the majority of which were confirmed by Pierre-Louis de Kock (Senior Botanist/Specialist Taxonomist) and Michi Maier (Principal Botanist/Director). Malcolm Trudgen (an expert on flora of the Pilbara) and Steve Dillon (a specialist taxonomist with the WA Herbarium) were consulted to provide advice and identify some unusual or difficult specimens.

All data from the 2018/2019 surveys were entered into an Access database structure held at Biota (the 'Site Species Database' developed by Ted Griffin at the request of Malcolm Trudgen of M.E. Trudgen and Associates). Species recorded from previous survey work within the study area were also entered to ensure these would be included in the flora lists for each deposit. As part of this process, old species nomenclature was updated. In addition, some records were either assigned to a more probable taxon, where an educated guess could be made (e.g. *Acacia validinervia,* recorded by Ecologia (2013), would represent *A. steedmanii* subsp*. borealis;* and *Corynotheca micrantha,* also recorded by Ecologia (2013), was considered more likely to refer to *Tricoryne* sp. Hamersley Range (S. van Leeuwen 915)); or were entirely excluded (e.g. *Indigofera brevidens*, recorded by Eco Logical (2014), is an excluded name). Two additional historical records from Rio Tinto surveys were updated on advice from Scott Reiffer (Rio Tinto, pers. comm. 2019): *Ptilotus divaricatus,* reported in Biota (2014b), was likely to be *P. schwartzii* var. *schwartzii*, whilst *Fimbristylis leucocolea,* reported in Eco Logical (2014), should refer to *F. simulans*.

A full flora species list for each deposit is provided in Appendix 7, together with a site by species matrix for the quadrats and relevés sampled for this study. Nomenclature and conservation

significance rankings used in this report are consistent with the current listing of flora recognised by the WA Herbarium on FloraBase[4] at the time of preparation of this report.

3.4 Analysis

3.4.1 Sampling Adequacy

Plots of species accumulation curves can be used to assess sampling adequacy. When a survey has sampled an adequate proportion of the floristic assemblage, the curve should plateau and approach asymptote. PRIMER v6 (Clarke and Gorley 2006) was used to calculate smoothed species accumulation curves based on 999 random permutations of the species data; only quadrat and relevé data were used (opportunistic records were excluded).

Species accumulation curves alone cannot be reliably used to extrapolate predicted species richness for future biological sampling. In order to estimate asymptotic richness (i.e. an extrapolation of species richness) for the incidence data (i.e. presence, rather than abundance data), the Chao 2 Mean and ICE Mean estimators were calculated using EstimateS (Colwell 2013).

3.4.2 Floristic Analysis

To assist with placing the vegetation types from the study area into a broader regional context, a hierarchical clustering analysis was conducted in PRIMER v6 (Clarke and Gorley 2006) to investigate the similarity of sampling sites based on their floristic composition. The floristic analysis for the current study utilised a single data set derived from sites sampled in the study area, together with sites completed within 50 km. Only thoroughly sampled quadrats and relevés were included in the data set; sites with incomplete data and recently burnt sites were excluded.

The data set incorporated the following sites:

- 182 sites sampled in the study area during the current surveys in 2018-2019;
- 31 sites from the West Angelas 2 Native Vegetation Clearing Permit (NVCP) survey (Eco Logical 2014), located in Western Hill;
- 14 sites from the Western Hill NVCP survey (Biota 2014b), located in Western Hill;
- 54 sites from the West Angelas Gas Pipeline NVCP survey (Biota 2019), 30 of which were located in Western Hill;
- 47 sites from the Greater West Angelas survey (Ecologia 2013), spread across Deposit H, Deposit F and Deposit J/Mt Ella East;
- 13 sites from the West Angelas Deposit F NVCP survey (Biota 2014a), 10 of which were located in Deposit F;
- 82 sites from West Angelas Deposits E and F (Biota 2006a), including seven in Deposit F and five in Deposit J/Mt Ella East;
- three sites from the Angelo River survey (ENV 2012), located in Deposit J/Mt Ella East;
- eight sites from the West Angelas Deposit F survey (Rio Tinto 2014), located 1 km south of Deposit F;
- seven sites from the West Angelas Deposit G NVCP survey (Biota 2014c), located between Western Hill and Deposit H;
- 35 sites from the West Angelas Gas-Fired Power Station and Pipeline Corridor (Biota 2010), located between 6 km and 48 km south of Western Hill;
- 42 sites from the Juna Downs section of the Hope Downs Rail Corridor (Biota 2006b), located between 11 km west-northwest and 25 km northeast of Deposit F;
- 22 sites from Baby Hope Downs (Biota 2014d), located 14 km northeast of Deposit F;

[4] http://florabase.dpaw.wa.gov.au

- six sites from the Rio Tinto Rail Duplication Corridor between Bellbird Siding and Juna Downs (Biota 2008), located 25 km northwest of Western Hill;
- 15 sites from the Additional Eastern Corridor for the Bellbird Siding to Juna Downs section of the Rio Tinto Rail Duplication Corridor (Biota 2009), located 20 km north of Western Hill; and
- two sites from the Koodaideri Southern Infrastructure Corridor (Biota 2012), 47 km north of the study area.

The total data set included 329 sites sampled in the study area, and 234 outside. It would have been preferable to include additional sites in the vicinity, however no other data were able to be sourced.

For sites that had been sampled twice, data from the two phases were merged; where cover values differed between phases, the higher value was included.

A combined species list was generated from all sites in the data set, and reviewed for errors and inconsistencies. Old nomenclature was updated, and taxon names and records were then rationalised as follows:

- Annual and weakly perennial species were excluded, to mitigate for the effect of sampling in poor seasonal conditions.
- All weeds were removed with the exception of **Cenchrus ciliaris*, which was dominant in the vegetation at some sites.
- Parasitic mistletoes (*Amyema, Diplatia* and *Lysiana* species) were removed, along with records of fungi.
- Taxa that could potentially refer to more than one entity across different projects (e.g. "*Euphorbia* sp.") were removed.
- Where taxa were considered likely to refer to the same entity, or where identifications may vary between projects, these were merged (e.g. all records of *Triodia epactia* and *T. pungens* were treated as *Triodia* sp. (*epactia/pungens*), and all Mulga taxa were combined as "*Acacia* aff. *aneura*"). Where two or more such taxa were present within one site, the cover values were summed.
- Species that were present at only single sites were also removed to reduce 'noise' in the data set.

The final species list included 336 entities; taxa that were omitted or merged are listed in Appendix 11.

The analysis was run using percent cover data (square-root transformed), as well as presence-absence data. The Bray-Curtis measure of similarity was used to produce a similarity matrix and the cluster analysis (group average method) was used to determine floristic groups. Statistically different groups were identified through similarity profile analysis (SIMPROF). The similarity percentage test (SIMPER) was used to determine which species contributed most to the similarities between groups.

Results were investigated through outputs including dendrograms (tree diagrams) of site similarity, and Non-metric Multi-Dimensional Scaling plots (NMDS plots). Selected inputs and outputs from the analysis are provided in Appendix 11.

3.5 Limitations of the Study

The results of the field surveys provide a good representation of the flora and vegetation of the study area and its conservation values. However, there are limitations to this study that must be considered when reviewing and applying the results detailed in this report. As per the EPA's Technical Guidance for botanical surveys for EIA (EPA 2016a), potential constraints and consequent limitations of this detailed survey assessment are summarised in Table 3.5.

Table 3.5: Potential constraints and limitations of the West Angelas detailed survey.

Potential Constraint	Statement of Limitations
1. Availability of contextual information at a regional and local scale	The West Angelas locality has been well surveyed, and numerous unpublished reports were considered as part of the desktop review. Publicly available databases of rare species and communities' information were also searched, as were private company databases. The current surveys added considerable new data specific to the study area. With the exception of a lack of contextual sites in the vicinity of the study area for use in the floristic analysis, contextual information is not considered to be a limiting factor for this study.
2. Competency/ experience of the team carrying out the survey, including experience in the bioregion surveyed	Sufficient time was allocated to the current field survey component (122 person days). The field personnel were also suitably qualified to identify flora, with at least one botanist in each team of two having a minimum of 7 years experience in the Pilbara bioregion (see Section 3.2.1). Additional assistance was sought as required from specialist external taxonomists (see Section 3.3). There were therefore no limitations due to resourcing.
3. Proportion of flora recorded and/or collected, any identification issues	All vascular flora encountered in the current study area in 2018-2019 were recorded, comprising 542 native and 11 weed species. Almost all of the flora specimens collected during the current field surveys (~94%) were of sufficient quality to be fully determined, within the limits of the taxonomic frameworks available at the current time. Historical sampling in the study area added a further 101 native and four weed species to the combined list. Fungi and non-vascular flora (algae, mosses and liverworts) were not sampled, which is consistent with the accepted level of effort for a survey of this type and scale. The proportion of flora recorded was not considered to be a limitation.
4. Appropriate area fully surveyed (effort and extent)	A detailed survey as described by EPA (2016a) was considered appropriate to address the requirements for EIA of the West Angelas study area (11,570 ha in size). Approximately 4,415 ha of the study area had previously been surveyed to a detailed survey level, comprising the southern 644 ha (63%) at Deposit F North, 66 ha (2.2%) at Deposit J/Mt Ella East and 3,705 ha (94%) of Deposit H. Biota was not commissioned to conduct additional works in these areas at Deposit F North or Deposit J/Mt Ella East, as these studies are considered adequate and current[5]. Biota was commissioned to conduct additional works, mainly baseline surveys in previously unsurveyed areas (4,039 ha), and quadrat sampling and rationalisation of existing vegetation mapping in areas requiring additional sampling (3,158 ha). These areas comprised the majority of Western Hill, Deposit J/ Mt Ella East and small sections of Deposit F North. Additional survey effort was also completed through the previously surveyed sections at Deposit H. Previously unsampled areas at Western Hill, Deposit F North and Deposit J/Mt Ella East were surveyed to a satisfactory level for a detailed 'dry season' survey (as detailed in Section 2.2). A total of 125 quadrats and 55 relevés were established during the current survey, with 80 quadrats, four relevés, and two historical quadrats resampled during Phase 2. All vegetation units described by the current survey included at least three replicated sampling sites, as required by EPA (2016a), with the exception of six units (D1, D10, D12, G1, P4 and P10). Units D1, D10, D12 and G1 were all particularly small in size (between 1 ha and 4.8 ha). Unit P4, an historically mapped unit, occurred mostly to the south of Deposit F North; it was not possible to sample a third site in this unit due to the small amount of intact vegetation remaining and the location of spoil dumps, which limited access. Unit P10 occurred in a single isolated stand at Deposit H; this area was sampled with two sites. It is considered that all 45 units are adequately described based on the sites established. The effort and extent for the survey were therefore consistent, as far as practicable, with the requirements for a detailed survey as per EPA (2016a) and are not considered limitations for the study.

[5] Most studies had been completed within the last 5 years; the surveys by Ecologia (2013) were from 2012, however we expect these to be deemed acceptable.

Potential Constraint	Statement of Limitations
5. Access restrictions within the study area	The majority of tracks were in good condition and located no more than 2.1 km from any survey sites. A large section of the track running east-west along the northern footslopes of the ranges in the Western Hill deposit was not drivable. This reduced the amount of sampling effort through this area, although the northern section is still considered to be adequately surveyed. Access to the current study area was therefore not considered to be a limitation.
6. Survey timing, rainfall, season of survey	The timing of the Phase 1 surveys was considered to be favourable for recording annual and cryptic perennial species present during the typical dry season in the Pilbara. Rainfall preceding the surveys had been higher than average, and conditions were better than would normally be experienced at this time of year (see Section 3.2.2). The timing of the Phase 2 survey was planned to follow the typical wet season in the Pilbara, however only 10% of the long-term median rainfall was received during the three months prior to the survey (January to March), resulting in below average conditions. Given the amount of survey work that has been completed, both in the study area and in the locality, it is considered that the current study still provides an adequate representation of the flora values of the study area.
7. Disturbance that may have affected the results of survey such as fire, flood or clearing	Small areas of clearing (including tracks, drill lines, and mining and pastoral infrastructure) occurred throughout the study area, with a particularly large and intensive network at the southern end of Deposit F North, and parts of Western Hill and Deposit H (coinciding with 'strike zones'). The majority of Western Hill and Deposit J/Mt Ella East was burnt in 2015. This did not affect the survey, given that the dominant tree, shrub and spinifex taxa in each stratum had recovered well. Large sections of Deposit F North and Deposit H had been burnt more recently (2016). This resulted in a higher abundance of fire ephemerals (e.g. *Senna* spp., *Goodenia stobbsiana,* etc.) than normal, however the dominant vegetation (i.e. the tree, shrub and spinifex strata) was still identifiable and mostly recovered. Biota generally considers three years post-fire timing to be acceptable for conducting vegetation and flora surveys in the Pilbara. Disturbance is not considered to have substantially affected the results of the assessment and is not considered to be a limitation for the study.

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4.0 Desktop Assessment

4.1 IBRA Bioregion and Subregion

The study area lies within the Pilbara bioregion, one of 89 bioregions defined by the Interim Biogeographic Regionalisation for Australia (IBRA) (DSEWPaC 2012). The Pilbara bioregion is divided into four subregions. The study area lies within the Hamersley subregion, which is described by Kendrick (2003) as follows:

- "Mountainous area of Proterozoic sedimentary ranges and plateaus, dissected by gorges (basalt, shale and dolerite). Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges. The climate is semi-desert tropical, average 300 mm rainfall, usually in summer cyclonic or thunderstorm events. Winter rain is not uncommon. Drainage into either the Fortescue River (to the north), the Ashburton River to the south, or the Robe River to the west. Subregional area is 6,215,092 ha."

4.2 Land Systems

A total of 105 land systems have been identified and mapped in the Pilbara bioregion[6]. Land systems mapping covering the study area has been prepared by van Vreeswyk et al. (2004). The study area intersects six land systems (Boolgeeda, Egerton, Jamindie, Newman, Platform and Rocklea), as summarised in Table 4.1 and shown in Figure 4.1. All six land systems are widespread in the Pilbara.

4.3 Hydrology

There are no permanent creeks in the study area, however numerous ephemeral creeks are present. These include a single named watercourse, the Turee Creek East Branch, a small section of which is intersected at the southern edge of Western Hill. This watercourse flows from east to west through Western Hill, then drains southwest into Turee Creek proper, a tributary of the Ashburton River. All of the other minor watercourses at Western Hill also drain into the Turee Creek East Branch.

The creeklines in the northern section of Deposit J/Mt Ella East likewise drain northwest into Turee Creek East Branch, while those in the southern section of this area drain south into Angelo River, another tributary of the Ashburton River. Both Western Hill and Deposit J/Mt Ella East are located entirely within the Ashburton Catchment.

Deposit H and Deposit F North both overlap two catchments: the Ashburton Catchment in the west, and the Fortescue River Upper Catchment in the east. Watercourses in the southwestern section of Deposit H and the western section of Deposit F North drain west and north respectively into the Turee Creek East Branch. All other watercourses in Deposit H drain north or east and comprise minor tributaries of Pebble Mouse Creek; this drains northeast into Weeli Wolli Creek. Watercourses in the east of Deposit F North also drain east into Weeli Wolli Creek, which eventually feeds into the Fortescue River system.

There are no water reserves within 10 km of the study area.

[6] This information was obtained by merging the Ashburton land system mapping (Payne et al. 1988) and Pilbara land system mapping (van Vreeswyk et al. 2004) and intersecting this with the Pilbara bioregion (Environment Australia 2000).

Table 4.1: Land systems intersected by the study area.
(Data from Payne et al. 1988, and van Vreeswyk et al. 2004.)

Land System	Description	Total Area of Land System in the Pilbara Bioregion (ha)	Area of Land System in the Study Area, by Deposit (ha)		Percentage of Total Land System that Occurs in the Study Area (%)
Boolgeeda (RGEBGD)	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands.	961,635	Western Hill	1,693.0	0.2
			Deposit H	224.2	<0.1
			Deposit J/Mt Ella East	1,192.1	0.1
			Deposit F North	298.5	<0.1
			Total	3,407.8	0.4
Egerton (RGEEGE)	Highly dissected hardpan plains supporting mulga shrublands and hard spinifex hummock grasslands.	66,858	Deposit H	513.1	0.8
			Deposit F North	20.4	<0.1
			Total	533.5	0.8
Jamindie (RGEJAM)	Stony hardpan plains and rises supporting groved mulga shrublands, occasionally with spinifex understorey.	192,225	Western Hill	75.4	<0.1
			Total	75.4	<0.1
Newman (RGENEW)	Rugged jaspilite plateaus, ridges and mountains supporting hard spinifex grasslands.	1,993,745	Western Hill	1,564.9	0.1
			Deposit H	1,987.3	0.1
			Deposit J/Mt Ella East	1,359	0.1
			Deposit F North	1,83.7	<0.1
			Total	5,094.9	0.3
Platform (RGEPLA)	Dissected slopes and raised plains supporting hard spinifex grasslands.	236,336	Western Hill	989.5	0.4
			Deposit J/Mt Ella East	347.2	0.1
			Deposit F North	141.6	0.1
			Total	1,478.3	0.6
Rocklea (RGEROC)	Basalt hills, plateaus, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands.	2,881,200	Deposit H	980.1	<0.1
			Total	980.1	<0.1

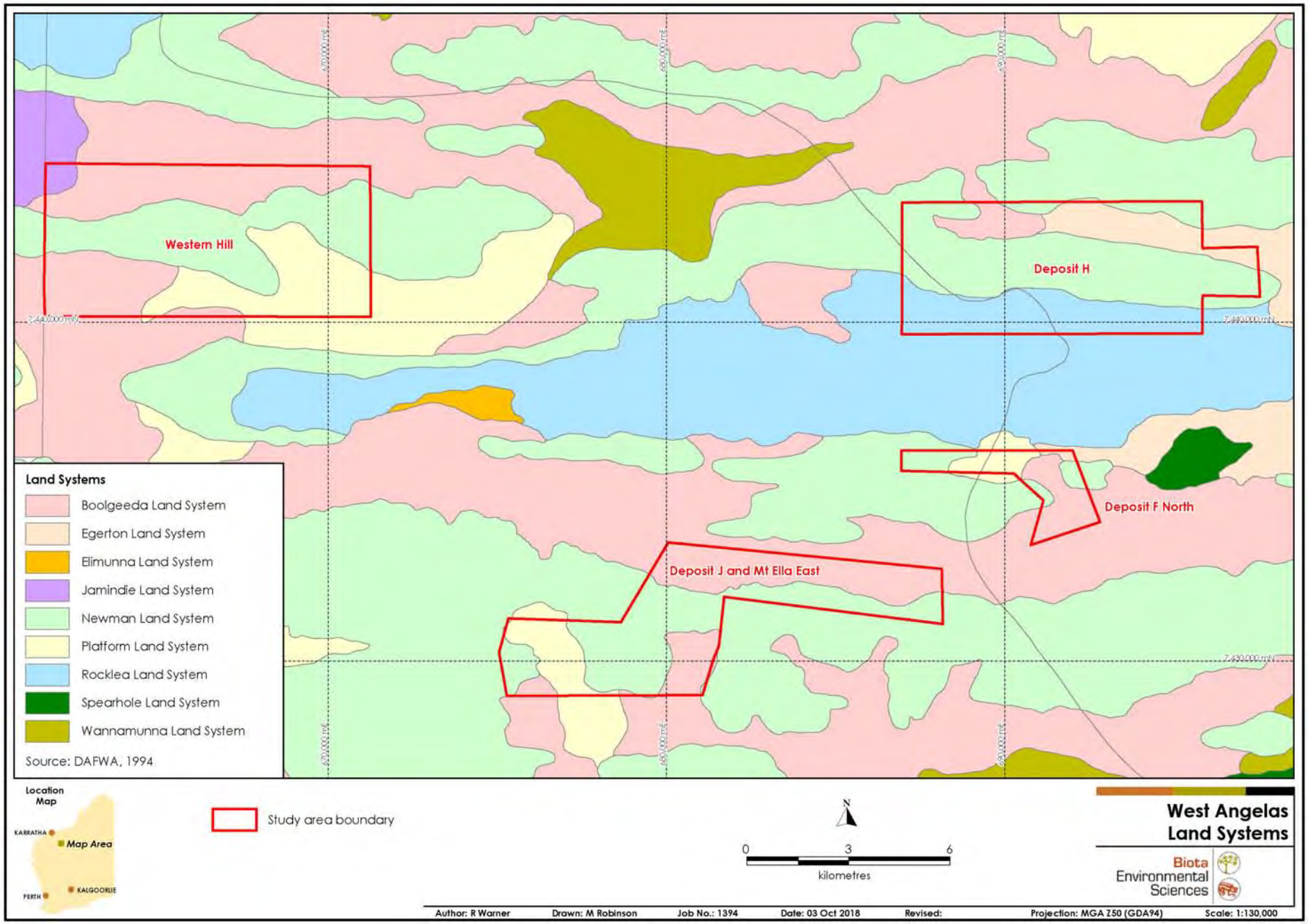


Figure 4.1: Land systems for the study area and locality.

4.4 Surface Geology and Soils

The study area encompasses 11 geological units (see Figure 4.2). These units were mapped at a scale of 1:250,000 by the Geological Survey of WA (1996a, 1996b). Units Qa (alluvium) and Czc (colluvium) are the dominant geological units in the study area (Table 4.2).

Table 4.2: Geological units occurring in the study area (Geological Survey of Western Australia 1996a, 1996b).

Unit Code	Geological Description	Area (ha)	
Czc	Colluvium: partly consolidated valley-fill deposits.	Western Hill	1,266.9
		Deposit J/Mt Ella East	793.2
		Deposit F North	262.9
		Total	2,323.0
Czr	Laterite: includes surficial hematite-goethite deposits on banded iron-formation; forms Hamersley Surface.	Deposit H	90.4
		Deposit J/Mt Ella East	69.2
		Deposit F North	191
		Total	350.6
Fd	Metadolerite sills intruded into Fortescue Group; medium- to coarse-grained, massive grey-green rock, usually foliated.	Deposit H	572.6
		Total	572.6
Fj	Jeerinah Formation: interbedded mudstone, siltstone and chert with minor felsic tuff, dolomite and sandstone.	Deposit H	714.8
		Total	714.8
Fjb	Metabasalt; pillows locally well developed.	Deposit H	750.8
		Total	750.8
Hb	Brockman Iron Formation: banded iron-formation, chert and minor shale.	Western Hill	664.6
		Deposit J/Mt Ella East	701.2
		Total	1,365.8
Hd	Wittenoom Dolomite: dolomite; interbedded thin chert, shale and dolomite in upper part.	Western Hill	212.7
		Deposit J/Mt Ella East	103.3
		Total	316.0
Hm	Marra Mamba Iron Formation: chert, ferruginous chert and banded iron-formation with minor shale.	Deposit H	1,401.8
		Deposit F North	110.4
		Total	1,512.2
Hs	Mount McRae Shale and Mount Sylvia Formation: interbedded shale, chert and banded iron-formation.	Western Hill	416
		Deposit J/Mt Ella East	492.4
		Total	908.4
Qa	Alluvium: unconsolidated silt, sand and gravel.	Western Hill	1,462.7
		Deposit H	174.5
		Deposit J/Mt Ella East	706.7
		Deposit F North	80
		Total	2,423.9
Qw	Alluvium and colluvium: red-brown sandy and clayey soil.	Western Hill	300.1
		Deposit J/Mt Ella East	32.2
		Total	332.3

Three soil units were also mapped at a scale of 1:2,000,000 for the study area (see Figure 4.3 and Table 4.3) by Agriculture Western Australia (1967). The dominant soil unit was Fa13, covering 62% of the study area.

Table 4.3: Soil units occurring in the study area (Agriculture Western Australia 1967).

Unit Code	Soil Description	Area (ha)	
Fa13	Ranges of banded jaspilite and chert along with shales, dolomites and iron ore formations; some areas of ferruginous duricrust, and occasional narrow winding valley plains and steeply dissected pediments. The soils are frequently stony and shallow, and there are extensive areas without soil cover.	Western Hill	2,162.1
		Deposit H	2,650.0
		Deposit J/Mt Ella East	2,321.9
		Total	7,134.0
Fa14	Steep hills and steeply dissected pediments on areas of banded jaspilite and chert along with shales, dolomite, and iron ore formations; some narrow winding valley plains: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5.11) soils on the steeper slopes. (Dr2.33 and Dr2.32) soils on the pediments are more extensive than in unit Fa13. (Um5.52) and (Uf6.71) soils occur on the valley plains.	Western Hill	1,179.7
		Deposit H	1,054.7
		Deposit J/Mt Ella East	576.4
		Deposit F North	644.3
		Total	3,455.1
Fb3	High-level valley plains set in extensive areas of unit Fa13. Extensive areas of pisolitic limonite deposits: principal soils are deep earthy loams (Um5.52) along with small areas of (Gn2.12) soils.	Western Hill	981.1
		Total	981.1

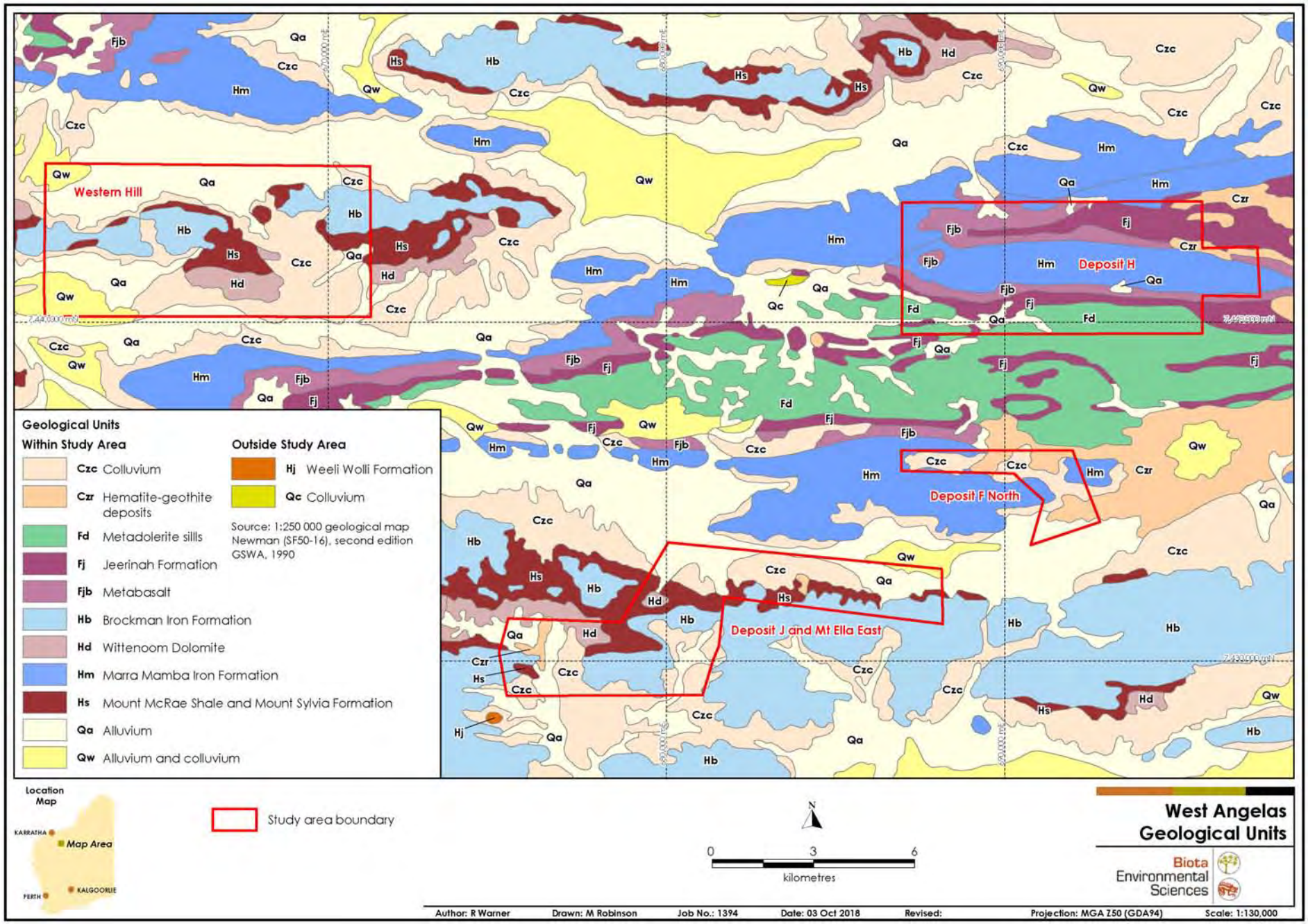


Figure 4.2: Geological units mapped for the study area and locality by the Geological Survey of WA (1996a, 1996b).

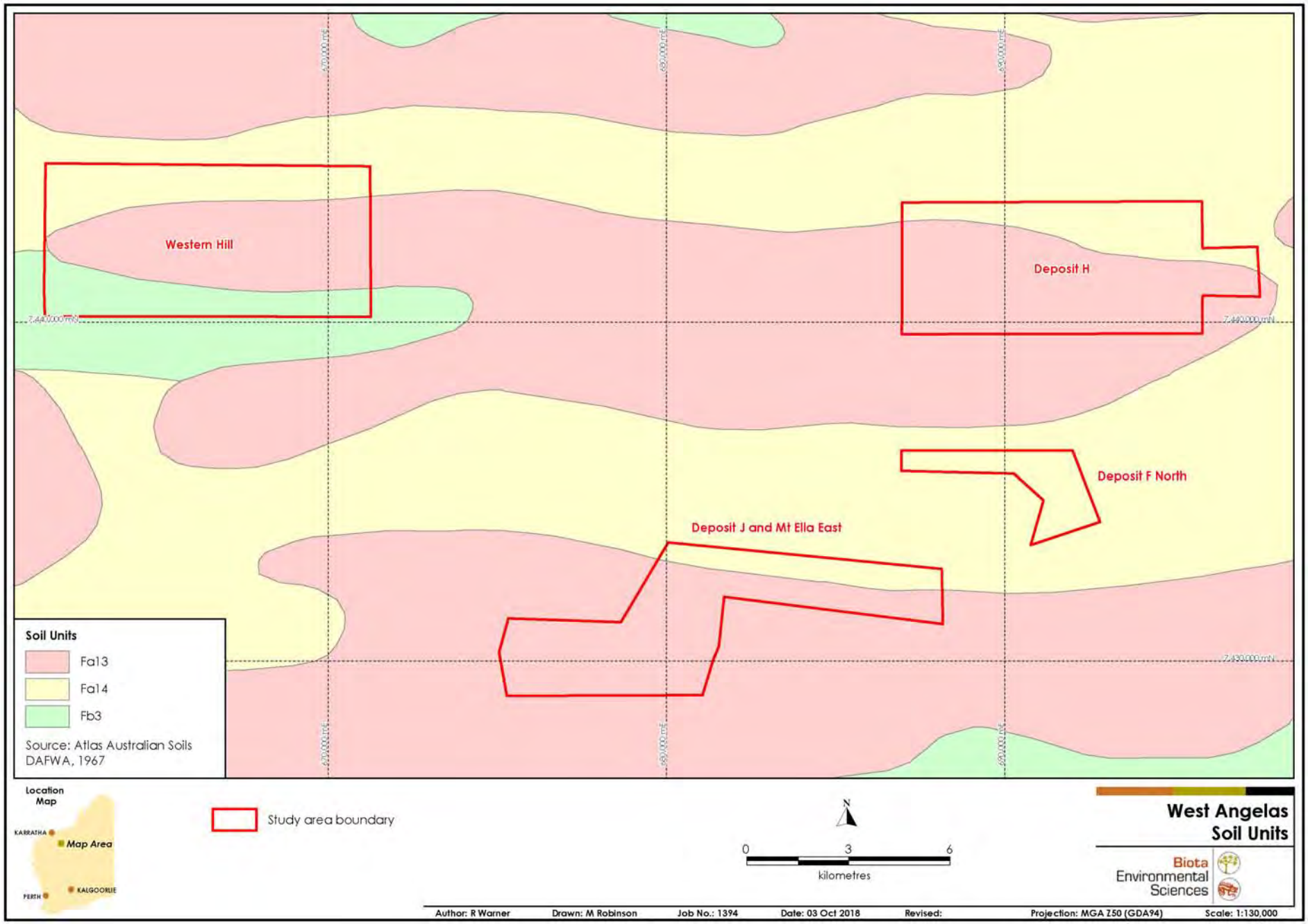


Figure 4.3: Soil units mapped for the study area and locality by the Geological Survey of WA (1996a, 1996b).

4.5 Beard's Regional Vegetation Mapping

Beard (1975b, 1975a) described and mapped the vegetation of the Pilbara at a scale of 1:1,000,000. The study area is located on the Hamersley Plateau, which lies within the Fortescue Botanical District of the Eremaean Botanical Province as defined by Beard. The vegetation of this province is typically open, and frequently dominated by spinifex, wattles and occasional eucalypts.

The study area intersects two vegetation units mapped by Beard:

- Hamersley_18 ((a_1Li) – Low woodland; Mulga (*Acacia aneura* complex); and
- Hamersley_82 ($e_{16}Lr.t_3Hi$) – Hummock grassland, low tree steppe; Snappy Gum (*Eucalyptus leucophloia*) over *Triodia wiseana*.

These vegetation units are widespread in the Hamersley subregion and have been subject to only minor clearing (see Table 4.4). However, given the broad scale of Beard's mapping, these units provide only limited information about the vegetation occurring in the study area (see Section 5.1 for a more detailed description of the vegetation).

Table 4.4: Beard's (1975b) vegetation mapping units occurring within the study area and their pre-European and current extent in the subregion (data from the Government of Western Australia 2013).

Beard's Vegetation Mapping Unit	Pre-European Extent within Hamersley Subregion (ha)	Current Extent (ha)	% Remaining	Extent within the Study Area by Deposit (ha) (% of Current Mapped Extent in the Hamersley Subregion)	
Hamersley 18	581,246	577,123	99.3	Western Hill	2,944.3
				Deposit H	119.9
				Deposit J/Mt Ella East	1,836.0
				Deposit F North	531.8
				Total	5,462.0
Hamersley 82	2,177,574	2,165,235	99.4	Western Hill	1,378.5
				Deposit H	3,584.7
				Deposit J/Mt Ella East	1,062.2
				Deposit F North	82.5
				Total	6,107.9

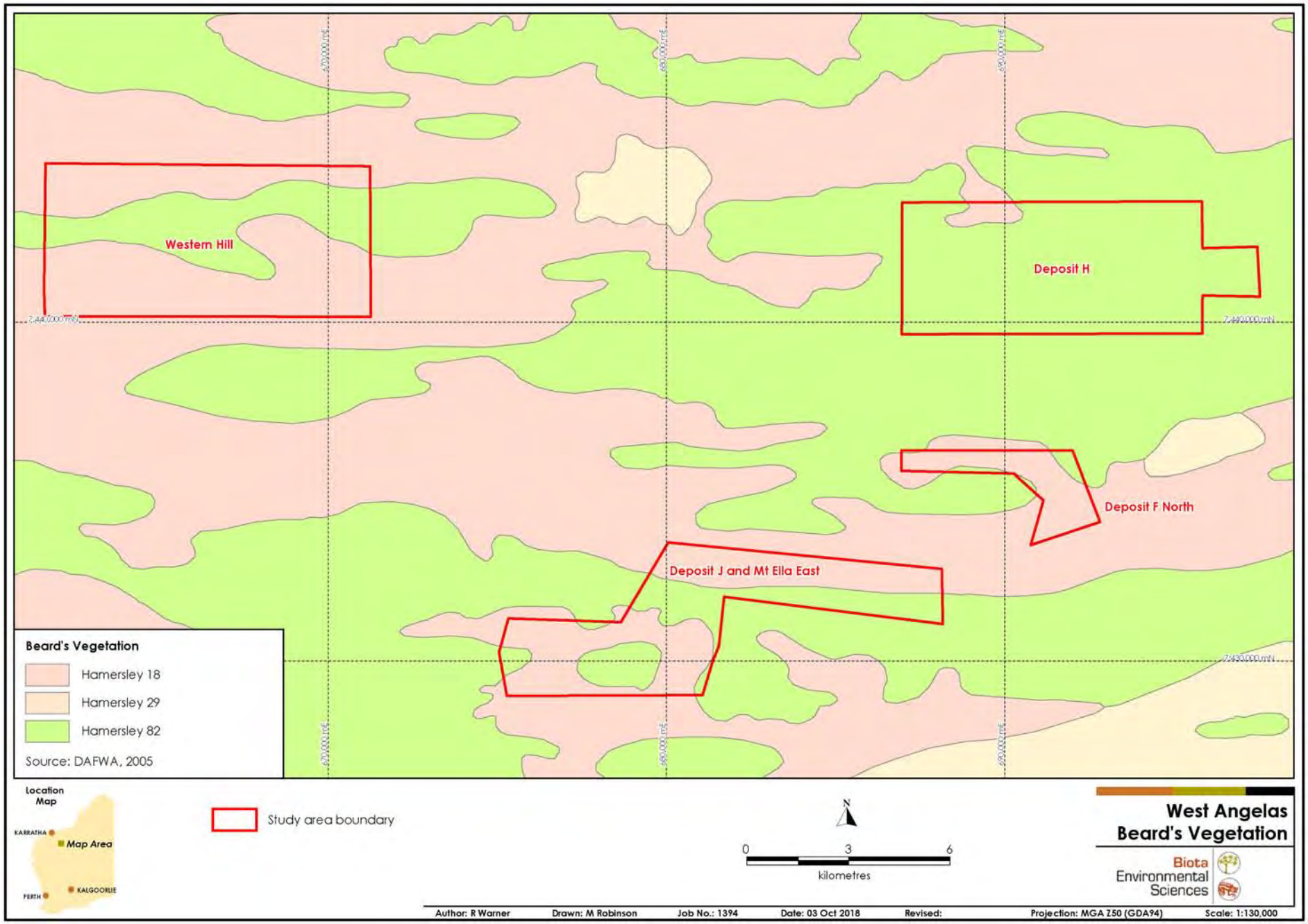


Figure 4.4: Beard's (1975b) vegetation mapping for the study area and locality.

4.6 Conservation Reserves in the Locality

The IBRA provides a national system for assessing the condition of native ecosystems and their level of protection in the National Reserve System. During the bioregional audit conducted in 2003 by the then department of Conservation and Land Management (now the DBCA), the Pilbara bioregion was considered to be under-represented by the National Reserve System, with less than 10% of the bioregion protected. However, of the four subregions within the Pilbara bioregion, the Hamersley subregion has the highest percentage of area under some form of protection (Kendrick 2003).

Karijini National Park is the closest conservation reserve to the study area, situated adjacent to the western boundary of the Western Hill deposit area.

4.7 Environmentally Sensitive Areas

ESAs are defined in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005* under section 51B of the WA *Environmental Protection Act 1986*. These include areas that are: World Heritage sites; included on the Register of the National Estate; defined wetlands; vegetation containing Threatened flora; TECs; and Bush Forever sites.

The original (1977) boundary of the Hamersley Range National Park (now included within Karijini National Park) was listed on the Register of the National Estate (RNE) and is therefore considered an ESA. The boundary of the RNE area is 600 m west of the Western Hill deposit area, while the current boundary of Karijini National Park adjoins the western boundary of Western Hill.

4.8 Previous Botanical Surveys in the Study Area

The results of a selection of botanical surveys (i.e. major surveys completed within 20 km of the study area) were reviewed, with a focus on identifying records of TECs, PECs, and flora species of conservation significance known from the locality of the study area. The findings of these surveys are summarised in Table 4.5, with the locations of the surveys displayed in Figure 4.5. For all of the surveys, it was recognised that these comprised "snap-shot" assessments of the flora at a particular time, and that further species would be recorded with additional survey work. Any other key limitations mentioned in the reports are listed in Table 4.5.

4.8.1 Summary of Flora Sampling Effort within the Study Area

A summary of the total flora sampling effort conducted over all surveys within the West Angelas study area is presented in Table 4.6. A total of 223 quadrats and 112 relevés have been assessed within the study area across all surveys, including the current assessment. Locations of all quadrats and relevés are presented in overview on Appendix 5, as well as in detail on the vegetation mapping in Appendix 8. In addition to the site sampling, systematic and/or targeted searches have also been completed within all of the deposits (see Table 4.6); some of these were only identified through data supplied for Rio Tinto, and are therefore not included in Table 4.5 or shown in Figure 4.5.

Table 4.5: A summary of the major vegetation and flora surveys completed in the vicinity of the study area.

Project/Survey (Reference)	Survey Type; Date of Field Survey	Size of Area (ha)	No of Native Taxa	Features of Conservation Significance: Threatened Ecological Communities (TECs)/ Priority Ecological Communities (PECs) Threatened / Priority Flora	Key Limitations (as stated in reference)
West Angelas Gas Pipeline Native Vegetation Clearing Permit (NVCP) (B-2018-007) (Biota 2019)	NVCP survey; October 2016.	1,150 (245.5 ha overlaps Western Hill)	343	• No TECs • One PEC: Priority 1 "West Angelas Cracking Clays". • Vegetation unit MG-TG-CC is considered to have a minor association with the "West Angelas Cracking Clays" PEC based on the clay substrate and scattered presence of some floristic components of relevance to the PEC (*Astrebla* and *Aristida* grasslands). • Five Priority flora taxa: o three Priority 2: *Aristida lazaridis*, *Isotropis parviflora* and *Eremophila pusilliflora*; and o two Priority 3: *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431).	• None.
Systematic Flora Survey at Western Hill AR-15-13456 (Rio Tinto 2016)	Rare flora survey; September-October 2018	798 (entirely within Western Hill)	195	• No TECs. • No PECs. • Seven Priority flora taxa: o two Priority 2: *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen 15708) and *Oxalis* sp. Pilbara (M.E. Trudgen 12725); and o five Priority 3: *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• None listed.
West Angelas Deposit F NVCP Report (Biota 2014a)	NVCP survey; August 2014.	637 (380 ha overlaps Deposit F)	266	• No TECs. • No PECs. • No Threatened flora. • Seven Priority flora taxa: o two Priority 2: *Aristida lazaridis* and *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen 15708); o four Priority 3*: Indigofera gilesii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739); and o one Priority 4: *Goodenia nuda*.	• Surveyed in late winter; some species may not have been present at the time of survey; some specimens were in poor condition, hindering identification.
West Angelas Deposit G NVCP Report (Biota 2014c)	NVCP survey; June 2014.	280	260	• No TECs. • Vegetation unit P3 considered to contain some areas equivalent to the Priority 1 'West Angelas Cracking-Clays" PEC. • No Threatened flora. • Three Priority 3 flora taxa: *Indigofera gilesii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (historical record).	• Some areas of recent clearing were not mapped.

Project/Survey (Reference)	Survey Type; Date of Field Survey	Size of Area (ha)	No of Native Taxa	Features of Conservation Significance: Threatened Ecological Communities (TECs)/ Priority Ecological Communities (PECs) Threatened / Priority Flora	Key Limitations (as stated in reference)
Western Hill NVCP Report (Biota 2014b)	NVCP Survey; March 2014.	92.5 (90 ha overlaps Western Hill)	194	• No TECs. • No PECs. • Seven Priority flora taxa: o one Priority 2: *Eremophila pusilliflora*; and o six Priority 3: *Eremophila* sp. Hamersley Range (K. Walker KW 136) *Grevillea saxicola*, *Indigofera gilesii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• Some areas of rugged terrain at the eastern end of the study area were not traversed for safety reasons.
Multiple Areas at West Angelas and Angelo River Rare Flora Survey (Eco Logical and Rio Tinto 2014a)	Rare flora survey; August, September and October 2013, March 2014.	851 (24.4 ha of which overlaps Deposit F)	334	• No TECs. • Part of the study area falls within the Priority 1 'West Angelas Cracking-Clays PEC' buffer. • No Threatened flora. • Eight Priority flora taxa: o one Priority 2: *Eremophila pusilliflora;* and o seven Priority 3: *Acacia effusa*, *Indigofera gilesii*, *Pilbara trudgenii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• None listed.
West Angelas 2 (AR-14-12516) Biological Assessment (Eco Logical 2014)	NVCP Survey; August – September 2014.	374 (372 ha overlaps Western Hill)	173	• No TECs. • No PECs. • Five Priority flora taxa: o one Priority 2: *Eremophila pusilliflora;* and o four Priority 3: *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola*, *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• None listed.
Rio Tinto Greater West Angelas Vegetation and Flora Assessment (Ecologia 2013)	Flora and vegetation survey of Deposits C, D, D extension, G, F, H and Mt Ella; Phase 1: August 2011, Phase 2: July 2012.	17,596 (405 ha overlaps Deposit F North, 344 ha overlaps Deposit H, 73 ha overlaps Deposit J/Mt Ella East)	432	• No TECs. • Priority 1 'West Angelas Cracking-Clays' PEC. • 10 Priority flora taxa: o two Priority 2: *Aristida lazaridis* and *Eremophila pusilliflora;* o six Priority 3: *Acacia* aff. *subtiliformis*, *Indigofera gilesii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739); and o two Priority 4: *Goodenia nuda* and *Lepidium catapycnon*.	• Aerial imagery was of low resolution and hindered definition of some vegetation community boundaries. • Access was restricted in some parts of the study areas, affecting the distribution of sampling sites. • Surveys were conducted in winter; some specimens were in poor condition, hindering identification.

Project/Survey (Reference)	Survey Type; Date of Field Survey	Size of Area (ha)	No of Native Taxa	Features of Conservation Significance: Threatened Ecological Communities (TECs)/ Priority Ecological Communities (PECs) Threatened / Priority Flora	Key Limitations (as stated in reference)
West Angelas Deposit C (AR-13-11587) Rare Flora Report (Biota 2013)	Rare flora survey; September 2013.	132	162	• No TECs. • Priority 1 'West Angelas Cracking-Clays' PEC (14.9 ha; considered to be an extension of the existing known occurrence). • No Threatened flora. • Three Priority flora taxa: o one Priority 2: *Eremophila pusilliflora*; and o two Priority 3: *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431).	• None listed.
Angelo River Flora and Vegetation Assessment (ENV 2012)	Flora and vegetation survey; June 2011.	45,588 (1,679 ha overlaps Deposit J/Mt Ella East)	310	• No TECs. • No PECs. • No Threatened flora. • Eight Priority flora taxa: o two Priority 2: *Isotropis parviflora* and *Oxalis* sp. Pilbara M.E. Trudgen 12725); and o six Priority 3: *Acacia effusa*, *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727), *Pilbara trudgenii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Rostellularia adscendens* var. *latifolia* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• Survey was conducted under sub-optimal conditions, and some species (particularly annual grasses) were likely to be absent or difficult to identify.
Flora and Vegetation Survey for Proposed Evaluation Drilling at Hope Downs 3 Marra Mamba (Rio Tinto 2011)	Rare flora survey; August 2011.	260	177	• No TECs. • No PECs. • No Threatened flora. • One Priority 3 taxon: *Rhagodia* sp. Hamersley (M. Trudgen 17794).	• Survey was conducted at a relatively a dry time of year; many ephemeral species may have been absent.
Flora, Vegetation and Fauna Assessment of the Re-Aligned Gas Pipeline Corridor at West Angelas (ENV 2011)	Biological survey; November 2011.	1,110	265	• No TECs. • No PECs. • No Threatened flora • Two Priority flora taxa: o one Priority 2: *Eremophila pusilliflora*; and o one Priority 3: *Rhagodia* sp. Hamersley (M. Trudgen 17794).	• None listed.

Project/Survey (Reference)	Survey Type; Date of Field Survey	Size of Area (ha)	No of Native Taxa	Features of Conservation Significance: Threatened Ecological Communities (TECs)/ Priority Ecological Communities (PECs) Threatened / Priority Flora	Key Limitations (as stated in reference)
A Flora and Vegetation Survey of the Proposed West Angelas Gas-Fired Power Station and Pipeline Corridor (Biota 2010)	Flora and vegetation survey; August 2010.	1,793	262	• No TECs. • Priority 1 'West Angelas Cracking-Clays' PEC. • No Threatened flora. • Four Priority 3 flora taxa: *Acacia effusa*, *Indigofera gilesii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Sida* sp. Barlee Range (S. van Leeuwen 1642).	• Survey followed six months of low rainfall; most ephemeral and many cryptic perennial species were absent, particularly in Mulga (*Acacia 'aneura'*) dominated vegetation units. • The entire area was not systematically searched for rare flora. • No floristic analysis was conducted to assist with definition of the vegetation types and evaluation of their distribution.
Flora and Vegetation Survey for a Proposed Access Track to West Angelas Deposit E and F NVCP (Rio Tinto 2010a).	Rare flora survey; July 2010.	116.5	103	• No TECs. • No PECs. • No Threatened flora. • No Priority flora.	• Survey was conducted at a relatively dry time of the year; many ephemeral species may have been absent.
Flora and Vegetation Survey of the Hope Downs 2 Area (Mattiske 2010)	Flora and vegetation survey; September 2007	4,130	212	• No TECs. • No PECs. • No Threatened flora. • One Priority 4 flora species: *Ptilotus mollis*.	• Majority of survey area had been burnt, limiting the species recorded.
West Angelas Multiple Areas Flora and Vegetation Survey and Desktop Fauna Assessment (Ecologia 2009a)	Flora and vegetation survey; July – September 2008.	120	308	• No TECs. • Priority 1 'West Angelas Cracking-Clays' PEC. • No Threatened flora. • Three Priority flora taxa: o two Priority 3: *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431); and o one Priority 4: *Goodenia nuda*.	• None listed.

Project/Survey (Reference)	Survey Type; Date of Field Survey	Size of Area (ha)	No of Native Taxa	Features of Conservation Significance: Threatened Ecological Communities (TECs)/ Priority Ecological Communities (PECs) Threatened / Priority Flora	Key Limitations (as stated in reference)
Hope Downs Rail Corridor (Juna Downs Section) Vegetation and Flora Survey (Biota 2006b)	Flora and vegetation survey; September-October 2005, February 2006.	4,515	382	• No TECs. • No PECs. • No Threatened flora. • One Priority 3 flora taxon: *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727).	• Some sections of the study area were not surveyed for rare flora.
Vegetation and Flora Survey of West Angelas Deposits E and F (Biota 2006a)	Flora and vegetation survey; May 2004.	1,882 (437 ha overlaps Deposit J/Mt Ella East, 151 ha overlaps Deposit F North)	424	• No TECs. • No PECs. • No Threatened flora. • Three Priority 3 flora taxa: *Indigofera gilesii*, *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	• Some sections of the study area were not surveyed for rare flora. • No floristic analysis was conducted to assist with the definition of uncommon vegetation types.
West Angelas GD_05_01007 Botanical Survey (Rio Tinto 2005)	Rare flora survey; August / September, October 2005.	858	Not listed	• No Threatened flora. • Three Priority 3 taxa: *Acacia effusa*, *Triodia* sp. Mt Ella (M.E. Trudgen 12739) and *Indigofera gilesii*.	• None listed.
Deposit F Rare Flora Survey (Biota 2004)	Rare flora survey; May 2004.	182	157	• No Threatened flora. • No Priority flora species.	• None listed.

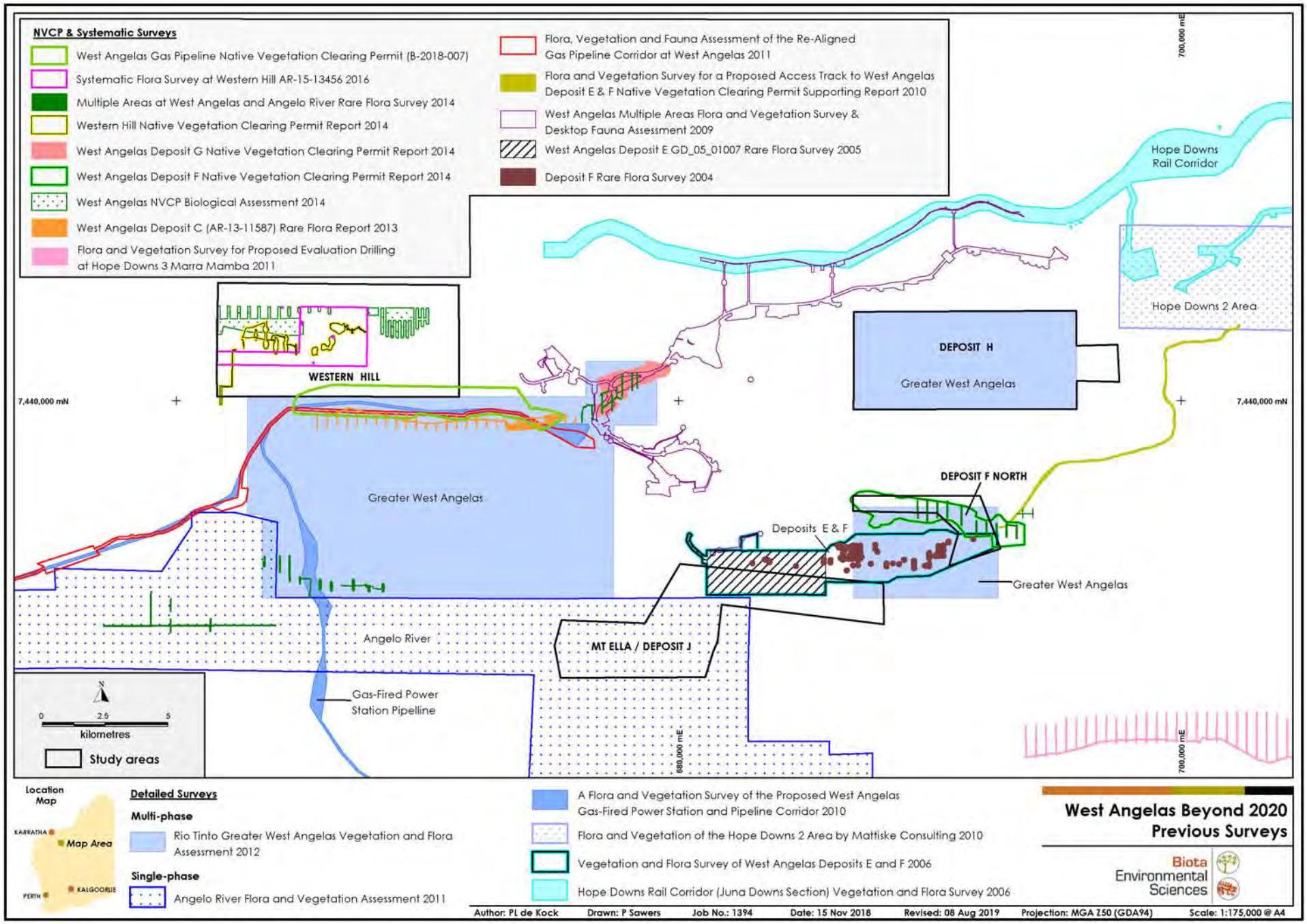


Figure 4.5: Locations of previous botanical surveys in the vicinity of the study area.

Table 4.6: Summary of total flora sampling effort conducted within the West Angelas study area.

Project/Survey (Reference)	Western Hill			Deposit F North			Deposit H			Deposit J / Mt Ella East		
	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches
Current survey: Phase 1 2018	46	16	✔	12	5	✔	NA	NA	NA	31	9	✔
Current Survey: Phase 2 2019 (NB. R = additional sites that were resampled)	1 (43R)	4 (3R)	✔	(13R)	2	✔	34	18	✔	1 (26R)	1 (1R)	✔
West Angelas Gas Pipeline NVCP (B-2018-007) (Biota 2019)	–	30	✔	–	–	–	–	–	–	–	–	–
Systematic Flora Survey at Western Hill AR-15-13456 (Rio Tinto 2016)	–	–	✔	–	–	–	–	–	–	–	–	–
Mt Ella *Tetratheca fordiana* Targeted Flora Survey (Rio Tinto 2015a)	–	–	–	–	–	–	–	–	–	–	–	✔
Flora, Vegetation and Fauna Habitat Assessment at Deposit F West Angelas AR-14-12345 and AR-13-12126 (Rio Tinto 2014)	–	–	–	–	–	✔	–	5†	–	–	1†	–
Multiple Areas at West Angelas and Angelo River Rare Flora Survey (Eco Logical and Rio Tinto 2014a)	–	–	–	–	–	✔	–	–	–	–	–	–
Resource Evaluation Drilling at Deposit H West Angelas Rare Flora Survey Report (Eco Logical and Rio Tinto 2014b)	–	–	–	–	–	–	–	–	✔	–	–	–
West Angelas Deposit F NVCP Report (Biota 2014a)	–	–	–	7	5	✔	–	–	–	–	–	–
West Angelas 2 (AR-14-12516) Biological Assessment (Eco Logical 2014)	31	–	✔	–	–	–	–	–	–	–	–	–
Western Hill NVCP Report (Biota 2014b)	–	14	✔	–	–	–	–	–	–	–	–	–
Rio Tinto Greater West Angelas Vegetation and Flora Assessment (Ecologia 2013)	–	–	–	12	–	✔	33	–	✔	2	–	✔
Angelo River Flora and Vegetation Assessment (ENV 2012)	–	–	–	–	–	–	–	–	–	3	–	✔
Flora and Vegetation Survey for Proposed Exploration Drilling at West Angelas (Rio Tinto 2010b)	–	–	–	–	–	–	–	–	–	–	–	✔
Flora and Vegetation Survey of Track Constructions at Angelo River (Rio Tinto 2010c)	–	–	–	–	–	–	–	–	–	–	–	✔
Botanical Survey for Additional Drilling at West Angelas E47/797 (Rio Tinto 2009a)	–	–	✔	–	–	–	–	–	–	–	–	–
Botanical Survey for Exploration Drilling at Angelo River E47/1050 (Rio Tinto 2009b)	–	–	–	–	–	–	–	–	–	–	–	✔

Project/Survey (Reference)	Western Hill			Deposit F North			Deposit H			Deposit J / Mt Ella East		
	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches	No. of Quadrats	No. of Relevés	Rare Flora Searches
Vegetation and Flora Survey of West Angelas Deposits E and F (Biota 2006a)	–	–	–	5	2	✔	–	–	–	5	–	✔
West Angelas Deposit E GD_05_01007 (Rio Tinto 2005)	–	–	–	–	–	–	–	–	–	–	–	✔
West Angeles Tenement Drilling 04 (Robe 2004)	–	–	✔	–	–	–	–	–	–	–	–	✔
Total (NB. R = additional sites that were resampled)	78 (43R)	64 (3R)	8	36 (13R)	14	7	67	23	3	42 (26R)	11 (1R)	11

† Data not sighted; advised by Rio Tinto.

4.9 Communities of Conservation Significance from the Locality

4.9.1 TECs Known from the Locality

TECs are described by DBCA as biological assemblages occurring in a particular habitat, which are under threat of modification or destruction from various processes (as per DEC 2010) (see Appendix 1). TECs are listed by the WA Minister for Environment and are significant at the State level, being protected under the WA *Biodiversity Conservation Act 2016* (the BC Act), as well as having protection as ESAs under the WA *Environmental Protection Act 1986* (see Section 4.7).

Two TECs are listed for the Pilbara region: the 'Themeda Grasslands of Hamersley Station' and the 'Ethel Gorge aquifer stygobiont community' (DBCA 2018).

There is no suitable habitat for either of the Pilbara TECs in the study area, and neither is known to occur.

4.9.2 PECs Known from the Locality

PECs are biological communities that are recognised to be of significance, but do not meet the criteria for listing as a TEC. There are five categories of PECs, none of which are currently protected under legislation (see Appendix 1).

Forty-two PECs are listed for the Pilbara bioregion (DBCA 2019). Five of these PECs occur within 40 km of the study area (Figure 4.6):

1. Priority 1 'Brockman Iron Cracking Clay Communities of the Hamersley Range'

   This PEC is described as "rare tussock grassland dominated by *Astrebla lappacea* (not every site has presence of *Astrebla*) in the Hamersley Range, on the Brockman land system. Tussock grassland on cracking clays – derived in valley floors, depositional floors. This is a rare community and the landform is rare. Known from near West Angelas, Newman, Tom Price and the boundary of Hamersley and Brockman Stations" (DBCA 2019). This PEC is considered to be at risk from grazing, mining and infrastructure developments and altered hydrology. The buffer zone[7] around the closest occurrence of this PEC is 0.8 km northwest of the study area (from Western Hill).

2. Priority 1 'Coolibah – Lignum Flats, sub type 2'

   This PEC is known from Lake Robinson and occurs on red clays in run-on zones. It is described as "Coolibah woodlands over Lignum (*Duma florulenta*) over Swamp Wanderrie. Associated species include *Eriachne benthamii, Themeda triandra, Aristida latifolia, Eulalia aurea* and *Acacia aneura*. This PEC is considered to be at risk from dewatering, grazing, altered hydrological regimes and clearing" (DBCA 2019). The closest buffer zone for this community is located 7.2 km north-northwest of the study area (from Deposit H).

3. Priority 1 'Weeli Wolli Spring Community'

   This PEC is described as "Weeli Wolli Spring's riparian woodland and forest associations are unusual as a consequence of the composition of the understorey. The sedge and herbfield communities that fringe many of the pools and associated water bodies along the main channels of Weeli Wolli Creek have not been recorded from any other wetland site in the Pilbara. The spring and creekline are also noted for their relatively high diversity of stygofauna and this is probably attributed to the large-scale calcrete and alluvial aquifer system associated with the creek. The valley of Weeli Wolli Spring also supports a very rich microbat assemblage including a Threatened species" (DBCA 2019). This PEC is restricted to Weeli Wolli Spring, 18.7 km northeast of the study area (from Deposit H), and would not occur in the study area.

[7] A management zone designated by the DBCA.

4. Priority 1 'West Angelas Cracking-Clays'

   This PEC occurs extensively in the West Angelas locality. It is described as "Open tussock grasslands of *Astrebla pectinata, A. elymoides, Aristida latifolia*, in combination with *Astrebla squarrosa* and low scattered shrubs of *Sida fibulifera*, on basalt derived cracking-clay loam depressions and flowlines" (DBCA 2019). This PEC is considered at risk from mining, weed invasion and changes in the fire regime. The buffer zones for this community are close to all the deposit areas (<1 km), with the easternmost buffer zone intersecting the study area (in Deposit H).

5. Priority 3 ' Coolibah – Lignum Flats, sub type 1'

   This PEC is known from Coondewanna Flats and Wanna Munna Flats, where it occurs on red clays in run-on zones. It is described as "Coolibah and Mulga (*Acacia aneura*) woodland over Lignum and tussock grasses on clay plains" (DBCA 2019). Associated species include *Eriachne benthamii, Themeda triandra, Aristida latifolia, Eulalia aurea* and *Acacia aneura*. This PEC is considered to be at risk from dewatering, grazing, altered hydrological regimes and clearing. The closest buffer zone for this community is located 3.7 km north of the study area (from Deposit H).

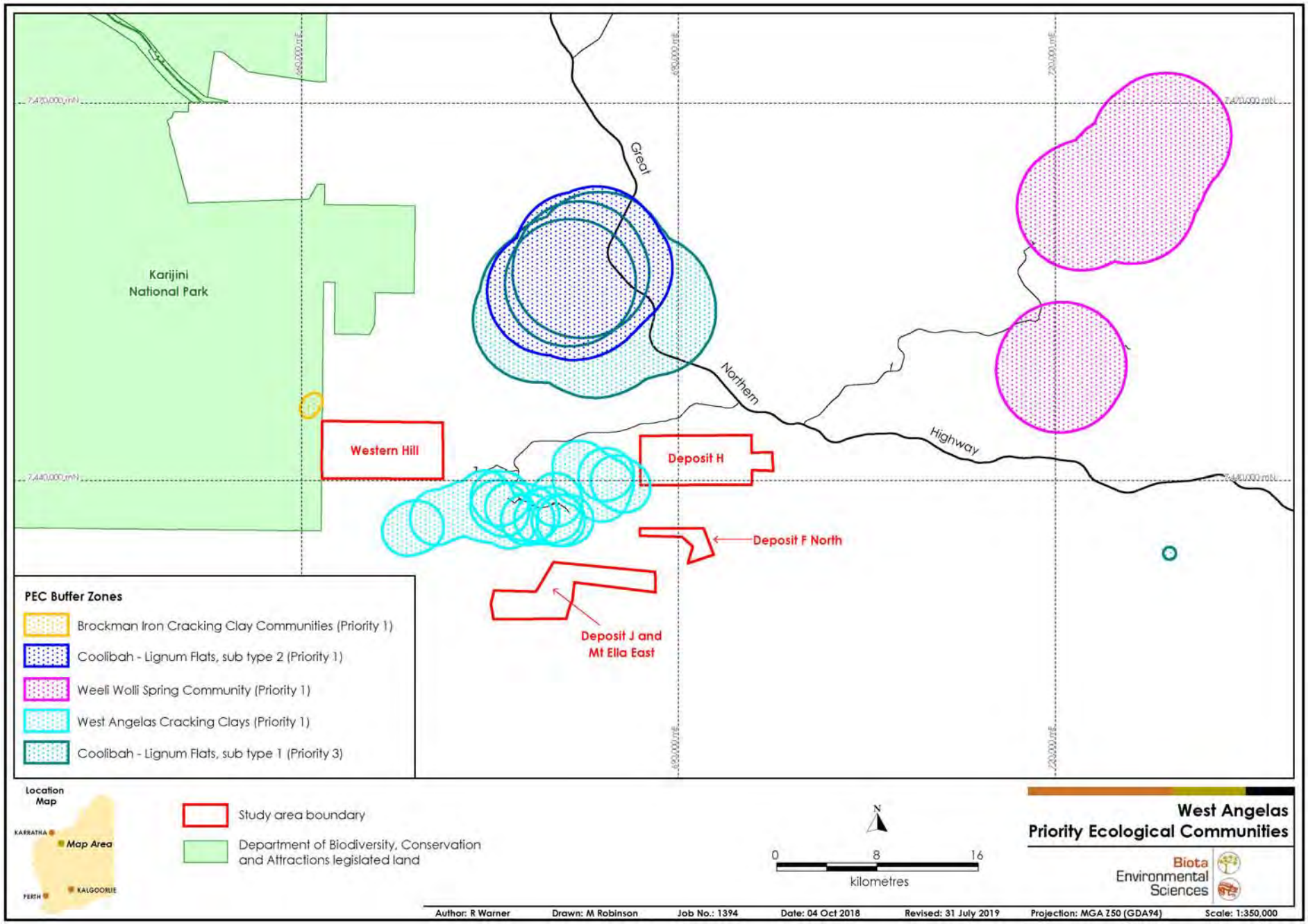


Figure 4.6: Locations of PECs within 40 km of the study area.

4.10 Flora of Conservation Significance Known from the Locality

4.10.1 Threatened Flora

Three Threatened flora species are currently listed for the Pilbara bioregion under State and/or Commonwealth legislation: *Aluta quadrata*, *Pityrodia* sp. Marble Bar (G. Woodman & D. Coultas GWDC Opp 4) and *Thryptomene wittweri*. *Aluta quadrata* is currently only listed as a Threatened species under the WA BC Act. *Pityrodia* sp. Marble Bar (G. Woodman & D. Coultas GWDC Opp 4) and *Thryptomene wittweri* are listed as Threatened species under both the WA BC Act and the Commonwealth EPBC Act.

- *Aluta quadrata* is a perennial shrub that is currently only known from south-facing slopes and gullies on a range of hills near Paraburdoo. The West Angelas study area is outside the known range of this species and it would not occur.
- *Pityrodia* sp. Marble Bar (G. Woodman & D. Coultas GWDC Opp 4) is a shrub growing to approximately 1.5 m, which is described as occurring on steep hill slopes with a granite, ironstone or sandstone substrate. This species occurs in the vicinity of Marble Bar, and the six current collection locations occur over a range of less than 20 km east-west. Given the restricted distribution of this species, it would not occur in the study area.
- *Thryptomene wittweri* (Mountain Thryptomene) is a spreading, perennial shrub occurring in skeletal stony soils on breakaways and in drainage channels, typically high in the landscape (elevations >1,000 m). Locations in the Pilbara are restricted to the vicinity of Mt Meharry. As the West Angelas study area occurs outside the known range of this species and as there is no suitable habitat (hills >1,000 m in elevation), this species would not occur.

4.10.2 Priority Flora

Based on the database searches and literature reviews conducted for this study, a total of 60 Priority flora taxa have been recorded in the locality of the study area (see Appendix 3).

Eighteen Priority flora taxa have been recorded in the study area during previous surveys (locations are shown on maps and also tabulated in Appendix 9). These comprise:

- four Priority 2: *Aristida lazaridis*, *Eremophila pusilliflora*, *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) and *Oxalis* sp. Pilbara (M.E. Trudgen 12725);
- 12 Priority 3: *Acacia effusa*, *Aristida jerichoensis* var. *subspinulifera, Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola, Indigofera* gilesii, *Olearia mucronata*, *Pilbara trudgenii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Sida* sp. Hamersley Range (K. Newbey 10692), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739); and
- two Priority 4: *Acacia bromilowiana* and *Lepidium catapycnon*.

One additional Priority 3 species, *Acacia subtiliformis*, was recorded from Deposit J/Mt Ella East by Eco Logical Australia (2013). This location appeared to be in atypical habitat for the species (based on inspection of aerial imagery), and represented the only record in the vicinity. As a consequence, it was anticipated that the record may be erroneous, and it was earmarked for verification during the field survey.

Based on the known distributions and habitat preferences of the other Priority flora known from the locality, compared with the habitats that appeared to be present in the study area, 11 additional Priority flora taxa were identified through the desktop review as having the potential to occur in the study area. These were designated as either "likely to occur" or "may potentially occur" based on the criteria in Table 3.1:

- Likely to occur:
  - one Priority 1: *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 3835);

  - one Priority 3: *Rostellularia adscendens* var. *latifolia*; and
  - two Priority 4: *Eremophila magnifica* subsp. *magnifica* and *Goodenia nuda*.
- May potentially occur:
  - three Priority 1: *Eremophila* sp. West Angelas (S. van Leeuwen 4068), *Rhodanthe ascendens* and *Tetratheca fordiana*;
  - one Priority 2: *Isotropis parviflora*;
  - three Priority 3: *Geijera salicifolia*, *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) and *Xerochrysum boreale*.

The 30 taxa listed above were considered key target taxa for the Phase 1 field survey. The habitats present in the study area were not considered prospective for any of the other Priority flora identified as occurring in the locality of the study area (for a discussion of the reasons, see Appendix 3).

4.11 Introduced Flora Species Known from the Study Area

A total of 13 introduced flora species have previously been recorded from the study area; these are summarised in Table 4.7, while locations are presented in Appendix 10.

None of the species recorded are listed as declared pests for the Pilbara region pursuant to the WA *Biosecurity and Agriculture Management Act 2007* (BAM Act), or as Weeds of National Significance (WONS) (Thorp and Lynch 2000)[8]. However, a number are generally recognised as serious environmental weeds; particularly **Cenchrus ciliaris,* which is listed under the EPBC Act as an invasive species "considered by the States and Territories to pose a particularly significant threat to biodiversity"; and **Rumex vesicarius,* "one of the most serious environmental weeds in the Pilbara region of Western Australia" (Anthony and Dixon 2006).

Table 4.7 Introduced species recorded previously with the West Angelas study Area.

Species	Western Hill	Deposit H	Deposit F North	Deposit J / Mt Ella East
**Bidens bipinnata* (Bipinnate Beggartick)	✓	✓	✓	✓
**Cenchrus ciliaris* (Buffel Grass)	✓		✓	
**Conyza* sp. (Flaxleaf Fleabane)			✓	
**Datura leichhardtii* (Native Thornapple)	✓			
**Flaveria trinervia* (Speedy Weed)	✓			
**Lactuca serriola* (Prickly Lettuce)				✓
**Malvastrum americanum* (Spiked Malvastrum)	✓	✓	✓	
**Physalis* sp. (Cape Gooseberry)	✓			
**Rumex vesicarius* (Ruby Dock)			✓	✓
**Setaria verticillata* (Whorled Pigeon Grass)	✓		✓	
**Sigesbeckia orientalis* (Indian Weed)	✓	✓		
**Sonchus oleraceus* (Common Sowthistle)			✓	
**Tribulus terrestris* (Caltrop)	✓			
Total	9	3	7	3

[8] For the current listing of Weeds of National Significance, go to http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html

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5.0 Vegetation of the Study Area

5.1 Overview

A total of 45 vegetation types have been described for the study area, as described and mapped in Appendix 8. Two additional units comprise a mosaic that incorporates two vegetation types. A total of 39 vegetation units were newly described by the current study, adding to six historical units; five described by Biota (2014a), and a single unit described by Ecologia (2013).

Each vegetation unit is described in Appendix 8, together with its distribution within the study area. Representative photos of the vegetation units are presented in Plate 5.1 to Plate 5.44[9].

The vegetation units were broadly associated with five major landforms. Each landform is briefly discussed below, with a general overview of the associated vegetation:

- Major drainage lines

  Major drainage lines were uncommon in the study area, and only three areas of such habitats were recorded: one at Deposit H, supporting unit D1 (EcEvExPlApyGOsTHtCYaEUaARla); one at Western Hill, supporting unit D2 (EvAcTErTHtTp); and the third at Deposit J/Mt Ella East, supporting unit D3 (ExChPlApyTErTHtTp). Unit D1 occurred at the northernmost (downstream) end of a major drainage line in the Deposit H study area, which flows northeast into Pebble Mouse Creek. This vegetation was dominated by *Eucalyptus camaldulensis* subsp. *refulgens* (Rivergum), *E. victrix* (Coolibah), and to a lesser extent *E. xerothermica* (Pilbara Box), in addition to common drainage-line shrubs in the middle stratum (e.g. *Petalostylis labicheoides* (Slender Petalostylis), *Acacia pyrifolia* subsp. *pyrifolia* (Ranji Bush) and *Gossypium sturtianum* var. *sturtianum* (Desert Rose)), with common grasses typically dominating the lower stratum (e.g. *Cymbopogon ambiguus* and *Eulalia aurea*). Notably, this unit supported the Priority 2 species *Aristida lazaridis* at high densities.

  Vegetation unit D2 was recorded in Turee Creek along the southern boundary of Western Hill, where it extended into Deposits C and D. Overall, this vegetation was dominated by *Eucalyptus victrix* (sometimes occurring in isolated pockets) and *Acacia citrinoviridis*, with *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) dominating the lower shrub stratum. The grass stratum was dominated by the tussock grass *Themeda triandra* and hummock grass *Triodia pungens* (Soft Spinifex). The drainage line formed a network of narrow clay-dominated floodplains, where *Acacia citrinoviridis* was more dominant (occurring with scattered *E. victrix*); and narrow stony channels, where *E. victrix* and *Cymbopogon ambiguus* (Scentgrass) occurred at higher densities.

  Vegetation unit D3 was recorded from three major drainage lines at Deposit J/Mt Ella East. These drainage lines typically had a narrow stony channel with an exposed rocky bed, in addition to floodbanks with clay soils. These habitats supported *Eucalyptus xerothermica* (which occurred at high densities along the floodbanks), *Petalostylis labicheoides* and *Acacia pyrifolia* in the upper strata, with *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) in the lower shrub stratum. The ground cover was dominated by the grass *Themeda triandra* (occurring at higher densities along banks) and the spinifex *Triodia pungens*.

- Minor-moderate drainage lines

  A network of minor-moderate drainage lines dissected the entire study area, not all of which were mapped due to their small scale. Three of the nine minor-moderate drainage line units were representative of common vegetation units typical of smaller drainages in the Pilbara (i.e. D5 (ChPlAmoTErTHtTp), D7 (ChAmoTHtTp) and D8 (ElChPlGOrAmoTHtTp). These generally had an overstorey of *Corymbia hamersleyana* (Hamersley Bloodwood) and/or *Eucalyptus leucophloia*

[9] NB: no image is available for P4. This historical vegetation unit in Deposit F North was not sampled during the current study, as only a very small area was accessible and a large section had been cleared for a waste dump.

subsp. *leucophloia* (Snappy Gum) trees, over a middle stratum of *Acacia monticola* (Gawar) and/or *Petalostylis labicheoides* tall shrubs, occasionally with lower shrubs of *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) (e.g. at D5). *Themeda triandra* and *Triodia pungens* were both typical dominant grass taxa. These three units were recorded at Western Hill (unit D5), Deposit F North (unit D7) and Deposit H (unit D8). Another similar unit, D6 (ChCdAanPlTp) at Western Hill, was dominated by *Corymbia hamersleyana* together with *C. deserticola* subsp. *deserticola*, over a shrub stratum containing *Petalostylis labicheoides* and *Acacia 'aneura'* (species in the 'Mulga' complex), and a grass stratum of common species (e.g. *Themeda triandra* and *T. pungens*).

The remaining five minor-moderate drainage line vegetation types were less common. Unit D4 (AanAcaApTp) at Western Hill had a low woodland dominated by *Acacia 'aneura', A. catenulata* subsp. *occidentalis* and *A. pruinocarpa* over a very open hummock grassland of *Triodia pungens*. Unit D9 (EtTp) at Deposit F North had a low mallee woodland of *Eucalyptus trivalva* over a very open hummock grassland *Triodia pungens*.The final three units included *Eucalyptus xerothermica* as a dominant species. Unit D10 (ExAanANlSsTHt) at Deposit H is particularly uncommon and supported a low woodland of *E. xerothermica* and *A.* '*aneura*', over a middle stratum dominated by *Isotropis* sp. Arid zone (G. Byrne 2775), and a dense cover of *Themeda triandra* at ground level. Unit D11 (ExAanEtPlANlEUsTHtTp) at Deposit H and Deposit F North had a low open woodland overstorey dominated by *Eucalyptus xerothermica* and/or *Acacia* '*aneura'* over mallees of *Eucalyptus trivalva*. The middle shrub stratum was dominated by *Petalostylis labicheoides* and *Androcalva luteiflora*, and occurred over a very open ground layer of the grasses *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133) or *Themeda triandra* and the spinifex *Triodia pungens*. Drainage lines through substrates with a calcareous component at Deposit H supported unit D12 (ExEvMbMgANlTHtTloTp). This vegetation typically had an overstorey of *Eucalyptus xerothermica*, with *E. victrix* scattered trees (occasionally occurring in isolated pockets), together with tall shrubs of *Melaleuca bracteata* (River Teatree) and *M. glomerata*, and a middle shrub stratum typically dominated by *Androcalva luteiflora* (Yellow-flowered Rulingia). *Themeda triandra*, *Triodia longiceps* (Giant Grey Spinifex) and *Triodia pungens* variously dominant at ground level.

- Gorges and gullies

  Three vegetation units were described in gorge and gully habitats. Two of these, G1 (AanApCfDpHARkPToTp) and G2 (AanCALcCfCAPmPToERlmARbTp), were dominated by *Acacia* '*aneura*' and *Corymbia ferriticola*, together with the low shrub *Ptilotus obovatus*. Vegetation unit G1, recorded at Western Hill, also supported *Acacia pruinocarpa* and a high density of *Harnieria kempeana* subsp. *muelleri*, together with *Triodia pungens.* Unit G2, which occurred at Western Hill, Deposit J/Mt Ella East and Deposit H, was dominated by the fire sensitive tree species *Callitris columellaris* (White Cypress Pine), together with the tall shrub *Capparis mitchellii* (Wild Orange). Unit G3 (CfAmoTHtTp), an uncommon unit of small stony gorges at Deposit F North, supported *Corymbia ferriticola, Acacia monticola,* and the grasses *Themeda triandra* and *Triodia pungens*.

- Clay plains and stony plains

  Clay plains were distributed widely through the study area, particularly at Western Hill, Deposit F North and Deposit H. These plains variously supported vegetation units P1 to P6, which were typically dominated by *Acacia* '*aneura*', a combination of middle stratum shrub species, and *Triodia pungens* as the most common spinifex species. One of these vegetation types, unit P2 (AanAayERfoTm), occurred as a single discrete patch at Deposit F North and was dominated by *Triodia melvillei*. Where *Acacia 'aneura'* occurred on floodplains at Deposit H, it typically co-occurred with *Eucalyptus xerothermica*, forming unit P7 (AanExERfoERloTHtTwTp).

  The extensive clay plains at Western Hill, occurring in the southwestern corner and along the northern boundary, were dominated by vegetation unit M1 (mosaic), which comprised a mosaic of the vegetation units P3 (AanAcaApERfoTp) and P6 (AanApTp). Unit P3 typically occurred where the taxa in the upper and middle strata occurred at moderate to high densities, with a very open spinifex layer, whilst the taxa in the upper and middle strata in unit P6 were typically sparse, with a dense cover of spinifex (e.g. the small section mapped separately in the far southwestern corner of Western Hill). The density of *Acacia 'aneura'*, *A. catenulata* subsp.

occidentalis and *A. pruinocarpa* through unit P3 was variable. Other shrub taxa that varied in abundance across unit P3 included *Eremophila* taxa (particularly *E. caespitosa*, *E. fraseri* subsp. *fraseri* and *E. phyllopoda* subsp. *obliqua*) and *Sida ectogama*. Along the northern boundary of Western Hill, two isolated and slightly elevated stony habitats were recorded with map notes MM-MN16 and PL-MN132. These habitats were not discriminated but were mapped as M1, as the vegetation was considered to representative of an ecotone, being dominated by *Acacia* '*aneura*', *A. pruinocarpa* and *Triodia pungens*, taxa that are typical of both units P3 and P6. Additionally, low densities of other taxa that are more typical of stony habitats (e.g. *Acacia wanyu*, *Ptilotus rotundifolius* and *Senna* taxa) were recorded. In the southwestern corner of Western Hill, a small apparent drainage line dominated by *Acacia 'aneura'* can be seen on aerial imagery; however data from current map notes and historical relevés (WRRA and WRRB (Biota 2014b)) confirmed the vegetation was not distinct from elsewhere, with the same dominant species typical for unit P3 and P6, but occurring at higher densities. Where drainage lines were distinct and dominated by *Acacia 'aneura'*, they formed vegetation unit D4, however these often transitioned into other vegetation units when the drainage channel became indistinct.

Clay plains with sparse *Acacia* '*aneura*' at Western Hill and Deposit J/Mt Ella East supported the uncommon vegetation unit P8 (AanTHtARcTp), noted for having a high clay content with typically a dense cover of *Themeda triandra* and/or *Aristida contorta*.

Other more general units over stony plains included units P9 (ApAwTvTp) at Western Hill, P10 (ElAtenAdAmTw) at Deposit H and P12 (EgTpTv) at Deposit J/Mt Ella East. These were typically dominated by a mixed shrub layer, often dominated by species of *Acacia*, and had an overstorey of either *Eucalyptus gamophylla* or *E. leucophloia* subsp. *leucophloia*, and various spinifex species forming a hummock grassland.

Three distinct units occurred on plains where the geology was partly comprised of quartz and/or calcrete: P11 (ElTspp) at Western Hill, P13 (ErEsMeTwTa) at Deposit H, and P14 (EtErEsTspp) at both Deposit J/Mt Ella East and Deposit H. Units P13 and P14 are both considered uncommon, comprising an unusual mix of mallee Eucalypt species over various spinifex taxa. Unit P13 was dominated by the shrub species *Melaleuca eleuterostachya*, a species typically associated with quartz/calcrete geologies in the Pilbara.

- Stony hillslopes, hillcrests and foothills

Stony hillslopes, hillcrests and foothills were widespread throughout the entire study area. Hillcrests typically supported vegetation unit H5 (ChElAmHAgTpTw), H7 (ElAmTvTp) and H10 (ElEgAmPlTvTw), which were dominated by a mix of tree taxa (typically *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana*), with *Acacia maitlandii* typically dominant in the middle stratum, and a combination of spinifex species at ground level (e.g. *Triodia pungens*, *T. vanleeuwenii* and *T. wiseana* (Limestone Spinifex)). Where the middle stratum was sparse, vegetation unit H15 (ElTpTw) dominated the landscape. At higher elevations, hillcrests occasionally supported H11 (ElEkAhTvTw) (e.g. at Deposit H), which was dominated by *Eucalyptus kingsmillii* (Kingsmill's Mallee) and *Acacia hamersleyensis*, often occurring at high densities; or vegetation unit H13 (ElEsppTwTsm), a similar unit comprising a mix of mallee taxa (e.g. *E. gamophylla* (Twin-leaf Mallee), *E. kingsmillii*, *E. pilbarensis*, *E. repullulans* and *E. trivalva*), in addition to the spinifex species *Triodia* sp. Mt Ella (M.E. Trudgen 12739). Vegetation unit H16 (ElTvTpTsm) dominated large sections of hillcrests and hillslopes at Western Hill, and had sparse *Eucalyptus leucophloia* subsp. *leucophloia*, an open middle stratum, and a mix of spinifex species notably including the Priority 3 taxon *Triodia* sp. Mt Ella (M.E. Trudgen 12739).

Vegetation units H1 (Deposit H) and H2 (Western Hill) were recorded where stony hillslopes and hillcrests supported *Acacia* '*aneura*'. Both units had a middle shrub stratum dominated by various *Eremophila* taxa (e.g. *E. forrestii* subsp. *forrestii* and *E. jucunda* subsp. *pulcherrima*) over a spinifex stratum dominated by *Triodia wiseana* and/or *T. pungens.* Another broadly similar vegetation unit occurring on stony hillcrests and slopes was unit H3 (AcaElAanTp) at Deposit H, which in addition to *Acacia* '*aneura*', supported *A. catenulata* subsp. *occidentalis* and *Eucalyptus leucophloia* subsp. *leucophloia.*

Steep stony hillslopes supported two main units: H6 (ElAbTp) and H14 (ElTbrTw). These were characterised by sparse trees of *Eucalyptus leucophloia* subsp. *leucophloia* and sparse shrubs

of *Acacia* spp. over a hummock grassland of *Triodia pungens,* or *T. wiseana* and *T. brizoides* (where slopes were steep, e.g. at Deposit H).

Low undulating stony ironstone hills and foothills supported a number of similar units (e.g. H8 (ElCdApTvTp) and H9 (ElCdEgTv) at Western Hill, Deposit J/Mt Ella East and Deposit F North). Vegetation unit H12 (ElERfTpTw) occurred in small isolated sections at Western Hill, where the geology comprised Wittenoom dolomite formation. The middle stratum was dominated by *Eremophila fraseri* subsp. *fraseri*, and associated species typically included *Heliotropium chrysocarpum, Indigofera monophylla* and *Ptilotus clementii* (Tassel Top). Vegetation unit H4 (AiTw) was widespread across low undulating basalt hills at Deposit H, and was dominated by *Acacia inaequilatera* (Baderi), sometimes with sparse *Eucalyptus leucophloia* subsp. *leucophloia*, over *Triodia wiseana*.



Plate 5.1: D1 – EcEvExPlApyGOsTHtCYaEUaARla.



Plate 5.2: D2 – EvAcTErTHtTp.



Plate 5.3: D3 – ExChPlApyTErTHtTp.



Plate 5.4: D4 – AanAcaApTp.



Plate 5.5: D5 – ChPlAmoTErTHtTp.



Plate 5.6: D6 – ChCdAanPlTp.



Plate 5.7: D7 – ChAmoTHtTp.



Plate 5.8: D8 – ElChPlGOrAmoTHtTp.



Plate 5.9: D9 – EtTp.



Plate 5.10: D10 – ExAanANlSsTHt.



Plate 5.11: D11 – ExAanEtPlANlEUsTHtTp.



Plate 5.12: D12 – ExEvMbMgANlTHtTloTp.



Plate 5.13: G1 – AanApCfDpHARkPToTp.



Plate 5.14: G2 – AanCALcCfCAPmPToERImARbTp.



Plate 5.15: G3 – CfAmoTHtTp.



Plate 5.16: P1 – AanAayApTvTp.



Plate 5.17: P2 – AanAayERfoTm.



Plate 5.18: P3 – AanAcaApERfoTp.



Plate 5.19: P4 – AanApAayTp.



Plate 5.20: P5 – AanApERfoTp.



Plate 5.21: P7 – AanExERfoERloTHtTwTp.



Plate 5.22: P8 – AanTHtARcTp.



Plate 5.23: P9 – ApAwTvTp.



Plate 5.24: P10 – ElAtenAdAmTw.



Plate 5.25: P11 – ElTspp.



Plate 5.26: P12 – EgTpTv.



Plate 5.27: P13 – ErEsMeTwTa.



Plate 5.28: P14 – EtErTspp.



Plate 5.29: H1 – AanAayElERfoERlaTpTw.



Plate 5.30: H2 – AanERsppTp.



Plate 5.31: H3 – AcaElAanTp.



Plate 5.32: H4 – AiTw.



Plate 5.33: H5 – ChElAmHAgTpTw.



Plate 5.34: H6 – ElAbTp.



Plate 5.35: H7 – ElAmTvTp.



Plate 5.36: H8 – ElCdApTvTp.



Plate 5.37: H9 – ElCdEgTv.



Plate 5.38: H10 – ElEgAmPlTvTw.



Plate 5.39: H11 – ElEkAhTvTw.



Plate 5.40: H12 – ElERfTpTw.



Plate 5.41: H13 – ElEsppTwTsm.



Plate 5.42: H14 – ElTbrTw.



Plate 5.43: H15 – ElTpTw.



Plate 5.44: H16 – ElTvTpTsm.

5.2 Condition of the Vegetation Units

Vegetation condition assessments were based on the ranking scale presented in EPA (2016a). which is based on that developed by Trudgen (1988). The resulting condition of the vegetation in the study area is mapped in Appendix 10, with weed locations shown in overview. The rankings considered the degree of invasion by introduced flora (weeds), impact from humans, feral animal and livestock activities, and the structural integrity of the vegetation (see Appendix 4).

The majority of the West Angelas study area was in better condition than other localities in the Pilbara, given that much of the area was free of pastoral activities and associated disturbance (e.g. grazing, trampling, tracks and high abundances of introduced flora). As a result, the study area was largely ranked as being in Excellent to Very Good condition. The highest condition

ranking for the study area (Excellent) was typically associated with vegetation types on hills and stony plains; these areas were generally weed-free. Vegetation in Very Good condition was generally associated with areas of Mulga or clay plains, in addition to gullies and gorges at higher elevation: these areas tended to support higher densities of weeds (most commonly **Bidens bipinnata*). A relatively small proportion of the study area had been cleared for mining exploration activities, including tracks and drill pads, or for mining and pastoral infrastructure; these areas were scored as Completely Degraded[10].

5.3 Results of the Floristic Analysis

5.3.1 Overview

Due to the size of the data set, results from the floristic analysis are most easily displayed in NMDS plots, however output dendrograms are also provided in Appendix 11.

On the basis of the perennial species present, sites from the current study area were typically intermingled with sites from outside the study area, suggesting that their floristic composition was not broadly dissimilar (Figure 5.1). With regards to the four components of the study area, the Western Hill and Deposit H sites showed the broadest range with regards to floristic composition, and the least overlap (Figure 5.2). The latter aspect is likely to reflect the presence of different geological units in the component study areas, particularly the dominance of Marra Mamba Iron Formation, Jeerinah Formation, metabasalt and metadolerite sills at Deposit H; these units were absent or minor in the other component study areas.

There were clear differences in the floristic composition of sites located within the five main landform categories used for this study, and further differences between sites on clay plains compared to stony plains (Figure 5.3). The 10 species most characteristic of each habitat type are indicated in Table 5.1, along with the cumulative percent similarity provided by these species. Mulga taxa (designated '*Acacia* aff. *aneura*' in the analysis data set) were key species across all habitats except the stony plains and major drainage sites. This is in keeping with the location of the study area at West Angelas, a locality known to support the greatest diversity of Mulga forms in the Pilbara and a variety of Mulga communities (Department of Environment and Conservation 2010). In recognition of the diversity of both Mulga taxa and Mulga communities in the broader locality, an area from the southeastern corner of Karijini National Park extending almost to Newman was once proposed for a "Mulgalands Conservation Park" (Van Leeuwen and Bromilow 2002).

[10] During the field survey, an extensive network of new drill pads and tracks was observed in the southern end of Deposit F North (and visible on subsequent inspection of aerial imagery). These areas had not been included in the spatial layer of 'Disturbed' areas provided by Rio Tinto, and no attempt was made to capture these cleared areas during the current digitising process. As a result, the calculation of 'Disturbed' areas for Deposit F North will be an underestimate.

Table 5.1: Top 10 indicator species for each habitat.

Habitat	Ten Species with Greatest Contribution to Similarity	Cumulative Percent Similarity
Major Drainages	*Themeda triandra, Triodia epactia/pungens, Petalostylis labicheoides, Acacia bivenosa, Acacia pyrifolia, Paraneurachne muelleri, Duperreya commixta, Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90), *Ptilotus obovatus* var. *obovatus, Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186)	59%
Minor Drainages	*Themeda triandra, Triodia epactia/pungens, Petalostylis labicheoides, Androcalva luteiflora, Acacia monticola, Duperreya commixta, Corymbia hamersleyana, Gossypium robinsonii, Eucalyptus xerothermica, Acacia* aff. *aneura*	68%
Gullies / Gorges	*Corymbia ferriticola, Callitris columellaris, Acacia* aff. *aneura, Ptilotus obovatus* var. *obovatus, Triodia epactia/pungens, Duperreya commixta, Aristida burbidgeae, Cymbopogon ambiguus, Themeda triandra, Eriachne mucronata*	59%
Hills	*Triodia epactia/pungens, Triodia vanleeuwenii, Eucalyptus leucophloia* subsp. *leucophloia, Triodia wiseana, Senna glutinosa* subsp. *glutinosa, Acacia pruinocarpa, Acacia bivenosa, Acacia* aff. *aneura, Solanum lasiophyllum*	64%
Stony Plains	*Triodia wiseana, Triodia epactia/pungens, Paraneurachne muelleri, Duperreya commixta, Acacia bivenosa, Triodia vanleeuwenii, Ptilotus obovatus* var. *obovatus, Solanum lasiophyllum, Triodia longiceps, Senna glutinosa* subsp. x *luerssenii*	55%
Clay Plains	*Triodia epactia/pungens, Acacia* aff. *aneura, Acacia pruinocarpa, Eremophila forrestii* subsp. *forrestii, Acacia catenulata* subsp. *occidentalis, Solanum lasiophyllum, Ptilotus obovatus* var. *obovatus, Duperreya commixta, Maireana villosa, Triodia vanleeuwenii*	82%

Using a nominal 30% similarity between sites, the analysis identified 34 floristic groups on the basis of the cover data for perennial species (see Table 2 in Appendix 11). A subset of 23 of these groups contained sites from the study area.

In general, the vegetation types identified for the study area had some or all sites in floristic groups that also contained sites from outside the study area, however five floristic groups only contained sites from inside the study area:

- *FG_p* contained three of the sites from H2 (WA01, WNG-REL07 and WNG17). Six species contributed 76% to the observed similarity in this group (*Acacia* aff. *aneura, Eremophila jucunda* subsp. *pulcherrima, Triodia epactia/pungens, Eremophila cuneifolia, Enneapogon lindleyanus* and *Hibiscus burtonii*).
- *FG_t* contained a single historical site (Q_31) from the hills vegetation type H16. This site had a relatively high cover (15%) of *Themeda* sp. Mt Barricade (M.E. Trudgen 2471); this species occurs in patches on hill slopes and is often dense where it occurs, but was not common in the data set.
- *FG_u* contained a single historical site (Q_78) from the mosaic vegetation type M1 from clay plains. This site had a relatively high cover (20%) of *Eucalyptus xerothermica;* this species was not typically present with high cover in plains sites in the data set, but did occur with high cover in sites in drainage line habitats.
- *FG_v* contained a single site (WAREL-06) from the hills vegetation type H1. This site had 3% cover of *Triodia brizoides* along with a high cover of *Acacia ayersiana* (20%); this latter species was not present in any other sites with *Triodia brizoides*.
- *FG_af* contained two sites from P13 (WA16 and WA22) and two sites from P14 (WA07 and WA21). Six species contributed 76% to the observed similarity (*Triodia wiseana, T. angusta, Eucalyptus socialis* subsp. *eucentrica, Melaleuca eleuterostachya, Acacia bivenosa* (wispy/weeping form) and *Hibiscus coatesii*).

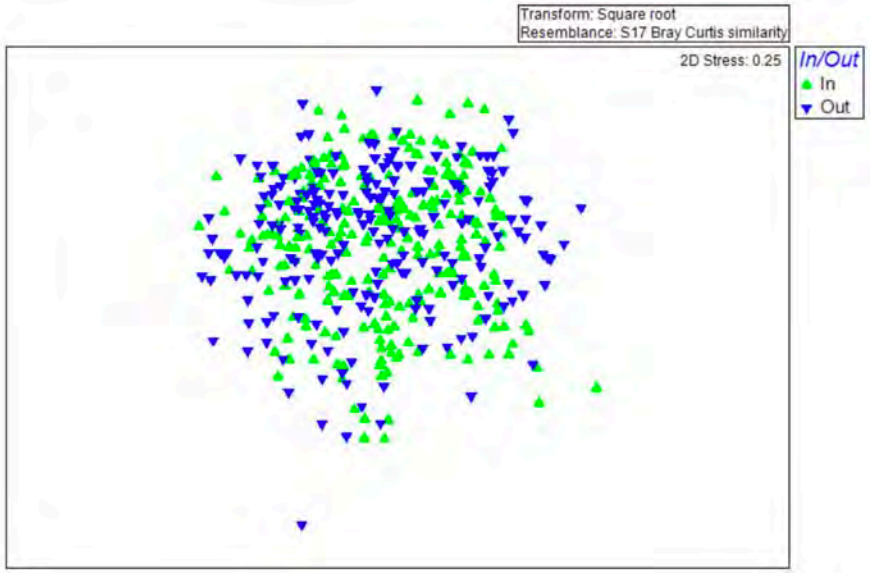


Figure 5.1: NMDS plot showing similarity of sites based on cover of perennial species, coded by location inside or outside of study area.

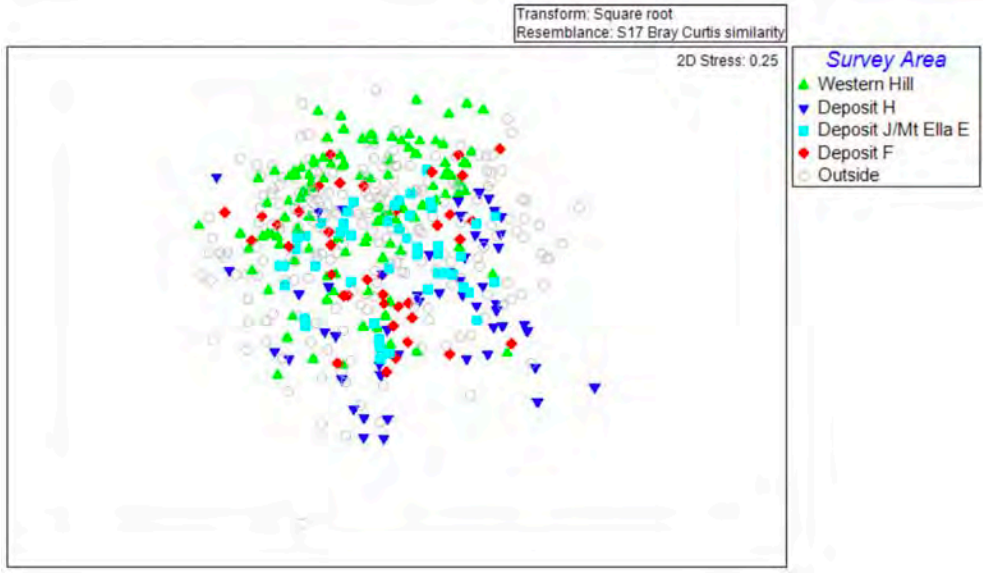


Figure 5.2: NMDS plot showing similarity of sites based on cover of perennial species, coded by location in each component of the study area, or outside.

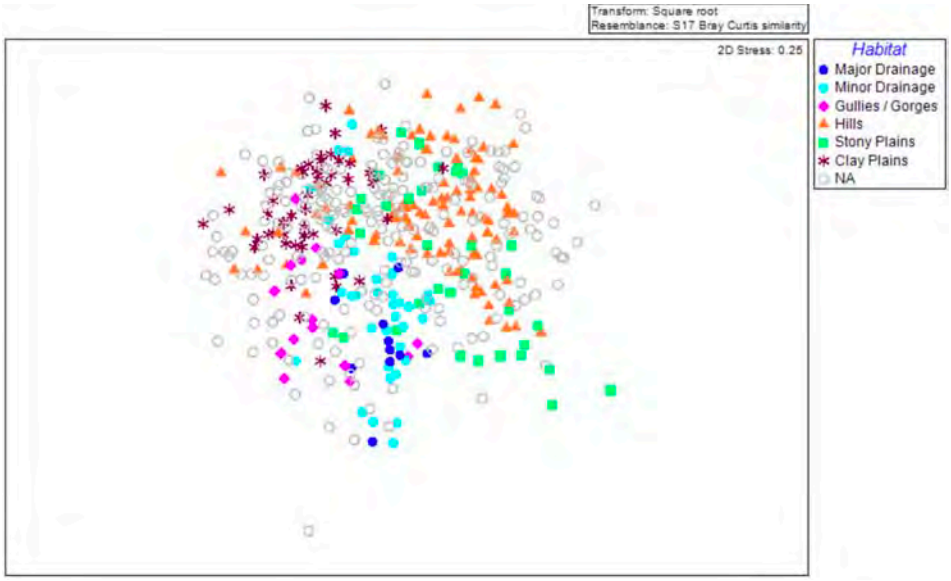


Figure 5.3: NMDS plot showing similarity of sites based on cover of perennial species, coded by habitat type.

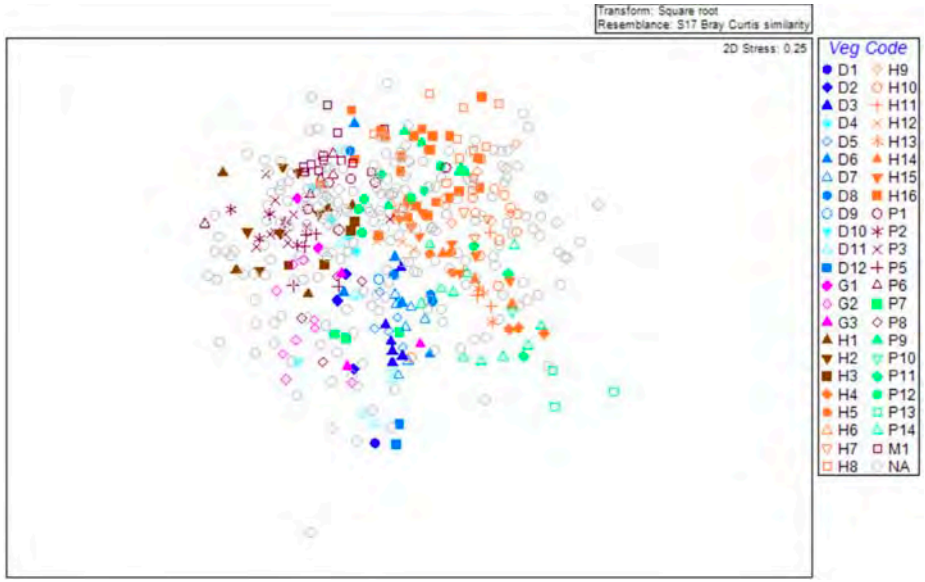


Figure 5.4: NMDS plot showing similarity of sites based on cover of perennial species, coded by vegetation type.

See also Appendix 11, for NMDS plots of sites in study area only.

5.3.2 Correspondence of Vegetation Types with Floristic Groups

The floristic groups identified by the analyses were reviewed against the vegetation types identified on the basis of structure and dominant species, and showed variable support for these units; some floristic groups contained all sites sampled within a particular vegetation type, and only those sites, while other floristic groups contained sites from multiple vegetation types. In general, the drainage line vegetation types showed considerable overlap in sites, which is not unexpected given that many species were in common. Sites in Mulga-dominated vegetation also tended to occur in a subset of floristic groups, irrespective of their habitat. It is considered that survey season and methodology (quadrat versus relevé) are likely contributing factors.

A brief description of each of the floristic groups containing sites from the study area is provided below:

- *FG_i* contained the three sites from P7, along with single sites from D4 and P8, and three sites from floodplains outside the study area. These sites all had an overstorey containing Mulga (*Acacia 'aneura'* complex) and Pilbara Box (*Eucalyptus xerothermica*) over an understorey of the tussock grass *Themeda triandra.*
- *FG_k* contained all three sites from the major drainage line vegetation type D2, and seven sites from similar habitats outside the study area. These were characterised by the indicator species *Eucalyptus victrix, Acacia citrinoviridis* and *Themeda triandra.*
- *FG_l* contained the single site from the major drainage line vegetation type D1, together with both sites from vegetation type D12, which occurred in a minor drainage line through calcrete. This floristic group also included two sites from major drainage lines outside the study area. These sites were characterised by *Eucalyptus victrix* and the tussock grasses *Themeda triandra* and *Eulalia aurea,* but occurred in drainage lines of very different scale and were clearly functionally different.
- *FG_m* contained one site from the gorge vegetation type G3 (WAREL-16) and two sites from minor drainage lines outside the study area. These sites were characterised by *Corymbia hamersleyana, Gossypium robinsonii* and *Themeda triandra*, which are all typical species of minor drainage habitats. WAREL-16 was located in the lower part of a gully, and lacked a number of the species that were typical of more defined gorge habitats such as those that clustered in *FG_x*, but did include others such as *Ficus brachypoda* and *Aristida burbidgeae*.
- *FG_n* contained 33 sites from drainage line vegetation types (including all or most sites from D3, D5, D7, D8, D10 and D11), as well as seven sites from similar habitats outside the study area. These sites were characterised by species typical of such habitats, particularly the tall shrub *Petalostylis labicheoides,* soft spinifex (*Triodia epactia* or *T. pungens*) and the tussock grass *Themeda triandra.*
- *FG_o* contained single sites from the minor drainage line vegetation types D7 and D9, and three sites from similar habitat outside the study area. These were characterised by an overstorey of Twin-leaf Mallee (*Eucalyptus gamophylla*) and the tall shrub *Acacia steedmanii* subsp*. borealis,* which was not common in the data set, over an understorey of *Triodia epactia/pungens.*
- *FG_p* contained three sites from the hills vegetation type H2, which were characterised by Mulga*, Eremophila jucunda* subsp*. pulcherrima* and *Triodia epactia/pungens.* The other three sites in H2 grouped with the Mulga-dominated sites in *FG_ab* (see below). *Eremophila jucunda* subsp*. pulcherrima* was not common in the data set, and occurred with relatively high cover in these sites.
- *FG_q* contained one site from the plains vegetation type P5, and seven sites from clay plains outside the study area. Sites in this group were characterised by Mulga*, Ptilotus obovatus var. obovatus* and *Acacia catenulata* subsp*. occidentalis;* the other four sites in P5 grouped with the Mulga-dominated sites in *FG_ab* (see below).
- *FG_r* contained single sites from the plains vegetation types P3 and P6, and three sites from similar clay plains outside the study area. Sites in this group were characterised by Mulga*,*

Acacia pruinocarpa and *Evolvulus alsinoides.* All of the other sites in P6 and all but one of the other sites in P3 grouped with the Mulga-dominated sites in *FG_ab* (see below).

- *FG_s* contained all five sites from the plains vegetation type P2 and seven sites from similar habitats outside the study area. Sites in this group were characterised by Mulga*, Acacia pruinocarpa* and *Triodia melvillei.*
- *FG_t, FG_u* and *FG_v* contained single sites from the study area, as discussed in Section 5.3.1.
- *FG_w* contained single sites from the hills vegetation type H1 (WAREL-09) and drainage line vegetation type D4 (WNG-REL22), together with a site on a clay plain outside the study area but relatively close to WNG-REL22. Sites in this group were characterised by *Acacia ayersiana, A. catenulata subsp. occidentalis* and *Triodia epactia/pungens.*
- *FG_x* contained both sites from the gorge vegetation type G1, all nine sites from G2 and two of the three sites in G3, along with two sites in H3. This floristic group also included five sites in gullies outside the study area, located between Deposit J/Mt Ella East and Deposit F North. Sites in this group were characterised by Mulga*, Corymbia ferriticola* and *Triodia epactia/pungens,* but also included various other species typical of gorge/gully habitat such as *Aristida burbidgeae, Astrotricha hamptonii, Callitris columellaris* and *Ficus brachypoda.*
- *FG_z* contained two sites from the minor drainage line vegetation type D6, together with a site in the same habitat outside the study area. Sites in this group were characterised by *Eucalyptus gamophylla, Acacia monticola* and *Triodia epactia/pungens.*
- *FG_ab* contained sites from various vegetation units that were dominated by Mulga and *A. pruinocarpa* over *Triodia epactia/pungens*. The sites in the study area were from drainage lines (D4, D8 and D11), hills (H1, H2 and H16) and plains (one site from P12, together with most of the sites in P1, P3, P5, P6 and the mosaic unit M1). This floristic group also included 53 sites in similar habitats outside the study area, mostly from plains.
- *FG_ac* contained sites from various vegetation units that were dominated by *Eucalyptus leucophloia* subsp*. leucophloia, Acacia bivenosa* and *Triodia epactia/pungens*. Sites in the study area were mainly on hills (all sites from H6 and H12, most sites from H15 and a few sites from H1, H3, H8 and H9) and on plains (a few sites from P3, P9, P11 and P12), with one site from drainage line D6. This floristic group contained 34 sites outside the study area, mostly on hills and stony plains,
- *FG_ad* contained three of the four sites from vegetation type P11, which occurred on stony plains with a calcareous/quartz substrate, together with a single site from similar habitat outside the study area. These sites were dominated by *Eucalyptus leucophloia* subsp*. leucophloia, Acacia bivenosa* and *Triodia longiceps.*
- *FG_ae* contained mostly sites from hills vegetation (all three sites in H7, most of the sites in H8, H9 and H10, half of the sites in H16, and one site from H11), together with some sites from plains (most sites from P9, and single sites from P1, P12 and P14). This floristic group also contained 31 sites from hills and stony plains outside the study area. These sites were dominated by *Eucalyptus leucophloia subsp. leucophloia* over *Triodia vanleeuwenii* and *T. epactia/pungens.*
- *FG_af* and *FG_ag* together contained all but one site from vegetation types P13 and P14, which were associated with small areas of undulating plain with a somewhat calcareous substrate. *FG_ag* also contained four sites from similar habitat north of the study area. These sites were dominated by the low mallee eucalypts *E. repullulans, E. socialis* subsp*. eucentrica* and/or *E. trivalva* over various spinifex species including *Triodia wiseana, T. angusta* and *T. epactia/pungens*.
- *FG_ah* contained mostly sites from hills vegetation (all sites from H4, H5, H13 and H14, three of the four sites from H11, and two sites from H10) along with the single site from plains vegetation type P10. This floristic group also included 15 sites outside the study area, mostly from hills. These sites were dominated by *Eucalyptus leucophloia subsp. leucophloia, Senna glutinosa subsp. glutinosa* and *Triodia wiseana.*

5.4 Vegetation of Conservation Significance

The vegetation types currently considered to be of elevated significance are summarised in Table 5.2. These were classified as per the rankings in Table 3.4 in Section 3.2.4.1, and are described in more detail in the following sections.

The remaining vegetation types in the study area were considered to be of lower conservation significance ('Negligible' as per Table 3.4), being representative of the vegetation occurring in similar habitats throughout the local area. Note that this is not meant to imply that the vegetation in the study area is of no conservation value, as all intact native vegetation is inherently valuable (DEWHA 2010).

5.4.1 Vegetation Communities of High Local Significance

None of the vegetation types identified for the study area represent TECs listed either under the Commonwealth EPBC Act or the WA *Environmental Protection Act 1986*, and no PECs were identified in the study area. No Threatened flora or Priority 1 species were recorded from the study area.

Two riparian vegetation types were identified as being of High local conservation significance:

- Vegetation unit D1 (EcEvExPlApyGOsTHtCYaEUaARla) represented GDV[11]. This unit occurred in a major drainage line in the northeastern section of Deposit H (at the northern boundary). The unit was dominated by *Eucalyptus camaldulensis* subsp. *refulgens* (Rivergum) together with *E. victrix* (Coolibah), and to a lesser extent *E. xerothermica* (Pilbara Box). The middle stratum was dominated by *Petalostylis labicheoides, Acacia pyrifolia*, and *Gossypium sturtianum* var. *sturtianum* (Sturt's Desert Rose), with the lower stratum dominated by tussock grasses; most notably the Priority 2 taxon *Aristida lazaridis*. Given the dominance of *Aristida lazaridis* in the vegetation unit, it is probable that unit D1 would be uncommon through this habitat in similar sections of the Hamersley subregion. However, only a very small section (approximately 200m long) of the drainage line supported unit D1, as it quickly transitioned to unit D11 to the south, which was typically dominated by *Eucalyptus xerothermica* and only very isolated occurrences of *E. victrix*.
- Vegetation unit D2 (EvAcTErTHtTp) was considered to be potential GDV (see Appendix 8). This unit occurred in a major drainage system (a section of Turee Creek) along the southern boundary of the Western Hill deposit, and was dominated by the tree species *Eucalyptus victrix* and the low tree / tall shrub species *Acacia citrinoviridis*.

5.4.2 Vegetation Communities of Moderate Local Significance

A total of 15 vegetation units were considered to be of Moderate local significance as they supported large populations of Priority 2 and/or Priority 3 flora. These comprised:

- Two units occurring within minor-moderate drainage lines: D8 (ElChPlGOrAmoTHtTp) supported high numbers of *Indigofera gilesii* (Priority 3), and D11 (ExAanEtPlANlEUsTHtTp) supported relatively high numbers of *Aristida lazaridis* (Priority 2).
- Seven units occurring on hillslopes, hillcrests and foothills: H2 (AanERsppTp), H6 (ElAbTp), H10 (ElEgAmPlTvTw), H13 (ElEsppTwTsm), H14 (ElTbrTw), H15 (ElTpTw) and H16 (ElTvTpTsm). These supported a combination of one or more of the following Priority flora: *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (Priority 2), and *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola*, *Indigofera gilesii, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (all Priority 3).

[11] In the Pilbara bioregion, we consider vegetation units dominated by the obligate phreatophytic species *Eucalyptus camaldulensis* subsp. *refulgens* and/or *Melaleuca argentea* to be GDV, and those dominated by *E. victrix* to be potential GDV.

- An additional unit on low stony hills, H8 (ElCdApTvTp), supported relatively high numbers of *Isotropis parviflora* (Priority 2).
- Vegetation units P3 (AanAcaERfoTp) and P8 (AanTHtARcTp), occurring on clay plains, supported high numbers of *Eremophila pusilliflora* (Priority 2) and *Rhagodia* sp. Hamersley (M. Trudgen 17794) (Priority 3). Vegetation unit P8 is also an uncommon vegetation unit through this habitat, although there are additional occurrences through broad valleys east of the West Angelas study area, extending to the Great Northern Highway. Vegetation unit P3 is considered to be relatively common.
- Vegetation units G1 (AanApCfDpHARkPToTp), G2 (AanCALcCfCAPmPToERImARbTp) and G3 (CfAmoTHtTp) occur in rocky gorge habitats. Morton et al. (1995) list gorges of the Hamersley range as being of elevated conservation significance, as gorge and gully habitats form refugia for fire-sensitive species in the Pilbara. High numbers of Priority flora were associated with these vegetation units or occurred in close proximity (e.g. *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (Priority 2), and *Pilbara trudgenii*, *Eremophila* sp. Hamersley Range (K. Walker KW 136) and *Grevillea saxicola* (all Priority 3)).

Three additional vegetation types were considered likely to have a limited local representation:

- Vegetation units P13 (ErEsMeTwTa) and P14 (EtErEsTspp) are considered to be of local significance, as they comprise an unusual mix of mallee 'Eucalypt' species (e.g. *Eucalyptus repullulans* (Kopi Mallee) in combination with *E. trivalva* and/or *E. socialis* subsp. *eucentrica* (Red mallee)). Unit P13 was noted for having *Melaleuca eleuterostachya* occurring as a dominant in the middle stratum; in the Pilbara this species is commonly associated with calcrete/quartz geologies. Both vegetation units are uncommon through similar habitats in this section of the Hamersley subregion.
- Vegetation unit D10 would also be of local significance as it would be an uncommon unit through similar habitats in this section of the Hamersley Ranges. It had an unusually high cover of both *Isotropis* sp. Arid zone (G. Byrne 2775) and *Themeda triandra*.

Table 5.2: Vegetation units of elevated conservation significance within the West Angelas study area.

Significance	Mapping Unit from the Current Study		Area (ha)	
Vegetation Units of High Local Significance				
Major drainage systems supporting rIparian vegetation				
GDV	D1:	EcEvExPlApyGOsTHtCYaEUaARla	Deposit H	1.0
Potential GDV	D2:	EvAcTErTHtTp	Western Hill	40.5
Vegetation Units of Moderate Local Significance				
Core habitat for Priority 2 flora and/or large numbers of Priority 3 flora				
Vegetation of minor-moderate drainage lines	D8	ElChPlGOrAmoTHtTp	Deposit H	6.1
	D11	ExAanEtPlANlEUsTHtTp	Deposit H	84.8
Vegetation of clay plains	P3:	AanAcaApERfoTp (not mapped separately – within M1)	Western Hill	1,831.5
	P8:	AanTHtARcTp	Western Hill	88.9
			Deposit J/Mt Ella East	11.2
Vegetation of hillslopes, hillcrests and foothills	H2:	AanERsppTp	Western Hill	155.3
	H6:	ElAbTp	Western Hill	153.9
	H8:	ElCdApTvTp	Western Hill	821.2
	H10:	ElEgAmPlTvTw	Deposit H	1,141.5
	H13:	ElEsppTwTsm	Deposit J/Mt Ella East	98.0
	H14:	ElTbrTw	Deposit H	80.7
	H15:	ElTpTw	Deposit J/Mt Ella East	706.0
	H16:	ElTvTpTsm	Western Hill	748.9
Vegetation of gullies and gorges	G1:	AanApCfDpHARkPToTp	Western Hill	4.8
	G2:	AanCALcCfCAPmPToERlmARbTp	Western Hill	7.2
			Deposit J/Mt Ella East	1.7
			Deposit H	3.5
	G3:	CfAmoTHtTp	Deposit F North	2.2
Uncommon vegetation units in the locality				
Vegetation of minor-moderate drainage lines	D10:	ExAanANlSsTHt	Deposit H	4.5
Vegetation of stony plains	P13:	ErEsMeTwTa	Deposit H	41.2
	P14:	EtErEsTspp	Deposit F North	26.5
			Deposit H	789.0
			Deposit J/Mt Ella East	346.6

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6.0 Flora of the Study Area

6.1 Overview

A total of 542 native vascular flora taxa from 179 genera and 57 families were recorded from the study area during the field surveys in 2018 and 2019, while a total of 643 native vascular flora taxa from 188 genera and 58 families have been recorded from the study area based on all survey work to date (see Appendix 7). This total includes 21 Priority flora taxa (discussed in Section 6.4), and 14 introduced flora species (see Section 6.5). A summary for each deposit is presented in Table 6.1.

Table 6.1: Number of species recorded from the study area and in each deposit (combined previous and current surveys).

Deposit	Total Study Area	Western Hill	Deposit F North	Deposit H*	Deposit J/Mt Ella East
Families	58	50	38	51	46
Genera	188	157	106	147	135
Native Species	643	483	300	401	359
Priority Flora	21	14	9	9	15
Introduced Flora	15	11	7	7	7

* Biota only surveyed in 2019.

The dominant plant families are presented in Table 6.2, whilst the dominant genera are presented in Table 6.3. These families and genera are typically represented in species lists from this region.

Table 6.2: The dominant plant families recorded from the study area, together with the number of species in each deposit (combined previous and current surveys).

Family	No. of Native Species				
	Total Study Area	Western Hill	Deposit F North	Deposit H*	Deposit J/Mt Ella East
Fabaceae	125	92	66	75	71
Poaceae	104	79	59	71	61
Malvaceae	68	55	37	44	44

* Biota only surveyed in 2019.

Table 6.3: The dominant plant genera recorded from the study area, together with the number of species in each deposit (combined previous and current surveys).

Genus	No. of Native Species				
	Total Study Area	Western Hill	Deposit F North	Deposit H*	Deposit J/Mt Ella East
Acacia	51	40	36	30	29
Senna	38	25	18	20	25
Eremophila	24	19	12	13	9
Sida	20	14	14	16	14
Ptilotus	19	16	11	13	11
Eriachne	15	12	7	6	8
Aristida	14	11	11	10	10
Euphorbia	14	10	9	8	11
Abutilon	12	10	6	8	8
Eucalyptus	12	7	7	10	9
Hibiscus	12	11	8	8	8

* Biota only surveyed in 2019.

6.2 Sampling Adequacy and Species Richness

The species accumulation curve generated from the 2018-2019 survey data is approaching a plateau, indicating that the sampling of the study area was relatively thorough (Figure 6.1). However, the two estimates of species richness (ICE and Chao2) suggested that the actual number of species present in the sampled area was approximately 580, which would mean that 88-89% of the total flora were recorded during the site sampling for the current study (Table 6.4). These sorts of proportions are similar to those reported for other surveys of a similar nature (e.g. 83% (Ecoedge 2014); 84% (Ecologia 2016), 82-88% (Ecologia 2009b); 86-87% (Biota 2018); and 87% (Coffey 2015)). When the additional species that were recorded opportunistically are included, the species recorded in 2018-2019 represent 93-94% of the total species estimated to occur in the sampling area.

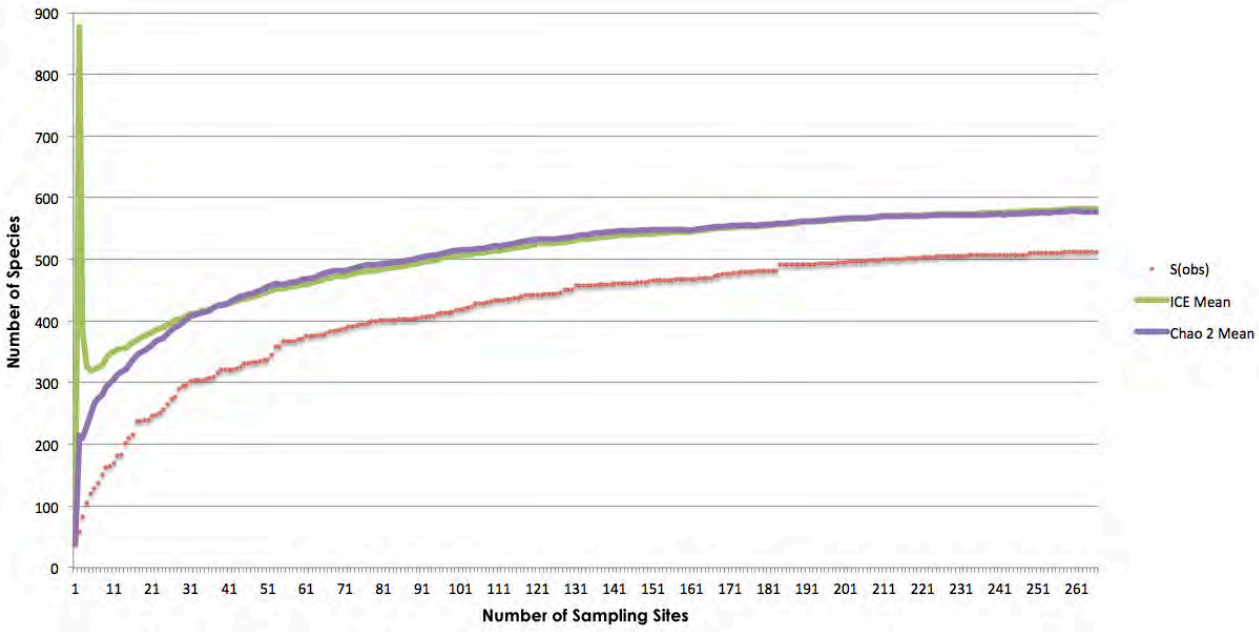


Figure 6.1: Species accumulation curve based on actual observations at the sampling sites (S(obs)), together with two estimates of species richness (ICE and Chao 2).

Table 6.4: Recorded species richness compared with predicted species richness using incidence-based estimators (without opportunistic records).

Parameter		Number of Species	Percent of Estimated Richness Recorded
Number of Species Recorded (from 2018-2019 quadrats and relevés only)		513	N/A
Estimated Number of Species	Chao 2 Mean	577	89%
	ICE Mean	582	88%

The total number of species recorded from the overall study area is high, reflecting the diverse array of landforms and geology types present, and also the wide geographic spread of the component deposits (spanning 17 km north-south and 40 km east-west). This results in a broad variety of distinct habitats, and a large number of species with overlapping distributions. When compared to other study areas in the locality, it appears that the Western Hill deposit in particular supports a relatively high number of species for the size of the area (see Figure 6.2).

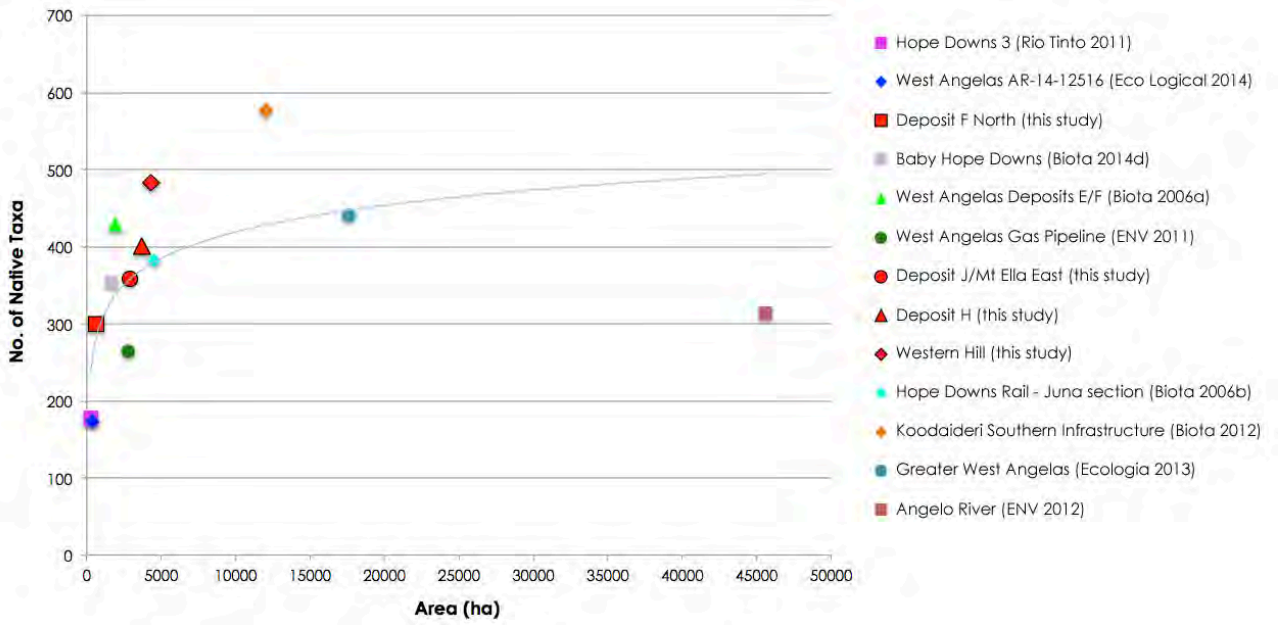


Figure 6.2: Native species richness for the components of the current study area, compared to other survey areas in the locality.

6.3 Undescribed or Unresolved Taxa and Apparent Variation within Taxonomic Entities from the Current Survey

Some specimens collected from the study area belong to undescribed taxa, or to taxa that cannot be fully determined due to a lack of taxonomic resolution in the particular group (Section 6.3.1). Other specimens belong to forms of species that have been recognised by various specialists, but that have not yet been formally assigned a phrase-name (Section 6.3.2). Most of these taxa are widespread and not considered to be of any elevated conservation significance, except where noted below.

6.3.1 Undescribed or Unresolved Taxa Recorded During the Current Survey

Four undescribed or unresolved taxa were recorded within the study area, and one additional species has not been recorded previously for WA. For most of these species, further work (including genetic analysis) would be required to determine the taxonomic status of the entities, however none are currently considered to be of conservation significance. The taxa are described below:

- *Aristida* aff. *nitidula*
  This taxon is a compactly tufted perennial, which can reach a height of 70 cm and grows in sandy loam substrates through stony hills. *Aristida* aff. *nitidula* is morphologically similar to *A. nitidula*, which occurs in the Pilbara, but differs vegetatively in having mostly flat leaves that coil at maturity, and lemmas that have, in addition to tubercles, a distinct marginal band (Steve Dillon, WA Herbarium, pers. comm. 2018). Seven specimens designated as *Aristida* aff. *nitidula* have been vouchered with the WA Herbarium from the Pilbara, all of which were collected between Newman and Tom Price (WA Herbarium 2019). Given the range of this species, it is unlikely to be of conservation significance.
- *Eulalia* sp. (Three Rivers Station, B. Forsyth AQ6789133)
  Eulalia sp. (Three Rivers Station B. Forsyth AQ6789133) differs from *E. aurea* (the more common *Eulalia* species in the Pilbara) by its broader leaves, elongated rhizomes and the inflorescences remaining closed at maturity (Simon and Alfonso 2012). This *Eulalia* taxon was first collected in 2008 by Dr. Ken Tinley on Three Rivers Homestead in the Gascoyne region of WA, and the phrase name *Eulalia* sp. (Three Rivers Station B. Forsyth AQ6789133) was applied (Bryan Simon, Queensland Herbarium, pers. comm. 2012). This phrase name is not yet recognised on FloraBase or Australasia's Virtual Herbarium. A formal description of *Eulalia* sp. (Three Rivers

Station B. Forsyth AQ6789133) is currently being progressed by the Pilbara bioregion flora expert Malcolm Trudgen (M.E Trudgen and Associates) and Rachel Butler (previously from Biota).

Given that a number of collections have been made throughout the Pilbara bioregion, it is likely that this species has simply been under-collected due to its similarity to the common species *E. aurea,* and it would not be considered to be of conservation significance. *Eulalia* sp. (Three Rivers Station B. Forsyth AQ6789133) was recorded from several locations in the northeast of Deposit H, from the moderate-major drainage line that was dominated by vegetation type D11 with a small area of D1.

- *Hibiscus sturtii* var. aff. *truncatus*
  Five specimens of *Hibiscus* collected from the study area appeared most similar to *Hibiscus sturtii* var. *truncatus,* however *Hibiscus sturtii* var. *truncatus* is documented as having an epicalyx that is truncate or subtruncate with reduced lobes (Fryxell 1968), while the specimens collected from the study area differed by having longer acuminate epicalyx lobes. This taxon was recorded from areas of vegetation types M1 and P9 on plains and low hills in the northern section of Western Hill. Two specimens from the study area were sent to Steve Dillon, who confirmed this taxon is similar to the variety *truncatus*, but different enough to warrant treating as distinct. Genetic analysis within the *H. sturtii* complex is currently being undertaken, however it is doubtful that any material of this particular entity was included, as there are only a few matching specimens (under a variety of names) in the WA collection (S. Dillon, WA Herbarium, pers. comm. October 2019). Biota has recorded this taxon from near West Turner and Eliwana, where it was found to be locally abundant. It is unlikely that it is of conservation significance.

- *Eriachne* aff. *mucronata*
  This taxon was recorded from steep south-facing hillslopes (vegetation type G2) in the eastern section of Western Hill. *Eriachne mucronata* is known to be very variable (see Section 6.3.2), and this particular entity matched three other specimens at the WA Herbarium (from Mt Meharry, Mt Ella and West Angela Hill) (S. Dillon, WA Herbarium, pers. comm. October 2018). The glumes were shorter than most of the collections of *E. mucronata,* and the lemmas were not distinctly mucronate. The conservation significance of this entity could not be determined without further investigation, including additional collections. However, given that *Eriachne mucronata* is already known to comprise a large complex of taxa, it is unlikely that this particular entity would be considered to be of conservation significance.

- *Peripleura hispidula* var. *hispidula*
  Peripleura hispidula is a small annual daisy with erect stems. Variety *hispidula* is distinguished by the covering of minute gland-tipped hairs on the outer faces of the involucre bracts; coarser, erect septate hairs are usually absent, although a few may be present (Burbidge 1982). This particular variety is commonly recorded from Queensland and New South Wales but is not currently vouchered from the Pilbara. However, a specimen from near Yandi has been confirmed as this taxon by Andrew Perkins (previously a taxonomist with the WA Herbarium). This taxon was recorded from 24 locations from the study area, mainly in Western Hill and Deposit J/Mt Ella East; it was also recorded during historical surveys of Deposit F North. Records were mostly associated with drainage lines (e.g. D3, D5 and D6), and Mulga-dominated vegetation in gullies and on steep hill slopes (e.g. G2, H2 and H3). Additional records are known from the broader West Angelas locality, and this taxon has also been recorded from a number of other locations near Rio Tinto's Yandi mine operations, as well as from the Hardey River near Tom Price (Biota database). Vouchers for these collections have been submitted to the WA Herbarium but are believed to be in the specimen backlog. The furthest of the records, at Hardey River, is some 102 km northwest of the study area. It is therefore likely that this taxon is considerably more widespread in the Pilbara than current records suggest, particularly as other specimens may have been determined to variety solely based on geographical location, and it is unlikely to be of conservation significance.

6.3.2 Taxonomic Forms Recorded During the Current Survey

Five species recorded during the current survey have distinct forms that are not currently recognised by the WA Herbarium, as indicated by the nomenclature designated on FloraBase. These species and their forms are described below:

- *Acacia bivenosa*
  A form of *Acacia bivenosa* was recorded from the study area that is generally restricted to calcrete habitats. The form has a distinctly tall, spindly and weeping habit (c.f. the more typical low compact shrub form), which is the only character distinguishing it from the more common form of the species. Both forms are very widespread in the Pilbara.
- *Acacia ayersiana*
  A variant of *Acacia ayersiana* recorded from the study area was designated *Acacia ayersiana* (narrow phyllode variant). As the name suggests, this form of *Acacia ayersiana* has narrower phyllodes than typical *A. ayersiana*. This variant has been recognised by Bruce Maslin, an expert in *Acacia* at the WA Herbarium[12].
- *Eriachne mucronata*
  Two documented forms of *Eriachne mucronata* were present in the study area: the 'typical form' (culms with sparse erect hairs) and one designated as 'arid form' (which has white woolly hairs on the culms). These two forms are widespread in the Pilbara bioregion. A third 'glabrous form' (glabrous culms) was also recorded; this form is also likely to be well distributed in the Pilbara.
- *Acacia sibirica*
  Two documented forms of *Acacia sibirica* were present in the study area: one with standard broad phyllodes and the second, a 'linear form', which as the name suggest has narrow linear phyllodes. Both are well distributed in the Pilbara.
- *Senna artemisioides* subsp. *oligophylla* (form with thinly sericeous leaves)
  A form of *Senna artemisioides* subsp. *oligophylla* collected from the study area has been recognised as a separate entity for some time by Malcolm Trudgen. The leaf indumentum of this form consists of closely appressed fine hairs, which give the leaf surface a silvery look, in addition to the leaf shape being usually elliptic. According to McCarthy (1998), *Senna artemisioides* subsp. *oligophylla* is noted for having only a sparse indumentum of appressed hairs and ovate to obovate leaves. Both *S. artemisioides* subsp. *oligophylla* (form with thinly sericeous leaves) and *S. artemisioides* subsp. *oligophylla* are distributed widely throughout the Pilbara bioregion, where they often co-occur.

6.4 Flora of Conservation Significance

6.4.1 Threatened Flora

No species listed as Threatened flora under either State or Commonwealth legislation have been recorded in the West Angelas study area, and none are considered likely to occur (see Section 4.10.1 and Appendix 3).

6.4.2 Priority Flora Recorded from the Study Area

Eighteen Priority flora taxa were recorded from the study area during the current surveys, with a further three taxa recorded during previous surveys (see Appendix 9 for tabulation of records, with locations shown on maps). These 21 taxa are presented in Table 6.5, along with a brief description and the recorded abundance (note that a nominal abundance of "1" was assigned to records that lacked a number of individuals). The two of the larger deposits, Western Hill and Deposit J/Mt Ella East, contained the highest number of Priority flora species.

[12] See http://www.worldwidewattle.com/speciesgallery/species-intro.php?id=-3539

A number of additional records were made slightly outside (between 1 m and 100 m) the boundaries of Deposit J/Mt Ella East during the current surveys (see Appendix 9). These comprised:

- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (Priority 2): 89 individuals;
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (Priority 2): 2 individuals;
- *Eremophila* sp. Hamersley Range (K. Walker KW 136) (Priority 3): 22 individuals;
- *Pilbara trudgenii* (Priority 3): 63 individuals;
- *Solanum kentrocaule* (Priority 3): 21 individuals;
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (Priority 3): 550 individuals; and
- *Acacia bromilowiana* (Priority 4): 1 individual.

In addition, one record of *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (Priority 3) was made approximately 175 m west of Deposit H, comprising 3,000 individuals.

Some historical records of Priority flora were investigated during the 2018 field survey, and clarified as follows:

- The location of the record of *Acacia subtiliformis* in the Deposit J/Mt Ella East area presented in the Rio Tinto data output from Eco Logical (2013) was revisited. While the superficially similar species *A. maitlandii* was recorded at the location, no plants of *A. subtiliformis* were found. The habitat at this location (high on a rocky ironstone hill) was also atypical for the latter species, which typically prefers calcrete substrates lower in the landscape (although it is noted that a collection has been vouchered with the WA Herbarium from similar habitat ("top of a large rocky ridge") some 47 km northeast). The record from Eco Logical (2013) does not appear to be supported by a voucher, and the taxon was also referred to in places in Rio Tinto (2015b) as *Acacia* "aff." *subtiliformis*, indicating that the identification may have been tentative. Taking into account all of the above, it is considered that this record cannot be confidently assigned to the Priority species. On the basis of the current information, *Acacia subtiliformis* cannot be proven to occur in the study area.
- One of the records of *Acacia bromilowiana* from Eco Logical (2013) in the Deposit J/Mt Ella East area was revisited and could not be confirmed; only the superficially similar *Acacia hamersleyensis* was observed at the stated location (675940 mE, 7429993 mN). The two species were observed co-occurring at another nearby location that was recorded by Eco Logical (2013), so only the record nominated above has been removed from consideration.
- The record of *Sida* sp. Hamersley Range (K. Newbey 10692) from Eco Logical (2013) at Deposit J/Mt Ella East was also revisited in 2018, however only the superficially similar *Sida* sp. Shovelanna Hill (S. van Leeuwen 3842) was observed at the stated location (676075 mE, 7430038 mN). There is, however, a specimen of *Sida* sp. Hamersley Range (K. Newbey 10692) vouchered from 400 m northwest, so only the nominated record has been removed from consideration. (It is possible that the two records refer to the same population.) The number of individuals was not provided with the WA Herbarium record, but the species was described as "locally common in sheltered situations among rocks".

Table 6.5: Summary of Priority flora taxa recorded from the study area.

Taxon	Description	Total Count for Current Survey[C] and Historical Surveys[H]			
		Western Hill	Deposit F North	Deposit H †	Deposit J / Mt Ella East
Priority 2					
Aristida lazaridis	A tufted perennial grass growing to 1.4 m tall, with a distinctly long lemma (up to 1.2 cm in length) (Plate 6.1). Typically inhabits clay or clay-loam soils.	–	100[H]	224[C] 5[H]	68[C]
Eremophila pusilliflora	A low-growing open shrub growing to 50 cm tall, with small leaves and reddish-pink flowers (Plate 6.2). Occurs on seasonally inundated alluvial plains and on red-brown sandy-loam or clay-loam soils (Buirchell and Brown 2016).	214[C] 61[H]	–	–	–
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	A medium sized spindly shrub to 2 m tall, with a distinctive relatively dense ferruginous indumentum, large ovate-shaped leaves and large purple flowers (Plate 6.3). Typically prefers rocky slopes, gullies, breakaways and areas below free-faces, usually on moderate to tall hills.	446[C] 702[H]	18[H]	253[C]	332[C]
Isotropis parviflora	A small shrub to 20 cm tall, with small narrow linear leaves and a moderately dense indumentum of fine white hairs (Plate 6.4). It is typically found growing on hillslopes and stony plains.	23[C] 1,680[H]	–	–	39[C]
Oxalis sp. Pilbara (M.E. Trudgen 12725)	A small green cryptic perennial herb growing to 20 cm tall, often spreading (Plate 6.5). It is typically found in shaded environments, usually at the bases of rocks, breakaways or free-faces.	235[C] 7[H]	–	–	12[C] 1[H]
Priority 3					
Acacia effusa	A low, dense, spreading, somewhat viscid shrub growing to 1 m tall, with minni-ritchi bark (Plate 6.6). Found on stony red loam on scree slopes of low ranges (WA Herbarium 2019).	–	–	–	220[H]
Aristida jerichoensis var. *subspinulifera*	This species is a compactly tufted perennial grass growing to 0.8 m tall (Plate 6.7). It occurs on hardpan plains with a clay to clay loam soil (WA Herbarium 2019).	5[C]	20[H]	6[H]	212[H]
Eremophila sp. Hamersley Range (K. Walker KW 136)	An upright shrub growing to 2.5 m tall, with grey-green lanceolate leaves, and a characteristically long, and often sigmoidally-curved pedicel. Typically prefers rocky slopes, gullies, breakaways and areas below free-faces, usually on moderate to tall hills (Plate 6.8).	1,361[C] 3,349[H]	–	115[C]	1,066[C] 40[H]
Grevillea saxicola	A tall shrub or low tree growing to 7 m tall (Plate 6.9), often occurring with *Acacia "aneura"* ('sens. lat.') on skeletal red-brown sandy loam on upper scree slopes, steep rocky slopes and hillcrests (Dillon 2014). It has divided leaves with characteristically terete to sub-terete lobes.	138[C] 210[H]	–	–	–
Indigofera gilesii	A sparse shrub growing to 1.5 m tall with purple-pink flowers and dark recurved spiny stipules (Plate 6.10). It occurs on pebbly loam, in gullies, amongst boulders, outcrops and hills (WA Herbarium 2019).	20[H]	2[C] 87[H]	105[C] 187[H]	255[C] 5[H]
Olearia mucronata	A densely branched, unpleasantly aromatic shrub growing to 1 m tall, with white-yellow flowers. Found on schistose hills and along drainage channels (WA Herbarium 2019).	1[H]	–	–	–

Taxon	Description	Total Count for Current Survey[C] and Historical Surveys[H]			
		Western Hill	Deposit F North	Deposit H †	Deposit J / Mt Ella East
Pilbara trudgenii	A gnarled, aromatic shrub growing to 1 m tall (Plate 6.12). Found on skeletal red stony soil over ironstone, typically on rocky hill summits, steep slopes, screes and free-faces (WA Herbarium 2019).	525[C]	–	–	169[C] 20[H]
Rhagodia sp. Hamersley (M. Trudgen 17794)	A spindly shrub growing to 2 m tall, with narrow grey leaves (Plate 6.13). Typically prefers red sandy clay-loam plains and floodplains, often growing in association with Mulga (*Acacia aneura*), but has also been recorded from stony soils on elevated habitats (rocky breakaways) in the study area.	243[C] 656[H]	1[C] 2[H]	11[C] 24[H]	54[C] 2[H]
Rostellularia adscendens var. *latifolia*	A herb or low shrub growing to 0.3 m tall with blue to violet flowers. Occurs on ironstone soils near creeks and rocky hills (WA Herbarium 2019).	–	–	–	5[C]
Sida sp. Barlee Range (S. van Leeuwen 1642)	A low spreading shrub growing to 0.5 m tall, with yellow flowers (Plate 6.14). It occurs on skeletal red soil on steep slopes, in gullies and along breakaways (WA Herbarium 2019).	–	8[H]	140[C] 118[H]	–
Sida sp. Hamersley Range (K. Newbey 10692)	A low shrub growing to around 60 cm tall, with greyish green oblong leaves and small yellow flowers. Typically grows along the bases of breakaways and free faces, or other areas of rocky hillslope.	–	–	–	NR[H] (described as "locally common")
Solanum kentrocaule	A spindly perennial shrub to 1.5 m tall, with mauve to purple flowers, and stems covered in dense prickles (Plate 6.15). It inhabits hillsides and mountaintops, or occasionally creek-beds, occurring in skeletal red-brown soil over ironstone or on basalt scree (Bean 2013).	357[C] 70[H]	–	–	488[C] 21[H]
Triodia sp. Mt Ella (M.E. Trudgen 12739)	Perennial hummock grass to 0.4 m tall, with aromatic resin (Plate 6.16). Occurs on light orange-brown pebbly loam, amongst rocks, outcrops, and gully slopes (WA Herbarium 2019).	15,006[C] 8,665[H]	19[C] 48[H]	10727[C] 121[H]	44,196[C] 2,533[H]
Priority 4					
Acacia bromilowiana	A tree or shrub to 12 m tall with dark grey fibrous bark (Plate 6.17). It is distinguished from the more common *Acacia hamersleyensis* by its more robust habit, reddish branchlets, and a characteristically divided peduncle. This species typically occurs on rocky hills, breakaways, scree slopes and in gorges (WA Herbarium 2019).	–	50[H]	–	45[C] 52[H]
Goodenia nuda	An erect to ascending, slender herb growing to 50 cm tall, with narrow, pale green to glaucous leaves (Plate 6.18). This species is widespread throughout the Pilbara, and is found in a variety of different habitat types, most typically growing near creeklines and on clay-loam plains.	–	1[C]	–	–
Lepidium catapycnon	This species is an open, woody perennial herb/shrub to 0.3 m tall, with zigzagging stems (Plate 6.19). It typically occurs on skeletal soils on hillslopes.	5[C]	–	30[H]	–
	Total number of Priority species:	14	9	10	15

† Deposit H was not surveyed in 2018.

[C] Indicates records from current survey (Phase 1 and Phase 2, 2018/2019) and [H] indicates historical records (various sources; see Appendix 9).



Plate 6.1: *Aristida lazaridis*: habit (left) and close-up of spikelet (right).



Plate 6.2: *Eremophila pusilliflora*: habit (left) and close-up of flower (right).



Plate 6.3: *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708).



Plate 6.4: *Isotropis parviflora*: habit (left) and close-up of flower (right).



Plate 6.5: *Oxalis* sp. Pilbara (M.E. Trudgen 12725).





Plate 6.6: *Acacia effusa*: habit (left), and close-up of phyllodes (right).



Plate 6.7: Aristida jerichoensis var. subspinulifera.





Plate 6.8: *Eremophila* sp. Hamersley Range (K. Walker KW 136): habit (left) and close-up of flower (right).



Plate 6.9: *Grevillea saxicola*.



Plate 6.10: *Indigofera gilesii*.



Plate 6.11: *Indigofera* sp. Bungaroo Creek (S. van Leeuwen 4301).





Plate 6.12: *Pilbara trudgenii*: habit (left), and close-up of flower (right).





Plate 6.13: *Rhagodia* sp. Hamersley (M. Trudgen 17794): habit (left), and close-up of leaves (right).



Plate 6.14: *Sida* sp. Barlee Range (S. van Leeuwen 1642).





Plate 6.15: *Solanum kentrocaule*: habit (left), and close-up of flowers (right).





Plate 6.16: *Triodia* sp. Mt Ella (M.E. Trudgen 12739): habit (left; dark green hummocks in image), and close-up of inflorescence (right).



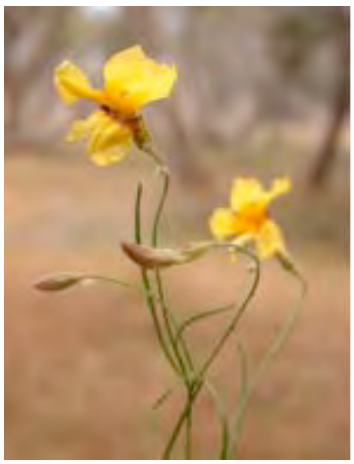


Plate 6.17: *Acacia bromilowiana.*



Plate 6.18: *Goodenia nuda.*



Plate 6.19: *Lepidium catapycnon*: habit (left), and close-up of inflorescence (right).

6.4.3 Likelihood of Other Priority Flora Species Occurring in the Study Area

A total of 30 Priority flora were identified through the desktop review as either being known to occur or having the potential to occur in the study area (see Section 4.10.2). Following the field surveys, a sub-set of 21 of these species has been recorded (Section 6.4.2).

With regards to the remaining nine species, five species are now considered unlikely to occur in the study area. These comprise:

- the shrub species *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P1), *Tetratheca fordiana* (P2) and *Geijera salicifolia* (P3), and the tussock grass *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3): although there is some potentially suitable habitat for these perennial species, they were not recorded despite extensive searches; and
- the shrub species *Acacia subtiliformis* (P3), for which there is no particularly suitable habitat.

Three daisy species are still considered to have the potential to occur in the area, as they may not have been identifiable at the time of the surveys, if present:

- *Rhodanthe ascendens* (P1) may potentially occur in vegetation type P8, particularly in the northwestern corner of Western Hill, as there is a known location within 2 km; but also possibly in the northeastern corner of Deposit J/Mt Ella East.
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 3835) (P1) is considered likely to occur on clayey plains, which are particularly extensive at Western Hill and Deposit H; there is also a known location within 500 m of Deposit F North.
- *Xerochrysum boreale* (P3) may potentially occur in Mulga vegetation on clay plains, particularly in vegetation types P3 and P5 (and therefore also mosaic unit M1).

In addition, the shrub *Eremophila magnifica* subsp. *magnifica* (P4) may potentially occur on hills at Deposit J/Mt Ella East or at Deposit H. There is abundant suitable habitat within both areas, not all of which has been searched, and a population has been recorded 1.5 km west of Deposit J/Mt Ella East.

6.5 Introduced Flora

A total of 11 introduced flora taxa were recorded during the current surveys. All of these had been previously recorded in the study area except for two species: **Solanum nigrum*, recorded from six locations at Western Hill; and **Vachellia farnesiana*, recorded from four locations at Deposit H. Four additional species were also recorded from previous surveys; **Conyza bonariensis* (Fleabane), **Datura leichhardtii* (Native Thornapple), **Lactuca serriola* (Prickly Lettuce) and **Physalis* sp. (Gooseberry). Records of weeds from the current surveys (2018 and 2019) are summarised in Table 6.6, while all records are shown on the vegetation condition mapping and tabulated in Appendix 10. These include records from extensive weed control programmes completed by Astron (2016, and 2017). Note that for the purpose of providing a total number of individuals, any record for which this information was not recorded was assigned a nominal value of "1".

Introduced species were most commonly recorded from drainage lines during the current surveys, and were also scattered on the clay plains dominated by Mulga. Weeds were largely absent from the stony plains, hillcrests, hillslopes and foothills, except in gorges and gullies where Bipinnate Beggartick (**Bidens bipinnata*) was found to be abundant.

While, none of the species recorded are listed as WONS (Thorp and Lynch 2000), or as declared plants for the Pilbara region under the WA BAM Act (see DAFWA 2019), a number are considered to be serious environmental weeds. The then Department of Parks and Wildlife's (2013a) Weed Species Ranking, which was derived from the Department's Weed Prioritisation Process (WPP) (Department of Parks and Wildlife 2013b), took into account the potential distribution, current distribution, ecological impact, invasiveness and feasibility of control to derive a broad qualitative weed species ranking corresponding to specific management actions. Five of the species recorded from the study area have both a 'High' Ecological Impact ranking and a 'Rapid' Invasiveness Ranking through this process: **Cenchrus ciliaris*, **Malvastrum americanum, *Rumex vesicarius*, **Setaria verticillata* and **Vachellia farnesiana* (Table 6.6). Two of these species are particularly serious weeds: **Cenchrus ciliaris,* which is listed under the EPBC Act as an invasive species "considered by the States and Territories to pose a particularly significant threat to biodiversity"; and **Rumex vesicarius, "*one of the most serious environmental weeds in the Pilbara region of Western Australia" (Anthony and Dixon 2006).

Table 6.6 Summary of Introduced taxa recorded within the study areas, including WPP rankings.

Species	Description	WPP – Weed Species Ranking		Total Count from Current[C] and Historical[H] Surveys			
		Ecological Impact	Invasiveness	Western Hill	Deposit F North	Deposit H †	Deposit J / Mt Ella East
**Bidens bipinnata* (Bipinnate Beggartick)	Annual daisy growing to 90 cm tall, with yellow flowers between March and September (WA Herbarium 2019). Commonly observed in association with Mulga vegetation and creeklines in the Pilbara. May occur in high densities within suitable habitats and given appropriate conditions, but on its own does not appear to cause exclusion of native flora species.	U	R	20733[C] 3,675[H]	70[C] 101[H]	10290[C] 31[H]	26,455[C] 1[H]
**Cenchrus ciliaris* (Buffel Grass)	Perennial tussock grass growing to 1 m tall and flowering for most of the year. Introduced by pastoralists as a fodder species and now widespread through WA. This species has demonstrated allelopathic capacities, whereby it releases chemicals that inhibit the growth of other plants (Cheam 1984a, 1984b, Hussain et al. 2010), and it competes aggressively and effectively with native flora species. Commonly found along drainage lines, floodplains, in sandy coastal areas and disturbed sites (WA Herbarium 2019), where it can form dense tussock grasslands. Reproduces by seed and short rhizomes and is thought to be dispersed primarily by wind and water, but can also be spread through the movement of mammals, birds and vehicles.	H	R	154[C] 2[H]	13[H]	1[C]	
**Datura leichhardtii* (Native Thornapple)	Stout annual herb growing to 1 m tall, with spiny fruits and white flowers from June to October (WA Herbarium 2019). Common along watercourses and drainage areas in the Pilbara.	L	U	1[H]			
**Conyza bonariensis*	A genus of upright annual daisies, growing to 1m tall. Originating from America, the genus has now become a relatively common weed of disturbed areas predominantly through coastal WA (Hussey et al. 2007). **Conyza bonariensis* is the most common and widespread species in WA, and the only species known from the Pilbara (from very few records to date) (WA Herbarium 2019).	-	-		1[H]		
**Flaveria trinervia* (Speedy Weed)	Annual daisy growing to 40 cm tall, with an inflorescence consisting of a large dense cluster of yellow flower heads. Widespread through the Pilbara and Kimberley in a variety of habitats, including drainages and disturbed areas (Hussey et al. 2007).	-	-	2[C] 2[H]			
**Lactuca serriola*	Erect annual or biennial herb that is infrequently recorded in the Pilbara, usually through drainage areas. This species can grow up to 2 m tall and produces yellow flowers from October to December or January to February, depending on its form.	-	-				1[H]
**Malvastrum americanum* (Spiked Malvastrum)	Erect, perennial herb or shrub to 1.3 m tall, with yellow or orange flowers from April to July. A common introduced species associated with Mulga vegetation, hills, rockpiles, plains, drainage lines and floodplains. This species is widespread throughout the Kimberley, Pilbara, Gascoyne and Carnarvon bioregions.	H	R	185[C] 53[H]	6[H]	744[C] 11[H]	30[C]

Species	Description	WPP – Weed Species Ranking		Total Count from Current[C] and Historical[H] Surveys			
		Ecological Impact	Invasiveness	Western Hill	Deposit F North	Deposit H †	Deposit J / Mt Ella East
**Physalis* sp. (Cape Gooseberry)	Annual or short-lived perennial shrub or herb with bell-shaped, yellow to white flowers and an enlarged lantern-shaped fruiting calyx. Found on red alluvial soils, sandplains, floodplains and riverbeds (Hussey et al. 2007).	U	U	20[H]			
**Rumex vesicarius* (Ruby Dock)	Stout, fleshy annual herb with densely clustered red-pink fruit between July and September (WA Herbarium 2019). Common in disturbed areas in the arid zone from the Pilbara to the Nullarbor (Hussey et al. 2007).	H	R	11[C]	2[H]		1[C] 572[H]
**Setaria verticillata* (Whorled Pigeon Grass)	Loosely tufted annual grass to 1.3 m tall (WA Herbarium 2019). Commonly occurs in disturbed areas, in shrublands and on the edges of rivers and creeks from the Kimberley to the Pilbara (Hussey et al. 2007).	H	R	219[C] 18[H]	1[H]	20[C]	31[C]
**Sigesbeckia orientalis* (Indian Weed)	Upright, slightly hairy annual herb, with opposite, toothed leaves, and small yellow flower-heads with a densely glandular indumentum. Distributed mainly in the Pilbara bioregion, with other records in the Central Ranges bioregion, at Exmouth and throughout the Southwest (WA Herbarium 2019).	U	R	96[C] 60[H]		3[H]	4[C]
**Solanum nigrum* (Black Berry Nightshade)	Erect perennial herb or shrub to 1 m tall, with white flowers all year (WA Herbarium 2019). Most common in the Southwest of WA, but also found less abundantly in the Pilbara in sheltered habitats such as Mulga vegetation and drainage lines.	L	R	30[C]			
**Sonchus oleraceus* (Common Sowthistle)	Short-lived annual herb growing to 1.5 m tall (WA Herbarium 2019). This species is common and widespread in disturbed areas of WA from Wittenoom to the Nullarbor (Hussey et al. 2007).	L	R		1[H]		5[C]
**Tribulus terrestris* (Caltrop)	Prostrate vine with greyish pinnate leaves and small yellow flowers, often found on sandy soils (WA Herbarium 2019). Widespread throughout the Eremaean and Northern botanical provinces.	U	M	1[H]			3[C]
**Vachellia farnesiana* (Mimosa Bush)	Spreading, thorny shrub to 4 m tall, with dark grey bark, pinnate leaves, and yellow flowers in winter (WA Herbarium 2019). Widespread from the Kimberley to near Perth, typically occurring along drainage systems and in adjacent low-lying areas (Hussey et al. 2007).	H	R		45 [C]		

Note: [C] denotes species was recorded during the current surveys (2018/2019), whilst [H] indicates species was recorded during historical (previous) surveys. † Deposit H was not surveyed during Phase 1.

WPP = Weed Prioritisation Process (Department of Parks and Wildlife 2013b); only species with rankings in both categories are listed:

Ecological Impact Ranking: H = High., L = Low, U = Unknown.

Invasiveness Ranking: M = Moderate, R = Rapid, U = Unknown.

7.0 Discussion and Conclusions

7.1 Vegetation

7.1.1 Overview

A total of 45 vegetation types were recorded from the study area, not including the two mosaic units that were comprised of two vegetation types. Most of the vegetation types were rated as being in Very Good to Excellent condition. Vegetation in Very Good condition was generally associated with areas of clay plains or drainage lines, in addition to gullies and gorges at higher elevation; these areas tended to have higher densities of weeds. A relatively small proportion of the study area had been cleared for mining exploration activities, including tracks and drill pads, or for mining and pastoral infrastructure; these areas were scored as Completely Degraded.

7.1.2 Vegetation of Conservation Significance

None of the vegetation types represent TECs or PECs, however 20 of the units were considered to be of elevated importance:

- Two vegetation units were considered to be of High local significance as they comprised riparian vegetation occurring in major drainage systems:
  - Vegetation unit D1 was 'groundwater dependent vegetation' dominated by *Eucalyptus camaldulensis* subsp. *refulgens* (Rivergum).
  - Vegetation unit D2 was 'potential groundwater dependent vegetation' dominated by Coolibah (*Eucalyptus victrix*).
- A total of 15 vegetation units were considered to be of Moderate local significance as they supported large numbers of Priority 2 and/or Priority 3 flora species:
  - Units D8 and D11 in minor-moderate drainage lines supported high numbers of the Priority flora species *Indigofera gilesii* (Priority 3) and *Aristida lazaridis* (Priority 2), respectively.
  - Units H2, H6, H10, H13, H14, H15 and H16 of hills were also associated with high numbers of the Priority flora species *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (Priority 2), and *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola*, *Indigofera gilesii, Rhagodia* sp. Hamersley (M. Trudgen 17794), *Sida* sp. Barlee Range (S. van Leeuwen 1642), *Solanum kentrocaule* and *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (all Priority 3). These species typically occurred in rockier substrates, higher in the landscape. In certain areas of vegetation units H10, H13, H15 and H16 (usually around breakaways and rocky slopes), *Triodia* sp. Mt Ella (M.E. Trudgen 12739) occurred in relatively high abundance (providing between 1.5% and 14% cover), and therefore contributed a significant component to the spinifex stratum. However, given that the abundance of *Triodia* sp. Mt Ella (M.E. Trudgen 12739) within these units was highly variable, it is unlikely that they would be considered to be of any higher significance than at the local scale.
  - Unit H8 occurred on low stony hills, and supported relatively high numbers of *Isotropis parviflora* (Priority 2). Vegetation unit H8 was dominated by the tree species *Corymbia deserticola* subsp. *deserticola* and the spinifex *Triodia vanleeuwenii.* Similar vegetation to this unit would be relatively common through comparable habitats in the Hamersley subregion. *Isotropis parviflora* (Priority 2) has also been recorded in association with vegetation units dominated by *Corymbia deserticola* subsp. *deserticola* and *Triodia vanleeuwenii* in other localities (e.g. at Koodaideri; Biota 2011).
  - Vegetation units P3 and P8 both occurred on clay plains, and supported high numbers of *Eremophila pusilliflora* (Priority 2) and *Rhagodia* sp. Hamersley (M. Trudgen 17794) (Priority 3). In addition, P8 is an uncommon unit of clay plains; whilst it occurs through valleys and plains east of West Angelas, it is considered uncommon in the remaining areas of the Hamersley subregion.

  - Vegetation units G1, G2 and G3 occur in rocky gorge habitats, and are of elevated significance as they provide refugia for fire-sensitive species in the Pilbara. High numbers of Priority flora were also associated within or in close proximity to these vegetation units.

- A further three vegetation units were considered to be of Moderate local significance as they were likely to have a limited representation in the locality (i.e. would be uncommon through similar habitats in this section of the Hamersley subregion):
  - Vegetation unit D10 in Deposit H had an unusually high density of both *Isotropis* sp. Arid zone (G. Byrne 2775) and *Themeda triandra*.
  - Vegetation units P13 and P14, which occurred on stony plains with a calcareous/quartz substrate, were dominated by a distinct mix of mallee Eucalypts (i.e. *Eucalyptus repullulans* (Kopi Mallee) in combination with *E. trivalva* and/or *E. socialis* subsp. *eucentrica* (Red Mallee)).

The remaining vegetation types in the study area were considered to be of 'Negligible' conservation significance, being representative of the vegetation occurring in similar habitats through the local area.

In general, the species dominating vegetation in the study area are not uncommon in this section of the Hamersley subregion, and none of the vegetation types would be expected to be restricted to the study area. The vegetation units with the most limited area of extent in the locality were considered to be D10, P13 and P14, based on the experience of the mapping botanist (P.-L. de Kock; see Section 5.1).

7.2 Flora

7.2.1 Overview

A total of 643 native flora species have been recorded from the study area to date, including:

- 483 native flora taxa from 157 genera and 50 families from Western Hill;
- 300 native taxa from 106 genera and 38 families from Deposit F North;
- 401 native taxa from 147 genera and 51 families from Deposit H (which was not surveyed in 2018);
- 359 native taxa from 135 genera and 46 families from Deposit J/Mt Ella East.

The high number of species recorded reflects the large size of the study area, the broad geographic range encompassed by the component areas, and the diverse array of landforms and geological units included within it. The Western Hill deposit appears to have a particularly high species richness for an area of this size in this locality.

7.2.2 Flora of Conservation Significance

The Threatened species listed for the Hamersley subregion (*Aluta quadrata* and *Thryptomene wittweri*) would not occur in the study area due to their relatively restricted distributions and a lack of suitable habitat.

Eighteen Priority flora species were recorded from the current study, with three additional Priority species recorded during previous surveys; these species are summarised in Table 7.1. There are additional records of all of these taxa from the locality, with the exception of *Sida* sp. Hamersley Range (K. Newbey 10692), and all of the species are distributed over a range of at least 130 km and often up to several hundred kilometres (see Table 7.1).

Table 7.1: Summary of Priority flora recorded from the study area.

Species	Typical Habitats	Abundance in Study Area (based on all sampling to date)	Abundance in Locality (additional Rio Tinto records within 15 km)	Abundance in Broader Region (NatureMap)
Priority 2				
Aristida lazaridis	Major drainage areas through clayey flats.	Deposit F North: 100 individuals Deposit H: 229 individuals Deposit J/Mt Ella East: 68 individuals	849 individuals from 88 locations.	Distributed over a range of 133 km, from near the Rangers Station in Karijini National Park southeast to near Hope Downs 4 camp.
Eremophila pusilliflora	Alluvial plains.	Western Hill: 275 individuals	77 individuals from 7 locations, all between Western Hill and Deposit J/Mt Ella East.	Distributed over a range of 120 km in the Pilbara, from near Munjina to the southern Hamersley subregion, with an outlying record 270 km southeast at the edge of the Little Sandy Desert bioregion.
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Upper slopes and crests of hills.	Western Hill: 1,148 individuals Deposit F North: 18 individuals Deposit H: 253 individuals Deposit J/Mt Ella East: 332 individuals	75 individuals from 5 locations, 3.8-5.0 km west of Deposit J/Mt Ella East.	Distributed over a range of 200 km in the Pilbara, from Tom Price to northwest of Newman.
Isotropis parviflora	Undulating ironstone plains.	Western Hill: 1,703 individuals Deposit J/Mt Ella East: 39 individuals	3,101 individuals from 156 locations just southeast of Western Hill; 15 individuals at 2 locations south of Deposit J/Mt Ella East.	Most records from a range of 210 km in the Pilbara, from near Wittenoom to east of Newman, with outlying records over 800 km east near the NT border.
Oxalis sp. Pilbara (M.E. Trudgen 12725)	Rocky hillslopes, gullies and gorges.	Western Hill: 242 individuals Deposit J/Mt Ella East: 13 individuals	13 individuals from 2 locations south of Deposit J/Mt Ella East.	Distributed over a range of 510 km from near Mt Farquhar in the Pilbara to the southwestern edge of the Little Sandy Desert bioregion.
Priority 3				
Acacia effusa	Scree slopes of low ranges.	Deposit J/Mt Ella East: 220 individuals	840 individuals from 43 locations south of Deposit J/Mt Ella East.	Most records from a range of 125 km in the Pilbara, from Tom Price to south of West Angelas, with an outlying record 630 km south in the Murchison.
Aristida jerichoensis var. *subspinulifera*	Hardpan clay plains.	Western Hill: 5 individuals Deposit F North: 20 individuals Deposit H: 6 individuals Deposit J/Mt Ella East: 212 individuals	1.912 individuals from 40 locations in the area between the four deposits.	Most records from a range of 300 km through the eastern half of the Hamersley subregion, with outlying records up to 320 km south near Wiluna; also recorded from the eastern states.
Eremophila sp. Hamersley Range (K. Walker KW 136)	Hill crests, cliff tops, gorges.	Western Hill: 4,710 individuals Deposit J/Mt Ella East: 1,106 individuals	184 individuals from 26 locations in the area south of Western Hill; 140 individuals at 2 locations south of Deposit J/Mt Ella East.	Most records from a range of 220 km through the southeastern Hamersley subregion, with one record just to the south in the Ashburton.

Species	Typical Habitats	Abundance in Study Area (based on all sampling to date)	Abundance in Locality (additional Rio Tinto records within 15 km)	Abundance in Broader Region (NatureMap)
Grevillea saxicola	Upper scree slopes on banded ironstone, usually with Mulga.	Western Hill: 348 individuals	2 individuals from 1 location between Western Hill and Deposit J/Mt Ella East.	Numerous records over a range of 230 km through the eastern half of the Hamersley subregion.
Indigofera gilesii	Rocky slopes, gorges, and creeklines.	Western Hill: 20 individuals Deposit F North: 89 individuals Deposit H: 292 individuals Deposit J/Mt Ella East: 260 individuals	480 individuals from 80 locations in the area between and to the south of the four deposits.	Most records from a range of 170 km through the eastern half of the Hamersley subregion, with other records 300 km south in the Murchison and over 800 km east in the Central Ranges and Tanami.
Olearia mucronata	Hills and rocky drainage channels.	Western Hill: 1 individual	1 individual 40 m north of the northern boundary of Deposit J/Mt Ella East.	Distributed over 850 km from the Pilbara to near Laverton.
Pilbara trudgenii	Hill summits, steep slopes, screes and cliff faces.	Deposit J/Mt Ella East: 189 individuals Western Hill: 525 individuals	100 individuals from 1 location, 4.6 km west of Deposit J/Mt Ella East.	Distributed over a range of 130 km through the southeastern Hamersley subregion.
Rhagodia sp. Hamersley (M. Trudgen 17794)	Mulga vegetation on clay plains.	Western Hill: 899 individuals Deposit F North: 3 individuals Deposit H: 35 individuals Deposit J/Mt Ella East: 56 individuals	842 individuals from 261 locations, distributed between and to the north and south of the four deposits.	Distributed over a range of 300 km through the eastern half of the Hamersley and Fortescue subregions of the Pilbara; particularly common on clay flats between West Angelas and Hope Downs.
Rostellularia adscendens var. *latifolia*	Various; creeks, plains, low hills.	Deposit J/Mt Ella East: 5 individuals	51 individuals from 2 locations west and south of Deposit J/Mt Ella East.	Distributed over a range of 500 km through the Pilbara, from the northeast to near the southwest.
Sida sp. Barlee Range (S. van Leeuwen 1642)	Steep slopes, rocky gullies and breakaways.	Deposit F North: 8 individuals Deposit H: 258 individuals	124 individuals from 18 locations between Western Hill and Deposit J/Mt Ella East.	Distributed over a range of 350 km through the Hamersley subregion, with records also from the northern Ashburton bioregion.
Sida sp. Hamersley Range (K. Newbey 10692)	Rocky areas including cliffs and gullies.	Deposit J/Mt Ella East: 1 confirmed record	Nil.	Distributed over a range of 240 km through the central Hamersley subregion; the WA Herbarium voucher from the study area appears to be the only record from the West Angelas locality, with all other records further west.
Solanum kentrocaule	Hill slopes and mountain crests, rocky creek beds.	Western Hill: 427individuals Deposit J/Mt Ella East: 509 individuals	127 individuals from 23 locations west and east of Deposit J/Mt Ella East.	Distributed over a range of 230 km through the central Hamersley subregion, with one record from the northern Ashburton bioregion.

Species	Typical Habitats	Abundance in Study Area (based on all sampling to date)	Abundance in Locality (additional Rio Tinto records within 15 km)	Abundance in Broader Region (NatureMap)
Triodia sp. Mt Ella (M.E. Trudgen 12739)	Hill slopes and gullies.	Western Hill: 23,671 individuals Deposit F North: 67 individuals Deposit H: 10,848 individuals Deposit J/Mt Ella East: 46,729 individuals	5,489 individuals from 185 locations in the area from between Deposit F North and Western Hill, to south of Deposit J/Mt Ella East.	Most records from a range of 180 km through the southeastern section of the Pilbara, with a record from the northern Ashburton and one record over 220 km northeast at Rudall River.
Priority 4				
Acacia bromilowiana	Rocky hills, breakaways, scree slopes, gorges and rocky creek beds.	Deposit F North: 50 individuals Deposit J/Mt Ella East: 97 individuals	308 individuals from 12 locations west of Deposit J/Mt Ella East, and 5 individuals from 2 locations north and south of Deposit F North.	Most records from a range of 320 km through the Hamersley subregion, with records also from 160 km away at Balfour Downs in the southeastern Chichester subregion,
Goodenia nuda	Alluvial plains, creeks.	Deposit F North: 1 individual	97 individuals from 8 locations between the four deposits.	Widespread over a range of more than 700 km, with most records from the Pilbara, extending south to the Murchison and east to the Great Sandy Desert; widespread and not uncommon.
Lepidium catapycnon	Skeletal soils on hill slopes.	Western Hill: 5 individuals Deposit H: 30 individuals	204 individuals from 9 locations 170 m to 1.5 km west of Deposit J/Mt Ella East.	Most records from a range of 250 km through the Hamersley subregion, with an outlying record from Nullagine in the Chichester subregion,

Following the field survey, four taxa identified during the desktop study are still considered to have the potential to occur in the study area. The shrub *Eremophila magnifica* subsp. *magnifica* (Priority 4) has been recorded 1.5 km west of Deposit J/Mt Ella East, and not all of the suitable habitat within this deposit and Deposit H has been searched; this species may potentially occur. The remaining three taxa are daisy species that may not have been identifiable due to the dry conditions at the time of the surveys, if present:

- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 3835) (Priority 1): this species has been recorded in close proximity to Deposit F North (500 m east), and Western Hill and Deposit H in particular contain extensive suitable habitat ('Mulga' communities on red clay on plains, low in the landscape). This species would be likely to occur.
- *Rhodanthe ascendens* (Priority 1): a small amount of potentially suitable habitat (cracking clay) is present and the species has been recorded in close proximity (NR 1.7 km northwest of Western Hill). This species may potentially occur.
- *Xerochrysum boreale* (Priority 3): extensive suitable habitat is present (loamy, sandy or gravelly soils on plains); this species is recorded very infrequently in locality, but may potentially occur.

7.2.3 Introduced Flora

A total of 15 introduced (weed) species have been recorded within the study area to date. None of the species recorded are listed as WoNS and none are listed as declared pests under the WA BAM Act. However, some are considered to be serious environmental weeds, particularly **Rumex vesicarius* (Ruby Dock) and **Cenchrus* ciliaris (Buffel Grass) (see Section 6.5). It is important to note that these species were recorded in relatively low numbers from the deposits. Bipinnate Beggartick (**Bidens bipinnata*) was by far the most abundant weed species in the study area, with tens of thousands of individuals recorded from Western Hill, Deposit H and Deposit J/Mt Ella East.

7.3 Other Conservation Significant Features

One other feature of conservation significance occurs in the vicinity of the study area. The original boundary of the Hamersley Range National Park (now included within Karijini National Park) was listed on the RNE and is therefore considered an ESA. The RNE boundary is 600 m west of the Western Hill deposit area, however the eastern boundary of Karijini National Park adjoins Western Hill.

8.0 Glossary and Acronyms

*	Used prior to a species name to denote an introduced (weed) species.
aff.	Abbreviation of *affinis* (Latin); 'with affinities to'.
Annual (plant)	A plant that lives for only one year.
BAM Act	The WA *Biosecurity and Agriculture Management Act 2007*.
Conservation significant	A plant, community or habitat that has a formally assigned conservation ranking, usually because it is recognised to be rare, unusual, new or poorly sampled (see Appendix 1 for more on the conservation framework).
Cryptic	Plants that die back to a perennial root-stock under dry conditions; considered cryptic (meaning hidden) because although they are consistently present, it is difficult to tell unless suitable conditions prevail.
DBCA	The Department of Biodiversity, Conservation and Attractions, formerly Department of Parks and Wildlife, Department of Environment and Conservation (DEC), and Department of Conservation and Land Management (CALM).
Dominant species	The species that occur most abundantly in an area or vegetation stratum.
EPA	Environmental Protection Authority of Western Australia.
EPBC Act	The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
Ferruginous	Rust-coloured.
Flora keys	Botanical publications containing a series of questions (regarding the plant's characteristics) aiding in the identification of a taxon.
Foot traverse	Consists of walking through an area to confirm or note the vegetation and/or species presence (usually sampling a narrow corridor/cross section of vegetation).
GDV and potential GDV	Groundwater Dependent Vegetation is vegetation dominated by *Melaleuca argentea* or *Eucalyptus camaldulensis* subsp. *refulgens*, and potential GDV is vegetation dominated by *Eucalyptus victrix*.
IBRA	Interim Biogeographical Regionalisation for Australia.
Indumentum	A layer of hairs on the leaves, stems or other parts of a plant.
Minni ritchi	A type of reddish brown bark that continuously peels in small curly flakes.
Mucronate	Tipped with a short, sharp, abrupt point.
NVCP	Native Vegetation Clearing Permit.
Opportunistic	A plant species collected from outside a formal sampling site (quadrat or relevé); sometimes abbreviated to "Opp."
PEC	Priority Ecological Community (see Appendix 1 for more on the WA conservation framework).
Pedicel	The stalk of a solitary flower.
Peduncle	The stalk holding two or more flowers of an inflorescence.
Perennial	A plant that lives for more than two growing seasons.
Priority flora	Flora listed by the DBCA as requiring additional information to properly evaluate their conservation significance, or requiring ongoing monitoring (see Appendix 1 for more on the WA conservation framework).
Quadrat	A bounded sample area of uniform vegetation in which all species present are recorded; the standard quadrat size for the Pilbara is 50 m by 50 m, or an equivalent area (2,500 m^2).

Relevé	An unbounded flora sampling site, with a similar area to a quadrat, in which most species present are recorded.
Schistose	(of metamorphic rock) having a laminar structure like that of schist.
sens. lat.	Abbreviation of *sensu lato* (Latin), meaning "in the broad sense".
Sigmoidally curved	S-shaped; doubly curved, like the letter S.
sp. (plural: spp.)	Abbreviation of 'species'.
Stratum (plural: strata)	A horizontal level of vegetation defined by growth habit (and sometimes height); e.g. low trees, tall trees, tussock grasses, hummock grasses, etc.
subsp. (plural: subspp.)	Abbreviation of 'subspecies'.
Taxon (plural: taxa)	A taxonomic entity; typically at species level or below.
TEC	Threatened Ecological Community (see Appendix 1 for more on the WA conservation framework).
Terete	Round in cross-section, cylindrical.
Threatened flora	Flora protected by legislation, either listed under the Commonwealth EPBC Act or the WA *Biodiversity Conservation Act 2016*; see Appendix 1 for more on the WA conservation framework.
var.	Abbreviation of 'variety'.

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Appendix 1

Framework for Conservation Significance Ranking of Communities and Species in WA

A. Definitions, Categories and Criteria for Threatened and Priority Ecological Communities (DEC 2010)

1. General Definitions

Ecological Community
A naturally occurring biological assemblage that occurs in a particular type of habitat.

Note: The scale at which biological communities are defined will often depend on the level of detail in the information source, therefore no particular scale is specified.

A threatened ecological community (TEC) is one which is found to fit into one of the following categories; "presumed totally destroyed", "critically endangered", "endangered" or "vulnerable".

Possible threatened ecological communities that do not meet survey criteria are added to the DBCA's Priority Ecological Community Lists under Priorities 1, 2 and 3. Ecological Communities that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

An assemblage is a defined group of biological entities.

Habitat is defined as the areas in which an organism and/or assemblage of organisms lives. It includes the abiotic factors (e.g. substrate and topography), and the biotic factors.

Occurrence: a discrete example of an ecological community, separated from other examples of the same community by more than 20 metres of a different ecological community, an artificial surface or a totally destroyed community.

By ensuring that every discrete occurrence is recognised and recorded future changes in status can be readily monitored.

Adequately Surveyed is defined as follows:
"An ecological community that has been searched for thoroughly in most likely habitats, by relevant experts."

Community structure is defined as follows:
"The spatial organisation, construction and arrangement of the biological elements comprising a biological assemblage" (e.g. *Eucalyptus salmonophloia* woodland over scattered small shrubs over dense herbs; structure in a faunal assemblage could refer to trophic structure, e.g. dominance by feeders on detritus as distinct from feeders on live plants).

Definitions of Modification and Destruction of an ecological community:

Modification: "changes to some or all of ecological processes (including abiotic processes such as hydrology), species composition and community structure as a direct or indirect result of human activities. The level of damage involved could be ameliorated naturally or by human intervention."

Destruction: "modification such that reestablishment of ecological processes, species composition and community structure within the range of variability exhibited by the original community is unlikely within the foreseeable future even with positive human intervention."

Note: Modification and destruction are difficult concepts to quantify, and their application will be determined by scientific judgement. Examples of modification and total destruction are cited below:

Modification of ecological processes: The hydrology of Toolibin Lake has been altered by clearing of the catchment such that death of some of the original flora has occurred due to dependence on fresh water. The system may be bought back to a semblance of the original state by redirecting saline runoff and pumping waters of the rising underground watertable away to restore the hydrological balance. Total destruction of downstream lakes has occurred due to hydrology being altered to the point that few of the original flora or fauna species are able to tolerate the level of salinity and/or water logging.

Modification of structure: The understorey of a plant community may be altered by weed invasion due to nutrient enrichment by addition of fertiliser. Should the additional nutrients be removed from the system the balance may be restored, and the original plant species better able to compete. Total destruction may occur if additional nutrients continue to be added to the system causing the understorey to be completely replaced by weed species, and death of overstorey species due to inability to tolerate high nutrient levels.

Modification of species composition: Pollution may cause alteration of the invertebrate species present in a freshwater lake. Removal of pollutants may allow the return of the original inhabitant species. Addition of residual highly toxic substances may cause permanent changes to water quality, and total destruction of the community.

Threatening processes are defined as follows:
"Any process or activity that threatens to destroy or significantly modify the ecological community and/or affect the continuing evolutionary processes within any ecological community."

Examples of some of the continuing threatening processes in Western Australia include: general pollution; competition, predation and change induced in ecological communities as a result of introduced animals; competition and displacement of native plants by introduced species; hydrological changes; inappropriate fire regimes; diseases resulting from introduced micro-organisms; direct human exploitation and disturbance of ecological communities.

Restoration is defined as returning an ecological community to its pre-disturbance or natural state in terms of abiotic conditions, community structure and species composition.

Rehabilitation is defined as the re-establishment of ecological attributes in a damaged ecological community although the community will remain modified.

2. Definitions and Criteria for Presumed Totally Destroyed, Critically Endangered, Endangered and Vulnerable Ecological Communities

ECOLOGICAL COMMUNITIES

Presumed Totally Destroyed (PD)
An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant and either of the following applies (A or B):

A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or

B) All occurrences recorded within the last 50 years have since been destroyed

Critically Endangered (CR)
An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.

An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (A, B or C):

A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii):

   i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);

   ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.

B) Current distribution is limited, and one or more of the following apply (i, ii or iii):

   i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);

   ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;

iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.

C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)
An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B, or C):

A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii):

i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);

ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.

B) Current distribution is limited, and one or more of the following apply (i, ii or iii):

i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);

ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;

iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.

C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)
An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B or C):

A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.

B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.

C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

3. Definitions and Criteria for Priority Ecological Communities

PRIORITY ECOLOGICAL COMMUNITY LIST
Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community Lists under Priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community, and evaluation of conservation status, so that consideration can be given to their declaration as threatened ecological communities. Ecological Communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

Priority One: Poorly-known ecological communities
Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities
Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities

(i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:

(ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;

(iii) communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four: Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

(a) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.

(b) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

(c) Ecological communities that have been removed from the list of threatened communities during the past five years.

Priority Five: Conservation Dependent ecological communities
Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

B. Categories for Flora and Fauna Species

1. Western Australian *Biodiversity Conservation Act 2016,* and Priority Species Classification

In Western Australia, 'Threatened', 'Extinct' and 'Specially Protected' fauna and flora species are protected under the *Biodiversity Conservation Act 2016* (the BC Act), making it an offence to take or disturb these species without Ministerial approval. The definition of 'take' is broad, and includes killing, injuring, harvesting or capturing fauna, and gathering, cutting, destroying, harvesting or damaging flora.

Such species are classified within a framework of several categories.

Species of the highest conservation significance are designated as Threatened species and are protected under sections 19(1)(a), 19(1)(b) and 19(1)(c) of the BC Act. Species are listed within one of three categories:

- Critically endangered (CR), Endangered (EN), or Vulnerable (V), representing those species listed in Schedules 1 to 3 respectively of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* or the *Wildlife Conservation (Rare Flora) Notice 2018*.

Presumed extinct species are protected under sections 24 and 25 of the BC Act and are listed in one of two categories:

- Extinct (EX), representing those species listed in Schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* or the *Wildlife Conservation (Rare Flora) Notice 2018*; or
- Extinct in the wild (EW); there are currently no listed species under this category.

Specially protected species are protected under section 13(1) of the BC Act, and include species of special conservation interest, migratory species, cetaceans, species subject to international agreement, or species otherwise in need of special protection. Of these:

- Migratory species (MI) are those listed under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*;
- Species of special conservation interest (conservation dependent fauna) (CD) are those listed under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*; and
- Other specially protected fauna (OS) are those listed under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*;

In addition to the species formally designated as protected under the BC Act, the WA Department of Biodiversity, Conservation and Attractions (DBCA) also maintains a list of 'Priority species'.

Species that appear to be rare or threatened, but for which there is insufficient information to properly evaluate their conservation significance, are assigned to one of three Priority categories (Priority 1 to Priority 3), while species that are adequately known but require regular monitoring are assigned to Priority 4.

Note that of the above classifications, only 'Threatened', 'Extinct' and 'Specially Protected' species have statutory standing. The Priority flora and fauna classifications are employed by the WA DBCA to manage and classify their database of species considered potentially rare or at risk, but these categories have no legislative status.

Further explanations of the categories is provided in more detail in the following pages.

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

CONSERVATION CODES

For Western Australian Flora and Fauna

Threatened, Extinct and Specially Protected fauna or flora[1] are species[2] which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

The *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and the *Wildlife Conservation (Rare Flora) Notice 2018* have been transitioned under regulations 170, 171 and 172 of the *Biodiversity Conservation Regulations 2018* to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016.*

Categories of Threatened, Extinct and Specially Protected fauna and flora are:

T **Threatened species**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**

Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN **Endangered species**

Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU **Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that *"is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1 Priority 1: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 Priority 2: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

[1] The definition of flora includes algae, fungi and lichens
[2]Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

2. Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Many of the species that are specially protected at State level are also listed as Threatened species at the Federal level, as one of the Matters of National Environmental Significance (MNES) identified under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). These may be classified as 'critically endangered', 'endangered', 'vulnerable' or 'lower risk', consistent with IUCN categories:

1. Critically Endangered (CR): a taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
2. Endangered (EN): a taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.
3. Vulnerable (VU): a taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future.
4. Lower Risk (LR): a taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:
    - Conservation Dependent (CD). Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation program targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
    - Near Threatened (NT). Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.
    - Least Concern (LC). Taxa which do not qualify for Conservation Dependent or Near Threatened.

In addition, numerous Migratory species are listed as MNES under the EPBC Act (some of which are also listed as Threatened). Migratory species are those animals that migrate to Australia and its external territories, or pass through or over Australian waters during their annual migrations. The list of migratory species consists of those species listed under the following international conventions:

1. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);
2. China-Australia Migratory Bird Agreement (CAMBA);
3. Japan-Australia Migratory Bird Agreement (JAMBA); and,
4. Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Marine species are also protected under the EPBC Act, and are listed to ensure the long-term conservation of the species. Marine species include all Australian sea snakes, seals, crocodiles, dugongs, marine turtles, seahorses and seabirds that naturally occur in the Commonwealth marine area.

Under the terms of the EPBC Act, an action (e.g. a project or development) is required to be referred to the Australian Government Environment Minister for approval if it has, will have, or is likely to have, a significant impact on an MNES. The term 'action' includes projects and developments subsequent to commencement of the Act, however there are a number of exemptions (e.g. projects in Commonwealth areas). According to Department of the Environment (2013), a 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.

References:

Department of the Environment (2013). Matters of National Environmental Significance - Significant Impact Guidelines 1.1 *Environment Protection and Biodiversity Conservation Act 1999*. Department of the Environment, Canberra, Australia.

Appendix 2

EPBC Act and NatureMap Search Results

NatureMap
Mapping Western Australia's biodiversity

NatureMap Species Report

Created By Guest user on 07/08/2018

Kingdom Plantae
Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 118° 45' 16" E,22° 49' 47" S
Buffer 40km
Group By Conservation Status

Conservation Status	Species	Records
Non-conservation taxon	743	3668
Priority 1	11	47
Priority 2	12	51
Priority 3	30	201
Priority 4	6	41
Rare or likely to become extinct	1	6
TOTAL	**803**	**4014**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Rare or likely to become extinct					
1.	6069	*Thryptomene wittweri*		T	
Priority 1					
2.	20164	*Barbula ehrenbergii*		P1	
3.	20243	*Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)*		P1	Y
4.	40643	*Eremophila sp. Hamersley Range (K. Walker KW 136)*		P1	
5.	20256	*Eremophila sp. West Angelas (S. van Leeuwen 4068)*		P1	
6.	17363	*Eremophila spongiocarpa*		P1	
7.	42861	*Euphorbia inappendiculata var. queenslandica*		P1	
8.	13290	*Rhodanthe ascendens*		P1	
9.	44786	*Synostemon hamersleyensis*		P1	
10.	25768	*Tetratheca fordiana*		P1	
11.	41101	*Triodia sp. Karijini (S. van Leeuwen 4111)*		P1	
12.	33026	*Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)*		P1	
Priority 2					
13.	26	*Adiantum capillus-veneris (Maidenhair)*		P2	
14.	216	*Aristida lazaridis*		P2	
15.	48669	*Arthropodium sp. Ironstone (J. Bull & J. Waters ONS PJ 36.01)*		P2	Y
16.	766	*Cladium procerum*		P2	
17.	48236	*Eremophila pusilliflora*		P2	
18.	42843	*Euphorbia australis var. glabra*		P2	
19.	40560	*Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)*		P2	
20.	6639	*Ipomoea racemigera*		P2	
21.	17790	*Isotropis parviflora*		P2	
22.	12794	*Kohautia australiensis*		P2	
23.	30374	*Oxalis sp. Pilbara (M.E. Trudgen 12725)*		P2	
24.	19366	*Teucrium pilbaranum*		P2	
Priority 3					
25.	3286	*Acacia daweana*		P3	
26.	3316	*Acacia effusa*		P3	
27.	23528	*Acacia subtiliformis*		P3	
28.	34810	*Amaranthus centralis*		P3	
29.	52	*Ampelopteris prolifera*		P3	
30.	17918	*Aristida jerichoensis var. subspinulifera*		P3	
31.	20378	*Dampiera metallorum*		P3	
32.	14894	*Eremophila magnifica subsp. velutina*		P3	
33.	4622	*Euphorbia clementii*		P3	
34.	4646	*Euphorbia stevenii (Caustic Bottletree)*		P3	
35.	882	*Fimbristylis sieberiana*		P3	
36.	3940	*Glycine falcata*		P3	

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
				P3	
37.	12529	*Goodenia lyrata*		P3	
38.	29381	*Goodenia sp. East Pilbara (A.A. Mitchell PRP 727) (O'Meara's Goodenia)*		P3	
39.	44441	*Grevillea saxicola*		P3	
40.	12832	*Gymnanthera cunninghamii*		P3	
41.	17716	*Indigofera gilesii*		P3	
42.	19594	*Iotasperma sessilifolium*		P3	
43.	19640	*Oldenlandia sp. Hamersley Station (A.A. Mitchell PRP 1479)*		P3	
44.	12638	*Olearia mucronata*		P3	
45.	20311	*Pilbara trudgenii*		P3	
46.	20168	*Rhagodia sp. Hamersley (M. Trudgen 17794)*		P3	
47.	11556	*Rostellularia adscendens var. latifolia*		P3	
48.	16616	*Sida sp. Barlee Range (S. van Leeuwen 1642)*		P3	
49.	42542	*Solanum kentrocaule*		P3	
50.	4729	*Stackhousia clementii*		P3	
51.	42142	*Swainsona thompsoniana*		P3	
52.	17820	*Themeda sp. Hamersley Station (M.E. Trudgen 11431)*		P3	
53.	19534	*Triodia sp. Mt Ella (M.E. Trudgen 12739)*		P3	
54.	48251	*Xerochrysum boreale*		P3	
Priority 4					
55.	29571	*Acacia bromilowiana*		P4	
56.	14893	*Eremophila magnifica subsp. magnifica*		P4	
57.	7530	*Goodenia nuda*		P4	
58.	3022	*Lepidium catapycnon (Hamersley Lepidium)*		P4	
59.	2744	*Ptilotus mollis*		P4	
60.	20862	*Rhynchosia bungarensis*		P4	
Non-conservation taxon					
61.	4886	*Abutilon amplum*			
62.	4889	*Abutilon cryptopetalum*			
63.	9080	*Abutilon cunninghamii*			
64.	4891	*Abutilon fraseri (Lantern Bush)*			
65.	18120	*Abutilon fraseri subsp. fraseri*			
66.	4895	*Abutilon lepidum*			
67.	4896	*Abutilon leucopetalum (Desert Chinese Lantern)*			
68.	4898	*Abutilon macrum*			
69.	4899	*Abutilon malvifolium (Bastard Marshmallow)*			
70.	4901	*Abutilon otocarpum (Desert Chinese Lantern)*			
71.	4902	*Abutilon oxycarpum (Flannel Weed)*			
72.	43020	*Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)*			
73.		*Abutilon sp.*			
74.	42920	*Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)*			
75.	14113	*Abutilon sp. Pilbara (W.R. Barker 2025)*			
76.	11215	*Acacia adoxa var. adoxa*			
77.	3205	*Acacia adsurgens*			
78.	44579	*Acacia adsurgens x rhodophloia*			
79.	3214	*Acacia ancistrocarpa (Fitzroy Wattle)*			
80.	3217	*Acacia aneura (Mulga, Wanari)*			
81.	37260	*Acacia aptaneura*			
82.	3223	*Acacia arida*			
83.	3228	*Acacia atkinsiana*			
84.	3232	*Acacia ayersiana*			
85.	3241	*Acacia bivenosa*			
86.	19571	*Acacia catenulata*			
87.	23524	*Acacia catenulata subsp. occidentalis*			
88.	3260	*Acacia citrinoviridis*			
89.	17013	*Acacia colei var. colei*			
90.	13502	*Acacia coriacea subsp. pendens*			
91.	3272	*Acacia cowleana (Halls Creek Wattle)*			
92.	3300	*Acacia dictyophleba (Sandhill Wattle, Ngarkalya)*			
93.	16174	*Acacia elachantha*			
94.	3326	*Acacia eriopoda (Broome Pindan Wattle)*			
95.	45337	*Acacia exigua*			
96.	3360	*Acacia hamersleyensis*			
97.	3370	*Acacia hilliana*			
98.	3377	*Acacia inaequilatera (Baderi)*			
99.	36418	*Acacia incurvaneura*			
100.	3399	*Acacia kempeana (Witchetty Bush, Ilykuwara)*			
101.	37240	*Acacia macraneura*			
102.	3434	*Acacia maitlandii (Maitland's Wattle)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
103.	3435	*Acacia marramamba*			
104.	12952	*Acacia minyura*			
105.	3447	*Acacia monticola (Gawar, Lilwardi)*			
106.	36416	*Acacia mulganeura*			
107.	3475	*Acacia pachyacra*			
108.	15724	*Acacia paraneura*			
109.	3500	*Acacia pruinocarpa (Gidgee)*			
110.	36800	*Acacia pteraneura*			
111.	29016	*Acacia pyrifolia var. morrisonii*			
112.	29015	*Acacia pyrifolia var. pyrifolia*			
113.	15215	*Acacia retivenea subsp. clandestina*			
114.	3519	*Acacia rhodophloia*			
115.	44584	*Acacia rhodophloia x sibirica*			
116.	29135	*Acacia sericophylla*			
117.	8949	*Acacia sibirica (Bastard Mulga)*			
118.	3553	*Acacia spondylophylla*			
119.	23526	*Acacia steedmanii subsp. borealis*			
120.	13070	*Acacia synchronicia*			
121.	3573	*Acacia tenuissima*			
122.	3577	*Acacia tetragonophylla (Kurara, Wakalpuka)*			
123.	3579	*Acacia trachycarpa (Minni Ritchi, Balgali)*			
124.	23521	*Acacia trudgeniana*			
125.	20319	*Acacia tumida var. pilbarensis*			
126.	31511	*Acacia victoriae subsp. victoriae*			
127.	3606	*Acacia xiphophylla*			
128.	172	*Acrachne racemosa*			
129.	2646	*Aerva javanica (Kapok Bush)*	Y		
130.	2648	*Alternanthera denticulata (Lesser Joyweed)*			
131.	2651	*Alternanthera nana (Hairy Joyweed)*			
132.	31076	*Amaranthus cochleitepalus*			
133.	2660	*Amaranthus cuspidifolius*			
134.	2663	*Amaranthus interruptus (Native Amaranth)*			
135.	20018	*Amaranthus undulatus*			
136.	19835	*Amphipogon sericeus*			
137.	2369	*Amyema benthamii*			
138.	13700	*Amyema bifurcata*			
139.	2372	*Amyema fitzgeraldii (Pincushion Mistletoe)*			
140.	11614	*Amyema gibberula var. gibberula*			
141.	2380	*Amyema miquelii (Stalked Mistletoe)*			
142.	29080	*Amyema sanguinea var. pulchra*			
143.	40910	*Androcalva luteiflora (Yellow-flowered Rulingia)*			
144.	2333	*Anthobolus leptomerioides*			
145.	43104	*Apowollastonia hamersleyensis*			
146.	32314	*Archidium rehmannii*			
147.	204	*Aristida burbidgeae*			
148.	207	*Aristida contorta (Bunched Kerosene Grass)*			
149.	210	*Aristida holathera*			
150.	12063	*Aristida holathera var. holathera*			
151.	212	*Aristida inaequiglumis (Feathertop Threeawn)*			
152.	213	*Aristida ingrata*			
153.	215	*Aristida latifolia (Feathertop Wiregrass)*			
154.	217	*Aristida nitidula (Flat-awned Threeawn)*			
155.	218	*Aristida obscura (Brush Threeawn)*			
156.	221	*Aristida pruinosa (Gulf Feathertop Wiregrass)*			
157.	227	*Astrebla elymoides (Weeping Mitchell Grass)*			
158.	229	*Astrebla pectinata (Barley Mitchell Grass)*			
159.	6202	*Astrotricha hamptonii (Ironplant)*			
160.	4740	*Atalaya hemiglauca (Whitewood)*			
161.	33030	*Austrobryonia pilbarensis*			
162.	32318	*Barbula indica*			
163.	747	*Baumea rubiginosa*			
164.	7854	*Bidens bipinnata (Bipinnate Beggartick)*	Y		
165.	7855	*Bidens pilosa (Cobbler's Pegs)*	Y		
166.	46339	*Bidens subalternans var. araneosa*	Y		
167.	46338	*Bidens subalternans var. simulans*	Y		
168.	7866	*Blumea tenella*			
169.	2770	*Boerhavia coccinea (Tar Vine, Wituka)*			
170.	2773	*Boerhavia paludosa*			
171.	2774	*Boerhavia repleta*			
172.		*Boerhavia sp.*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
173.	11167	*Bonamia erecta*			
174.	6606	*Bonamia media*			
175.	44782	*Bonamia pilbarensis*			
176.	239	*Bothriochloa bladhii (Forest Bluegrass)*			
177.	16329	*Bothriochloa bladhii subsp. bladhii*			
178.	240	*Bothriochloa ewartiana (Desert Bluegrass)*			
179.	12716	*Brachychiton acuminatus*			
180.	4999	*Brachychiton gregorii (Desert Kurrajong, Ngalta)*			
181.	7413	*Brunonia australis (Native Cornflower)*			
182.	15885	*Brunonia australis var. A Kimberley Flora (K.F. Kenneally 5452)*			
183.	19070	*Brunonia sp. Long hairs (D.E. Symon 2440)*			
184.	14312	*Bulbine pendula*			
185.	750	*Bulbostylis barbata*			
186.	752	*Bulbostylis turbinata*			
187.	2860	*Calandrinia polyandra (Parakeelya)*			
188.	2864	*Calandrinia ptychosperma*			
189.	31073	*Calandrinia sp. The Pink Hills (F. Obbens FO 19/06)*			
190.	8466	*Callitris columellaris (White Cypress Pine)*			
191.	14090	*Calocephalus beardii*			
192.	7893	*Calocephalus knappii*			
193.	48223	*Calocephalus pilbarensis*			
194.	7903	*Calotis hispidula (Bindy Eye)*			
195.	7905	*Calotis multicaulis (Many-stemmed Burr-daisy)*			
196.	7906	*Calotis plumulifera*			
197.	5446	*Calytrix carinata*			
198.	2976	*Capparis lasiantha (Split Jack, Balqarda)*			
199.	2978	*Capparis mitchellii (Wild Orange)*			
200.	2982	*Capparis umbonata (Wild Orange, Nanggalu)*			
201.	2949	*Cassytha capillaris*			
202.	11242	*Cassytha racemosa forma pilosa*			
203.	258	*Cenchrus ciliaris (Buffel Grass)*	Y		
204.	259	*Cenchrus echinatus (Burrgrass)*	Y		
205.	19762	*Centipeda minima subsp. macrocephala*			
206.	7921	*Centipeda thespidioides (Desert Sneezewood)*			
207.	31	*Cheilanthes austrotenuifolia*			
208.	32	*Cheilanthes brownii*			
209.	37	*Cheilanthes lasiophylla (Woolly Cloak Fern)*			
210.	41	*Cheilanthes sieberi (Mulga Fern)*			
211.	12815	*Cheilanthes sieberi subsp. pseudovellea*			
212.	12818	*Cheilanthes sieberi subsp. sieberi*			
213.		*Cheilanthes sp.*			
214.	8462	*Cheilanthes tenuifolia (Rock Fern)*			
215.	2485	*Chenopodium auricomum (Queensland Bluebush)*			
216.	266	*Chloris barbata (Purpletop Chloris)*	Y		
217.	269	*Chloris pectinata (Comb Chloris)*			
218.	272	*Chloris virgata (Feathertop Rhodes Grass)*	Y		
219.	47174	*Chrysocephalum apiculatum subsp. pilbarense*			
220.	33516	*Chrysocephalum gilesii*			
221.	12614	*Chrysocephalum pterochaetum*			
222.	273	*Chrysopogon fallax (Golden Beard Grass)*			
223.	7370	*Citrullus lanatus (Pie Melon)*	Y		
224.	2985	*Cleome oxalidea*			
225.	2988	*Cleome viscosa (Tickweed, Tjinduwadhu)*			
226.	13692	*Clerodendrum floribundum var. angustifolium*			
227.	13689	*Clerodendrum tomentosum var. lanceolatum*			
228.	2778	*Codonocarpus cotinifolius (Native Poplar, Kundurangu)*			
229.	1165	*Commelina ensifolia (Wandering Jew, Buargu)*			
230.	6612	*Convolvulus clementii*			
231.	7939	*Conyza bonariensis (Flaxleaf Fleabane)*	Y		
232.	13560	*Corchorus crozophorifolius*			
233.	17405	*Corchorus lasiocarpus*			
234.	18409	*Corchorus lasiocarpus subsp. lasiocarpus*			
235.	18408	*Corchorus lasiocarpus subsp. parvus*			
236.	4864	*Corchorus sidoides (Flannel Weed)*			
237.	18415	*Corchorus sidoides subsp. sidoides*			
238.		*Corchorus sp.*			
239.	20242	*Corchorus sp. Hamersley Range hilltops (S. van Leeuwen 3826)*			
240.	17661	*Corchorus tectus*			
241.	4865	*Corchorus tridens*			
242.	4867	*Corchorus walcottii (Woolly Corchorus)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
243.	17083	*Corymbia deserticola subsp. deserticola*			
244.	17077	*Corymbia ferriticola*			
245.	17093	*Corymbia hamersleyana*			
246.	17092	*Corymbia opaca*			
247.	3144	*Crassula peduncularis (Purple Stonecrop)*			
248.	19378	*Crotalaria dissitiflora subsp. benthamiana*			
249.	3783	*Crotalaria medicaginea*			
250.	3785	*Crotalaria novae-hollandiae (New Holland Rattlepod)*			
251.	16189	*Cryptandra monticola*			
252.	7371	*Cucumis melo (Ulcardo Melon)*			
253.	7372	*Cucumis myriocarpus (Prickly Paddy Melon)*	Y		
254.	41722	*Cucumis picrocarpus*			
255.	41721	*Cucumis variabilis*			
256.	17117	*Cullen cinereum*			
257.	17436	*Cullen graveolens*			
258.	17118	*Cullen leucanthum*			
259.	17119	*Cullen leucochaites*			
260.	17217	*Cullen pallidum*			
261.	17120	*Cullen pogonocarpum*			
262.	3010	*Cuphonotus andraeanus*			
263.	13733	*Cuscuta victoriana*			
264.	6216	*Cyclospermum leptophyllum*	Y		
265.	279	*Cymbopogon ambiguus (Scentgrass)*			
266.	281	*Cymbopogon obtectus (Silkyheads)*			
267.	6584	*Cynanchum floribundum (Dumara Bush, Tjipa)*			
268.	6585	*Cynanchum pedunculatum*			
269.		*Cynanchum sp.*			
270.	48280	*Cynanchum viminale subsp. australe*			
271.	46558	*Cynodon convergens*			
272.	46556	*Cynodon tenellus*			
273.	777	*Cyperus bulbosus (Bush Onion, Tjanmata)*			
274.	12811	*Cyperus cunninghamii subsp. cunninghamii*			
275.	789	*Cyperus difformis (Rice Sedge)*			
276.	12808	*Cyperus hesperius*			
277.	798	*Cyperus iria*			
278.	818	*Cyperus vaginatus (Stiffleaf Sedge)*			
279.	290	*Dactyloctenium radulans (Button Grass)*			
280.	7424	*Dampiera candicans*			
281.	47241	*Datura leichhardtii subsp. leichhardtii*	Y		
282.	6218	*Daucus glochidiatus (Australian Carrot)*			
283.	17140	*Daviesia eremaea*			
284.	3852	*Desmodium campylocaulon*			
285.	3856	*Desmodium muelleri*			
286.	13741	*Dichanthium sericeum subsp. humilius*			
287.	13740	*Dichanthium sericeum subsp. polystachyum*			
288.	11964	*Dichanthium sericeum subsp. sericeum*			
289.	7959	*Dichromochlamys dentatifolia*			
290.	7164	*Dicladanthera forrestii*			
291.	6754	*Dicrastylis cordifolia*			
292.	308	*Digitaria ammophila (Silky Umbrella Grass)*			
293.	310	*Digitaria brownii (Cotton Panic Grass)*			
294.	311	*Digitaria ciliaris (Summer Grass)*	Y		
295.	312	*Digitaria coenicola*			
296.	313	*Digitaria ctenantha (Comb Finger Grass)*			
297.	48378	*Diplachne fusca subsp. fusca*			
298.	12023	*Diplopeltis stuartii var. stuartii (Desert Pepperflower)*			
299.	11320	*Dipteracanthus australasicus subsp. australasicus*			
300.	2499	*Dissocarpus paradoxus (Curious Saltbush)*			
301.	4759	*Dodonaea coriacea*			
302.	11406	*Dodonaea lanceolata var. lanceolata*			
303.	4772	*Dodonaea pachyneura*			
304.	4773	*Dodonaea petiolaris*			
305.	11674	*Dodonaea viscosa subsp. mucronata*			
306.	44508	*Duma florulenta*			
307.	31274	*Duperreya commixta*			
308.	2500	*Dysphania glandulosa*			
309.	11632	*Dysphania glomulifera subsp. eremaea*			
310.	2502	*Dysphania kalpari (Rat's Tail, Kalpari)*			
311.	33479	*Dysphania melanocarpa (Black Crumbweed)*			
312.	33596	*Dysphania melanocarpa forma leucocarpa*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
313.	2506	*Dysphania rhadinostachya*			
314.	11653	*Dysphania rhadinostachya subsp. inflata*			
315.	11890	*Dysphania rhadinostachya subsp. rhadinostachya*			
316.	328	*Echinochloa colona (Awnless Barnyard Grass)*	Y		
317.	7057	*Elacholoma hornii*			
318.	823	*Eleocharis atropurpurea*			
319.	827	*Eleocharis geniculata*			
320.	2511	*Enchylaena tomentosa (Barrier Saltbush)*			
321.	357	*Enneapogon caerulescens (Limestone Grass)*			
322.	360	*Enneapogon lindleyanus (Wiry Nineawn, Purple-head Nineawn)*			
323.	363	*Enneapogon pallidus (Conetop Nineawn)*			
324.	365	*Enneapogon polyphyllus (Leafy Nineawn)*			
325.	20377	*Enneapogon robustissimus*			
326.	368	*Enteropogon ramosus (Windmill Grass, Curly Windmill Grass)*			
327.	32355	*Entosthodon radians*			
328.	32356	*Entosthodon subnudus*			
329.	375	*Eragrostis cumingii (Cuming's Love Grass)*			
330.	377	*Eragrostis desertorum (Desert Lovegrass)*			
331.	378	*Eragrostis dielsii (Mallee Lovegrass)*			
332.	380	*Eragrostis eriopoda (Woollybutt Grass, Wangurnu)*			
333.	388	*Eragrostis leptocarpa (Drooping Lovegrass)*			
334.	392	*Eragrostis pergracilis*			
335.	393	*Eragrostis setifolia (Neverfail Grass)*			
336.	398	*Eragrostis tenellula (Delicate Lovegrass)*			
337.	399	*Eragrostis xerophila (Knotty-butt Neverfail)*			
338.	14509	*Eremophila caespitosa*			
339.	15167	*Eremophila canaliculata*			
340.	7189	*Eremophila clarkei (Turpentine Bush)*			
341.	7190	*Eremophila compacta*			
342.	7192	*Eremophila cuneifolia (Pinyuru, T'iranju)*			
343.	17153	*Eremophila flaccida subsp. flaccida*			
344.	7208	*Eremophila forrestii (Wilcox Bush)*			
345.	15052	*Eremophila forrestii subsp. forrestii*			
346.	16696	*Eremophila fraseri subsp. fraseri*			
347.	17171	*Eremophila jucunda subsp. jucunda*			
348.	17519	*Eremophila jucunda subsp. pulcherrima*			
349.	7228	*Eremophila lachnocalyx (Woolly-calyxed Eremophila)*			
350.	16940	*Eremophila lanceolata*			
351.	17597	*Eremophila latrobei subsp. filiformis*			
352.	17169	*Eremophila latrobei subsp. glabra*			
353.	17576	*Eremophila latrobei subsp. latrobei*			
354.	7234	*Eremophila longifolia (Berrigan, Tulypurpa)*			
355.	18570	*Eremophila oppositifolia subsp. angustifolia*			
356.	15164	*Eremophila petrophila subsp. petrophila*			
357.	17283	*Eremophila phyllopoda subsp. obliqua*			
358.	15160	*Eremophila platycalyx subsp. pardalota*			
359.	15058	*Eremophila platycalyx subsp. platycalyx*			
360.		*Eremophila sp.*			
361.	400	*Eriachne aristidea*			
362.	403	*Eriachne benthamii (Swamp Wanderrie)*			
363.	408	*Eriachne flaccida (Claypan Grass)*			
364.	411	*Eriachne helmsii (Buck Wanderrie Grass)*			
365.	13660	*Eriachne lanata*			
366.	413	*Eriachne mucronata (Mountain Wanderrie Grass)*			
367.	415	*Eriachne ovata*			
368.	16485	*Eriachne pulchella subsp. dominii*			
369.	16486	*Eriachne pulchella subsp. pulchella*			
370.	421	*Eriachne tenuiculmis*			
371.	4335	*Erodium cygnorum (Blue Heronsbill)*			
372.	41301	*Eucalyptus aridimontana*			
373.	35345	*Eucalyptus camaldulensis subsp. obtusa (Blunt-budded River Red Gum)*			
374.	5641	*Eucalyptus ewartiana (Ewart's Mallee)*			
375.	5655	*Eucalyptus gamophylla (Twin-leaf Mallee, Warilu)*			
376.	5684	*Eucalyptus kingsmillii (Kingsmill's Mallee)*			
377.	5698	*Eucalyptus leucophloia (Snappy Gum, Migum)*			
378.	18088	*Eucalyptus leucophloia subsp. leucophloia*			
379.	5744	*Eucalyptus pilbarensis*			
380.	18058	*Eucalyptus repullulans*			
381.	5773	*Eucalyptus socialis (Red Mallee, Altarpa)*			
382.	19576	*Eucalyptus socialis subsp. eucentrica*			

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383.	18219	*Eucalyptus tephrodes*			
384.	29733	*Eucalyptus trivalva (Victoria Spring Mallee)*			
385.	14548	*Eucalyptus victrix*			
386.	15592	*Eucalyptus xerothermica*			
387.	11011	*Eulalia aurea*			
388.	4617	*Euphorbia australis (Namana)*			
389.	42844	*Euphorbia australis var. hispidula*			
390.	35303	*Euphorbia australis var. subtomentosa*			
391.	4619	*Euphorbia biconvexa*			
392.	4620	*Euphorbia boophthona (Gascoyne Spurge)*			
393.	4623	*Euphorbia coghlanii (Namana)*			
394.	4626	*Euphorbia drummondii (Caustic Weed, Piwi)*			
395.	42847	*Euphorbia ferdinandi var. ferdinandi*			
396.	4635	*Euphorbia myrtoides*			
397.	12097	*Euphorbia tannensis subsp. eremophila (Desert Spurge)*			
398.	42879	*Euphorbia trigonosperma*			
399.	42876	*Euphorbia vaccaria var. vaccaria*			
400.	11200	*Evolvulus alsinoides var. villosicalyx*			
401.	10765	*Exocarpos sparteus (Broom Ballart, Djuk)*			
402.	19648	*Ficus brachypoda*			
403.	43508	*Ficus geniculata var. insignis*			
404.	12096	*Ficus virens var. virens*			
405.	850	*Fimbristylis depauperata*			
406.	851	*Fimbristylis dichotoma (Eight Day Grass)*			
407.	859	*Fimbristylis littoralis*			
408.	12159	*Fimbristylis simulans*			
409.	35558	*Flaveria trinervia (Speedy Weed)*	Y		
410.	3903	*Gastrolobium grandiflorum (Wallflower Poison)*			
411.	7060	*Glossostigma diandrum*			
412.	3938	*Glycine canescens (Silky Glycine)*			
413.	7988	*Gnephosis arachnoidea (Cobwebby-headed Gnephosis)*			
414.	41245	*Gompholobium oreophilum*			
415.	2676	*Gomphrena canescens (Batchelors Buttons)*			
416.	2680	*Gomphrena cunninghamii*			
417.	12517	*Goodenia cusackiana*			
418.	7526	*Goodenia microptera*			
419.	12552	*Goodenia muelleriana*			
420.	12571	*Goodenia pascua*			
421.	12574	*Goodenia prostrata*			
422.	7550	*Goodenia stellata*			
423.	10982	*Goodenia stobbsiana*			
424.	7556	*Goodenia tenuiloba*			
425.	7558	*Goodenia triodiophila*			
426.	4910	*Gossypium australe (Native Cotton)*			
427.	4918	*Gossypium robinsonii (Wild Cotton)*			
428.	1963	*Grevillea berryana*			
429.	2121	*Grevillea wickhamii (Wickham's Grevillea)*			
430.	13440	*Grevillea wickhamii subsp. aprica*			
431.	19478	*Grevillea wickhamii subsp. hispidula*			
432.	2138	*Hakea chordophylla*			
433.	2177	*Hakea lorea (Witinti)*			
434.	19137	*Hakea lorea subsp. lorea*			
435.	29840	*Halgania cyanea var. Allambi Stn (B.W. Strong 676)*			
436.	6690	*Halgania gustafsenii*			
437.	30294	*Halgania gustafsenii var. Mid West (G. Perry 370)*			
438.	17493	*Halgania gustafsenii var. gustafsenii*			
439.	30258	*Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)*			
440.	6174	*Haloragis gossei*			
441.	23465	*Haloragis gossei var. gossei*			
442.	23464	*Haloragis gossei var. inflata*			
443.	20669	*Haloragis maierae*			
444.	6180	*Haloragis trigonocarpa*			
445.	17722	*Hannafordia bissillii subsp. bissillii*			
446.	17325	*Harnieria kempeana subsp. muelleri*			
447.	17301	*Heliotropium chrysocarpum*			
448.	6705	*Heliotropium crispatum*			
449.	6706	*Heliotropium cunninghamii*			
450.	6712	*Heliotropium heteranthum*			
451.	17307	*Heliotropium inexplicitum*			
452.	17309	*Heliotropium pachyphyllum*			

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453.	6720	*Heliotropium ventricosum*			
454.	5128	*Hibbertia glaberrima*			
455.	4922	*Hibiscus brachychlaenus*			
456.	4924	*Hibiscus burtonii*			
457.	4925	*Hibiscus coatesii*			
458.	4930	*Hibiscus goldsworthii*			
459.	4931	*Hibiscus haynaldii*			
460.	4933	*Hibiscus leptocladus*			
461.	43022	*Hibiscus sp. Gardneri (A.L. Payne PRP 1435)*			
462.	40640	*Hibiscus sp. Mt Robinson (G. Byrne 3537)*			
463.	4942	*Hibiscus sturtii (Sturt's Hibiscus)*			
464.	11651	*Hibiscus sturtii var. campylochlamys*			
465.	11385	*Hibiscus sturtii var. grandiflorus*			
466.	11477	*Hibiscus sturtii var. platychlamys*			
467.	43081	*Hibiscus verdcourtii*			
468.	5215	*Hybanthus aurantiacus*			
469.	453	*Imperata cylindrica (Kunai Grass)*			
470.	45473	*Indigofera fractiflexa subsp. fractiflexa*			
471.	3974	*Indigofera georgei (Bovine Indigo)*			
472.	3981	*Indigofera linnaei (Birdsville Indigo)*			
473.	3982	*Indigofera monophylla*			
474.	3985	*Indigofera rugosa*			
475.	3987	*Indigofera trita*			
476.	6631	*Ipomoea lonchophylla (Cowvine)*			
477.	6633	*Ipomoea muelleri (Poison Morning Glory, Yumbu)*			
478.	6636	*Ipomoea plebeia (Bellvine)*			
479.	12663	*Ischaemum albovillosum*			
480.	458	*Iseilema dolichotrichum*			
481.	459	*Iseilema eremaeum*			
482.	461	*Iseilema fragile*			
483.	464	*Iseilema membranaceum (Small Flinders Grass)*			
484.	465	*Iseilema vaginiflorum (Red Flinders Grass)*			
485.	7397	*Isotoma petraea (Rock Isotome, Tundiwari)*			
486.	48615	*Isotropis sp. Arid zone (G. Byrne 2775)*			
487.	8088	*Ixiochlamys cuneifolia*			
488.	12059	*Jasminum didymum subsp. lineare (Desert Jasmine)*			
489.	8096	*Lactuca serriola (Prickly Lettuce)*	Y		
490.	29046	*Lactuca serriola forma serriola*	Y		
491.	19726	*Leiocarpa semicalva*			
492.	19727	*Leiocarpa semicalva subsp. semicalva*			
493.	19236	*Leiocarpa tomentosa*			
494.	3025	*Lepidium echinatum*			
495.	3032	*Lepidium muelleri-ferdinandii*			
496.	3033	*Lepidium oxytrichum*			
497.	3035	*Lepidium pedicellosum*			
498.	3037	*Lepidium phlebopetalum (Veined Peppercress)*			
499.	37480	*Lobelia arnhemiaca*			
500.	7403	*Lobelia heterophylla (Wing-seeded Lobelia)*			
501.	36863	*Lobelia heterophylla subsp. heterophylla*			
502.	36880	*Lobelia heterophylla subsp. pilbarensis*			
503.	4061	*Lotus cruentus (Redflower Lotus)*			
504.	2396	*Lysiana casuarinae*			
505.	2398	*Lysiana murrayi (Mistletoe, Parka-Parka)*			
506.	2544	*Maireana georgei (Satiny Bluebush)*			
507.	2556	*Maireana planifolia (Low Bluebush)*			
508.	2571	*Maireana villosa*			
509.	4962	*Malvastrum americanum (Spiked Malvastrum)*	Y		
510.	12949	*Marsdenia australis*			
511.	75	*Marsilea exarata*			
512.	76	*Marsilea hirsuta (Nardoo)*			
513.		*Marsilea sp.*			
514.	19500	*Maytenus sp. Mt Windell (S. van Leeuwen 846)*			
515.	5875	*Melaleuca argentea (Silver Cadjeput, Bandaran)*			
516.	5879	*Melaleuca bracteata (River Teatree)*			
517.	5051	*Melhania oblongifolia*			
518.	3054	*Menkea villosula*			
519.	7082	*Mimulus gracilis*			
520.	8110	*Minuria leptophylla (Minnie Daisy)*			
521.	4105	*Mirbelia viminalis*			
522.	17158	*Myoporum montanum (Native Myrtle)*			

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523.	17925	*Myriocephalus oldfieldii*			
524.	6201	*Myriophyllum verrucosum (Red Water Milfoil)*			
525.	138	*Najas marina (Prickly Water Nymph)*			
526.	3614	*Neptunia dimorphantha (Sensitive Plant)*			
527.	3615	*Neptunia gracilis (Native Sensitive Plant)*			
528.	17906	*Neptunia gracilis forma gracilis*			
529.	20252	*Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)*			
530.	6971	*Nicotiana benthamiana (Tjuntiwari)*			
531.	6976	*Nicotiana occidentalis (Native Tobacco)*			
532.	11331	*Nicotiana occidentalis subsp. obliqua*			
533.	11856	*Nicotiana occidentalis subsp. occidentalis*			
534.	6977	*Nicotiana rosulata (Rosetted Tobacco)*			
535.	11410	*Nicotiana rosulata subsp. ingulba*			
536.	11734	*Nicotiana rosulata subsp. rosulata*			
537.	6979	*Nicotiana simulans*			
538.	7338	*Oldenlandia crouchiana*			
539.	12635	*Olearia fluvialis*			
540.	8151	*Olearia stuartii*			
541.	8153	*Olearia xerophila*			
542.	17	*Ophioglossum lusitanicum (Adders Tongue)*			
543.	7117	*Pandorea pandorana*			
544.	503	*Panicum decompositum (Native Millet, Kaltu-kaltu)*			
545.	504	*Panicum effusum (Hairy Panic Grass)*			
546.	43	*Paraceterach reynoldsii*			
547.	515	*Paraneurachne muelleri (Northern Mulga Grass)*			
548.	12670	*Parietaria cardiostegia*			
549.	518	*Paspalidium clementii (Clements Paspalidium)*			
550.	519	*Paspalidium constrictum (Knottybutt Grass)*			
551.	522	*Paspalidium jubiflorum (Warrego Grass)*			
552.	523	*Paspalidium rarum (Rare Paspalidium)*			
553.	524	*Paspalidium reflexum*			
554.	12486	*Peplidium aithocheilum*			
555.	7092	*Peplidium muelleri*			
556.	18462	*Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)*			
557.	34997	*Peripleura arida*			
558.	34998	*Peripleura obovata*			
559.	35001	*Peripleura virgata*			
560.	546	*Perotis rara (Comet Grass)*			
561.	3675	*Petalostylis labicheoides (Slender Petalostylis)*			
562.	556	*Phragmites karka (Tropical Reed, Gamagurd)*			
563.	17626	*Phyllanthus erwinii*			
564.	4680	*Phyllanthus maderaspatensis*			
565.	4687	*Phyllanthus virgatus*			
566.	5245	*Pimelea forrestiana*			
567.	5250	*Pimelea holroydii*			
568.	11185	*Pimelea microcephala subsp. microcephala*			
569.	34760	*Plantago cunninghamii*			
570.	6910	*Plectranthus intraterraneus*			
571.	8167	*Pluchea dentex*			
572.	17816	*Pluchea ferdinandi-muelleri*			
573.	45242	*Podolepis remota*			
574.	2901	*Polycarpaea holtzei*			
575.	2903	*Polycarpaea longiflora*			
576.	41365	*Polygala glaucifolia*			
577.	6653	*Polymeria ambigua (Morning Glory)*			
578.	6655	*Polymeria calycina*			
579.	13966	*Polymeria longifolia*			
580.	12964	*Pomax rupestris*			
581.	43981	*Portulaca decipiens*			
582.	2884	*Portulaca oleracea (Purslane, Wakati)*			
583.	2886	*Portulaca pilosa (Djanggara)*	Y		
584.	20426	*Potamogeton tepperi*			
585.	113	*Potamogeton tricarinatus (Floating Pondweed)*			
586.	12707	*Prostanthera albiflora*			
587.	6912	*Prostanthera campbellii*			
588.	18210	*Psydrax rigidula*			
589.	18155	*Psydrax suaveolens*			
590.	45	*Pteris vittata (Chinese Brake)*			
591.	8191	*Pterocaulon serrulatum*			
592.	41221	*Pterocaulon serrulatum var. velutinum*			

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593.	8192	*Pterocaulon sphacelatum (Apple Bush, Fruit Salad Plant)*			
594.	2690	*Ptilotus aervoides*			
595.	2696	*Ptilotus astrolasius*			
596.	2704	*Ptilotus calostachyus (Weeping Mulla Mulla)*			
597.	2706	*Ptilotus carinatus*			
598.	2711	*Ptilotus clementii (Tassel Top)*			
599.	2718	*Ptilotus drummondii (Narrowleaf Mulla Mulla)*			
600.	2725	*Ptilotus fusiformis*			
601.	2727	*Ptilotus gaudichaudii*			
602.	2728	*Ptilotus gomphrenoides*			
603.	2731	*Ptilotus helipteroides (Hairy Mulla Mulla)*			
604.	2734	*Ptilotus incanus*			
605.	2741	*Ptilotus macrocephalus (Featherheads)*			
606.	2746	*Ptilotus nobilis (Tall Mulla Mulla)*			
607.	41001	*Ptilotus nobilis subsp. nobilis (Yellow Tails)*			
608.	2747	*Ptilotus obovatus (Cotton Bush)*			
609.	11396	*Ptilotus obovatus var. obovatus*			
610.	2751	*Ptilotus polystachyus (Prince of Wales Feather)*			
611.	2754	*Ptilotus roei*			
612.	2755	*Ptilotus rotundifolius (Royal Mulla Mulla)*			
613.	15855	*Ptilotus schwartzii var. schwartzii*			
614.	2582	*Rhagodia eremaea (Thorny Saltbush)*			
615.	13308	*Rhodanthe charsleyae*			
616.	13301	*Rhodanthe floribunda*			
617.	13246	*Rhodanthe humboldtiana*			
618.	13310	*Rhodanthe margarethae*			
619.	42011	*Rhodanthe polakii*			
620.	13251	*Rhodanthe propinqua*			
621.	6599	*Rhyncharrhena linearis (Bush Bean, Wintjulanypa)*			
622.	4190	*Rhynchosia australis (Rhynchosia)*			
623.	4191	*Rhynchosia minima (Rhynchosia)*			
624.		*Rhynchosia sp.*			
625.		*Riccia sorocarpa*			
626.		*Riccia sp.*			
627.		*Riccia vesiculosa*			
628.	45178	*Roebuckiella similis*			
629.	2443	*Rumex vesicarius (Ruby Dock)*	Y		
630.	8198	*Rutidosis helichrysoides (Grey Wrinklewort)*			
631.	17985	*Rutidosis helichrysoides subsp. helichrysoides*			
632.	30434	*Salsola australis*			
633.	2357	*Santalum lanceolatum (Northern Sandalwood, Yarnguli)*			
634.	12578	*Scaevola acacioides*			
635.	12723	*Scaevola amblyanthera*			
636.	13179	*Scaevola amblyanthera var. amblyanthera*			
637.	13178	*Scaevola amblyanthera var. centralis*			
638.	12579	*Scaevola browniana*			
639.	13150	*Scaevola browniana subsp. browniana*			
640.	7633	*Scaevola parvifolia (Camel Weed)*			
641.	13173	*Scaevola parvifolia subsp. parvifolia*			
642.	13172	*Scaevola parvifolia subsp. pilbarae*			
643.	7644	*Scaevola spinescens (Currant Bush, Maroon)*			
644.	599	*Schizachyrium fragile (Senale Redgrass)*			
645.	13285	*Schoenia ayersii*			
646.	48355	*Schoenoplectiella dissachantha*			
647.	16257	*Schoenoplectus subulatus*			
648.	989	*Schoenus falcatus*			
649.	2602	*Sclerolaena convexula*			
650.	2603	*Sclerolaena cornishiana (Cartwheel Burr)*			
651.	2608	*Sclerolaena deserticola*			
652.	2631	*Sclerolaena tetragona*			
653.	25880	*Senecio hamersleyensis*			
654.	20161	*Senecio pinnatifolius*			
655.	17645	*Senna artemisioides*			
656.	12279	*Senna artemisioides subsp. helmsii*			
657.	12280	*Senna artemisioides subsp. oligophylla*			
658.	17558	*Senna artemisioides subsp. x artemisioides*			
659.	12283	*Senna artemisioides subsp. x sturtii*			
660.	18443	*Senna ferraria*			
661.	18449	*Senna glaucifolia*			
662.	18346	*Senna glutinosa*			

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663.	12305	*Senna glutinosa subsp. chatelainiana*			
664.	12307	*Senna glutinosa subsp. glutinosa*			
665.	12309	*Senna glutinosa subsp. pruinosa*			
666.	12308	*Senna glutinosa subsp. x luerssenii*			
667.	18451	*Senna hamersleyensis*			
668.	12312	*Senna notabilis*			
669.	16378	*Senna pleurocarpa*			
670.	12315	*Senna pleurocarpa var. angustifolia*			
671.	19347	*Senna sericea*			
672.	18595	*Senna sp. Karijini (M.E. Trudgen 10392)*			
673.	18445	*Senna stricta*			
674.	18450	*Senna symonii*			
675.	46816	*Seringia elliptica (Showy fire-bush)*			
676.	46821	*Seringia nephrosperma (Free carpel fire-bush)*			
677.	606	*Setaria dielsii (Diels' Pigeon Grass)*			
678.	612	*Setaria surgens (Pigeon Grass)*			
679.	613	*Setaria verticillata (Whorled Pigeon Grass)*	Y		
680.	4966	*Sida arenicola*			
681.	4971	*Sida cardiophylla*			
682.	4972	*Sida clementii*			
683.	4976	*Sida echinocarpa*			
684.	31759	*Sida ectogama*			
685.	4977	*Sida fibulifera (Silver Sida)*			
686.	4986	*Sida platycalyx (Lifesaver Burr)*			
687.	31859	*Sida sp. Articulation below (A.A. Mitchell PRP 1605)*			
688.	31854	*Sida sp. Excedentifolia (J.L. Egan 1925)*			
689.	31857	*Sida sp. Golden calyces glabrous (H.N. Foote 32)*			
690.	33698	*Sida sp. Pilbara (A.A. Mitchell PRP 1543)*			
691.	20253	*Sida sp. Shovelanna Hill (S. van Leeuwen 3842)*			
692.	31852	*Sida sp. Supplejack Station (T.S. Henshall 2345)*			
693.	19712	*Sida sp. dark green fruits (S. van Leeuwen 2260)*			
694.	16617	*Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)*			
695.	16948	*Sida sp. verrucose glands (F.H. Mollemans 2423)*			
696.	4989	*Sida spinosa (Spiny Sida)*			
697.	16923	*Sida trichopoda*			
698.	8223	*Sigesbeckia orientalis (Indian Weed)*	Y		
699.	6995	*Solanum centrale (Desert Raisin, Kampurarpa)*			
700.	6998	*Solanum cleistogamum*			
701.	42544	*Solanum elatius*			
702.	7008	*Solanum ferocissimum*			
703.	7009	*Solanum gabrielae*			
704.	7014	*Solanum horridum*			
705.	7018	*Solanum lasiophyllum (Flannel Bush, Mindjulu)*			
706.	9258	*Solanum morrisonii*			
707.	7022	*Solanum nigrum (Black Berry Nightshade)*	Y		
708.	7029	*Solanum phlomoides*			
709.	42546	*Solanum piceum*			
710.	8231	*Sonchus oleraceus (Common Sowthistle)*	Y		
711.	13575	*Spermacoce brachystema*			
712.	629	*Sporobolus australasicus (Fairy Grass)*			
713.	4731	*Stackhousia intermedia*			
714.	4734	*Stackhousia muricata*			
715.	19555	*Stackhousia muricata subsp. annual (W.R. Barker 2172)*			
716.	18405	*Stackhousia sp. swollen gynophore (W.R. Barker 2041)*			
717.	7098	*Stemodia grossa (Marsh Stemodia, Mindjaara)*			
718.	16199	*Stenanthemum petraeum*			
719.	3074	*Stenopetalum anfractum*			
720.	3075	*Stenopetalum decipiens*			
721.	3078	*Stenopetalum nutans*			
722.	3079	*Stenopetalum pedicellare*			
723.	3082	*Stenopetalum velutinum (Velvet Thread Petal)*			
724.	8234	*Streptoglossa adscendens*			
725.	8235	*Streptoglossa bubakii*			
726.	8236	*Streptoglossa cylindriceps*			
727.	8237	*Streptoglossa decurrens*			
728.	12492	*Striga squamigera*			
729.	7729	*Stylidium fluminense*			
730.	12353	*Stylosanthes hamata (Verano Stylo)*	Y		
731.	4220	*Swainsona canescens (Grey Swainsona)*			
732.	13596	*Swainsona complanata*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
733.	4223	*Swainsona decurrens*			
734.	4231	*Swainsona kingii*			
735.	4233	*Swainsona leeana*			
736.	4234	*Swainsona maccullochiana (Ashburton Pea)*			
737.	4238	*Swainsona oroboides (Variable Swainsona)*			
738.	25902	*Symphyotrichum squamatum (Bushy Starwort)*	Y		
739.	13339	*Synaptantha tillaeacea var. tillaeacea*			
740.	4252	*Templetonia egena (Round Templetonia)*			
741.	4259	*Tephrosia arenicola*			
742.	41986	*Tephrosia oxalidea*			
743.	41825	*Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)*			
744.	17768	*Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)*			
745.	41811	*Tephrosia sp. Fortescue (A.A. Mitchell 606)*			
746.	42442	*Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)*			
747.	42225	*Tephrosia sp. Newman (A.A. Mitchell PRP 29)*			
748.	40060	*Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)*			
749.	4287	*Tephrosia virens*			
750.	48313	*Teucrium disjunctum*			
751.	48603	*Teucrium teucriiflorum*			
752.	672	*Themeda avenacea (Native Oatgrass)*			
753.	17819	*Themeda sp. Mt Barricade (M.E. Trudgen 2471)*			
754.	673	*Themeda triandra*			
755.	1338	*Thysanotus manglesianus (Fringed Lily)*			
756.	29457	*Thysanotus sp. Eremaean (S. van Leeuwen 1067)*			
757.	2942	*Tinospora smilacina (Snakevine, Oondala)*			
758.	19043	*Trachymene oleracea subsp. oleracea*			
759.	19053	*Trachymene pilbarensis*			
760.	678	*Tragus australianus (Small Burrgrass)*			
761.	44241	*Trianthema glossostigmum*			
762.	44305	*Trianthema pilosum*			
763.	4374	*Tribulus astrocarpus*			
764.	4376	*Tribulus forrestii*			
765.	4377	*Tribulus hirsutus*			
766.	4379	*Tribulus macrocarpus*			
767.	4381	*Tribulus platypterus (Cork Hopbush)*			
768.	18072	*Tribulus suberosus*			
769.	6727	*Trichodesma zeylanicum (Camel Bush, Kumbalin)*			
770.	47242	*Trichodesma zeylanicum var. latisepaleum*			
771.	29483	*Tricoryne sp. Hamersley Range (S. van Leeuwen 915)*			
772.	8252	*Tridax procumbens (Tridax, Tridax Daisy)*	Y		
773.	48201	*Trigastrotheca molluginea*			
774.	17886	*Triodia biflora*			
775.	681	*Triodia brizoides*			
776.	690	*Triodia longiceps (Giant Grey Spinifex)*			
777.	17877	*Triodia melvillei*			
778.	696	*Triodia pungens (Soft Spinifex)*			
779.	48463	*Triodia vanleeuwenii*			
780.	704	*Triodia wiseana (Limestone Spinifex)*			
781.	48319	*Tripogonella loliiformis*			
782.	706	*Triraphis mollis (Needle Grass)*			
783.	4879	*Triumfetta leptacantha*			
784.	14942	*Triumfetta maconochieana*			
785.	98	*Typha domingensis (Bulrush, Djandjid)*			
786.	29268	*Urochloa occidentalis*			
787.	29270	*Urochloa occidentalis var. ciliata*			
788.	29269	*Urochloa occidentalis var. occidentalis*			
789.	717	*Urochloa piligera*			
790.	718	*Urochloa pubigera*			
791.	7654	*Velleia connata (Cup Velleia)*			
792.		*Vigna sp.*			
793.	31391	*Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)*			
794.	11788	*Vittadinia dissecta var. hirta*			
795.	8265	*Vittadinia eremaea*			
796.	20153	*Vittadinia sp. Earaheedy (D.J. Edinger 3106)*			
797.	7386	*Wahlenbergia gracilenta (Annual Bluebell)*			
798.	7393	*Wahlenbergia tumidifructa*			
799.	48250	*Xerochrysum interiore*			
800.	732	*Yakirra australiensis*			
801.	11894	*Yakirra australiensis var. australiensis*			
802.	18140	*Zygophyllum eichleri*			

Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

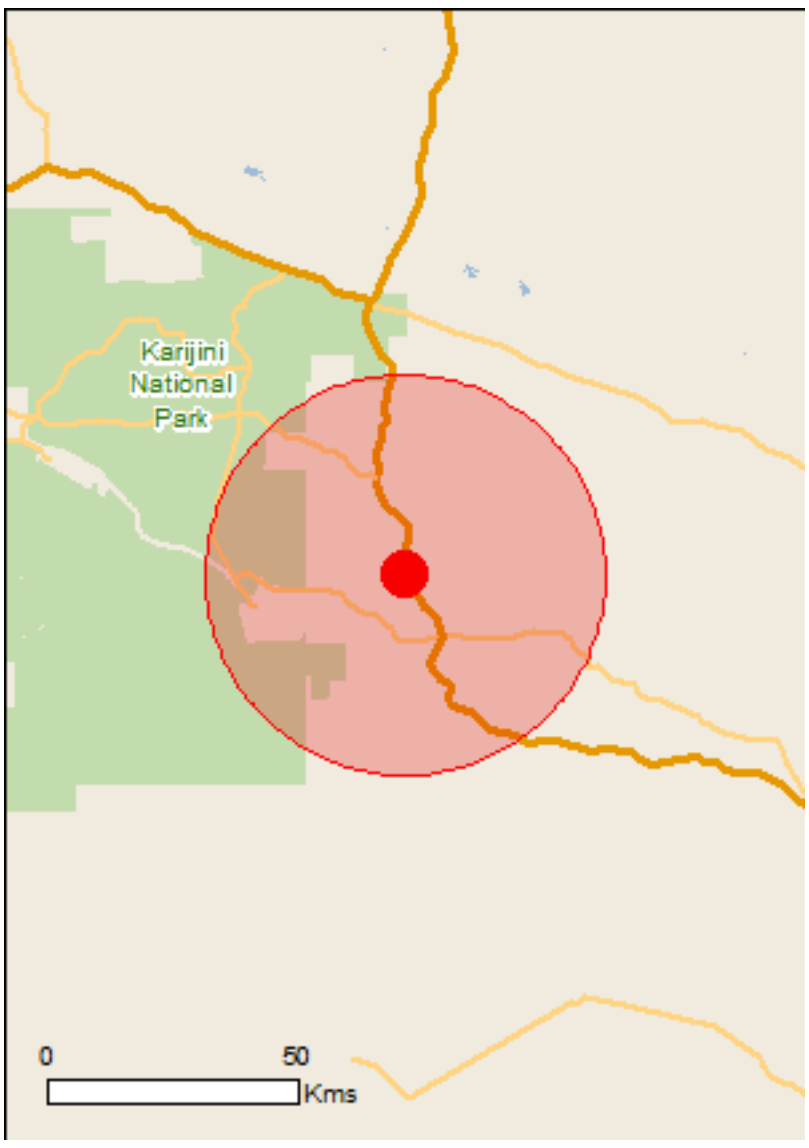
Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 01/11/18 20:30:01

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

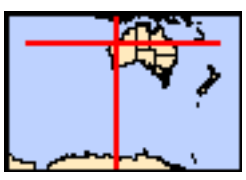
Caveat
Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates

Buffer: 40.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	9
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	9
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis		
Night Parrot [59350]	Endangered	Species or species habitat likely to occur within area
Rostratula australis		
Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Mammals		
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Breeding known to occur within area
Macrotis lagotis		
Greater Bilby [282]	Vulnerable	Species or species habitat may occur within area
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat known to occur within area
Plants		
Thryptomene wittweri		
Mountain Thryptomene [16645]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Liasis olivaceus barroni		
Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		

Name	Threatened	Type of Presence
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species	[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.	
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Karijini	WA
Unnamed WA41696	WA

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Mammals		
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-22.82972 118.75444

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix 3

Flora of Conservation Significance Known from the Locality and their Likelihood of Occurrence in the Study Area

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Threatened											
Thryptomene wittweri	Spreading or rounded shrub to 1.5 m in height.	Breakaways and stony creek beds on high mountains (>1,000 m in elevation).	✓	✓	✓					Would not occur: species is very infrequently recorded in locality (NR is 13 km north of Western Hill) and no suitable habitat is present.	Would not occur.
Priority 1											
Eremophila spongiocarpa	Compact, succulent leaved shrub.	Weakly saline alluvial plain, on margins of marsh.	✓							Would not occur: no suitable habitat.	Would not occur.
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	Tussock forming perennial grass to 30 cm tall.	Red-brown skeletal soils, ironstone; steep slopes, summits of tall hills.	✓	✓	✓					Would not occur: no suitable habitat (mountain summits).	Would not occur.
Eremophila sp. West Angelas (S. van Leeuwen 4068)	Spindly shrub to 3 m tall.	Skeletal red-brown soil on hill summits high in the landscape.	✓		✓					May potentially occur: some potentially suitable habitat is present, but recorded infrequently in the locality.	Unlikely to occur: not recorded in 2018/2019 despite extensive searches in potential habitat.
Euphorbia inappendiculata var. *queenslandica*	Glabrous annual to 15 cm tall.	Heavy clay soils on open plains and gentle slopes.			✓					Unlikely to occur: only a small amount of potentially suitable habitat, and species recorded very infrequently in locality.	Unlikely to occur.
Hibiscus sp. Mt Brockman (E. Thoma ET 1354)	Shrub to 4 m tall.	Gorges, rocky areas.				✓				Would not occur: suitable habitat present, however historical records in close proximity to study area are likely to be erroneous. Taxon is restricted to the Brockman/Nammuldi locality (>100 km northwest).	Would not occur.
Rhodanthe ascendens	Annual herb to 10 cm tall.	Cracking clay.	✓	✓	✓					May potentially occur: a small amount of potentially suitable habitat is present and species has been recorded in close proximity (NR 1.7 km northwest), but is recorded very infrequently in locality.	May potentially occur in vegetation type P8: not recorded in 2018/2019 but species may not have been identifiable at the time of the survey.
Synostemon hamersleyensis	Glabrous subshrub growing to 50 cm tall, with a perennial rootstock.	Breakaway formations and rocky outcrops.	✓							Would not occur: suitable habitat is present however species is restricted to the Koodaideri locality.	Would not occur.

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Triodia sp. Karijini (S. van Leeuwen 4111)	Hummock grass.	Skeletal dark orange-brown to red-brown soil on upper slopes and summits of mountains.	✓		✓					Unlikely to occur: no particularly suitable habitat present, and species is recorded very infrequently in locality.	Unlikely to occur.
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 3835)	Annual herb.	Mainly on red clay on plains, low in the landscape.	✓		✓					Likely to occur: extensive suitable habitat present (particularly at Western Hill and Deposit H), and recorded in close proximity to the study area (NR 500 m east of Deposit F North).	Likely to occur: not recorded in 2018/2019 but species may not have been identifiable at the time of the survey.
Priority 2											
Adiantum capillus-veneris	Rhizomatous perennial herb (fern) to 20 cm tall.	Moist sheltered sites in gorges and on cliff walls.	✓							Would not occur: no suitable habitat.	Would not occur.
Aristida lazaridis	Tufted perennial grass to 1.5 m tall.	Major drainage areas through clayey flats.	✓		✓	✓			✓	Recorded from Deposit F North (100 individuals) and Deposit H (5 individuals).	Additional records from Deposit J/ Mt Ella East in 2018/2019 (68 individuals), and Deposit H (224 individuals).
Arthropodium sp. Ironstone (J. Bull & J. Waters ONS PJ 36.01)	Perennial herb to 50 cm tall.	Gorges and steep Banded Ironstone slopes.	✓							Unlikely to occur: some potentially suitable habitat is present, however species is recorded very infrequently in locality and closest known records are 31 km north.	Unlikely to occur.
Cladium procerum	Densely tufted perennial, grass-like herb (sedge).	Perennial pools.	✓							Would not occur: no suitable habitat.	Would not occur.
Eremophila pusilliflora	Shrub to 3 m tall.	Alluvial plains.	✓	✓	✓	✓			✓	Recorded from Western Hill (61 individuals).	Additional records from Western Hill (214 individuals).
Euphorbia australis var. *glabra*	Low growing herbaceous perennial, with prostrate stems, growing to 20 cm tall.	Banks of semi-permanent pools or creeklines, or alluvial flats, on sandy to clayey-loam alluvium.	✓							Would not occur: no suitable habitat.	Would not occur: no suitable habitat.
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Erect shrub to 3 m tall.	Hilltops, upper hillslopes.	✓		✓	✓				Recorded from Western Hill (702 individuals) and Deposit F North (18 individuals).	Additional records from Deposit H (253 individuals), Deposit J/Mt Ella East (332 individuals) and Western Hill (446 individuals).

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Ipomoea racemigera	Creeping annual herb or climber.	Drainage lines.	✓							Unlikely to occur: no particularly suitable habitat present, and recorded very infrequently in the locality.	Unlikely to occur.
Isotropis parviflora	Shrub to 10 cm tall.	Undulating ironstone plains.	✓		✓	✓		✓		Recorded from Western Hill (1,680 individuals)	Additional records from Western Hill (23 individuals) and recorded from Deposit J/Mt Ella East (39 individuals).
Kohautia australiensis	Annual or perennial erect herb.	Calcareous plains and rises, gullies,	✓							Would not occur: no particularly suitable habitat.	Would not occur.
Oxalis sp. Pilbara (M.E. Trudgen 12725)	Herb to 15 cm tall.	Red-brown loam on rocky hillslopes and in gorges.	✓		✓	✓		✓		Recorded from Western Hill (7 individuals) and Deposit J/Mt Ella East (1 individual).	Additional records from Western Hill (235 individuals) and Deposit J/Mt Ella East (12 individuals).
Tetratheca fordiana	Shrub to 40 cm tall.	Shale pockets amongst ironstone on free rock faces.	✓	✓	✓	✓				May potentially occur: some potentially suitable habitat appears to be present and the species has been recorded in close proximity (NR is 1.4 km north of Deposit J/Mt Ella East), however it is recorded infrequently in the locality.	Unlikely to occur: no particularly suitable habitat present, and species not found despite extensive searches within prospective habitats.
Teucrium pilbaranum	Shrub to 20 cm tall.	Crab hole floodplains; margins of calcrete tables.	✓		✓					Would not occur: no suitable habitat.	Would not occur.
Priority 3											
Acacia daweana	Spreading shrub to 1.5 m tall.	Stony red loamy soils on low rocky rises and along drainage lines.	✓							Unlikely to occur: recorded very infrequently in locality.	Unlikely to occur.
Acacia effusa	Dense spreading shrub to 1 m tall.	Stony red loam; scree slopes of low ranges.	✓	✓	✓	✓		✓		Recorded from Deposit J/Mt Ella East (220 individuals).	No additional records during current survey.
Acacia subtiliformis	Spindly shrub to 3.5 m tall.	Calcrete platforms.	✓		✓	✓			✓	Apparently recorded at Deposit J/Mt Ella East by Eco Logical (2014b), however record was considered questionable; seemingly atypical habitat (not obviously calcareous) and no other records in close proximity.	Unlikely to occur; Eco Logical (2014b) location visited in 2018; habitat was not consistent with typical preferences for this species, and only the superficially similar *A. maitlandii* was present. No preferred habitat within the study area.

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Ampelopteris prolifera	Rhizomatous perennial fern.	Near water, or in wet ground.	✓							Would not occur: no suitable habitat.	Would not occur.
Aristida jerichoensis var. *subspinulifera*	Tufted perennial grass to 80 cm tall.	Hardpan clay plains.	✓		✓	✓			✓	Recorded from Deposit F North (20 individuals), Deposit H (6 individuals) and Deposit J/Mt Ella East (212 individuals).	Also recorded from Western Hill (5 individuals); no additional records from other deposits.
Dampiera metallorum	Multi-stemmed shrub to 40 cm tall.	Skeletal red-brown gravelly soil over banded ironstone; steep slopes and hill summits at high elevation.	✓	✓	✓	✓				Unlikely to occur: no particularly suitable habitat is present, and species is recorded very infrequently in locality (NR is 2 km west of Deposit J/Mt Ella East).	Unlikely to occur.
Eremophila magnifica subsp. *velutina*	Shrub to 1.5 m tall.	Skeletal soils over ironstone on summits and breakaways.	✓	✓	✓					Unlikely to occur; some suitable habitat is present however species is recorded infrequently in locality (NR is 15 km NW of Western Hill).	Unlikely to occur.
Eremophila sp. Hamersley Range (K. Walker KW 136)	Shrub to 2 m tall.	Skeletal red-brown silty loam on hill crests, cliff tops, gorges.	✓		✓	✓				Recorded from Western Hill (3,349 individuals) and Deposit J/Mt Ella East (40 individuals).	Additional records from Western Hill (1,361 individuals) and Deposit J/Mt Ella East (1,066 individuals).
Euphorbia clementii	Erect herb to 60 cm tall.	Gravelly hillsides, stony ground.	✓	✓		✓				Unlikely to occur: some suitable habitat is present, however species is recorded very infrequently in locality (NR is 4 km northwest of Deposit F North).	Unlikely to occur.
Euphorbia stevenii	Somewhat succulent perennial herb to 50 cm tall.	Clay soils.	✓		✓					Would not occur: no suitable habitat and species is recorded very infrequently in locality.	Would not occur.
Fimbristylis sieberiana	Shortly rhizomatous, tufted perennial sedge to 0.6 m tall.	Mud and skeletal soil pockets near permanent pools in gorges.	✓							Would not occur: no suitable habitat.	Would not occur.
Geijera salicifolia	Tree to 6 m tall.	Skeletal and stony soils in massive rock scree, rockpiles and gorges.				✓				May potentially occur: some suitable habitat present and recorded in close proximity (1 km west of Deposit J/Mt Ella East), however species is recorded very infrequently in the locality.	Unlikely to occur: no particularly suitable habitat present and not recorded during field survey.
Glycine falcata	Mat forming perennial herb to 20 cm tall.	Black clayey sand, crabhole plains.	✓							Unlikely to occur: no particularly suitable habitat.	Unlikely to occur.

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Goodenia lyrata	Prostrate herb.	Near claypans.	✓	✓	✓					Unlikely to occur: no particularly suitable habitat, and recorded infrequently in the locality (NR 11 km northeast of Western Hill).	Unlikely to occur.
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	Annual herb.	Red-brown clay soil, typically on calcrete platforms.	✓	✓	✓	✓		✓		Would not occur: no suitable habitat.	Would not occur.
Grevillea saxicola	Erect shrub to 2.5 m tall.	Upper scree slopes on banded ironstone, usually with Mulga.	✓		✓	✓				Recorded from Western Hill (210 individuals).	Additional records from Western Hill (138 individuals).
Gymnanthera cunninghamii	Erect shrub to 2 m tall.	Sandy soils along creeklines.	✓							Unlikely to occur: some potentially suitable habitat present, however species is recorded very infrequently in the locality.	Unlikely to occur.
Indigofera gilesii	Spindly shrub to 1.4 m tall	Skeletal red-brown loam on rocky slopes, gorges, and creeklines.	✓	✓	✓	✓	✓		✓	Recorded from Western Hill (20 individuals), Deposit F North (87 individuals), Deposit H (187 individuals) and Deposit J/Mt Ella East (5 individuals).	Additional records from Deposit F North (2 individuals), Deposit H (105 individuals) and Deposit J/Mt Ella East (255 individuals).
Iotasperma sessilifolium	Erect herb to 40 cm tall.	Cracking clay on plains.	✓							Would not occur: no suitable habitat.	Would not occur.
Oldenlandia sp. Hamersley Station (A.A. Mitchell PRP 1479)	Annual herb to 10 cm tall.	Stony undulating clay plains.	✓		✓					Unlikely to occur: some potentially suitable habitat present, but recorded infrequently in locality. NR 4.5km east of Western Hill.	Unlikely to occur.
Olearia mucronata	Densely branched aromatic shrub to 1 m tall.	Hills and rocky drainage channels.	✓	✓	✓	✓				Recorded from Western Hill (1 individual).	No additional locations recorded during the current survey.
Pilbara trudgenii	Aromatic shrub to 1 m tall.	Skeletal red stony soil over ironstone; hill summits, steep slopes, screes, cliff faces.	✓	✓	✓	✓		✓		Recorded from Deposit J/Mt Ella East (20 individuals).	Additional records from Deposit J/Mt Ella East (169 individuals) and also recorded from Western Hill (525 individuals).
Rhagodia sp. Hamersley (M. Trudgen 17794)	Spindly shrub to 2 m tall.	Mulga (*Acacia aneura*) and Snakewood (*A. xiphophylla*) vegetation on clay plains.	✓	✓	✓	✓		✓	✓	Recorded from Western Hill (656 individuals), Deposit F North (2 individuals), Deposit H (24 individuals) and Deposit J/Mt Ella East (2 individuals).	Additional records from Western Hill (243 individuals), Deposit F North (1 individual), Deposit H (11 individuals) and Deposit J/Mt Ella East (54 individuals).

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Rostellularia adscendens var. *latifolia*	Herb to 30 cm tall.	Various; creeks, plains, low hills.	✓		✓	✓		✓		Likely to occur: extensive suitable habitat present, and existing records in close proximity to study area (NR 100 m from Deposit J/Mt Ella East).	Recorded from Deposit J/ Mt Ella East (5 individuals).
Sida sp. Barlee Range (S. van Leeuwen 1642)	Spreading shrub to 50 cm tall.	Steep slopes, rocky gullies and breakaways.	✓		✓	✓			✓	Recorded from Deposit F North (8 individuals) and Deposit H (118 individuals).	Additional records from Deposit H (140 individuals).
Sida sp. Hamersley Range (K. Newbey 10692)	Upright, low spreading or semi-prostrate shrub, growing to 30 cm tall.	Base of rocky cliff habitats in red skeletal stony soils or ironstone.			✓	✓				Recorded: single records from Eco Logical (2014b) and the WA Herbarium database search, both at Deposit J/Mt Ella East.	No additional records in 2018/2019. Known from WA Herbarium record only: Eco Logical (2014b) location visited in 2018 but taxon not found.
Solanum kentrocaule	Erect shrub to 1 m tall.	Hillsides and mountain crests, creek beds; skeletal red-brown soil over ironstone on basalt or scree.	✓		✓	✓				Recorded from Western Hill (70 individuals) and Deposit J/Mt Ella East (21 individuals).	Additional records from Western Hill (357 individuals) and Deposit J/Mt Ella East (488 individuals).
Stackhousia clementii	Dense broom-like perennial herb to 45 cm tall.	Skeletal soils, sandstone hills.	✓							Would not occur: no suitable habitat.	Would not occur.
Swainsona thompsoniana	Annual herb.	Creekline, claypan.	✓		✓					Unlikely to occur: some potentially suitable habitat present, however species is recorded infrequently in the locality (NR is 4 km southeast of Western Hill).	Unlikely to occur.
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	Perennial tussock grass.	Clay plains.	✓			✓	✓		✓	May potentially occur, some potentially suitable habitat present, and records located centrally to the four deposits.	Unlikely to occur: no locations recorded in 2018/2019 despite extensive searches in prospective habitat.
Triodia sp. Mt Ella (M.E. Trudgen 12739)	Hummock grass to 40 cm tall.	Light orange-brown to red-brown pebbly loam on hill slopes and in gullies.	✓		✓	✓	✓	✓	✓	Recorded from Western Hill (8,665 individuals), Deposit F North (48 individuals), Deposit H (121 individuals) and Deposit J/Mt Ella East (2,533 individuals).	Additional records from Western Hill (15,006 individuals), Deposit F North (19 individuals), Deposit H (10,727), and Deposit J/Mt Ella East (44,196 individuals).
Xerochrysum boreale	Erect annual or perennial herb.	Loamy, sandy or gravelly soils on plains.	✓		✓					May potentially occur: extensive suitable habitat present, however recorded very infrequently in locality (NR is 6.8 km N of Western Hill).	May potentially occur in Mulga vegetation on clay flats.

Taxon	Habit	Habitat	Database Searches				Previous Surveys			Likelihood of Occurrence Within the Study Area	
			NatureMap	TPFL	WA Herbarium	Rio Tinto Database	Biota (2006b)	ENV (2012)	Ecologia (2013)	Initial Ranking Based on Desktop Review (NR=Nearest Record, if within 20 km)	Final Ranking Including Results of 2018/2019 Field Surveys
Priority 4											
Acacia bromilowiana	Shrub to 12 m tall.	Skeletal loam soils on rocky hills, breakaways, scree slopes, gorges and rocky creek beds.	✓	✓	✓	✓				Recorded from Deposit F North (50 individuals) and Deposit J/Mt Ella East (52 individuals).	Additional records from Deposit J/Mt Ella East (45 individuals).
Eremophila magnifica subsp. *magnifica*	Shrub to 1.5 m tall.	Rocky hillslopes, breakaways.	✓		✓	✓				Likely to occur: suitable habitat present, and recorded in close proximity (NR 1.5 km west of Deposit J/Mt Ella East).	May potentially occur: no records in 2018/2019 but there is extensive suitable habitat at Deposit J/Mt Ella East and Deposit H, not all of which has been searched.
Goodenia nuda	Herb to 50 cm tall.	Alluvial plains, creeks.	✓		✓	✓			✓	Likely to occur: extensive suitable habitat, and a record in close proximity (NR is 250 m south of Deposit F North).	Recorded from a single location at Deposit F North (1 individual).
Lepidium catapycnon	Open, woody perennial shrub to 30 cm with zigzag stems.	Skeletal soils on hill slopes.	✓	✓	✓	✓			✓	Recorded from Deposit H (30 individuals).	Also recorded from Western Hill (5 individuals).
Ptilotus mollis	Perennial shrub to 50 cm tall.	Stony hills and screes.	✓		✓	✓				Unlikely to occur; potentially suitable habitat in the study area, however recorded very infrequently in the locality.	Unlikely to occur.
Rhynchosia bungarensis	Compact, prostrate shrub to 50 cm tall.	Drainage lines, gorges and gullies.	✓							Would not occur: species recorded very infrequently in locality (NR from Wittenoom and Koodaideri).	Would not occur.
Species of Interest											
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)	Rhizomatous perennial grass growing to 40 cm tall.	Floodplains, banks of drainage.				✓				Likely to occur; suitable habitat in the study area and records in close proximity (NR 300m east of Deposit F North).	Recorded from a single location at Western Hill and 9 locations at Deposit H

Appendix 4

Vegetation Structural Classification and Condition Scale

Vegetation structural classes based on modifications of the vegetation classification system of Specht (1970) by Muir (1977) and Aplin (1979).

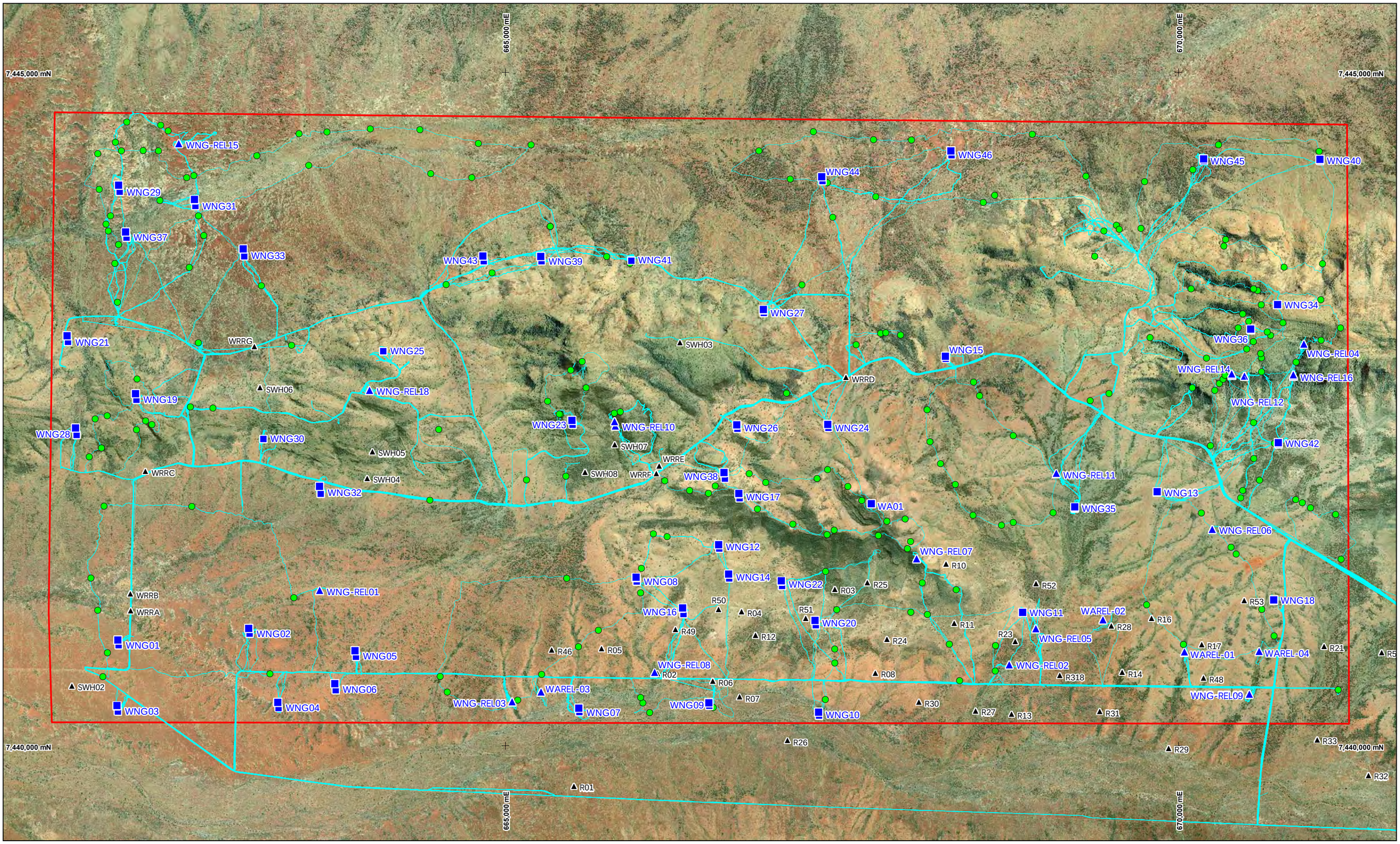
Stratum	Canopy Cover (%)				
	70-100%	30-70%	10-30%	2-10%	<2%
Trees over 30 m	Tall closed forest	Tall open forest	Tall woodland	Tall open woodland	Scattered tall trees
Trees 10-30 m	Closed forest	Open forest	Woodland	Open woodland	Scattered trees
Trees under 10 m	Low closed forest	Low open forest	Low woodland	Low open woodland	Scattered low trees
Shrubs over 2 m	Tall closed scrub	Tall open scrub	Tall shrubland	Tall open shrubland	Scattered tall shrubs
Shrubs 1-2 m	Closed heath	Open heath	Shrubland	Open shrubland	Scattered shrubs
Shrubs under 1 m	Low closed heath	Low open heath	Low shrubland	Low open shrubland	Scattered low shrubs
Hummock grasses	Closed hummock grassland	Hummock grassland	Open hummock grassland	Very open hummock grassland	Scattered hummock grasses
Grasses, Sedges, Herbs	Closed tussock grassland / bunch grassland / sedgeland / herbland	Tussock grassland / bunch grassland / sedgeland / herbland	Open tussock grassland / bunch grassland / sedgeland / herbland	Very open tussock grassland / bunch grassland / sedgeland / herbland	Scattered tussock grasses / bunch grasses / sedges / herbs

Vegetation condition scale taken from EPA (2016a), based on scales developed by Keighery (1994) and Trudgen (1988).

Vegetation Condition	South West and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix 5

Survey Effort: Location of Sampling Sites and Foot Traverses



Location Map



Western Hill study area

Previous Flora Sites

▲ Releve

Flora Survey Effort (Biota 2019)

- Quadrat
- Releve
- Mapping note
- GPS track log

N

0 0.5 1

kilometres

West Angelas Beyond 2020
Western Hill Survey Effort

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 19 Nov 2018 | Revised: 08 Aug 2019 | Projection: MGA Z50 (GDA94) | Scale: 1:25,000 @ A3

690,000 mE
695,000 mE
7,445,000 mN
7,440,000 mN
WA30
WA29
FS-2012-6272
FS-2012-6271
FS-2012-6198
WA12
WAREL-10
FS-2012-6199
WA31
WA11
FS-2012-6217
WA13
WA37
FS-2012-6238
WA10
FS-2012-6224
WAREL-08
WA18
WA35
FS-2012-6161
WAREL-24
WA14
WAREL-25
WA15
FS-2012-6190
FS-2012-6152
WAREL-12
FS-2012-6200
FS-2012-6154
FS-2012-6215
WA08
WA26
FS-2012-6214
WA17
FS-2012-6182
FS-2012-6187
WAREL-22
FS-2012-6153
FS-2012-6188
WA23
WAREL-14
FS-2012-6184
WAREL-20
FS-2012-6156
FS-2012-6160
WA16
WAREL-19
FS-2012-6183
WA21
WAREL-23
FS-2012-6155
WA22
WA09
WAREL-13
WAREL-09
WA28
FS-2012-6216
WA07
WAREL-06
FS-2012-6185
WA24
WA32
WA06
FS-2012-6158
WA34
FS-2012-6159
WA19
FS-2012-6218
WAREL-05
WA03
FS-2012-6157
WA27
WAREL-11
WA04
WA02
FS-2012-6171
WA33
WAREL-15
FS-2012-6189
WA05
WAREL-21
WAREL-07
FS-2012-6257
FS-2012-6258
WA25

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit H study area

Previous Flora Sites
- Quadrat

Flora Survey Effort (Biota 2019)
- Quadrat
- Releve
- Mapping note
- GPS track log

N
0 1 2
kilometres

West Angelas Beyond 2020
Deposit H Survey Effort

Biota Environmental Sciences

Author: PL de Kock | Drawn: MStevenson | Job No.: 1394 | Date: 07 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:30,000 @ A3

7,435,000 mN
680,000 mE
685,000 mE
7,435,000 mN
WES13
WES01
WES11
WES02
WES-M
FS-2012-6169
FS-2012-6181
WNG86
WNG-REL22
WNG-REL26
WNG59
WNG61
WNG62
WA20
WNG68
WNG63
WNG79
WNG-REL23
WNG-REL30
WNG67
WNG88
WNG73
WNG-REL25
WNG83
WNG85
WNG-REL24
WNG66
WNG58
WNG65
FS-2011-3596
WNG87
WNG64
FS-2011-3593
WNG81
WNG70
WNG-REL29
WNG82
7,430,000 mN
FS-2011-3597
WNG77
WNG75
WNG71
WNG-REL27
WNG89
WNG-REL28
WNG72
WAREL-17
WNG74
WNG84
WNG80
WNG78
WNG69
WNG76
7,430,000 mN
675,000 mE
680,000 mE
685,000 mE

Location Map

KARRATHA
Map Area
KALGOORLIE
PERTH

Deposit J/Mt Ella study area

Previous Flora Sites
- Quadrat
- Releve

Flora Survey Effort (Biota 2019)
- Quadrat
- Releve
- Mapping note
- GPS track log

N

0 1 2
kilometres

West Angelas Beyond 2020
Deposit J/Mt Ella Survey Effort

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 19 Nov 2018 | Revised: 31 July 2019 | Projection: MGA Z50 (GDA94) | Scale: 1:32,500 @ A3

688,000 mE
690,000 mE
692,000 mE
7,436,000 mN
7,434,000 mN
WNG51
WNG-REL13
WAF-RCBC
WAREL-16
WNG-REL20
WNG-REL21
WAF-RCBA
WAF-RCBB
WAF-RPSB
WAF-RPSA
WNG60
WAREL-18
WNG-REL19
WNG54
WNG57
WAF08
WAF06
FS-2012-6279
FS-2012-6256
WNG56
WNG-REL17
WNG55
WNG53
WAF07
WAF05
FS-2012-6255
WNG47
WNG50
WNG49
WNG48
WNG52
WAF09R
WAF09
FS-2012-6150
FS-2012-6213
FS-2012-6212
FS-2012-6151
WAF04
WES22
WES23
WES24
FS-2012-6232
WAF03R
WAF03
WES-H
WES09
WES10
FS-2012-6234
WES-I
FS-2012-6235
FS-2012-6211
FS-2012-6210

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit F North study area

Previous Flora Sites
- Quadrat
- Releve

Flora Survey Effort (Biota 2019)
- Quadrat
- Releve
- Mapping note
- GPS track log

N

0 250 500
metres

West Angelas Beyond 2020
Deposit F North Survey Effort

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 19 Nov 2018 | Revised: 07 Aug 2019 | Projection: MGA Z50 (GDA94) | Scale: 1:15,000 @ A3

Locations of floristic sample sites established during the current survey.

Site	Easting	Northing	Site	Easting	Northing	Site	Easting	Northing
Western Hill								
WNG01	662130	7440754	WNG22	667054	7441206	WNG43	664841	7443608
WNG02	663102	7440840	WNG23	665500	7442390	WNG44	667355	7444203
WNG03	662123	7440264	WNG24	667399	7442369	WNG45	670189	7444352
WNG04	663317	7440289	WNG25	664094	7442938	WNG46	668315	7444396
WNG05	663892	7440672	WNG26	666723	7442364	WNG-REL01	663622	7441151
WNG06	663741	7440426	WNG27	666920	7443218	WNG-REL02	668744	7440602
WNG07	665552	7440256	WNG28	661815	7442320	WNG-REL03	665051	7440326
WNG08	665977	7441226	WNG29	662136	7444122	WNG-REL04	670931	7442982
WNG09	666514	7440309	WNG30	663203	7442290	WNG-REL05	668941	7440868
WNG10	667330	7440238	WNG31	662699	7444014	WNG-REL06	670251	7441604
WNG11	668844	7440994	WNG32	663629	7441887	WNG-REL07	668056	7441389
WNG12	666588	7441481	WNG33	663061	7443647	WNG-REL08	666109	7440543
WNG13	669843	7441886	WNG34	670737	7443278	WNG-REL09	670528	7440382
WNG14	666663	7441259	WNG35	669231	7441773	WNG-REL10	665818	7442374
WNG15	668273	7442883	WNG36	670538	7443091	WNG-REL11	669093	7442018
WNG16	666323	7440998	WNG37	662186	7443784	WNG-REL12	670491	7442744
WNG17	666738	7441856	WNG38	666628	7442008	WNG-REL14	670398	7442748
WNG18	670709	7441085	WNG39	665269	7443606	WNG-REL15	662576	7444471
WNG19	662261	7442576	WNG40	671051	7444351	WNG-REL16	670855	7442741
WNG20	667303	7440916	WNG41	665936	7443613	WNG-REL18	663993	7442637
WNG21	661754	7443006	WNG42	670743	7442249			
Deposit J/Mt Ella East								
WNG58	675382	7430862	WNG73	679830	7431655	WNG86	687911	7432564
WNG59	684412	7432133	WNG74	679088	7429262	WNG87	679427	7430494
WNG61	687038	7432090	WNG75	675565	7429960	WNG88	684182	7431611
WNG62	686457	7432071	WNG76	676923	7428987	WNG89	680361	7429700
WNG63	683010	7431910	WNG77	677741	7429941	WNG-REL22	680087	7432806
WNG64	677737	7430379	WNG78	676311	7429071	WNG-REL23	684748	7431906
WNG65	675645	7430676	WNG79	679148	7431903	WNG-REL24	687695	7431482
WNG66	687578	7431206	WNG80	675534	7429166	WNG-REL25	678962	7431434
WNG67	685299	7431683	WNG81	681419	7430402	WNG-REL26	679379	7432212
WNG68	687821	7431837	WNG82	676145	7430079	WNG-REL27	675463	7429814
WNG69	680234	7429148	WNG83	680756	7431441	WNG-REL28	677548	7429405
WNG70	680284	7430258	WNG84	680901	7429242	WNG-REL29	675588	7430186
WNG71	675739	7429831	WNG85	680508	7431318	WNG-REL30	685133	7431691
WNG72	678204	7429414						
Deposit F North								
WNG47	691358	7436043	WNG53	691173	7435980	WNG-REL13	687172	7435976
WNG48	692024	7436075	WNG54	689922	7436057	WNG-REL17	690834	7436126
WNG49	691762	7436182	WNG55	691085	7436144	WNG-REL19	689519	7436690
WNG50	691548	7435981	WNG56	690705	7436070	WNG-REL20	687779	7435777
WNG51	687213	7436081	WNG57	689750	7435817	WNG-REL21	688616	7435892
WNG52	692021	7435741	WNG60	688885	7436177			

Appendix 6

Summarised Raw Data from Quadrats and Relevés Sampled in 2018 and 2019

West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG01

Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 03-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 662103 mE, 7440777 mN.

Habitat Flat plain.

Soil Reddish brown clay loam.

Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 26-50% gravel.

Vegetation Phase 1: *Acacia pruinocarpa* low open woodland over *A. aptaneura*, *A. aneura* tall open shrubland over *Triodia pungens* hummock grassland.
Phase 2: *Acacia pruinocarpa* low open woodland over *A. aptaneura*, *A. aneura* tall open shrubland over *Triodia pungens* hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura	2	250	WNG01-08	2	250	
Acacia aptaneura	2	400	WNG01-02	2	400	
Acacia ayersiana (narrow phyllode variant)				0.1	180	WNG01R-01
Acacia pruinocarpa	6	600		6	600	
Acacia pteraneura	0.1	150	WNG01-05			
Acacia tetragonophylla				0.1	10	
Aristida contorta	0.1	20		0.1	20	
Cheilanthes sieberi subsp. *sieberi*	0.1	10	WNG01-10	0.1	10	
Duperreya commixta	0.1	20		0.1	20	
Eragrostis xerophila	0.1	20	WNG01-07	0.1	20	
Eremophila caespitosa	0.1	20	WNG01-03	0.1	20	
Eremophila forrestii subsp. *forrestii*	0.1	90		0.1	90	
Eremophila latrobei subsp. *filiformis*				0.1	130	WNG01R-02
Grevillea berryana	0.1	120	WNG01-06	0.1	120	
Hibiscus burtonii	0.1	50	WNG01-09	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	70		0.1	70	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1	30	WNG01-04	0.1	30	
Solanum lasiophyllum	0.1	40		0.1	40	
Tribulus suberosus	0.1	60		0.1	60	
Triodia pungens	50	30	WNG01-01	50	30	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG02
Described by Phase 1: MM/CI Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 03-Apr-19
Type Quadrat100 x 25 m
Central Coordinate 50K 50K 663050 mE, 7440836 mN.
Habitat Broad gravelly plain.
Soil Dark reddish brown clay loam.
Rock Type Mixed, mainly ironstone: 1-25% cobbles, 26-50% pebbles, 51-75% gravel.
Vegetation Phase 1: *Acacia aptaneura*, *A. pruinocarpa*, (*A. aneura*, *A. macraneura*, *A. catenulata* subsp. *occidentalis*) low open forest over *Santalum lanceolatum*, *A. tetragonophylla* tall open shrubland over *Sida ectogama* open shrubland over *Ptilotus obovatus* low open shrubland over *Triodia pungens* very open hummock grassland.
Phase 2: *Acacia aptaneura*, *A. pruinocarpa*, (*A. aneura*, *A. macraneura*, *A. catenulata* subsp. *occidentalis*) low open forest over *Santalum lanceolatum*, *A. tetragonophylla* tall open shrubland over *Sida ectogama* open shrubland over *Ptilotus obovatus* low open shrubland over *Triodia pungens* very open hummock grassland.
Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	35	WNG02-08	0.1	35	
Abutilon lepidum	0.1	5	WNG02-03	0.1	5	
Acacia aneura	1	450	WNG02-10	1	450	
Acacia aptaneura	25	220	WNG02-01	25	220	
Acacia ayersiana	0.1	350	WNG02-18	0.1	350	
Acacia bivenosa	0.1	330		0.1	330	
Acacia catenulata subsp. *occidentalis*	1	600	WNG02-13	1	600	
Acacia incurvaneura	1	600	WNG02-14	1	600	
Acacia macraneura	2	500	WNG02-17	2	500	
Acacia pruinocarpa	10	500		10	500	
Acacia rhodophloia	1	400		1	400	
Acacia tetragonophylla	1	300		1	300	
Anthobolus leptomerioides	0.1	190	WNG02-09	0.1	190	
Aristida contorta	0.1	30		0.1	30	
Bidens bipinnata	0.1	25		0.1	25	
Boerhavia sp.	0.1	30				
Cheilanthes sieberi subsp. *sieberi*	0.1	20	WNG02-05	0.1	20	
Chrysocephalum gilesii	0.1	20	WNG02-11			
Cymbopogon ambiguus	0.1	90		0.1	90	
Digitaria ammophila	0.1	40	WNG06-07=			
Digitaria brownii	0.1	50		0.1	50	
Duperreya commixta	0.1	200		0.1	200	
Enchylaena tomentosa var. *tomentosa*	0.1	40		0.1	40	
Enneapogon polyphyllus	0.1	20				
Enneapogon robustissimus	0.1	45		0.1	45	
Eremophila forrestii subsp. *forrestii*	0.1	120		0.1	120	
Eremophila longifolia				0.1	350	
Evolvulus alsinoides var. *villosicalyx*	0.1	30		0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Goodenia prostrata	0.1	6				
Lepidium phlebopetalum	0.1	7	WNG02-15	0.1	10	WNG02R-08
Maireana planifolia x villosa	0.1	40	WNG02-12	0.1	40	
Maireana villosa	0.1	30		0.1	30	
Marsdenia australis				0.1	5	WNG02R-05
Paraneurachne muelleri	0.1	50		0.1	50	
Perotis rara	0.1	20				
Polycarpaea corymbosa var. *corymbosa*	0.1	15				
Psydrax latifolia	0.1	200		0.1	200	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus helipteroides	0.1	20				
Ptilotus obovatus var. *obovatus*	5	80		5	80	
Ptilotus schwartzii var. *schwartzii*	0.1	45		0.1	45	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	120		0.1	120	
Santalum lanceolatum	2	300		2	300	
Sclerolaena cornishiana	0.1	35				
Senna artemisioides subsp. *helmsii*	0.1	110	WNG02-07	0.1	130	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	20	WNG02R-03
Senna glaucifolia x S. artemisioides subsp. *helmsii*				0.1	70	WNG02R-02
Senna stricta				0.1	150	WNG02R-06
Sida ectogama	3	170		3	170	
Sida sp. L (A.M. Ashby 4202)	0.1	20	WNG02-04	0.1	20	WNG02R-01
Solanum piceum	0.1	90	WNG02-06	0.1	90	
Stenopetalum anfractum	0.1	10	WNG02-16			
Tribulus suberosus	0.1	70		0.1	70	
Triodia pungens	4	50	WNG02-02	4	50	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG03
Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 662107 mE, 7440294 mN.
Habitat Flat plain.
Soil Reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia aptaneura*, (*A. pruinocarpa*) tall open shrubland over *Triodia pungens* hummock grassland.
Phase 2: *Acacia aptaneura*, (*A. pruinocarpa*) tall open shrubland over *Triodia pungens* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	2	250	WNG01-02=	2	250	
Acacia ayersiana (narrow phyllode variant)				0.1	200	WNG03R-01
Acacia pruinocarpa	0.1	300		0.1	300	
Cheilanthes sieberi subsp. *sieberi*	0.1	10	WNG01-10=	0.1	10	
Codonocarpus cotinifolius	0.1	30				
Digitaria ammophila				0.1	10	WNG03R-02
Eragrostis setifolia	0.1	30	WNG03-03	0.1	30	
Eremophila forrestii subsp. *forrestii*	0.1	60		0.1	60	
Eremophila latrobei subsp. *filiformis*	0.1	150	WNG03-04	0.1	150	
Grevillea berryana	0.1	380	WNG03-01	0.1	380	
Hibiscus burtonii	0.1	40	WNG01-09=	0.1	40	
Solanum lasiophyllum	0.1	40		0.1	40	
Triodia pungens	40	70	WNG03-05	40	70	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG04
Described by Phase 1: MM/CI Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 03-Apr-19
Type Quadrat80 x 25 m
Central Coordinate 50K 663301 mE, 7440329 mN.
Habitat Broad flat plain with gravelly surface.
Soil Red clay loam.
Rock Type Ironstone mainly, plus some ? chert.

Vegetation Phase 1: *Acacia catenulata* subsp. *occidentalis*, (*A. pruinocarpa*) low open forest over *Eremophila forrestii* subsp. *forrestii*, *Sida ectogama* scattered shrubs over *Maireana villosa*, *Ptilotus schwartzii* scattered low shrubs over *Triodia pungens* scattered hummock grasses.Phase 2: *Acacia catenulata* subsp. *occidentalis*, (*A. pruinocarpa*) low open forest over *Eremophila forrestii* subsp. *forrestii*, *Sida ectogama* scattered shrubs over *Maireana villosa*, *Ptilotus schwartzii* scattered low shrubs over *Triodia pungens* scattered hummock grasses.
Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	0.1	500	WNG04-03	0.1	500	
Acacia ayersiana				0.1	450	WNG04R-06
Acacia bivenosa	0.1	220		0.1	220	
Acacia catenulata subsp. *occidentalis*	40	700	WNG04-06	40	700	
Acacia citrinoviridis				0.1	500	WNG04R-02
Acacia pruinocarpa	10	700		10	700	
Acacia tetragonophylla	0.1	210		0.1	210	
Anthobolus leptomerioides	0.1	110	WNG02-09=			
Aristida contorta	0.1	15		0.1	15	
Bidens bipinnata	0.1	45		0.1	45	
Boerhavia coccinea				0.1	10	WNG04R-03
Brachyscome iberidifolia	0.1	10	WNG04-04			
Cheilanthes sieberi subsp. *sieberi*	0.1	25	WNG02-05=	0.1	25	
Cynodon convergens	0.1	20				
Enneapogon polyphyllus	0.1	30		0.1	30	
Eremophila forrestii subsp. *forrestii*	0.1	110		0.5	110	
Eremophila latrobei subsp. *filiformis*				0.1	140	
Euphorbia drummondii	0.1	5	WNG04-05			
Grevillea berryana	0.1	700		0.1	700	
Maireana planifolia x villosa	0.1	55	WNG02-12=	0.1	40	WNG04R-07
Maireana villosa	0.1	35		0.1	35	
Perotis rara	2	10		2	10	
Polycarpaea corymbosa var. *corymbosa*	0.1	15				
Psydrax latifolia	0.1	190		0.1	190	
Pterocaulon sphacelatum				0.1	20	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	45		0.1	45	
Ptilotus schwartzii var. *schwartzii*	0.1	45		0.1	45	
Rhagodia eremaea	0.1	90				
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	190		0.1	190	
Senna artemisioides subsp. *helmsii*	0.1	130	WNG02-07=	0.1	110	WNG04R-01

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	130	WNG04R-05
Sida ectogama	0.1	130		0.1	130	
Solanum lasiophyllum	0.1	25		0.1	25	
Solanum piceum	0.1	110	WNG02-06=	0.1	110	
Spermacoce brachystema	0.1	20	WNG04-01	0.1	20	
Stenopetalum anfractum	0.1	10	WNG02-16=			
Triodia pungens	1	35	WNG04-02	1	35	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG05
Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 663873 mE, 7440698 mN.
Habitat Mulga floodplain with *minor* drainage flow lines throughout the area.
Soil Reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 26-50% gravel.
Vegetation Phase 1: *Acacia catenulata* subsp. *occidentalis*, *A. macraneura*, *A. aptaneura*, (*A. pruinocarpa*, *A. aneura*) low open forest over *A. tetragonophylla*, *Sida ectogama* tall open shrubland over *Maireana villosa*, *Eremophila caespitosa* scattered low shrubs over *Triodia wiseana*, *T. pungens* scattered hummock grasses.Phase 2: *Acacia catenulata* subsp. *occidentalis*, *A. macraneura*, *A. aptaneura*, (*A. pruinocarpa*, *A. aneura*) low open forest over *A. tetragonophylla*, *Sida ectogama* tall open shrubland over *Maireana villosa*, *Eremophila caespitosa* scattered low shrubs over *Triodia wiseana*, *T. pungens* scattered hummock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura	1	250	WNG01-08=	1	250	
Acacia aptaneura	10	300	WNG05-07	10	300	
Acacia ayersiana	0.5	400	WNG05-14	0.5	400	
Acacia bivenosa	0.1	300		0.1	300	
Acacia catenulata subsp. *occidentalis*	15	500	WNG05-05	15	500	
Acacia macraneura	10	500	WNG05-06			
Acacia pruinocarpa	5	500		5	500	
Acacia rhodophloia	0.1	450		0.1	450	
Acacia tetragonophylla	2	220		2	220	
Anthobolus leptomerioides	0.1	130		0.1	130	
Aristida contorta	0.1	10		0.1	10	
Bidens bipinnata	0.1	20		0.1	20	
Cheilanthes sieberi subsp. *sieberi*	0.1	10				
Chrysopogon fallax				0.1	30	
Cymbopogon sp.	0.1	20				
Digitaria brownii	0.1	35	WNG05-15			
Duperreya commixta	0.1	300		0.1	300	
Enchylaena tomentosa var. *tomentosa*	0.1	50		0.1	50	
Enneapogon polyphyllus	0.1	15	WNG05-02			
Eremophila caespitosa	0.1	20	WNG01-03=	0.1	20	
Eremophila forrestii subsp. *forrestii*	0.1	60		0.1	60	
Eremophila longifolia	0.1	300		0.1	300	
Eremophila phyllopoda subsp. *obliqua*	0.1	20	WNG05-12			
Evolvulus alsinoides var. *villosicalyx*	0.1	20		0.1	20	
Gomphrena kanisii	0.1	10	WNG05-16			
Hibiscus burtonii	0.1	40		0.1	40	
Maireana planifolia	0.1	20	WNG05-18	0.1	20	
Maireana planifolia x villosa	0.1	60	WNG05-13	0.1	60	
Maireana villosa	0.1	30	WNG05-01	0.1	30	
Polycarpaea corymbosa var. *corymbosa*	0.1	10				
Polycarpaea longiflora	0.1	10				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Psydrax suaveolens				0.1	40	
Pterocaulon sphacelatum	0.1	20	WNG05-17			
Ptilotus exaltatus	0.1	5		0.1	10	
Ptilotus helipteroides	0.1	2				
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	
Ptilotus schwartzii var. *schwartzii*	0.1	40		0.1	40	
Rhagodia eremaea	0.1	100		0.1	100	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	110	WNG05-08	0.1	110	
Salsola australis	0.1	20				
Sclerolaena cornishiana	0.1	10		0.1	10	
Senna artemisioides subsp. *helmsii*	0.5	40		0.5	40	
Senna glaucifolia	0.1	100	WNG05-04	0.1	100	
Senna glutinosa subsp. *glutinosa*	0.1	160				
Senna glutinosa subsp. *x luerssenii*	0.1	50		0.1	50	
Sida ectogama	1	250	WNG05-09	1	250	
Sida fibulifera	0.1	20				
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	40	WNG05-19			
Sida sp. L (A.M. Ashby 4202)	0.1	30	WNG05-11	0.1	20	WNG05R-01
Solanum lasiophyllum	0.1	30		0.1	30	
Solanum piceum	0.1	60	WNG05-03	0.1	60	
Themeda triandra	0.1	50				
Tribulus suberosus	0.5	70		0.5	70	
Triodia pungens	0.5	35		0.5	35	
Triodia wiseana	1	20		1	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG06
Described by Phase 1: MM/CI Phase 2: BRMTB Date Phase 1: 22-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 663707 mE, 7440432 mN.
Habitat Broad stony plain with a gentle slope to the south.
Soil Red clay loam.
Rock Type Ironstone: 51-75% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia incurvaneura*, (*A. pteraneura*) low open woodland over *A. incurvaneura*, (*Tribulus suberosus*, *Maireana villosa*, *Eremophila caespitosa*) low open shrubland over *Aristida contorta* scattered annual bunch grasses.Phase 2: *Acacia incurvaneura*, (*A. pteraneura*) low open woodland over *A. incurvaneura*, (*Tribulus suberosus*, *Maireana villosa*, *Eremophila caespitosa*) low open shrubland over *Aristida contorta* scattered annual bunch grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	5				
Acacia aptaneura				0.1	60	WNG06R-01
Acacia incurvaneura	4	400	WNG06-06	4	400	
Acacia pruinocarpa	0.1	40		0.1	40	
Acacia pteraneura	1.5	350	WNG06-01	1.5	350	
Acacia tetragonophylla				0.1	40	
Aristida contorta	0.5	30				
Brachyscome iberidifolia	0.1	20	WNG04-04=			
Cheilanthes sieberi subsp. *sieberi*	0.1	30	WNG02-05=	0.1	30	
Digitaria ammophila	0.1	30	WNG06-07	0.1	30	
Duperreya commixta	0.1	120		0.1	120	
Enneapogon polyphyllus	0.1	15				
Eragrostis setifolia	0.1	40	WNG06-05	0.1	40	
Eremophila caespitosa	0.1	30		0.1	30	
Eremophila forrestii subsp. *forrestii*	0.1	40		0.1	40	
Eremophila latrobei subsp. *filiformis*	0.1	120		0.1	120	
Eriachne pulchella	0.1	25	WNG06-11			
Euphorbia drummondii	0.1	2	WNG06-08			
Evolvulus alsinoides var. *villosicalyx*	0.1	15		0.1	15	
Gomphrena kanisii	0.1	25	WNG06-03			
Goodenia prostrata	0.1	2				
Goodenia tenuiloba	0.1	35				
Heliotropium heteranthum	0.1	2				
Hibiscus burtonii	0.1	70				
Maireana georgei	0.1	40				
Maireana villosa	0.5	40		0.5	40	
Monachather paradoxus	0.1	50	WNG06-04	0.1	50	
Panicum effusum	0.1	10	WNG06-10	0.1	10	
Perotis rara	0.1	10		0.1	10	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus helipteroides	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus polystachyus	0.1	30				
Ptilotus roei	0.1	5				
Ptilotus schwartzii var. *schwartzii*	0.1	55		0.1	55	
Sclerolaena cornishiana				0.1	10	
Senna artemisioides subsp. *helmsii*	0.1	40				
Sida sp. L (A.M. Ashby 4202)	0.1	25		0.1	25	
Solanum lasiophyllum	0.1	40		0.1	40	
Solanum piceum	0.1	80	WNG02-06=	0.1	80	
Stenopetalum anfractum	0.1	10	WNG02-16=			
Tribulus suberosus	0.1	50		0.1	50	
Triodia pungens	0.1	40	WNG06-02	0.1	40	
Vincetoxicum lineare	0.1	90		0.1	90	
Wahlenbergia gracilenta	0.1	20	WNG06-09			





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG07
Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 665540 mE, 7440289 mN.
Habitat Minor channel in broad floodplain drainage.
Soil Reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus victrix* woodland over *Acacia citrinoviridis* low woodland over *Ptilotus obovatus* low open shrubland over *Triodia pungens* very open hummock grassland over *Themeda triandra*, (*Bothriochloa ewartiana*, *Enneapogon lindleyanus*, **Cenchrus ciliaris*, *Eriachne tenuiculmis*) very open tussock grassland.Phase 2: *Eucalyptus victrix* woodland over *Acacia citrinoviridis* low woodland over *Ptilotus obovatus* low open shrubland over *Triodia pungens* very open hummock grassland and *Themeda triandra*, (*Bothriochloa ewartiana*, *Enneapogon lindleyanus*, **Cenchrus ciliaris*, *Eriachne tenuiculmis*) very open tussock grassland.
Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	0.1	180	WNG07-25	0.1	180	
Acacia bivenosa				0.1	300	
Acacia citrinoviridis	20	600		20	600	
Acacia pruinocarpa	0.5	400		0.5	400	
Acacia pteraneura	0.1	400	WNG01-05=			
Acacia pyrifolia var. *pyrifolia*	0.1	60		0.1	60	
Alternanthera nana	0.1	10		0.1	10	
Amaranthus cuspidifolius	0.1	40	WNG07-23			
Ammannia baccifera	0.1	40	WNG07-22			
Aristida contorta	0.1	20		0.1	20	
Aristida ingrata	0.1	20	WNG07-19			
Bidens bipinnata	0.1	50		0.1	50	
Boerhavia repleta				0.1	10	WNG07R-05
Boerhavia sp.	0.1	20		0.1	20	
Bothriochloa ewartiana	1	50	WNG07-18	1	50	
Capparis lasiantha	0.1	100		0.1	100	
Cenchrus ciliaris	1	50		1	50	
Cheilanthes sieberi subsp. *sieberi*				0.1	10	
Chrysocephalum gilesii	0.1	30	WNG07-20			
Cleome viscosa	0.1	30		0.1	30	
Corchorus crozophorifolius	0.1	70		0.1	70	
Cymbopogon ambiguus	0.1	100	WNG07-14	0.1	100	
Dicladanthera forrestii	0.1	20	WNG07-12	0.1	20	
Digitaria brownii	0.1	60		0.1	60	
Dipteracanthus australasicus subsp. *australasicus*	0.1	20	WNG07-13	0.1	20	
Duperreya commixta	0.1	30		0.1	30	
Enchylaena tomentosa var. *tomentosa*	0.1	60		0.1	60	
Enneapogon lindleyanus	1	70		1	70	
Enneapogon polyphyllus	0.1	30	WNG05-02=			
Eragrostis tenellula	0.1	40		0.1	40	
Eremophila longifolia				0.1	100	WNG07R-01

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eriachne mucronata (typical form)	0.1	30	WNG07-16	0.1	30	
Eriachne pulchella	0.1	10		0.1	10	
Eriachne tenuiculmis	0.5	20	WNG07-26	0.5	20	
Eucalyptus victrix	15	1200		15	1200	
Euphorbia tannensis subsp. *eremophila*	0.1	10				
Evolvulus alsinoides var. *villosicalyx*	0.1	10				
Gomphrena cunninghamii	0.1	5				
Gomphrena kanisii	0.1	5	WNG05-16=			
Goodenia muelleriana	0.1	10	WNG07-02			
Hakea lorea subsp. *lorea*	0.1	180		0.1	180	
Heliotropium cunninghamii	0.1	15	WNG07-30			
Hybanthus aurantiacus	0.1	20		0.1	20	
Indigofera georgei	0.1	120	WNG07-01	0.1	120	
Ipomoea plebeia				0.1	10	WNG07R-04
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	130	WNG07-17	0.1	130	
Lepidium phlebopetalum	0.1	5	WNG07-06	0.1	10	WNG07R-03
Maireana villosa	0.1	30	WNG05-01=	0.1	30	
Malvastrum americanum	0.1	10		0.1	10	
Marsilea hirsuta	0.1	10	WNG07-21			
Melhania oblongifolia	0.1	5				
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium constrictum	0.1	10	WNG07-24	0.1	10	
Phyllanthus maderaspatensis	0.1	40		0.1	40	
Pluchea dentex	0.1	30	WNG07-27			
Polycarpaea longiflora	0.1	10				
Pterocaulon sphacelatum	0.1	40	WNG07-15	0.1	40	
Ptilotus exaltatus	0.1	10		0.1	10	
Ptilotus helipteroides	0.1	5				
Ptilotus obovatus var. *obovatus*	3	40		3	40	
Ptilotus polystachyus	0.1	20				
Rhagodia eremaea	0.1	130		0.1	130	
Roepera eichleri	0.1	5	WNG07-07			
Salsola australis	0.1	20		0.1	20	
Santalum lanceolatum	0.1	100		0.1	100	
Sclerolaena convexula	0.1	20	WNG07-10			
Senna artemisioides subsp. *filifolia*	0.1	200	WNG07-11	0.1	200	
Senna artemisioides subsp. *helmsii*	0.1	120				
Setaria dielsii	0.1	20	WNG07-28			
Setaria verticillata	0.1	10				
Sida sp.				0.1	60	WNG07R-06
Sida sp. L (A.M. Ashby 4202)	0.1	10	WNG07-08			
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	60				
Solanum lasiophyllum	0.1	20		0.1	20	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.1	50				
Themeda triandra	2	40		2	40	
Trichodesma zeylanicum var. *zeylanicum*	0.1	20				
Triodia longiceps	0.1	60		0.1	60	
Triodia pungens	9	50	WNG07-05	9	50	
Urochloa occidentalis var. *ciliata*	0.1	10	WNG07-04			
Waltheria indica	0.1	25				





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG08
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 665949 mE, 7441256 mN.
Habitat Hillslope (with some crest) of a low stony hill on the south side of a tall range, with a gentle slope to the south-west.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 51-75% pebbles, 51-75% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia trudgenii* scattered tall shrubs over *A. pruinocarpa* scattered shrubs over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia trudgeniana* scattered tall shrubs over *A. pruinocarpa* scattered shrubs over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	150	WNG08-08	0.1	150	
Acacia ancistrocarpa	0.1	60		0.1	60	
Acacia bivenosa	0.1	50		0.1	50	
Acacia maitlandii	0.1	60		0.1	60	
Acacia pruinocarpa	0.5	180		0.5	180	
Acacia tenuissima	0.1	70		0.1	70	
Acacia trudgeniana	0.5	300		0.5	300	
Amphipogon sericeus	0.1	30	WNG08-02	0.1	30	
Aristida contorta	0.1	25				
Codonocarpus cotinifolius	0.1	170		0.1	170	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG08-01	0.1	50	
Cucumis variabilis	0.1	40				
Enneapogon caerulescens				0.1	20	
Eremophila phyllopoda subsp. *obliqua*	0.1	40	WNG08-07	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	500		0.5	500	
Gomphrena kanisii	0.1	15	WNG08-05			
Goodenia muelleriana	0.1	30	WNG08-04			
Goodenia stobbsiana	0.1	30	WNG08-03	0.1	30	
Goodenia triodiophila	0.1	40		0.1	40	
Heliotropium heteranthum	0.1	4				
Hibiscus burtonii				0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	40		0.1	40	
Indigofera monophylla	0.1	30		0.1	30	
Paraneurachne muelleri	0.1	30		0.1	30	
Ptilotus calostachyus	0.1	70		0.1	70	
Ptilotus exaltatus	0.1	30				
Ptilotus rotundifolius	0.1	50		0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	110	WNG08-06	0.1	110	
Senna glutinosa subsp. *pruinosa*	0.1	50		0.1	50	
Seringia nephrosperma	0.1	50				
Sida arenicola	0.1	190		0.1	190	
Sida cardiophylla	0.1	20				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG08-09	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70		0.1	70	
Solanum lasiophyllum				0.1	40	
Streptoglossa decurrens	0.1	25				
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)				0.1	8	
Tribulus suberosus	0.1	55		0.1	55	
Triodia pungens	4	40		4	40	
Triodia vanleeuwenii	45	20		45	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG09
Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666501mE, 7440340mN.
Habitat Floodplain.
Soil Reddish brown loam.
Rock Type Ironstone.
Vegetation Phase 1: *Acacia citrinoviridis* tall open shrubland over *Indigofera georgei*, (*Ptilotus obovatus*) low open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra*, *Enneapogon lindleyanus* scattered tussock grasses.
Phase 2: *Acacia citrinoviridis* tall open shrubland over *Indigofera georgei*, (*Ptilotus obovatus*) low open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra*, *Enneapogon lindleyanus* scattered tussock grasses.
Veg Condition Phase 1: Very Good; scattered weeds. Phase 2: Very Good; presence of scattered weeds.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon sp.	0.1	10				
Acacia 'aneura' sens. lat. (juvenile)	0.1	110	WNG09-05	0.1	110	
Acacia bivenosa	0.1	80		0.1	80	
Acacia citrinoviridis	7	250		7	250	
Acacia pyrifolia var. *pyrifolia*	0.1	130		0.1	130	
Amaranthus cuspidifolius	0.1	20	WNG07-23=			
Aristida contorta	0.1	25		0.1	25	
Aristida holathera var. *holathera*				0.1	20	
Boerhavia coccinea	0.1	5	WNG09-06	0.1	5	
Chrysocephalum gilesii	0.1	20	WNG07-20=			
Cleome viscosa	0.1	40		0.1	40	
Codonocarpus cotinifolius	0.1	100		0.1	100	
Corchorus crozophorifolius	0.1	70		0.1	70	
Corchorus sp.				0.1	5	WNG09R-01
Crotalaria medicaginea var. *neglecta*	0.1	10				
Dactyloctenium radulans				0.1	15	
Digitaria ctenantha				0.1	20	WNG09R-03
Dipteracanthus australasicus subsp. *australasicus*	0.1	20	WNG07-13=	0.1	20	
Duperreya commixta	0.1	90		0.1	90	
Dysphania rhadinostachya subsp. *inflata*	0.1	5	WNG09-15			
Enneapogon polyphyllus	0.1	10		0.1	10	
Enneapogon robustissimus	0.5	70	WNG09-01	0.5	70	
Eremophila forrestii subsp. *forrestii*				0.1	40	
Eremophila longifolia				0.1	170	
Euphorbia australis var. *subtomentosa*	0.1	5	WNG09-09	0.1	5	
Euphorbia biconvexa				0.1	20	WNG09R-07
Euphorbia tannensis subsp. *eremophila*	0.1	30	WNG09-03			
Evolvulus alsinoides var. *villosicalyx*	0.1	12		0.1	12	
Gomphrena kanisii	0.1	10	WNG09-08			
Goodenia muelleriana	0.1	10	WNG09-11			
Heliotropium cunninghamii				0.1	20	WNG09R-08

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hybanthus aurantiacus	0.1	40		0.1	40	
Indigofera georgei	4	70	WNG07-01=	4	70	
Iseilema membranaceum				0.1	20	WNG09R-04
Malvastrum americanum	0.1	60				
Melhania oblongifolia	0.1	10		0.1	10	
Nicotiana simulans	0.1	5	WNG09-16			
Notoleptopus decaisnei				0.1	30	WNG09R-06
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium clementii				0.1	20	WNG09R-05
Petalostylis labicheoides	0.1	170		0.1	170	
Phyllanthus maderaspatensis	0.1	40		0.1	40	
Polycarpaea longiflora	0.1	10		0.1	10	
Portulaca oleracea/intraterranea				0.1	4	
Pterocaulon sphacelatum	0.1	20	WNG07-15=	0.1	20	
Ptilotus exaltatus	0.1	80		0.1	80	
Ptilotus helipteroides	0.1	5				
Ptilotus obovatus var. *obovatus*	0.5	60		0.5	60	
Ptilotus polystachyus	0.1	20				
Rhagodia eremaea				0.1	100	
Rhodanthe humboldtiana	0.1	10	WNG-BS-03=			
Roepera eichleri	0.1	5	WNG07-07=			
Salsola australis	0.1	20		0.1	20	
Santalum lanceolatum				0.1	180	
Senna artemisioides subsp. *x artemisioides*	0.1	150		0.1	140	WNG09R-02
Senna notabilis	0.1	40		0.1	40	
Setaria verticillata	0.1	20				
Sida ectogama	0.1	30	WNG05-10=	0.1	30	
Sida fibulifera	0.1	15	WNG09-04	0.1	15	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	170		0.1	170	
Solanum lasiophyllum	0.1	15		0.1	15	
Solanum piceum	0.1	15	WNG05-03=	0.1	15	
Sporobolus australasicus	0.1	20				
Swainsona maccullochiana	0.1	40	WNG09-13			
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.1	50		0.1	50	
Themeda triandra	0.5	70		0.5	70	
Tribulus suberosus				0.1	90	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60		0.1	60	
Triodia longiceps	0.1	40		0.1	40	
Triodia pungens	12	30	WNG09-02	12	30	
Wahlenbergia tumidifructa	0.1	30	WNG09-10			
Waltheria indica	0.1	40				





West Angelas Beyond 2020 Phase 1 & Phase 2		Site	WNG10
Described by	Phase 1: PL/RM Phase 2: BRMTB	Date	Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type	Quadrat50 x 50 m		
Central Coordinate	50K 667313 mE, 7440270 mN.		
Habitat	Bed of a *major* drainage line, with a small island.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Relevéiverstone, Ironstone.		

Vegetation

Phase 1: *Eucalyptus victrix* scattered low trees over *Acacia citrinoviridis* tall open shrubland over *Petalostylis labicheoides* scattered tall shrubs over *Corchorus crozophorifolius*, *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*A. pyrifolia*, *Indigofera georgei*, *Ptilotus obovatus*) low shrubland over *Themeda triandra*, (*Enneapogon lindleyanus*, *Eriachne tenuiculmis*) very open tussock grassland and *Triodia pungens* scattered hummock grasses.

Phase 2: *Eucalyptus victrix* scattered low trees over *Acacia citrinoviridis* tall open shrubland over *Petalostylis labicheoides* scattered tall shrubs over *Corchorus crozophorifolius*, *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*A. pyrifolia*, *Indigofera georgei*, *Ptilotus obovatus*) low shrubland over *Themeda triandra*, (*Enneapogon lindleyanus*, *Eriachne tenuiculmis*) very open tussock grassland and *Triodia pungens* scattered hummock grasses.

Veg Condition	Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age	Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon amplum	0.1	100		0.1	100	
Abutilon fraseri subsp. *fraseri*				0.1	20	WNG10R-02
Acacia aptaneura				0.1	30	WNG10R-05
Acacia bivenosa	0.1	80		0.1	80	
Acacia citrinoviridis	7	700		7	700	
Acacia pyrifolia var. *pyrifolia*	1	100		1	100	
Alternanthera nana	0.1	20				
Amaranthus cuspidifolius	0.1	40	WNG10-02			
Androcalva luteiflora				0.1	240	WNG10R-01
Aristida contorta				0.1	15	
Bergia trimera	0.1	20	PL29=			
Bidens bipinnata	0.1	30		0.1	30	
Boerhavia coccinea	0.1	40		0.1	40	
Bothriochloa ewartiana	0.1	60	PL18=	0.1	60	
Calocephalus beardii	0.1	15	WNG10-04			
Cenchrus ciliaris				0.1	50	
Chrysocephalum gilesii	0.1	25	PL07=			
Cleome viscosa	0.1	30		0.1	30	
Corchorus crozophorifolius	8	60		8	60	
Corchorus lasiocarpus subsp. *parvus*	0.1	50		0.1	50	
Cucumis variabilis	0.1	100				
Cymbopogon ambiguus				0.1	100	
Dicladanthera forrestii	0.1	20		0.1	20	
Digitaria brownii	0.1	60	WNG10-01	0.1	60	
Digitaria ctenantha	0.1	40		0.1	40	
Dipteracanthus australasicus subsp. *australasicus*	0.1	30		0.1	30	
Dodonaea lanceolata var. *lanceolata*	0.1	150		0.1	150	
Duperreya commixta	0.1	100		0.1	100	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Dysphania rhadinostachya subsp. *inflata*	0.1	10	WNG10-10			
Enneapogon lindleyanus	1	50		1	50	
Enneapogon polyphyllus	0.1	30		0.1	30	
Enneapogon robustissimus	0.1	40		0.1	40	
Eragrostis tenellula	0.1	30				
Eriachne pulchella	0.1	15		0.1	15	
Eriachne tenuiculmis	1	40		1	40	
Eucalyptus victrix	1	800		1	800	
Eulalia aurea	0.1	70		0.1	70	
Evolvulus alsinoides var. *villosicalyx*	0.1	30		0.1	30	
Glycine canescens				0.1	40	WNG10R-04
Gomphrena cunninghamii	0.1	10				
Gossypium australe	0.1	60				
Heliotropium cunninghamii	0.1	15	WNG10-03	0.1	15	
Heliotropium sp.				0.1	5	WNG10R-03
Hybanthus aurantiacus	0.1	50		0.1	50	
Indigofera georgei	1	60	PL13=	1	60	
Ipomoea plebeia				0.1	5	WNG07R-04=
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	80	WNG10-06	0.1	80	
Lepidium oxytrichum	0.1	6	WNG10-08			
Malvastrum americanum	0.1	30		0.1	30	
Nicotiana simulans	0.1	15	WNG10-09			
Panicum decompositum				0.1	45	WNG10R-06
Paraneurachne muelleri	0.1	30		0.1	30	
Paspalidium clementii	0.1	10		0.1	10	
Petalostylis labicheoides	1	250		1	250	
Phyllanthus maderaspatensis	0.1	40		0.1	40	
Polycarpaea longiflora	0.1	30		0.1	30	
Pterocaulon sphacelatum	0.1	60		0.1	60	
Ptilotus exaltatus	0.1	60		0.1	60	
Ptilotus obovatus var. *obovatus*	1	80		1	80	
Rhagodia eremaea				0.1	40	
Rhynchosia minima	0.1	20				
Rumex vesicarius	0.1	70				
Salsola australis	0.1	50		0.1	50	
Setaria dielsii	0.1	60		0.1	60	
Setaria verticillata	0.1	60		0.1	60	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	120				
Solanum piceum				0.1	100	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	4	60		4	60	
Themeda triandra	5	80		5	80	
Trichodesma zeylanicum var. *zeylanicum*	0.1	10		0.1	10	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Triodia longiceps	0.1	50		0.1	50	
Triodia pungens	1	30		1	30	
Triraphis mollis	0.1	40	WNG10-07			
Triumfetta chaetocarpa	0.1	40	WNG10-05	0.1	40	
Wahlenbergia tumidifructa	0.1	30	PL30=			
Waltheria indica	0.1	30		0.1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG11
Described by Phase 1: BRMSC Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 668825 mE, 7441025 mN.
Habitat Gentle east facing rise/footslope of a hill to the west; drainage to east.
Soil Reddish brown loam.
Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Sida echinocarpa*, *Templetonia egena* scattered low shrubs over *Triodia longiceps*, (*T. wiseana*) hummock grassland and *Sclerolaena densiflora*, *S. eriacantha* very open herbland.

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Sida echinocarpa*, *Templetonia egena* scattered low shrubs over *Triodia longiceps*, (*T. wiseana*) hummock grassland and *Sclerolaena densiflora*, *S. eriacantha* very open herbland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia synchronicia	0.1	100		0.1	100	
Aristida contorta	0.1	10		0.1	10	
Aristida holathera var. *holathera*				0.1	40	
Atriplex codonocarpa	0.1	10		0.1	10	
Cynodon prostratus				0.1	5	
Enneapogon polyphyllus	0.1	10	WNG05-02=	0.1	10	
Eremophila cuneifolia	0.1	20		0.1	20	
Eriachne mucronata	0.1	20		0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	500		0.5	500	
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Goodenia muelleriana	0.1	10	WNG09-12=			
Maireana georgei	0.1	20	WNG11-02	0.1	20	
Maireana melanocoma	0.1	15				
Polycarpaea longiflora	0.1	10		0.1	10	
Ptilotus exaltatus	0.1	15		0.1	15	
Salsola australis	0.1	20				
Sclerolaena densiflora	2	15		2	15	
Sclerolaena eriacantha	1	15		1	15	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	50		0.1	50	
Senna glaucifolia				0.1	90	
Senna glutinosa subsp. *glutinosa*	0.1	120		0.1	120	
Senna glutinosa subsp. *x luerssenii*	0.1	30		0.1	30	
Senna stricta	0.1	30	REL03-12=	0.1	30	
Sida echinocarpa	0.5	50		0.5	50	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	100		0.1	100	
Solanum horridum	0.1	10	SOL CLE=	0.1	10	
Solanum lasiophyllum	0.1	30		0.1	30	
Templetonia egena	0.25	60	WNG11-01	0.25	60	
Triodia longiceps	35	20		35	20	
Triodia wiseana	5	12		5	12	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG12
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666564 mE, 7441507 mN.
Habitat Footslope/base of valley between tall ridge to north and hill to south.
Soil Reddish brown clay loam.
Rock Type Mudstone? angular pebbles and cobbles: 1-25% cobbles, 51-75% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa*, *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Triodia pungens* hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa*, *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Triodia pungens* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*				0.1	50	
Abutilon lepidum	0.1	60	WNG12-04			
Acacia bivenosa	0.5	170		0.5	170	
Acacia marramamba	0.1	30		0.1	30	
Acacia tetragonophylla	0.1	50		0.1	50	
Amphipogon sericeus	0.1	30	WNG08-02=			
Aristida contorta				0.1	25	
Aristida latifolia	0.1	50	WNG12-01	0.1	50	
Duperreya commixta	0.1	240		0.1	240	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	5	WNG12-02			
Enneapogon polyphyllus	0.1	25		0.1	25	
Eragrostis tenellula	0.1	25				
Eremophila phyllopoda subsp. *obliqua*	0.1	45	WNG08-07=	0.1	45	
Eremophila platycalyx subsp. *pardalota*	0.1	35	WNG12-03	0.1	35	
Eucalyptus leucophloia subsp. *leucophloia*	2	800		2	800	
Euphorbia australis var. *hispidula*	0.1	8	WNG12-06			
Evolvulus alsinoides var. *villosicalyx*				0.1	25	
Lepidium pedicellosum	0.1	40		0.1	40	
Maireana georgei	0.1	40		0.1	40	
Maireana planifolia	0.1	30	WNG12-05	0.1	30	
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium clementii	0.1	15		0.1	15	
Psydrax latifolia	0.1	40		0.1	40	
Ptilotus calostachyus	0.1	80		0.1	80	
Ptilotus exaltatus	0.1	80		0.1	80	
Salsola australis	0.1	10		0.1	10	
Sclerolaena eriacantha	0.1	35		0.1	35	
Senna glutinosa subsp. *pruinosa x* subsp. *x luerssenii*				0.1	170	
Senna glutinosa subsp. *x luerssenii*	0.1	90		0.1	90	
Senna stricta	0.1	50		0.1	50	
Sida cardiophylla	0.1	30				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida echinocarpa	0.1	60		0.1	60	
Sida sp. dark green fruits (S. van Leeuwen 2260)				0.1	120	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.5	180		0.5	180	
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	35		0.1	35	
Tribulus suberosus	0.1	20				
Triodia pungens	50	45		50	45	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG13
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 24-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 669827 mE, 7441919 mN.
Habitat Foothill of high hill to the north, among lower foothill area with small drainage channels.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Corymbia deserticola* subsp. *deserticola*, *Acacia pruinocarpa* scattered low trees over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland over *Amphipogon sericeus* scattered tussock grasses.
Phase 2: *Corymbia deserticola* subsp. *deserticola*, *Acacia pruinocarpa* scattered low trees over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland over *Amphipogon sericeus* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 1-2 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	180		0.1	180	
Acacia cowleana	0.1	300	WNG13-01	0.1	300	
Acacia pruinocarpa	0.5	250		0.5	250	
Acacia tenuissima	0.1	180		0.1	180	
Amphipogon sericeus	1	20	WNG13-02	1	20	
Aristida contorta	0.1	25		0.1	25	
Aristida holathera var. *holathera*	0.1	20				
Codonocarpus cotinifolius	0.1	100		0.1	100	
Corymbia deserticola subsp. *deserticola*	1	600		1	600	
Eriachne mucronata	0.1	35		0.1	35	
Goodenia microptera	0.1	10				
Indigofera monophylla	0.1	15				
Ptilotus calostachyus	0.1	90		0.1	90	
Ptilotus rotundifolius	0.1	5				
Schizachyrium fragile	0.1	5				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40		0.1	40	
Senna glaucifolia	0.1	110	WNG13-03	0.1	120	
Senna glutinosa subsp. *glutinosa*	0.1	250		0.1	250	
Sida arenicola	0.1	70		0.1	70	
Sida cardiophylla	0.1	40	REL09-06=			
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	20	
Solanum lasiophyllum	0.1	60		0.1	60	
Triodia pungens	0.5	50		0.5	50	
Triodia vanleeuwenii	35	30	WNG13-04	35	30	
Triodia wiseana	0.1	50		0.1	50	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG14
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666653 mE, 7441291 mN.
Habitat Crest and upper slopes (N and S facing) of moderate sized rocky hill.
Soil Dark reddish brown clay loam.
Rock Type Mudstone (mostly), ironstone, chert. Surface 95% covered with rocks: 1-25% large boulders, 1-25% boulders, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eremophila fraseri* subsp. *fraseri*, *Indigofera monophylla* (grey leaflet form), *Corchorus crozophorifolius* low open shrubland over *Triodia pungens*, (*T. wiseana*) open hummock grassland and *Enneapogon lindleyanus* scattered tussock grasses.

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eremophila fraseri* subsp. *fraseri*, *Indigofera monophylla*, *Corchorus crozophorifolius* low open shrubland over *Triodia pungens*, (*T. wiseana*) open hummock grassland and *Enneapogon lindleyanus* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	60	WNG14-08	0.1	60	
Acacia bivenosa	0.1	40		0.1	40	
Acacia pruinocarpa	0.1	45		0.1	45	
Acacia tetragonophylla	0.1	60		0.1	60	
Aristida contorta	0.1	20		0.1	20	
Boerhavia coccinea	0.1	20		0.1	20	
Capparis lasiantha	0.1	160		0.1	160	
Cleome viscosa	0.1	25		0.1	25	
Codonocarpus cotinifolius	0.1	320		0.1	320	
Corchorus crozophorifolius	0.5	45		0.5	45	
Cucumis variabilis	0.1	30		0.1	30	
Cymbopogon ambiguus				0.1	60	
Duperreya commixta	0.1	40		0.1	40	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	10	WNG14-03			
Enneapogon caerulescens				0.1	25	
Enneapogon lindleyanus	2	40	WNG14-02	2	40	
Enneapogon polyphyllus	0.1	30				
Eremophila fraseri subsp. *fraseri*	1.5	90	WNG14-11			
Eriachne aristidea	0.1	20				
Eucalyptus leucophloia subsp. *leucophloia*	2	600		2	600	
Euphorbia australis var. *subtomentosa*	0.1	5	WNG14-07			
Euphorbia tannensis subsp. *eremophila*	0.1	35				
Euphorbia trigonosperma				0.1	30	WNG14R-01
Evolvulus alsinoides var. *villosicalyx*	0.1	6		0.1	6	
Gomphrena kanisii	0.1	20	WNG08-05=			
Goodenia muelleriana				0.1	40	
Heliotropium chrysocarpum				0.1	40	WNG14R-03
Hibiscus coatesii				0.1	40	
Hibiscus sturtii var. *grandiflorus*	0.1	35	WNG14-06	0.1	35	
Indigofera monophylla	1	45	WNG14-05	1	45	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Jasminum didymum subsp. *lineare*	0.1	50		0.1	50	
Melhania oblongifolia	0.1	10		0.1	10	
Notoleptopus decaisnei				0.1	25	
Oldenlandia crouchiana	0.1	10	WNG14-04			
Paspalidium clementii				0.1	30	WNG14R-02
Pterocaulon sphacelatum	0.1	45		0.1	45	
Ptilotus auriculifolius	0.1	35				
Ptilotus calostachyus	0.1	70				
Ptilotus clementii	0.1	15		0.1	15	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	60		0.1	60	
Rhynchosia minima	0.1	20		0.1	20	
Salsola australis	0.1	35		0.1	35	
Senna artemisioides subsp. *oligophylla*	0.1	90		0.1	90	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	70	WNG14-09	0.1	70	
Senna glaucifolia	0.1	60	WNG14-12	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	140		0.1	140	
Senna notabilis	0.1	30				
Senna stricta	0.1	40		0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	90		0.1	90	
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	70		0.1	70	
Tribulus suberosus	0.1	65		0.1	65	
Trichodesma zeylanicum var. *zeylanicum*	0.1	70				
Triodia longiceps	0.1	45		0.1	45	
Triodia pungens	15	50	WNG14-01	15	50	
Triodia wiseana	1	20	WNG14-10	1	20	
Vincetoxicum lineare				0.1	50	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG15
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 24-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 668251 mE, 7442908 mN.
Habitat Foothills of a larger hill to the northeast.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 25-50% pebbles, 25-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia bivenosa* scattered low shrubs over *Triodia vanleeuwenii* hummock grassland and *Amphipogon sericeus* very open tussock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia bivenosa* scattered low shrubs over *Triodia vanleeuwenii* hummock grassland and *Amphipogon sericeus* very open tussock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens	0.1	40	WNG15-05	0.1	40	
Acacia bivenosa	0.5	40		0.5	40	
Acacia pruinocarpa	0.1	110		0.1	110	
Acacia rhodophloia	0.1	20		0.1	20	
Acacia tenuissima	0.1	60	WNG15-02	0.1	60	
Amphipogon sericeus	3	15	WNG13-02=	3	15	
Aristida contorta	0.1	10				
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG15-03	0.1	50	
Corymbia deserticola subsp. *deserticola*	0.5	500		0.5	500	
Cucumis variabilis	0.1	50				
Cymbopogon ambiguus	0.1	80		0.1	80	
Cymbopogon obtectus	0.1	40	WNG15-04			
Enneapogon polyphyllus	0.1	10				
Eremophila jucunda subsp. *pulcherrima*	0.1	10	REL05-04=	0.1	10	
Eremophila longifolia	0.1	80		0.1	80	
Eucalyptus leucophloia subsp. *leucophloia*	1	600		1	600	
Goodenia microptera	0.1	10				
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	10				
Hakea chordophylla				0.1	40	
Hibiscus sturtii var. *campylochlamys*	0.1	5		0.1	5	
Indigofera monophylla	0.1	15		0.1	15	
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus exaltatus	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	
Rhagodia sp. Hamersley (M. Trudgen 17794)				0.1	40	WNG15R-01
Santalum lanceolatum	0.1	100		0.1	100	
Senna artemisioides subsp. *oligophylla*	0.1	60		0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	180		0.1	180	
Senna glutinosa subsp. *x luerssenii*	0.1	80		0.1	80	
Senna notabilis	0.1	35				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna stricta x				0.1	60	WNG15R-02
Sida arenicola	0.1	70		0.1	70	
Sida cardiophylla	0.1	20	WNG15-01	0.1	20	
Sida echinocarpa	0.1	60		0.1	60	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	20				
Solanum lasiophyllum	0.1	40		0.1	40	
Triodia pungens	0.5	20	TRI PUN=	0.5	20	
Triodia vanleeuwenii	33	10		33	10	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG16
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666314 mE, 7441040 mN.
Habitat Stony plain/ lower slope of a low hills, sloping gently to the south.
Soil Reddish brown clay loam.
Rock Type Ironstone: 51-75% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* scattered low shrubs over *Triodia longiceps* hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* scattered low shrubs over *Triodia longiceps* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	15	WNG16-02	0.1	15	
Acacia atkinsiana	0.1	120		0.1	120	
Acacia bivenosa	0.5	90		0.5	90	
Acacia synchronicia	0.1	15				
Amphipogon sericeus	0.1	30	WNG08-02=	0.1	30	
Aristida contorta	0.1	20				
Capparis lasiantha	0.1	70		0.1	70	
Codonocarpus cotinifolius				0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	2	700		2	700	
Euphorbia boophthona				0.1	25	
Goodenia microptera	0.1	20				
Goodenia stobbsiana	0.1	40				
Maireana georgei	0.1	6		0.1	6	
Paraneurachne muelleri	0.1	40		0.1	40	
Ptilotus astrolasius	0.1	50		0.1	50	
Ptilotus calostachyus	0.1	45		0.1	45	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	25				
Salsola australis	0.1	40		0.1	40	
Sclerolaena eriacantha	0.1	30	WNG16-01	0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	25		0.1	25	
Senna glutinosa subsp. *glutinosa*	0.1	80		0.1	80	
Senna glutinosa subsp. *x luerssenii*	0.1	80		0.1	80	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	180		0.1	180	
Sporobolus australasicus	0.1	15				
Triodia longiceps	35	35		35	35	
Triodia pungens	0.1	30		0.1	30	
Triodia wiseana	0.1	15		0.1	15	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG17
Described by Phase 1: PL/RM Phase 2: BRMTB Date Phase 1: 24-Aug-18 Phase 2: 05-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666728 mE, 7441886 mN.
Habitat Saddle between two hill crests. South section is an east-west facing ridge of BIF.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone, quartz. Surface dominated by Ironstone cobbles and pebbles.
Vegetation Phase 1: *Acacia aptaneura*, *A. aneura* low woodland over *Eremophila phyllopoda* subsp. *obliqua*, (*E. oppositifolia* subsp. *angustifolia*) tall open shrubland over *Senna stricta*, *S. glutinosa* subsp. x *luerssenii*, (*Scaevola acacioides*) open shrubland over *E. jucunda* subsp. *pulcherrima*, (*E. cuneifolia*, *Lepidium pedicellosum*, *Maireana georgei*, *Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.
Phase 2: *Acacia aptaneura*, *A. aneura* low woodland over *Eremophila phyllopoda* subsp. *obliqua*, (*E. oppositifolia* subsp. *angustifolia*) tall open shrubland over *Senna stricta*, *S. glutinosa* subsp. x *luerssenii*, (*Scaevola acacioides*) open shrubland over *E. jucunda* subsp. *pulcherrima*, (*E. cuneifolia*, *Lepidium pedicellosum*, *Maireana georgei*, *Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	10				
Abutilon lepidum	0.1	20				
Acacia aneura	8	300	WNG17-02	8	300	
Acacia aptaneura	12	600	WNG17-01	12	600	
Acacia tetragonophylla	0.1	10		0.1	10	
Aristida contorta	0.1	20				
Aristida ingrata	0.1	50	WNG17-06			
Aristida jerichoensis var. *subspinulifera*	0.1	50	WNG17-15	0.1	50	
Aristida obscura	0.1	30				
Cheilanthes brownii	0.1	20	WNG17-09	0.1	20	
Cleome viscosa	0.1	25				
Cymbopogon ambiguus	0.1	40				
Digitaria ammophila	0.1	30				
Dodonaea petiolaris	0.1	140	WNG17-17	0.1	140	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	20	WNG17-18			
Enchylaena tomentosa var. *tomentosa*	0.1	30				
Enneapogon caerulescens	0.1	15				
Enneapogon lindleyanus	0.1	40		0.1	40	
Enneapogon polyphyllus	0.1	20				
Eremophila accrescens	0.1	120	WNG17-08	0.1	120	
Eremophila cuneifolia	2	80		2	80	
Eremophila jucunda subsp. *pulcherrima*	11	60		11	60	
Eremophila oppositifolia subsp. *angustifolia*	1.5	250	PL40=	1.5	250	
Eremophila phyllopoda subsp. *obliqua*	5	250		5	250	
Eriachne mucronata (typical form)	0.1	30				
Euphorbia boophthona	0.1	20				
Evolvulus alsinoides var. *villosicalyx*	0.1	20		0.1	20	
Hibiscus burtonii	0.1	25		0.1	25	
Hibiscus sturtii var. *truncatus*	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Iseilema membranaceum	0.1	10	WNG17-11			
Lepidium pedicellosum	1.5	30		1.5	30	
Maireana georgei	1	40		1	40	
Maireana planifolia	0.1	80		0.1	80	
Maireana villosa	0.1	40		0.1	40	
Panicum effusum	0.1	40				
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium clementii	0.1	20				
Peripleura virgata	0.1	30				
Psydrax suaveolens	0.1	60		0.1	60	
Pterocaulon sphacelatum	0.1	60	WNG17-16			
Pterocaulon sphaeranthoides	0.1	50				
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus fusiformis	0.1	50	WNG17-04			
Ptilotus obovatus var. *obovatus*	1	50		1	50	
Rhagodia eremaea	0.1	100		0.1	100	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	150		0.1	150	
Salsola australis	0.1	20		0.1	20	
Scaevola acacioides	1	170		1	170	
Schizachyrium fragile	0.1	20				
Sclerolaena eriacantha	0.1	20	WNG17-05	0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	80		0.1	80	
Senna glaucifolia	0.1	120	WNG17-14	0.1	120	
Senna glutinosa subsp. *x luerssenii*	4	130		4	130	
Senna stricta	4	170		4	170	
Sida echinocarpa	0.1	50				
Sida ectogama	0.1	120				
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	40		0.1	40	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1	40	PL11=			
Sida sp. L (A.M. Ashby 4202)	0.1	30	WNG17-07			
Solanum horridum	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	25				
Solanum piceum	0.1	100	WNG17-13			
Tribulus suberosus	0.1	100		0.1	100	
Triodia pungens	7	30	WNG17-03	7	30	
Triodia vanleeuwenii	0.1	30		0.1	30	
Vincetoxicum lineare	0.1	20				





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG18
Described by Phase 1: PL/RM Phase 2: PL/CI Date Phase 1: 23-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 670692 mE, 7441113 mN.
Habitat Hillcrest and slope of low hill.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone.
Vegetation Phase 1: *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia pachyacra* scattered tall shrubs over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland.
Phase 2: *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia pachyacra* scattered tall shrubs over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 1-2 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	100		0.1	100	
Acacia cowleana				0.1	50	WNG18R-01
Acacia pachyacra	1	250		1	250	
Acacia pruinocarpa	0.1	150		0.1	150	
Acacia rhodophloia	0.1	30		0.1	30	
Acacia tenuissima	0.1	50		0.1	50	
Amphipogon sericeus	0.1	40		0.1	40	
Anthobolus leptomerioides	0.1	100		0.1	100	
Aristida ingrata	0.1	70	WNG18-03	0.1	70	
Codonocarpus cotinifolius	0.1	50		0.1	50	
Corymbia deserticola subsp. *deserticola*	1	450		1	450	
Cymbopogon obtectus	0.1	80		0.1	80	
Digitaria brownii	0.1	70		0.1	70	
Duperreya commixta	0.1	120		0.1	120	
Fimbristylis dichotoma	0.1	20		0.1	20	
Goodenia stobbsiana	0.1	60		0.1	60	
Goodenia triodiophila	0.1	30		0.1	30	
Heliotropium inexplicitum	0.1	15	WNG18-01			
Heliotropium tenuifolium	0.1	20	WNG18-02	0.1	20	
Hibiscus sturtii var. *campylochlamys*	0.1	20		0.1	20	
Indigofera monophylla	0.1	60		0.1	60	
Isotropis parviflora	0.1	20		0.1	20	
Panicum effusum	0.1	20		0.1	20	
Paraneurachne muelleri	0.1	30				
Ptilotus astrolasius	0.1	50				
Ptilotus calostachyus	0.1	70		0.1	70	
Ptilotus rotundifolius	0.1	80		0.1	80	
Senna glutinosa subsp. *glutinosa*	0.1	120		0.1	120	
Senna glutinosa subsp. *glutinosa x* subsp. *x luerssenii*				0.1	40	
Senna glutinosa subsp. *pruinosa*	0.1	110		0.1	110	
Senna glutinosa subsp. *x luerssenii*	0.1	120		0.1	120	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	WNG18-04	0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	40	
Solanum lasiophyllum	0.1	50		0.1	50	
Triodia pungens	0.5	30		0.5	30	
Triodia vanleeuwenii	11	25		11	25	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG19
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 662230 mE, 7442590 mN.
Habitat Crest of small low hill of a greater range with an east to west range.
Soil Reddish brown loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% boulders, 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low woodland over *Ptilotus rotundifolius*, *Senna glutinosa* subsp. *glutinosa*, *S. glutinosa* subsp. *pruinosa* scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland and *Paraneurachne muelleri* scattered tussock grasses.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Ptilotus rotundifolius*, *Senna glutinosa* subsp. *glutinosa*, *S. glutinosa* subsp. *pruinosa* scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland and *Paraneurachne muelleri* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens				0.1	30	WNG19R-03
Acacia aptaneura	0.1	10	WNG05-07=	0.1	10	
Acacia bivenosa	0.1	30		0.1	30	
Acacia maitlandii	0.1	25		0.1	25	
Acacia marramamba	0.1	50	WNG19-03	0.1	50	
Acacia pruinocarpa	0.1	80		0.1	80	
Aristida contorta	0.1	25		0.1	25	
Codonocarpus cotinifolius	0.1	250		0.1	250	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG19-02	0.1	50	
Cymbopogon ambiguus	0.1	60				
Dampiera candicans	0.1	30				
Dodonaea coriacea	0.1	20		0.1	20	
Duperreya commixta	0.1	20		0.1	20	
Eremophila forrestii subsp. *forrestii*	0.1	40		0.1	40	
Eremophila jucunda subsp. *pulcherrima*	0.1	20		0.1	20	
Eremophila latrobei subsp. *latrobei*	0.1	50		0.1	50	
Eriachne mucronata	0.1	30		0.1	30	
Eriachne mucronata (typical form)				0.1	30	
Eriachne pulchella	0.1	10				
Eucalyptus leucophloia subsp. *leucophloia*	8	600		8	600	
Goodenia stobbsiana	0.1	20		0.1	20	
Goodenia triodiophila	0.1	20				
Heliotropium inexplicitum	0.1	5	WNG19-04			
Hibiscus burtonii	0.1	60				
Hibiscus sturtii var. *campylochlamys*				0.1	20	WNG19R-01
Indigofera monophylla	0.1	20		0.1	20	
Paraneurachne muelleri	0.5	20		0.5	20	
Ptilotus calostachyus	0.1	80		0.1	80	
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus rotundifolius	0.5	60		0.5	60	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	20		0.1	20	
Senna glaucifolia	0.1	35				
Senna glutinosa subsp. *glutinosa*	0.5	100		0.5	100	
Senna glutinosa subsp. *pruinosa*	0.5	40		0.5	40	
Senna glutinosa subsp. *x luerssenii*	0.1	35		0.1	35	
Senna stricta	0.1	35		0.1	35	
Seringia elliptica	0.1	70		0.1	70	
Sida arenicola	0.1	110		0.1	110	
Sida echinocarpa	0.1	30		0.1	30	
Sida sp. Excedentifolia (J.L. Egan 1925)				0.1	40	WNG19R-02
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50	WNG19-01	0.1	50	
Solanum lasiophyllum	0.1	30		0.1	30	
Tribulus suberosus	0.1	40		0.1	40	
Triodia pungens	5	20		5	20	
Triodia vanleeuwenii	30	15		30	15	
Vincetoxicum lineare	0.1	10	WNG19-05			





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG20
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 24-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 667284 mE, 7440945 mN.
Habitat Crest and slopes of low stony rise (mudstone) all aspects.
Soil Light reddish brown clay loam.
Rock Type Mudstone: 1-25% outcropping, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Codonocarpus cotinifolius* scattered tall shrubs over *Eremophila fraseri* subsp. *fraseri*, (*Corchorus crozophorifolius*, *C. lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia pungens*, *T. wiseana* open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Codonocarpus cotinifolius* scattered tall shrubs over *Eremophila fraseri* subsp. *fraseri*, (*Corchorus crozophorifolius*, *Corchorus lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia pungens*, *T. wiseana* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	20	WNG20-10			
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	160	WNG14-08=	0.1	160	
Acacia bivenosa	0.1	80		0.1	80	
Acacia marramamba	0.1	35		0.1	35	
Acacia sibirica	0.1	60	WNG20-11	0.1	60	
Acacia sibirica (linear form)	0.1	60	WNG20-08	0.1	60	
Acacia tetragonophylla				0.1	40	
Aristida contorta	0.1	20		0.1	20	
Aristida holathera var. *holathera*				0.1	40	
Boerhavia coccinea	0.1	30		0.1	30	
Cleome viscosa	0.1	40		0.1	40	
Codonocarpus cotinifolius	0.5	350		0.5	350	
Corchorus crozophorifolius	0.1	60		0.1	60	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	WNG20-07	0.1	60	
Crotalaria medicaginea var. *neglecta*	0.1	30		0.1	30	
Cymbopogon ambiguus	0.1	80		0.1	80	
Duperreya commixta	0.1	60		0.1	60	
Enneapogon caerulescens	0.1	30	WNG20-01	0.1	30	
Enneapogon lindleyanus	0.5	45	WNG20-03	0.5	45	
Enneapogon polyphyllus	0.1	25		0.1	25	
Eremophila fraseri subsp. *fraseri*	2.5	80		2.5	80	
Eriachne aristidea	0.1	20				
Eucalyptus leucophloia subsp. *leucophloia*	0.5	700		0.5	700	
Euphorbia australis var. *subtomentosa*	0.1	5	WNG20-04	0.1	5	
Euphorbia coghlanii	0.1	30	WNG20-02	0.1	30	
Euphorbia tannensis subsp. *eremophila*	0.1	45		0.1	45	
Evolvulus alsinoides var. *villosicalyx*	0.1	20		0.1	20	
Goodenia muelleriana	0.1	20				
Hibiscus coatesii				0.1	60	
Hibiscus sturtii var. *grandiflorus*	0.1	40	WNG20-05			
Indigofera monophylla	0.1	50	WNG14-05=	0.1	50	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Iseilema vaginiflorum	0.1	10	WNG20-06			
Melhania oblongifolia	0.1	25		0.1	25	
Oldenlandia crouchiana	0.1	5	WNG20-09	0.1	5	
Paraneurachne muelleri	0.1	60		0.1	60	
Paspalidium clementii	0.1	6		0.1	6	
Ptilotus auriculifolius	0.1	35				
Ptilotus clementii	0.1	70		0.1	70	
Ptilotus exaltatus	0.1	50		0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Rhynchosia minima	0.1	40		0.1	40	
Salsola australis	0.1	30		0.1	30	
Santalum lanceolatum	0.1	160	WNG20-12	0.1	160	
Senna artemisioides subsp. *helmsii*	0.1	80		0.1	80	
Senna artemisioides subsp. *oligophylla*	0.1	50		0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	140		0.1	140	
Sida echinocarpa	0.1	50		0.1	50	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	190		0.1	190	
Solanum horridum	0.1	25		0.1	25	
Solanum lasiophyllum	0.1	50		0.1	50	
Sporobolus australasicus	0.1	10				
Swainsona maccullochiana	0.1	50				
Tephrosia densa	0.1	40		0.1	40	
Tribulus suberosus	0.1	60				
Triodia pungens	15	40		15	40	
Triodia wiseana	10	20		10	20	



Phase 2 photo not taken

West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG21
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 661728 mE, 7443028 mN.
Habitat Low to *medium* hill to the west of great east-west range.
Soil Reddish brown loam.
Rock Type Ironstone: 1-25% cobbles, 51-75% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia pachyacra*, *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Indigofera monophylla*, *Corchorus lasiocarpus* subsp. *parvus* scattered low shrubs over *Triodia vanleeuwenii* hummock grassland.
Phase 2: *Acacia pachyacra*, *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Indigofera monophylla*, *Corchorus lasiocarpus* subsp. *parvus* scattered low shrubs over *Triodia vanleeuwenii* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	20		0.1	20	
Acacia maitlandii	0.1	50		0.1	50	
Acacia marramamba	0.1	80	WNG19-03=	0.1	80	
Acacia pachyacra	0.5	180	WNG21-02	0.5	180	
Acacia pruinocarpa	0.1	60		0.1	60	
Acacia sibirica	0.1	50	WNG21-08	0.1	50	
Amphipogon sericeus	0.1	20	WNG13-02=	0.1	20	
Aristida contorta				0.1	30	
Aristida ingrata	0.1	50	WNG21-03	0.1	50	
Clerodendrum floribundum var. *angustifolium*	0.1	200		0.1	200	
Codonocarpus cotinifolius	0.1	100		0.1	100	
Corchorus lasiocarpus subsp. *parvus*	0.5	20	WNG19-02=	0.5	20	WNG21R-01
Cucumis variabilis	0.1	45				
Duperreya commixta	0.1	30		0.1	30	
Enneapogon polyphyllus	0.1	15				
Eragrostis setifolia	0.1	20	WNG03-03=	0.1	20	
Eremophila caespitosa	0.1	15	WNG01-03=	0.1	15	
Eremophila jucunda subsp. *pulcherrima*	0.1	25				
Eriachne pulchella	0.1	10				
Fimbristylis dichotoma	0.1	15	WNG21-01	0.1	15	
Fimbristylis simulans	0.1	5	WNG21-06			
Gomphrena cunninghamii	0.1	20				
Gomphrena kanisii	0.1	10	WNG05-16=			
Goodenia microptera	0.1	25		0.1	25	
Goodenia stobbsiana	0.1	20		0.1	20	
Hakea chordophylla	0.1	40		0.1	40	
Hakea lorea subsp. *lorea*				0.1	80	
Heliotropium inexplicitum	0.1	5	WNG19-04=	0.1	5	
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG21-05			
Indigofera monophylla	1	20		1	20	
Polycarpaea corymbosa var. *corymbosa*	0.1	15				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus calostachyus	0.1	80		0.1	80	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Ptilotus rotundifolius	0.1	70		0.1	70	
Ptilotus schwartzii var. *schwartzii*	0.1	30				
Schizachyrium fragile	0.1	20				
Senna artemisioides subsp. *helmsii*	0.1	30		0.1	30	
Senna artemisioides subsp. *oligophylla*	0.1	40				
Senna glutinosa subsp. *glutinosa*	0.5	110		0.5	110	
Senna glutinosa subsp. *pruinosa*	0.1	25		0.1	25	
Senna glutinosa subsp. *x luerssenii*	0.1	35		0.1	35	
Senna notabilis	0.1	35				
Senna stricta	0.1	20				
Sida arenicola	0.1	120		0.1	120	
Sida cardiophylla	0.1	35	WNG21-04	0.1	35	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	WNG21-07			
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40		0.1	40	
Solanum horridum	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	50		0.1	50	
Themeda triandra	0.1	50				
Tribulus suberosus	0.1	30		0.1	30	
Triodia pungens	0.1	20		0.1	20	
Triodia vanleeuwenii	35	20		35	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG22
Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 24-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 667036 mE, 7441237 mN.
Habitat Low rocky mudstone hill, crest and upper slopes, all aspects.
Soil Yellowish red clay loam.
Rock Type Mudstone, occasional quartz: 1-25% outcropping, 26-50% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Codonocarpus cotinifolius* scattered tall shrubs over *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Indigofera monophylla* (grey leaflet form), *Eremophila fraseri* subsp. *fraseri* low open shrubland over *Triodia pungens* open hummock grassland and *Enneapogon lindleyanus*, (*E. caerulescens*) very open tussock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Codonocarpus cotinifolius* scattered tall shrubs over *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Indigofera monophylla*, *Eremophila fraseri* subsp. *fraseri* low open shrubland over *Triodia pungens* open hummock grassland and *Enneapogon lindleyanus*, (*E. caerulescens*) very open tussock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	10	WNG22-02	0.1	10	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)				0.1	40	
Acacia 'aneura' sens. lat. (juvenile)	0.1	20	WNG22-06	0.1	20	
Acacia adsurgens				0.1	40	
Acacia bivenosa	0.1	70		0.1	70	
Acacia pyrifolia var. *pyrifolia*	0.1	50		0.1	50	
Anthobolus leptomerioides	0.1	90		0.1	90	WNG22R-01
Aristida contorta	0.1	20		0.1	20	
Capparis lasiantha				0.1	50	
Cleome viscosa	0.1	15		0.1	15	
Codonocarpus cotinifolius	0.1	400		0.1	400	
Corchorus crozophorifolius	0.1	60		0.1	60	
Cucumis variabilis	0.1	30				
Cullen leucochaites	0.1	130	WNG22-11	0.1	130	
Digitaria brownii				0.1	40	WNG22R-02
Duperreya commixta	0.1	40		0.1	40	
Dysphania rhadinostachya	0.1	8				
Enneapogon caerulescens	1	20	WNG20-01=	1	20	
Enneapogon lindleyanus	3	40	WNG20-03=	3	40	
Enneapogon polyphyllus	0.1	30		0.1	30	
Eremophila forrestii subsp. *forrestii*	0.1	70		0.1	70	
Eremophila fraseri subsp. *fraseri*	1.5	80		1.5	80	
Eremophila jucunda subsp. *pulcherrima*	0.1	35		0.1	35	
Eremophila phyllopoda subsp. *obliqua*	0.1	40		0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	400		0.1	400	
Euphorbia australis var. *subtomentosa*	0.1	3	WNG22-07	0.1	3	
Euphorbia coghlanii	0.1	40	WNG22-10	0.1	40	
Euphorbia tannensis subsp. *eremophila*	0.1	20		0.1	20	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Gomphrena kanisii	0.1	30	WNG22-09			
Goodenia microptera	0.1	40				
Grevillea berryana	0.1	140		0.1	140	
Heliotropium chrysocarpum				0.1	25	
Hibiscus coatesii	0.1	100		0.1	100	
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)	0.1	55		0.1	55	
Indigofera monophylla	2	70	WNG22-01	2	70	
Jasminum didymum subsp. *lineare*				0.1	60	
Melhania oblongifolia	0.1	25		0.1	25	
Nicotiana occidentalis subsp. *occidentalis*	0.1	40	WNG22-08			
Paraneurachne muelleri	0.1	50		0.1	50	
Paspalidium clementii	0.1	20		0.1	20	
Portulaca oleracea/intraterranea	0.1	5	WNG22-05			
Pterocaulon sphacelatum	0.1	40				
Ptilotus auriculifolius	0.1	20				
Ptilotus clementii	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	60		0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	80		0.1	80	
Rhagodia eremaea	0.1	60		0.1	60	
Salsola australis	0.1	40		0.1	40	
Santalum lanceolatum	0.1	50		0.1	50	
Scaevola acacioides	0.1	35		0.1	35	
Senna artemisioides subsp. *helmsii*	0.1	50		0.1	50	
Senna artemisioides subsp. *oligophylla*	0.1	80		0.1	80	
Senna glaucifolia				0.1	40	
Senna glutinosa subsp. *glutinosa*	0.1	60		0.1	60	
Senna notabilis	0.1	40				
Senna stricta x	0.1	55	WNG22-03	0.1	55	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	180		0.1	180	
Solanum horridum	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	55		0.1	55	
Sporobolus australasicus	0.1	20				
Tribulus suberosus	0.1	45		0.1	45	
Triodia pungens	15	45		15	45	
Triodia wiseana	0.1	25		0.1	25	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG23

Described by Phase 1: PL/CI Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 04-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 665488 mE, 7442424 mN.

Habitat Slope of *major* range.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Triodia pungens*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) very open tussock grassland

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Triodia pungens*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) very open tussock

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura				0.1	20	WNG23R-02
Acacia bivenosa	0.1	40		0.1	40	
Acacia maitlandii	0.1	120		0.1	120	
Acacia pruinocarpa	0.1	NR		0.1	NR	
Acacia rhodophloia	0.1	10				
Acacia tenuissima	0.1	90		0.1	90	
Acacia tetragonophylla	0.1	90		0.1	90	
Amphipogon sericeus	0.1	35		0.1	35	
Aristida contorta	0.1	20				
Aristida holathera var. *holathera*	0.1	35	WNG23-07			
Codonocarpus cotinifolius	0.1	25		0.1	25	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	WNG23-05	0.1	60	
Cymbopogon ambiguus	0.1	60		0.1	60	
Dampiera candicans	0.1	40		0.1	40	
Digitaria brownii	0.1	30		0.1	30	
Dodonaea coriacea	0.1	35		0.1	35	
Dodonaea viscosa subsp. *mucronata*	0.1	110		0.1	110	
Eremophila jucunda subsp. *pulcherrima*	0.1	50		0.1	50	
Eremophila latrobei subsp. *latrobei*	0.1	40		0.1	40	
Eriachne mucronata (typical form)	0.1	40	WNG23-06	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	2.5	600		2.5	600	
Goodenia microptera	0.1	30				
Goodenia stobbsiana	0.1	20				
Goodenia triodiophila	0.1	15				
Hakea chordophylla	0.1	320		0.1	320	
Hibiscus coatesii	0.1	110		0.1	110	
Hibiscus sturtii var. *campylochlamys*	0.1	30		0.1	30	
Paraneurachne muelleri	0.1	45		0.1	45	
Peripleura virgata	0.1	25				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus clementii	0.1	25				
Ptilotus exaltatus	0.1	40				
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Ptilotus rotundifolius	0.1	50		0.1	50	
Scaevola acacioides	0.1	70		0.1	70	
Senna artemisioides subsp. *helmsii*	0.1	30		0.1	30	
Senna ferraria	0.1	140		0.1	140	
Senna glutinosa subsp. *glutinosa*	0.1	160	WNG23-03	0.1	160	
Senna glutinosa subsp. *x luerssenii*	0.1	80		0.1	80	
Seringia nephrosperma	0.1	30				
Sida echinocarpa	0.1	40		0.1	40	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1	25	PL11=			
Solanum horridum	0.1	25		0.1	25	
Solanum kentrocaule	0.1	190	WNG23-04	0.1	190	
Solanum lasiophyllum	0.1	40		0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	3	70	WNG23-02	3	70	
Tribulus suberosus	0.1	70		0.1	70	
Triodia pungens	18	40	WNG23-01	18	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	1.5	50		1.5	50	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG24
Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 24-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 667400 mE, 7442403 mN.
Habitat Slope of low stony hill; moderate slope to the east.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% boulders, 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. x *luerssenii* scattered shrubs over *Acacia bivenosa* scattered low shrubs over *Triodia pungens* hummock grassland.

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. x *luerssenii* scattered shrubs over *Acacia bivenosa* scattered low shrubs over *Triodia pungens* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	20	WNG24-05	0.1	20	
Abutilon lepidum	0.1	30	WNG24-06	0.1	30	
Acacia 'aneura' sens. lat. (juvenile)	0.1	80	WNG24-01	0.1	80	
Acacia bivenosa	1.5	90		1.5	90	
Acacia pruinocarpa	0.1	120		0.1	120	
Anthobolus leptomerioides				0.1	50	WNG24R-01
Aristida contorta	0.1	30				
Cymbopogon obtectus	0.1	30		0.1	30	
Digitaria brownii	0.1	60		0.1	60	
Duperreya commixta	0.1	50		0.1	50	
Enchylaena tomentosa var. *tomentosa*	0.1	35				
Enneapogon lindleyanus	0.1	30				
Enneapogon polyphyllus	0.1	30				
Eremophila phyllopoda subsp. *obliqua*	0.1	25		0.1	25	
Eremophila platycalyx subsp. *pardalota*	0.1	50	WNG24-03	0.1	50	
Eriachne mucronata	0.1	40		0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	4	600		4	600	
Goodenia stobbsiana				0.1	20	
Hibiscus coatesii	0.1	60				
Hibiscus sturtii var. *grandiflorus*	0.1	30	WNG20-05=	0.1	30	
Indigofera monophylla	0.1	30		0.1	30	
Lepidium pedicellosum	0.1	40		0.1	40	
Maireana georgei	0.1	30				
Paspalidium clementii	0.1	20				
Pterocaulon sphacelatum				0.1	30	
Ptilotus calostachyus	0.1	40				
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	30				
Ptilotus obovatus var. *obovatus*	0.1	70		0.1	70	
Ptilotus rotundifolius	0.1	60		0.1	60	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Rhagodia eremaea				0.1	80	
Santalum lanceolatum	0.1	170		0.1	170	
Scaevola acacioides	0.1	50		0.1	50	
Senna artemisioides subsp. *helmsii*	0.1	40				
Senna artemisioides subsp. *oligophylla*				0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	30	WNG24-04	0.1	30	
Senna glutinosa subsp. *pruinosa*	0.1	30		0.1	30	
Senna glutinosa subsp. *x luerssenii*	0.1	130		0.1	130	
Senna stricta	0.1	10		0.1	10	
Sida echinocarpa				0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG24-02	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	35		0.1	35	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70				
Solanum horridum	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	70		0.1	70	
Tephrosia oxalidea	0.1	10	WNG24-07			
Tribulus suberosus	0.1	50		0.1	50	
Triodia pungens	45	40		45	40	





West Angelas Beyond 2020 Phase 1 Site WNG25
Described by BRMSC Date 25-Aug-18
Type Quadrat50 x 50 m
Central Coordinate 50K 664071 mE, 7442963 mN.
Habitat Crest and upper slope of hill of greater range with east-west aspect.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia deserticola* subsp. *deserticola*) low open woodland over *Senna glutinosa* subsp. *glutinosa*, *S. glutinosa* subsp. *pruinosa* scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland and *Paraneurachne muelleri* scattered tussock grasses.
Veg Condition Excellent.
Fire Age Burnt 2-3 years ago.

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	0.1	20	WNG-BS-32=
Acacia bivenosa	0.1	20	
Acacia maitlandii	0.1	40	
Acacia pachyacra	0.1	100	WNG21-02=
Acacia pruinocarpa	0.1	50	
Amphipogon sericeus	0.1	20	WNG13-02=
Aristida contorta	0.1	30	
Corchorus lasiocarpus subsp. *parvus*	0.1	20	WNG19-02=
Corymbia deserticola subsp. *deserticola*	0.5	300	
Cymbopogon ambiguus	0.1	45	
Dampiera candicans	0.1	30	
Dodonaea coriacea	0.1	50	
Eremophila jucunda subsp. *pulcherrima*	0.1	20	
Eremophila phyllopoda subsp. *obliqua*	0.1	30	WNG-BS-13=
Eriachne mucronata	0.1	20	
Eucalyptus gamophylla	0.1	150	WNG25-02
Eucalyptus leucophloia subsp. *leucophloia*	3	500	
Goodenia stobbsiana	0.1	10	
Goodenia triodiophila	0.1	20	
Hakea chordophylla	0.1	350	
Heliotropium inexplicitum	0.1	5	WNG19-04=
Hibiscus burtonii	0.1	40	
Hibiscus coatesii	0.1	40	WNG25-01
Hibiscus sturtii var. *campylochlamys*	0.1	15	
Indigofera monophylla	0.1	20	
Paraneurachne muelleri	0.5	35	
Ptilotus calostachyus	0.1	100	
Ptilotus rotundifolius	0.1	40	
Schizachyrium fragile	0.1	10	
Senna artemisioides subsp. *helmsii*	0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	35	
Senna glaucifolia	0.1	45	
Senna glutinosa subsp. *glutinosa*	0.5	30	
Senna glutinosa subsp. *pruinosa*	0.5	90	
Seringia elliptica	0.1	40	
Sida echinocarpa	0.1	40	
Solanum horridum	0.1	15	
Solanum lasiophyllum	0.1	35	
Triodia pungens	3	20	
Triodia vanleeuwenii	35	10	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG26
Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 24-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666720 mE, 7442397 mN.
Habitat Moderate to steep slope of a moderate-sized rocky hill with a north aspect.
Soil Red clay loam.
Rock Type Grey rock; chert? 51-75% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa*, *A. pruinocarpa* scattered shrubs over *Triodia pungens* hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa*, *A. pruinocarpa* scattered shrubs over *Triodia pungens* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	20	WNG24-06=	0.1	20	
Acacia aptaneura	0.1	120	WNG26-01	0.1	120	
Acacia bivenosa	1	150		1	150	
Acacia marramamba	0.1	100		0.1	100	
Acacia pruinocarpa	0.5	140		0.5	140	
Acacia tetragonophylla	0.1	40		0.1	40	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	20				
Capparis lasiantha	0.1	70		0.1	70	
Codonocarpus cotinifolius	0.1	180		0.1	180	
Cymbopogon ambiguus	0.1	90		0.1	90	
Enneapogon polyphyllus	0.1	30				
Eremophila jucunda subsp. *pulcherrima*	0.1	35		0.1	35	
Eremophila phyllopoda subsp. *obliqua*	0.1	35		0.1	35	
Eriachne mucronata (typical form)				0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	2	600		2	600	
Evolvulus alsinoides var. *villosicalyx*	0.1	10				
Goodenia microptera	0.1	30		0.1	30	
Goodenia stobbsiana	0.1	10		0.1	10	
Hibiscus coatesii	0.1	80				
Hibiscus sturtii				0.1	25	WNG26R-01
Hibiscus sturtii var. *grandiflorus*	0.1	25	WNG20-05=			
Indigofera monophylla	0.1	30		0.1	30	
Paraneurachne muelleri				0.1	20	
Paspalidium clementii	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	60		0.1	60	
Scaevola acacioides	0.1	40		0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	60	WNG26-02	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	130	WNG24-04=	0.1	130	
Senna glutinosa subsp. *pruinosa*	0.1	80		0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna glutinosa subsp. *x luerssenii*	0.1	80		0.1	80	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	WNG24-02=	0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50		0.1	50	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	130				
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	30		0.1	30	
Tephrosia oxalidea				0.1	5	WNG26R-02
Trichodesma zeylanicum var. *zeylanicum*				0.1	20	
Triodia pungens	50	40		50	40	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG27
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 666920 mE, 7443252 mN.
Habitat Low slope of a hill southwest of the greater east-west range.
Soil Reddish brown loam.
Rock Type Ironstone: 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Senna glutinosa* subsp. *pruinosa*, *S. glutinosa* subsp. *glutinosa*, *Acacia bivenosa* scattered low shrubs over *Triodia pungens*, (*T. vanleeuwenii*) hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Senna glutinosa* subsp. *pruinosa*, *S. glutinosa* subsp. *glutinosa*, *Acacia bivenosa* scattered low shrubs over *Triodia pungens*, (*T. vanleeuwenii*) hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	10	WNG27-03	0.1	10	
Acacia adsurgens	0.1	100	WNG27-04	0.1	100	
Acacia aptaneura	0.1	45	WNG-BS-32=	0.1	45	
Acacia bivenosa	0.5	70		0.5	70	
Acacia maitlandii	0.1	40				
Acacia marramamba	0.1	80	WNG19-03=	0.1	80	
Acacia pruinocarpa	0.1	70		0.1	70	
Acacia wanyu	0.1	50		0.1	40	
Amphipogon sericeus	0.1	15	WNG13-02=			
Aristida contorta				0.1	20	
Capparis lasiantha	0.1	80		0.1	80	
Duperreya commixta	0.1	20				
Enneapogon polyphyllus	0.1	15				
Eremophila jucunda subsp. *pulcherrima*	0.1	30		0.1	30	
Eriachne mucronata	0.1	30				
Eriachne mucronata (typical form)				0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	1	600		1	600	
Goodenia muelleriana	0.1	15	WNG27-02			
Goodenia stobbsiana	0.1	20		0.1	20	
Heliotropium inexplicitum	0.1	5	WNG19-04=			
Hibiscus sturtii var. *campylochlamys*	0.1	20	WNG21-05=	0.1	20	
Indigofera monophylla	0.1	20		0.1	20	
Lepidium pedicellosum	0.1	20	WNG-BS-11=	0.1	20	
Maireana georgei	0.1	20		0.1	20	
Paraneurachne muelleri				0.1	20	
Ptilotus calostachyus	0.1	40		0.1	40	
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	30				
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Scaevola acacioides				0.1	20	
Senna artemisioides subsp. *oligophylla*	0.1	30		0.1	30	
Senna glutinosa subsp. *glutinosa*	0.5	90		0.5	90	
Senna glutinosa subsp. *pruinosa*	1	80		1	80	
Senna glutinosa subsp. *x luerssenii*	0.1	80		0.1	80	
Senna stricta	0.1	10		0.1	10	
Sida cardiophylla	0.1	15	WNG21-04=			
Sida echinocarpa	0.1	40		0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	30	
Solanum horridum	0.1	15	WNG27-01	0.1	15	
Solanum lasiophyllum	0.1	30		0.1	30	
Triodia pungens	40	20		40	20	
Triodia vanleeuwenii	2	10		2	10	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG28
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 661791 mE, 7442344 mN.
Habitat Moderately steep hillslope.
Soil Reddish brown sandy clay loam.
Rock Type Ironstone, quartz, chert.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia marramamba*, *Corchorus lasiocarpus* subsp. *parvus*, *Sida* sp. Pilbara (A.A. Mitchell PRP 1543) scattered low shrubs over *Triodia pungens*, (*T. vanleeuwenii*) open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia marramamba*, *Corchorus lasiocarpus* subsp. *parvus*, *Sida* sp. Pilbara (A.A. Mitchell PRP 1543) scattered low shrubs over *Triodia pungens*, (*T. vanleeuwenii*) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	50	WNG28-07	0.1	50	
Acacia atkinsiana	0.1	40		0.1	40	
Acacia bivenosa	0.1	50		0.1	50	
Acacia hamersleyensis	0.1	90	WNG28-08			
Acacia maitlandii	0.1	60		0.1	60	
Acacia marramamba	0.5	90		0.5	90	
Acacia pruinocarpa	0.1	120		0.1	120	
Acacia rhodophloia	0.1	50		0.1	50	
Amphipogon sericeus	0.1	45		0.1	45	
Capparis lasiantha	0.1	70		0.1	70	
Codonocarpus cotinifolius	0.1	250		0.1	250	
Corchorus lasiocarpus subsp. *parvus*	0.5	50	REL02-03=	0.5	50	
Digitaria brownii	0.1	30				
Dodonaea pachyneura	0.1	10		0.1	10	
Duperreya commixta	0.1	80		0.1	80	
Eremophila jucunda subsp. *pulcherrima*	0.1	45		0.1	45	WNG28R-01
Eremophila latrobei	0.1	50		0.1	50	
Eriachne mucronata	0.1	30				
Eriachne mucronata (typical form)				0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	1.5	700		1.5	700	
Goodenia microptera	0.1	30				
Goodenia stobbsiana	0.1	10		0.1	10	
Goodenia triodiophila	0.1	30		0.1	30	
Gossypium robinsonii	0.1	90		0.1	90	
Hakea chordophylla	0.1	130		0.1	130	
Heliotropium chrysocarpum	0.1	40	WNG28-05	0.1	40	
Heliotropium inexplicitum	0.1	20	WNG28-04	0.1	20	
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)	0.1	50	WNG28-03			
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG28-02	0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Indigofera monophylla	0.1	30		0.1	30	
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus clementii	0.1	50				
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus rotundifolius	0.1	80		0.1	80	
Senna artemisioides subsp. *helmsii*	0.1	30		0.1	30	
Senna ferraria	0.1	120	WNG28-01	0.1	120	
Senna glutinosa subsp. *glutinosa*	0.1	130		0.1	130	
Senna glutinosa subsp. *pruinosa*	0.1	150		0.1	150	
Senna glutinosa subsp. *x luerssenii*	0.1	70		0.1	70	
Seringia elliptica	0.1	60		0.1	60	
Sida arenicola	0.1	80		0.1	80	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG24-02=	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.5	60		0.5	60	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	90				
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	70		0.1	70	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	80	WNG28-06	0.1	80	
Trichodesma zeylanicum var. *zeylanicum*				0.1	50	
Triodia pungens	25	30		25	30	
Triodia vanleeuwenii	3	20		3	20	
Vincetoxicum lineare	0.1	140		0.1	140	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG29
Described by Phase 1: BRMSC Phase 2: PL/CI Date Phase 1: 26-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 662143 mE, 7444157 mN.
Habitat Hardpan/floodplain between two east west ridges to the north and south.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia aptaneura* scattered low trees over *Ptilotus obovatus* scattered low shrubs over *Themeda triandra*, *Digitaria brownii* scattered tussock grasses.
Phase 2: *Acacia aptaneura* scattered low trees over *Ptilotus obovatus* scattered low shrubs over *Themeda triandra*, *Digitaria brownii* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Very good; presence of weeds (**Cenchrus ciliaris*); presence of donkeys (scats).
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum				0.1	25	
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	0.1	10	WNG29-06			
Acacia aptaneura	1	450	WNG29-16	1	450	
Acacia tetragonophylla				0.1	50	
Aristida contorta	32	20		5	20	
Aristida pruinosa	0.1	150	WNG29-09	0.1	150	
Boerhavia repleta				0.1	40	
Boerhavia sp.	0.1	5		0.1	20	
Cenchrus ciliaris	0.1	30		0.1	30	
Chrysopogon fallax	0.1	60		0.1	60	
Cleome viscosa	0.1	50		0.1	50	
Cucumis variabilis	0.1	40		0.1	40	
Cymbopogon obtectus	0.1	80	WNG29-07	0.1	80	
Digitaria brownii	0.5	50		0.5	50	
Duperreya commixta	0.1	150		0.1	150	
Enneapogon caerulescens	0.1	10	WNG29-01	0.1	10	
Enneapogon lindleyanus	0.1	50		0.1	50	
Enneapogon polyphyllus	0.1	10		0.1	10	
Enneapogon robustissimus				0.1	60	
Eragrostis xerophila	0.1	40	WNG29-10	0.1	40	
Eremophila forrestii subsp. *forrestii*	0.1	120	WNG29-03	0.1	120	
Eremophila longifolia	0.1	50		0.1	50	
Eremophila pusilliflora	0.1	30	WNG-BS-34=	0.1	30	
Euphorbia australis var. *subtomentosa*	0.1	5	WNG29-12	0.1	5	
Euphorbia biconvexa				0.1	25	WNG29R-03
Euphorbia boophthona	0.1	40	WNG29-05			
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Glycine canescens	0.1	40	WNG29-11	0.1	40	
Gnephosis arachnoidea	0.1	5	WNG-BS-41=			
Gomphrena kanisii				0.1	30	WNG29R-01

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Goodenia microptera	0.1	10				
Goodenia muelleriana	0.1	20	WNG09-12=			
Heliotropium cunninghamii				0.1	15	WNG29R-02
Hibiscus burtonii	0.1	80		0.1	80	
Indigofera colutea	0.1	10		0.1	10	
Indigofera linnaei				0.1	15	
Lepidium phlebopetalum	0.1	10	WNG29-13			
Maireana planifolia	0.1	40		0.1	40	
Paraneurachne muelleri	0.1	20		0.1	20	
Paspalidium constrictum				0.1	40	WNG29R-05
Perotis rara				0.1	10	
Polycarpaea corymbosa var. *corymbosa*	0.1	10				
Portulaca filifolia				0.1	10	WNG29R-08
Pterocaulon sphacelatum	0.1	60		0.1	40	
Pterocaulon sphaeranthoides				0.1	30	
Ptilotus aervoides	0.1	5	WNG29-08			
Ptilotus exaltatus	0.5	50		0.1	50	
Ptilotus helipteroides	0.1	5				
Ptilotus obovatus var. *obovatus*	0.5	40		0.5	40	
Roepera eichleri	0.1	5		0.1	5	
Salsola australis	0.1	20		0.1	20	
Sclerolaena cornishiana	0.1	10		0.1	10	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40		0.1	40	
Senna glutinosa subsp. *chatelainiana*	0.1	150	WNG29-15	0.1	150	
Senna glutinosa subsp. *x luerssenii*	0.1	40		0.1	40	
Senna notabilis	0.1	70		0.1	70	
Sida fibulifera	0.1	20		0.1	20	
Sida sp. L (A.M. Ashby 4202)				0.1	30	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	170		0.1	170	
Solanum lasiophyllum	0.1	40		0.1	40	
Solanum piceum	0.1	70	WNG-BS-40=	0.1	70	
Stenopetalum anfractum	0.1	10	WNG29-14	0.1	10	
Swainsona maccullochiana	0.1	40	WNG09-13=	0.1	40	
Swainsona sp.				0.1	5	WNG29R-04
Themeda triandra	0.5	70	WNG-BS-35=	0.5	70	
Tribulus suberosus				0.1	40	
Triodia pungens	0.1	20		0.1	20	
Tripogonella loliiformis				0.1	20	WNG29R-07





West Angelas Beyond 2020 Phase 1 Site WNG30

Described by Phase 1: BRMSC Date 22-Aug-18

Type Quadrat25 x 100m

Central Coordinate 50K 663204 mE, 7442342 mN.

Habitat Moderate hillslope to gentle footslope facing south.

Soil Yellowish red sandy clay loam.

Rock Type Ironstone, quartz, chert: 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 51-75% pebbles, 51-75% gravel.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Ptilotus rotundifolius*, P. *obovatus* scattered low shrubs over *Triodia pungens*, (*T. vanleeuwenii*) open hummock grassland.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Phase 1		
	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	30	WNG30-04
Acacia adsurgens	0.1	30	WNG30-06
Acacia 'aneura' sens. lat. (juvenile)	0.1	40	WNG30-05
Acacia ayersiana (narrow phyllode variant)	0.1	30	WNG30-03
Acacia bivenosa	0.1	60	
Acacia hamersleyensis	0.1	90	WNG28-08=
Acacia marramamba	0.1	40	
Acacia rhodophloia	0.1	40	
Acacia tetragonophylla	0.1	40	
Bulbostylis barbata	0.1	10	
Codonocarpus cotinifolius	0.1	60	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	REL02-03=
Dampiera candicans	0.1	40	
Dodonaea coriacea	0.1	30	
Dodonaea petiolaris	0.1	40	WNG30-01
Duperreya commixta	0.1	400	
Enneapogon caerulescens	0.1	20	
Enneapogon lindleyanus	0.1	15	
Enneapogon polyphyllus	0.1	15	
Eremophila jucunda subsp. *pulcherrima*	0.1	60	
Eremophila latrobei	0.1	35	
Eremophila phyllopoda subsp. *obliqua*	0.1	30	
Eriachne mucronata	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	3	700	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Goodenia microptera	0.1	20	
Goodenia muelleriana	0.1	30	
Goodenia stobbsiana	0.1	40	
Gossypium australe	0.1	150	
Grevillea berryana	0.1	110	
Heliotropium inexplicitum	0.1	10	WNG28-04=
Hibiscus coatesii	0.1	60	
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG28-02=
Indigofera monophylla	0.1	50	
Maireana villosa	0.1	30	
Paspalidium clementii	0.1	20	
Polycarpaea longiflora	0.1	20	
Psydrax suaveolens	0.1	50	
Ptilotus calostachyus	0.1	100	
Ptilotus clementii	0.1	30	
Ptilotus exaltatus	0.1	60	
Ptilotus helipteroides	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	60	
Ptilotus rotundifolius	0.1	30	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	50	
Salsola australis	0.1	10	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40	WNG30-02
Senna glutinosa subsp. *glutinosa*	0.1	90	
Senna glutinosa subsp. *x luerssenii*	0.1	100	
Senna stricta	0.1	40	
Seringia elliptica	0.1	40	
Sida echinocarpa	0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG24-02=

Species	Phase 1		
	Cover (%)	Height (cm)	Specimen
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50	
Solanum horridum	0.1	30	
Solanum lasiophyllum	0.1	25	
Sporobolus australasicus	0.1	10	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	80	WNG28-06=
Tribulus suberosus	0.1	60	
Triodia pungens	25	30	
Triodia vanleeuwenii	1	20	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG31
Described by Phase 1: BRMSC Phase 2: PL/Cl Date Phase 1: 26-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 662700 mE, 7444048 mN.
Habitat Floodplain.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia aptaneura* scattered shrubs over *Indigofera georgei* scattered low shrubs over *Triodia pungens* open hummock grassland and *Themeda triandra*, (*Digitaria brownii*) open tussock grassland.
Phase 2: *Acacia aptaneura* scattered low trees over *Ptilotus obovatus* scattered low shrubs over *Themeda triandra*, *Digitaria brownii* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Very good; presence of weeds (**Cenchrus ciliaris*); presence of donkeys (scats).
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	15		0.1	15	
Acacia 'aneura' sens. lat. (juvenile)	0.1	210	WNG31-10	0.1	210	
Acacia aptaneura	0.1	120	WNG-BS-32=	0.1	120	
Acacia pruinocarpa	0.1	160		0.1	160	
Acacia tetragonophylla				0.1	150	
Alternanthera nana				0.1	10	
Aristida contorta	0.1	20		0.1	20	
Aristida holathera var. *holathera*	0.1	20				
Aristida inaequiglumis				0.1	90	WNG31R-01
Boerhavia sp.				0.1	10	
Chrysocephalum gilesii	0.1	15	WNG07-20=			
Chrysopogon fallax	0.1	30		0.1	30	
Cleome viscosa	0.1	50		0.1	50	
Convolvulus clementii				0.1	30	
Corchorus tridens				0.1	15	WNG31R-02
Cucumis variabilis				0.1	40	
Cymbopogon obtectus	0.1	20		0.1	20	
Digitaria ammophila	0.1	10	WNG31-07	0.1	10	
Digitaria brownii	2	60	WNG31-01	2	60	
Duperreya commixta	0.1	30		0.1	30	
Enneapogon polyphyllus				0.1	30	
Eragrostis cumingii	0.1	5	REL15-05=			
Eriachne flaccida	0.1	10	WNG31-04	0.1	10	
Eulalia aurea				0.1	70	
Euphorbia biconvexa				0.1	35	WNG31R-03
Evolvulus alsinoides var. *villosicalyx*	0.1	5		0.1	5	
Goodenia triodiophila	0.1	5				
Hakea chordophylla	0.1	60				
Indigofera georgei	1	50	WNG07-01=	1	50	
Ipomoea muelleri	0.1	2	WNG31-05	0.1	2	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	50	WNG-BS-42=	0.1	50	
Marsdenia australis	0.1	40	WNG31-06	0.1	40	
Paraneurachne muelleri	0.1	45				
Peplidium muelleri	0.1	1	WNG-BS-48=	0.1	1	
Perotis rara				0.1	10	
Pluchea dunlopii	0.1	30	WNG-BS-50=	0.1	30	
Pterocaulon sphacelatum	0.1	30	WNG31-02	0.1	30	
Ptilotus exaltatus	0.1	15		0.1	15	
Ptilotus xerophilus	0.1	15	WNG31-08			
Salsola australis	0.1	20		0.1	20	
Senna artemisioides subsp. *oligophylla*				0.1	15	
Sida fibulifera	0.1	10				
Sida sp. L (A.M. Ashby 4202)				0.1	40	
Solanum piceum				0.1	80	WNG31R-04
Stemodia grossa	0.1	40	WNG31-09	0.1	40	
Themeda triandra	25	110		25	110	
Triodia pungens	20	20	WNG31-03	20	20	

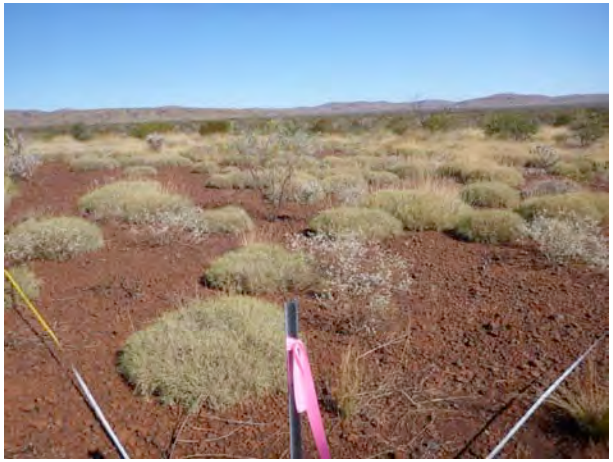




West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG32
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 25-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 663628 mE, 7441923 mN.
Habitat Broad stony plain and footslope.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia aptaneura*, *A. pruinocarpa* low open woodland over *A. bivenosa*, *A. ancistrocarpa* scattered tall shrubs over *Ptilotus obovatus*, mixed *Senna* spp. scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) very open hummock grassland and *Eragrostis eriopoda* scattered tussock grasses.
Phase 2: *Acacia aptaneura*, *A. pruinocarpa* low open woodland over *A. bivenosa*, *A. ancistrocarpa* scattered tall shrubs over *Ptilotus obovatus*, mixed *Senna* spp. scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) very open hummock grassland and *Eragrostis setifolia* scattered tussock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	15		0.1	15	
Acacia 'aneura' sens. lat. (juvenile)	0.1	210	WNG31-10	0.1	210	
Acacia aptaneura	0.1	120	WNG-BS-32=	0.1	120	
Acacia pruinocarpa	0.1	160		0.1	160	
Acacia tetragonophylla				0.1	150	
Alternanthera nana				0.1	10	
Aristida contorta	0.1	20		0.1	20	
Aristida holathera var. *holathera*	0.1	20				
Aristida inaequiglumis				0.1	90	WNG31R-01
Boerhavia sp.				0.1	10	
Chrysocephalum gilesii	0.1	15	WNG07-20=			
Chrysopogon fallax	0.1	30		0.1	30	
Cleome viscosa	0.1	50		0.1	50	
Convolvulus clementii				0.1	30	
Corchorus tridens				0.1	15	WNG31R-02
Cucumis variabilis				0.1	40	
Cymbopogon obtectus	0.1	20		0.1	20	
Digitaria ammophila	0.1	10	WNG31-07	0.1	10	
Digitaria brownii	2	60	WNG31-01	2	60	
Duperreya commixta	0.1	30		0.1	30	
Enneapogon polyphyllus				0.1	30	
Eragrostis cumingii	0.1	5	REL15-05=			
Eriachne flaccida	0.1	10	WNG31-04	0.1	10	
Eulalia aurea				0.1	70	
Euphorbia biconvexa				0.1	35	WNG31R-03
Evolvulus alsinoides var. *villosicalyx*	0.1	5		0.1	5	
Goodenia triodiophila	0.1	5				
Hakea chordophylla	0.1	60				
Indigofera georgei	1	50	WNG07-01=	1	50	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ipomoea muelleri	0.1	2	WNG31-05	0.1	2	
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	50	WNG-BS-42=	0.1	50	
Marsdenia australis	0.1	40	WNG31-06	0.1	40	
Paraneurachne muelleri	0.1	45				
Peplidium muelleri	0.1	1	WNG-BS-48=	0.1	1	
Perotis rara				0.1	10	
Pluchea dunlopii	0.1	30	WNG-BS-50=	0.1	30	
Pterocaulon sphacelatum	0.1	30	WNG31-02	0.1	30	
Ptilotus exaltatus	0.1	15		0.1	15	
Ptilotus xerophilus	0.1	15	WNG31-08			
Salsola australis	0.1	20		0.1	20	
Senna artemisioides subsp. *oligophylla*				0.1	15	
Sida fibulifera	0.1	10				
Sida sp. L (A.M. Ashby 4202)				0.1	40	
Solanum piceum				0.1	80	WNG31R-04
Stemodia grossa	0.1	40	WNG31-09	0.1	40	
Themeda triandra	25	110		25	110	
Triodia pungens	20	20	WNG31-03	20	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG33
Described by Phase 1: BRMSC Phase 2: PL/CI Date Phase 1: 26-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 663035 mE, 7443670 mN.
Habitat Hardpan plain between two east-west ridges.
Soil Reddish brown clay loam.
Rock Type Ironstone: 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Acacia aptaneura*, *A. ayersiana* low open woodland over *A. aptaneura* open shrubland over *Eremophila caespitosa* low open shrubland over *Triodia pungens* very open hummock grassland.
Phase 2: *Acacia aptaneura*, (*A. ayersiana*) low open woodland over *A. aptaneura* open shrubland over *Eremophila caespitosa* low open shrubland over *Triodia pungens* very open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	8	450	WNG33-02	12	450	
Acacia ayersiana	3	250	WNG33-01	3	250	
Acacia catenulata subsp. *occidentalis*				0.5	300	
Acacia pruinocarpa	0.1	240		0.1	240	
Acacia rhodophloia	0.1	100		0.1	100	
Acacia tetragonophylla	0.1	120		0.1	120	
Aristida contorta	0.1	20		0.1	20	
Cheilanthes sieberi subsp. *sieberi*				0.1	15	
Eragrostis cumingii	0.1	30	REL15-05=	0.1	30	
Eragrostis setifolia	0.1	30	WNG03-03=	0.1	30	WNGR33-01=
Eremophila caespitosa	5	30		5	30	
Eremophila forrestii subsp. *forrestii*	0.1	20		0.1	20	
Hibiscus burtonii				0.1	40	
Maireana planifolia x villosa	0.1	60	WNG05-13=	0.1	60	
Maireana villosa	0.1	30	WNG05-01=	0.1	30	
Psydrax suaveolens	0.1	210		0.1	210	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Ptilotus polystachyus	0.1	30				
Ptilotus schwartzii var. *schwartzii*	0.1	30		0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	15				
Solanum lasiophyllum	0.1	45		0.1	45	
Triodia pungens	3	50	WNG31-03=	3	50	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG34

Described by Phase 1: PL/CI Phase 2: PL/CI Date Phase 1: 27-Aug-18 Phase 2: 05-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 670733 mE, 7443312 mN.

Habitat Slope and crest of a *major* hill on a on a north to northwest facing slope.

Soil Dark reddish brown clay loam.

Rock Type Ironstone, BIF: 26-50% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Hakea chordophylla* scattered tall shrubs over *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *T. pungens* open hummock grassland and *Eriachne mucronata* scattered tussock grasses.

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Hakea chordophylla* scattered tall shrubs over *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *T. pungens* open hummock grassland and *Eriachne mucronata* scattered tussock grasses.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens	0.1	80		0.1	80	
Acacia bivenosa	0.1	170		0.1	170	
Acacia dictyophleba	0.1	70		0.1	70	
Acacia pruinocarpa	0.1	100		0.1	100	
Acacia rhodophloia				0.1	40	WNG34R-01
Acacia tenuissima	0.1	90		0.1	90	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	40		0.1	40	
Codonocarpus cotinifolius	0.1	200		0.1	200	
Corchorus lasiocarpus subsp. *parvus*				0.1	40	
Cymbopogon ambiguus	0.1	80		0.1	80	
Cymbopogon obtectus	0.1	50		0.1	50	
Dampiera candicans	0.1	30		0.1	30	
Eremophila longifolia	0.1	150		0.1	150	
Eriachne mucronata (arid form) (MET 12 736)	0.5	20		0.5	20	
Eucalyptus leucophloia subsp. *leucophloia*	5	400		5	400	
Goodenia stobbsiana	0.1	40		0.1	40	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	1	350		1	350	
Heliotropium inexplicitum	0.1	10	WNG34-04			
Hibiscus coatesii	0.1	70		0.1	70	
Paraneurachne muelleri	0.1	40		0.1	40	
Peripleura virgata	0.1	30				
Ptilotus calostachyus	0.1	80		0.1	80	
Senna ferraria	0.1	180	WNG34-02			
Senna glutinosa subsp. *glutinosa*	0.1	150	WNG34-01	0.1	150	
Senna notabilis	0.1	50		0.1	50	
Sida echinocarpa	0.1	25				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	10		0.1	10	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30				
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	40		0.1	40	
Tephrosia oxalidea				0.1	10	
Triodia pungens	11	30		11	30	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	14	60		14	60	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG35
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 27-Aug-18 Phase 2: 05-Apr-19
Type Quadrat25 x 100m
Central Coordinate 50K 669237 mE, 7441824 mN.
Habitat Drainage northeast to southwest.
Soil Reddish brown sandy loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus xerothermica*, *Corymbia hamersleyana* scattered low trees over *Petalostylis labicheoides*, (*Androcalva luteiflora*, *Acacia monticola*) tall closed shrubland over *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*Corchorus lasiocarpus* subsp. *parvus*, *Ptilotus obovatus*) low open shrubland over *Paraneurachne muelleri*, (*Themeda triandra*, *Eriachne mucronata*) very open tussock grassland and *Triodia pungens* scattered hummock grasses.
Phase 2: *Eucalyptus xerothermica*, *Corymbia hamersleyana* scattered low trees over *Petalostylis labicheoides*, (*Androcalva luteiflora*, *Acacia monticola*) tall closed scrub over *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered shrubs over *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*Corchorus lasiocarpus* subsp. *parvus*, *Ptilotus obovatus*) low open shrubland over *Paraneurachne muelleri*, (*Themeda triandra*, *Eriachne mucronata*) very open tussock grassland and *Triodia pungens* scattered hummock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	20				
Acacia bivenosa	0.1	60		0.1	60	
Acacia monticola	1	250		1	250	
Acacia pruinocarpa	0.1	170		0.1	170	
Androcalva luteiflora	2	220		2	220	
Anthobolus leptomerioides	0.1	60		0.1	60	
Aristida contorta	0.1	20		0.1	20	
Aristida holathera var. *holathera*	0.1	30				
Aristida pruinosa	0.1	100	WNG29-09=	0.1	100	
Capparis lasiantha				0.1	40	
Corchorus lasiocarpus subsp. *parvus*	1	40	WNG19-02=	1	40	
Corymbia hamersleyana	0.5	600		0.5	600	
Digitaria brownii	0.1	30	WNG35-01	0.1	30	
Duperreya commixta	0.1	60		0.1	60	
Enneapogon caerulescens	0.1	30				
Enneapogon polyphyllus	0.1	20				
Eremophila forrestii subsp. *forrestii*	0.1	20		0.1	20	
Eremophila longifolia	0.1	60		0.1	60	
Eriachne mucronata	0.5	35		0.5	35	
Eucalyptus leucophloia subsp. *leucophloia*				0.1	50	
Eucalyptus xerothermica	1	300	WNG35-02	1	300	
Euphorbia biconvexa	0.1	15	WNG35-03			
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Gossypium robinsonii	0.1	300		0.1	300	
Hibiscus coatesii	0.1	60				
Hibiscus sturtii var. *grandiflorus*	0.1	20	WNG-BS-43=	0.1	20	
Indigofera georgei	0.1	70		0.1	70	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Indigofera monophylla	0.1	20		0.1	20	
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	30	WNG-BS-42=	0.1	30	
Jasminum didymum subsp. *lineare*	0.1	50		0.1	50	
Paraneurachne muelleri	3	40		3	40	
Petalostylis labicheoides	70	250		70	250	
Ptilotus calostachyus	0.1	40		0.1	40	
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	50		0.1	50	
Ptilotus helipteroides	0.1	10				
Ptilotus obovatus var. *obovatus*	0.5	60		0.5	60	
Ptilotus polystachyus	0.1	30				
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	70		0.1	70	WNG35R-01
Salsola australis	0.1	20		0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	60		0.1	60	
Senna glutinosa subsp. *x luerssenii*	0.1	60				
Senna stricta				0.1	30	
Seringia elliptica	0.1	50		0.1	50	
Setaria dielsii	0.1	20				
Sida fibulifera	0.1	10		0.1	10	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	1	120		1	120	
Solanum horridum	0.1	10		0.1	10	
Solanum lasiophyllum	0.1	25		0.1	25	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	4	60		4	60	
Themeda triandra	1	100		1	100	
Triodia pungens	1	30		1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG36
Described by Phase 1: MM/RM Phase 2: PL/CI Date Phase 1: 27-Aug-18 Phase 2: 05-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 670516 mE, 7443114 mN.
Habitat Hillcrest and upper slope of a west facing hill.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Eriachne mucronata* very open tussock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Eriachne mucronata* very open tussock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura				0.1	25	
Acacia bivenosa	0.1	30		0.1	30	
Acacia dictyophleba	0.1	100		0.1	100	
Acacia marramamba	0.1	70		0.1	70	
Acacia pruinocarpa	0.1	90		0.1	90	
Amphipogon sericeus	0.1	50		0.1	50	
Cheilanthes brownii				0.1	10	WNG36R-01
Chrysocephalum pterochaetum	0.1	30	WNG36-05	0.1	30	
Codonocarpus cotinifolius	0.1	90		0.1	90	
Cymbopogon ambiguus	0.1	70		0.1	70	
Dodonaea pachyneura	0.1	40		0.1	40	
Eremophila jucunda subsp. *pulcherrima*	0.1	25		0.1	25	
Eriachne mucronata	4	40		4	40	
Eucalyptus leucophloia subsp. *leucophloia*	3	550		3	550	
Eulalia aurea	0.1	50		0.1	50	
Goodenia stobbsiana	0.1	20		0.1	20	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	100		0.1	100	
Hibiscus coatesii	0.1	40		0.1	40	
Paraneurachne muelleri				0.1	40	
Peripleura virgata	0.1	20		0.1	20	
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	30				
Ptilotus rotundifolius	0.1	60		0.1	60	
Senna artemisioides subsp. *helmsii*	0.1	30	WNG36-03			
Senna artemisioides subsp. *oligophylla*	0.1	35		0.1	35	
Senna ferraria	0.1	140	WNG36-01	0.1	140	
Senna glutinosa subsp. *glutinosa*	0.1	70		0.1	70	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna glutinosa subsp. *x luerssenii*	0.1	50		0.1	50	
Sida arenicola	0.1	70				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG36-02	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40		0.1	40	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40		0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	160		0.1	160	
Solanum lasiophyllum	0.1	20		0.1	20	
Tephrosia oxalidea	0.1	10	WNG36-04	0.1	10	
Themeda triandra	0.1	90		0.1	90	
Tribulus suberosus	0.1	40		0.1	40	
Trichodesma zeylanicum var. *zeylanicum*	0.1	80				
Triodia pungens	12	20		12	20	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	3	50		3	50	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG37
Described by Phase 1: BRMSC Phase 2: PL/CI Date Phase 1: 27-Aug-18 Phase 2: 03-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 662178 mE, 7443819 mN.
Habitat Floodplain between two east-west ranges.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% pebbles.
Vegetation Phase 1: *Isotropis* sp. Arid zone (G. Byrne 2775), *Dipteracanthus australasicus* subsp. *australasicus* scattered low shrubs over *Themeda triandra*, (*Chrysopogon fallax*) closed tussock grassland and *Triodia pungens* scattered hummock grasses.
Phase 2: *Isotropis* sp. Arid zone (G. Byrne 2775), *Dipteracanthus australasicus* subsp. *australasicus* scattered low shrubs over *Themeda triandra*, (*Chrysopogon fallax*) closed tussock grassland and *Triodia pungens* scattered hummock grasses.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	5		0.1	5	
Acacia aptaneura	0.1	180	WNG-BS-32=	0.1	180	
Acacia pruinocarpa	0.1	20		0.1	20	
Alternanthera nana				0.1	10	
Aristida contorta	0.1	15		0.1	15	
Bidens bipinnata				0.1	20	
Boerhavia sp.				0.1	30	
Cheilanthes sieberi subsp. *sieberi*				0.1	25	
Chrysocephalum gilesii	0.1	10	WNG07-20=	0.1	10	
Chrysopogon fallax	1	110		1	110	
Cleome viscosa	1	40		1	40	
Convolvulus clementii				0.1	30	
Cucumis variabilis	0.1	30		0.1	30	
Digitaria ammophila	0.1	30	WNG37-02	0.1	30	
Digitaria brownii	0.1	70	WNG35-01=	0.1	70	
Dipteracanthus australasicus subsp. *australasicus*	0.5	20	WNG07-13=	0.5	20	
Duperreya commixta				0.1	10	
Enneapogon lindleyanus	0.1	40				
Enneapogon polyphyllus	0.1	10		0.1	10	
Enneapogon robustissimus				0.1	50	WNG37R-04
Euphorbia biconvexa				0.1	40	WNG37R-03
Evolvulus alsinoides var. *villosicalyx*	0.1	10	WNG37-01	0.1	10	
Fimbristylis dichotoma				0.1	25	WNG37R-01
Flaveria trinervia				0.1	20	
Goodenia stellata	0.1	1	WNG37-03	0.1	1	
Gossypium australe				0.1	40	
Hakea lorea subsp. *lorea*	0.1	600		0.1	600	
Indigofera georgei	0.1	45		0.1	45	
Ipomoea muelleri				0.1	45	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ipomoea plebeia				0.1	10	WNG37R-02
Isotropis sp. Arid zone (G. Byrne 2775)	1	80	WNG-BS-42=	1	80	
Maireana planifolia	0.1	20				
Pluchea dunlopii	0.1	15	WNG-BS-50=			
Pterocaulon sphacelatum	0.1	20	WNG31-02=	0.1	20	
Ptilotus obovatus var. *obovatus*				0.1	40	
Rhynchosia minima				0.1	35	
Salsola australis	0.1	10		0.1	10	
Senna artemisioides subsp. *helmsii*				0.1	20	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	50	WNG37R-05
Senna notabilis				0.1	10	
Sida fibulifera	0.1	20		0.1	20	
Sida sp. L (A.M. Ashby 4202)				0.1	30	
Themeda triandra	75	120		75	120	
Tribulus suberosus				0.1	50	
Triodia pungens	0.5	20		0.5	20	
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	0.1	100	WNG37-04	0.1	100	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG38

Described by Phase 1: MM/RM Phase 2: BRMTB Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 666595 mE, 7442025 mN.

Habitat Upper hillslope to midslope.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone, quartz, chert: 1-25% outcrop, 26-50% cobbles, 26-50% pebbles.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* open shrubland over *Triodia pungens* hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* open shrubland over *Triodia pungens* hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	60	WNG38-01	0.1	60	
Acacia bivenosa	3	120		3	120	
Acacia pruinocarpa				0.1	130	
Acacia synchronicia	0.1	30	WNG38-04			
Acacia tetragonophylla	0.1	30				
Amphipogon sericeus	0.1	30				
Chrysopogon fallax	0.1	60				
Codonocarpus cotinifolius	0.1	190		0.1	190	
Cymbopogon sp.	0.1	60				
Digitaria brownii	0.1	45				
Duperreya commixta	0.1	180		0.1	180	
Enneapogon polyphyllus	0.1	40	WNG38-02			
Eremophila jucunda subsp. *pulcherrima*	0.1	40		0.1	40	
Eremophila latrobei	0.1	50				
Eriachne mucronata	0.1	40				
Eriachne mucronata (typical form)				0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	450		0.5	450	
Euphorbia drummondii	0.1	15	WNG38-05			
Goodenia microptera	0.1	30				
Goodenia stobbsiana	0.1	40		0.1	40	
Gossypium robinsonii	0.1	110		0.1	110	
Heliotropium inexplicitum	0.1	10	WNG34-04=			
Hibiscus coatesii	0.1	90				
Oldenlandia crouchiana				0.1	10	WNG38R-01
Paspalidium clementii	0.1	10				
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	35				
Salsola australis				0.1	30	
Schizachyrium fragile	0.1	10				
Senna ferraria	0.1	150		0.1	150	
Senna ferraria x S. glutinosa subsp. *glutinosa*	0.1	60	WNG38-03			

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna glutinosa subsp. *glutinosa*	0.1	170		0.1	170	
Senna glutinosa subsp. *x luerssenii*	0.1	90		0.1	90	
Senna notabilis	0.1	70		0.1	70	
Sida echinocarpa	0.1	45		0.1	45	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30		0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45		0.1	45	
Solanum horridum	0.1	40		0.1	40	
Solanum lasiophyllum	0.1	60		0.1	60	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60				
Triodia pungens	35	30		35	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG39
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 27-Aug-18 Phase 2: 04-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 665235 mE, 7443614 mN.
Habitat Low hills/foothills of low slope of east-west range, north side.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25%, 51-75% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Acacia pruinocarpa*) scattered low trees (resprouting) over *A. wanyu*, (*Ptilotus rotundifolius*) low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Acacia pruinocarpa*) scattered low trees (resprouting) over *A. wanyu*, (*Ptilotus rotundifolius*) low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens				0.1	20	WNG39R-02
Acacia aptaneura	0.1	45	WNG-BS-32=	0.1	45	
Acacia bivenosa	0.1	20		0.1	20	
Acacia pruinocarpa	0.1	60		0.1	60	
Acacia tetragonophylla	0.1	40		0.1	40	
Acacia wanyu	4	50	WNG39-01	4	50	
Aristida contorta	0.1	10				
Codonocarpus cotinifolius	0.1	5		0.1	5	
Duperreya commixta	0.1	20		0.1	20	
Enneapogon lindleyanus	0.1	40		0.1	40	
Enneapogon polyphyllus	0.1	10				
Eremophila phyllopoda subsp. *obliqua*	0.1	30	WNG-BS-13=	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	220		0.1	220	
Gomphrena kanisii	0.1	25	WNG39-03			
Heliotropium inexplicitum	0.1	5	WNG19-04=	0.1	5	
Hibiscus sturtii var. aff. *truncatus*	0.1	30	WNG39-04	0.1	30	
Hibiscus sturtii var. *campylochlamys*	0.1	35	WNG39-02	0.1	35	WNG39R-01
Indigofera monophylla	0.1	20		0.1	20	
Paraneurachne muelleri	0.1	30		0.1	30	
Ptilotus astrolasius	0.1	20	WNG39-05			
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	40				
Ptilotus rotundifolius	0.5	60		0.5	60	
Salsola australis	0.1	30		0.1	30	
Scaevola acacioides	0.1	40		0.1	40	
Senna artemisioides subsp. *helmsii*	0.1	20		0.1	20	
Senna glutinosa subsp. *pruinosa*	0.1	80		0.1	80	
Senna glutinosa subsp. *x luerssenii*	0.1	40		0.1	40	
Senna stricta	0.1	20		0.1	20	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida sp. Excedentifolia (J.L. Egan 1925)				0.1	20	WNG39R-03
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20	WNG19-01=	0.1	20	
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	50		0.1	50	
Triodia pungens	1	20		1	20	
Triodia vanleeuwenii	35	15		35	15	

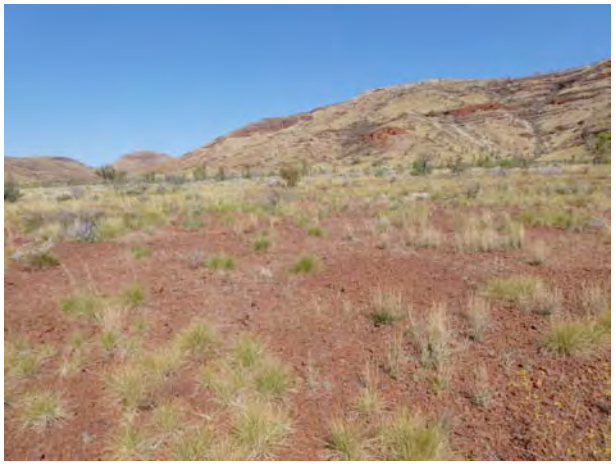




West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG40
Described by Phase 1: PL/CI Phase 2: PL/CI Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 671031mE, 7444380 mN.
Habitat Gently sloping footslope south of a *major* drainage.
Soil Dark reddish brown clay loam.
Rock Type Ironstone.
Vegetation Phase 1: *Acacia wanyu*, (*A. pruinocarpa*) scattered shrubs over *Corchorus lasiocarpus* subsp. *parvus*, *Ptilotus rotundifolius*, *Indigofera georgei* low open shrubland over *Triodia pungens* open hummock grassland.
Phase 2: *Acacia wanyu*, (*A. pruinocarpa*) scattered shrubs over *Corchorus lasiocarpus* subsp. *parvus*, *Ptilotus rotundifolius*, *Indigofera georgei* low open shrubland over *Triodia pungens* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	5				
Acacia bivenosa	0.1	50		0.1	50	
Acacia cowleana	0.1	100	WNG40-03	0.1	100	
Acacia pachyacra	0.1	220		0.1	220	
Acacia pruinocarpa	0.5	170		0.5	170	
Acacia wanyu	1	110		1	110	
Aristida contorta	0.1	15		0.1	15	
Aristida holathera var. *holathera*	0.1	10		0.1	10	
Codonocarpus cotinifolius	0.1	150		0.1	150	
Corchorus lasiocarpus subsp. *parvus*	1	60		1	60	
Cymbopogon obtectus	0.1	25		0.1	25	
Duperreya commixta	0.1	80		0.1	80	
Eragrostis setifolia				0.1	40	WNG40R-01
Eremophila fraseri subsp. *fraseri*	0.1	30		0.1	30	
Eriachne pulchella	0.1	10				
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Gossypium robinsonii	0.1	50		0.1	50	
Hakea lorea subsp. *lorea*				0.1	30	
Heliotropium inexplicitum	0.1	5	WNG40-02	0.1	5	
Hibiscus coatesii				0.1	50	
Indigofera georgei	0.5	60				
Indigofera monophylla	0.1	20		0.1	20	
Paraneurachne muelleri	0.1	50		0.1	50	
Ptilotus calostachyus	0.1	100		0.1	100	
Ptilotus clementii	0.1	40				
Ptilotus exaltatus	0.1	50		0.1	50	
Ptilotus obovatus var. *obovatus*				0.1	30	
Ptilotus rotundifolius	1	80		1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Salsola australis	0.1	40		0.1	40	
Schizachyrium fragile	0.1	10				
Senna artemisioides subsp. *helmsii*	0.1	60		0.1	60	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40		0.1	40	
Senna glutinosa subsp. *glutinosa*	0.1	70	WNG40-05	0.1	70	
Senna glutinosa subsp. *glutinosa x* subsp. *x luerssenii*	0.1	70		0.1	70	
Senna glutinosa subsp. *pruinosa*	0.1	100		0.1	100	
Senna glutinosa subsp. *x luerssenii*	0.1	50		0.1	50	
Senna stricta	0.1	30		0.1	30	
Seringia nephrosperma	0.1	40				
Sida cardiophylla	0.1	60		0.1	60	
Sida echinocarpa	0.1	60		0.1	60	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	100		0.1	100	
Tribulus suberosus	0.1	60		0.1	60	
Triodia pungens	12	40		12	40	
Vincetoxicum lineare	0.1	80				





West Angelas Beyond 2020 Phase 1 Site WNG41
Described by BRMSC Date 28-Aug-18
Type Quadrat50 x 50 m
Central Coordinate 50K 665948mE, 7443649mN.

Habitat Footslope of east-west BIF range.

Soil Reddish brown clay loam.

Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 26-50% gravel.

Vegetation *Acacia pruinocarpa* scattered low trees over *A. wanyu*, *Senna glutinosa* subsp. *pruinosa*, (*S. glutinosa* subsp. x *luerssenii*, *S. stricta*) low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	15	
Acacia pruinocarpa	0.1	70	
Acacia wanyu	1.5	70	
Aristida contorta	0.1	20	
Aristida holathera var. *holathera*	0.1	15	
Codonocarpus cotinifolius	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	0.1	20	WNG19-02=
Duperreya commixta	0.1	20	
Enneapogon polyphyllus	0.1	20	
Eremophila cuneifolia	0.1	35	
Eremophila longifolia	0.1	30	
Heliotropium inexplicitum	0.1	5	WNG19-04=
Hibiscus coatesii	0.1	30	WNG-BS-58=
Hibiscus sturtii var. *campylochlamys*	0.1	40	WNG39-02=
Indigofera monophylla	0.1	25	
Paraneurachne muelleri	0.1	30	
Ptilotus calostachyus	0.1	80	
Ptilotus exaltatus	0.1	30	
Ptilotus rotundifolius	0.1	70	
Salsola australis	0.1	20	
Scaevola acacioides	0.1	40	
Schizachyrium fragile	0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	25	
Senna glutinosa subsp. *glutinosa*	0.1	60	
Senna glutinosa subsp. *pruinosa*	2	60	
Senna glutinosa subsp. *x luerssenii*	0.5	70	
Senna notabilis	0.1	40	
Senna stricta	0.5	30	
Sida echinocarpa	0.1	20	
Sida fibulifera	0.1	30	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	35	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	40	
Solanum horridum	0.1	20	
Solanum lasiophyllum	0.1	50	
Tribulus suberosus	0.1	30	
Triodia pungens	2	20	
Triodia vanleeuwenii	35	15	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG42
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19
Type Quadrat62.5 x 40m
Central Coordinate 50K 670707 mE, 7442242 mN.
Habitat Lower footslope south aspect, very gravelly with cobbles and pebbles.
Soil Dark reddish clay loam.
Rock Type Ironstone, chert, some mudstone.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* scattered low shrubs over *Triodia longiceps*, (*T. pungens*) open hummock grassland over *Sclerolaena* spp. scattered herbs.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* scattered low shrubs over *Triodia longiceps*, (*T. pungens*) open hummock grassland over *Sclerolaena* spp. scattered herbs.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.5	100		0.5	100	
Acacia cowleana	0.1	30	WNG42-05	0.1	30	
Acacia pachyacra	0.1	110		0.1	110	
Acacia tenuissima	0.1	30				
Acacia tetragonophylla	0.1	50		0.1	50	
Amphipogon sericeus	0.1	30				
Aristida contorta	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	40				
Aristida ingrata	0.1	70	WNG42-09	0.1	70	
Codonocarpus cotinifolius	0.1	120		0.1	120	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	WNG42-07	0.1	60	
Cucumis variabilis	0.1	10				
Cymbopogon obtectus	0.1	60		0.1	60	
Enneapogon polyphyllus	0.1	20	WNG42-02	0.1	20	
Eriachne pulchella	0.1	5				
Eucalyptus leucophloia subsp. *leucophloia*	3	550		3	550	
Gomphrena kanisii	0.1	20	WNG42-08			
Goodenia muelleriana	0.1	30				
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG42-03	0.1	30	
Maireana georgei	0.1	45		0.1	45	
Maireana triptera	0.1	40		0.1	40	
Panicum effusum	0.1	35	WNG42-04			
Pterocaulon sphacelatum	0.1	30				
Ptilotus calostachyus	0.1	90				
Ptilotus clementii	0.1	40				
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	20		0.1	20	
Salsola australis	0.1	10		0.1	10	
Scaevola acacioides	0.1	30		0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sclerolaena densiflora	0.1	20	WNG42-01	0.1	20	
Sclerolaena eriacantha	0.1	50		0.1	50	
Senna artemisioides subsp. *helmsii*	0.1	45	WNG42-10	0.1	45	
Senna glutinosa subsp. *glutinosa*	0.1	100		0.1	100	
Senna glutinosa subsp. *x luerssenii*	0.1	110		0.1	110	
Senna notabilis	0.1	45				
Senna stricta	0.1	30		0.1	30	
Sida echinocarpa	0.1	70		0.1	70	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40				
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	100		0.1	100	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	130		0.1	130	
Solanum horridum	0.1	5				
Solanum lasiophyllum	0.1	80		0.1	80	
Streptoglossa decurrens	0.1	30		0.1	30	
Triodia longiceps	15	50		15	50	
Triodia pungens	1	30		1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG43

Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 28-Aug-18 Phase 2: 04-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 664809 mE, 7443628 mN.

Habitat Footslopes of a BIF hill to south of east-west range.

Soil Reddish brown clay loam.

Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Acacia pruinocarpa* scattered low trees (resprouting) over *A. wanyu*, *Indigofera monophylla*, (*Senna glutinosa* subsp. *pruinosa*, *S. glutinosa* subsp. x *luerssenii*, *Corchorus lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia vanleeuwenii* hummock grassland.

Phase 2: *Acacia pruinocarpa* scattered low trees (resprouting) over *A. wanyu*, *Indigofera monophylla*, (*Senna glutinosa* subsp. *pruinosa*, *S. glutinosa* subsp. x *luerssenii*, *Corchorus lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia vanleeuwenii* hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	0.1	100	WNG-BS-32=	0.1	100	
Acacia ayersiana (narrow phyllode variant)	0.1	40	WNG43-04	0.1	15	
Acacia bivenosa	0.1	20		0.1	20	
Acacia pruinocarpa	1	90		1	90	
Acacia wanyu	3	50		3	50	
Amphipogon sericeus	0.1	20	WNG13-02=	0.1	20	
Aristida contorta	0.1	10				
Codonocarpus cotinifolius	0.1	30				
Corchorus lasiocarpus subsp. *parvus*	0.5	30	WNG19-02=	0.5	30	
Cymbopogon ambiguus	0.1	20		0.1	20	
Digitaria brownii	0.1	30	WNG43-01	0.1	30	
Duperreya commixta	0.1	220		0.1	220	
Enneapogon caerulescens	0.1	20	WNG43-03			
Enneapogon polyphyllus	0.1	30				
Eremophila phyllopoda subsp. *obliqua*	0.1	20	WNG-BS-13=	0.1	20	
Eriachne mucronata				0.1	30	
Heliotropium inexplicitum	0.1	5	WNG19-04=			
Hibiscus coatesii				0.1	50	
Indigofera monophylla	3	30		3	30	
Paraneurachne muelleri	0.1	40		0.1	40	
Psydrax suaveolens	0.1	30		0.1	30	
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	10		0.1	10	
Ptilotus obovatus var. *obovatus*	0.1	20		0.1	20	
Ptilotus rotundifolius	0.1	60		0.1	60	
Scaevola acacioides	0.1	20		0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	20		0.1	20	
Senna glutinosa subsp. *pruinosa*	0.5	80		0.5	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna glutinosa subsp. *x luerssenii*	0.5	80		0.5	80	
Senna stricta	0.1	20				
Sida echinocarpa	0.1	30		0.1	30	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	45		0.1	45	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40		0.1	40	
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	60		0.1	60	
Stemodia grossa	0.1	20				
Triodia pungens	0.1	20		0.1	20	
Triodia vanleeuwenii	31	15		31	15	

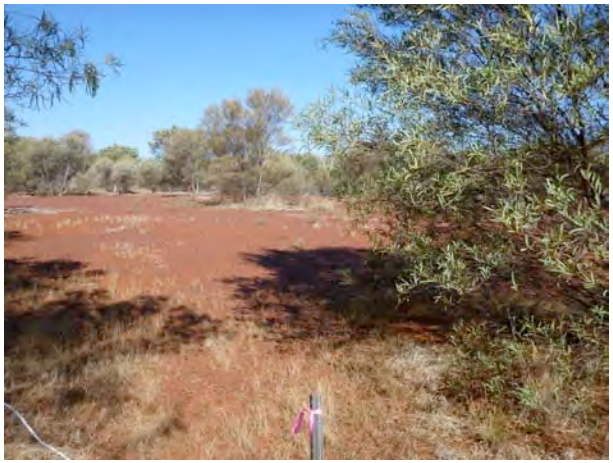




West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG44
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 667329 mE, 7444229 mN.
Habitat Plain with moderate ironstone pebbles and gravel.
Soil Red light clay.
Rock Type Ironstone: 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Acacia catenulata* subsp. *occidentalis*, (*A. incurvaneura*, *A. aptaneura*, *A. ayersiana* (narrow *phyllode* variant), *A. pruinocarpa*) low woodland over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens*, (*T. melvillei*) very open hummock grassland and *Enneapogon polyphyllus* scattered annual grasses.
Phase 2: *Acacia catenulata* subsp. *occidentalis*, (*A. incurvaneura*, *A. aptaneura*, *A. ayersiana* (narrow *phyllode* variant), *A. pruinocarpa*) low woodland over *Eremophila forrestii* subsp. *forrestii*, *Sida ectogama* (WNG44R-01) open shrubland over *Triodia pungens*, (*T. melvillei*) very open hummock grassland and *Enneapogon polyphyllus* scattered annual grasses.
Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	5	500	WNG44-10	5	500	
Acacia ayersiana (narrow phyllode variant)	1	500	WNG44-03	1	500	
Acacia catenulata subsp. *occidentalis*	15	600		15	600	
Acacia incurvaneura	5	500	WNG44-01	5	500	
Acacia pruinocarpa	1	500		1	500	
Acacia tetragonophylla	0.1	250		0.1	250	
Aristida contorta	0.1	30		0.1	30	
Aristida ingrata	0.1	70	WNG42-09=	0.1	70	
Bidens bipinnata	0.1	40		0.1	40	
Boerhavia coccinea				0.1	5	WNG44R-02
Cheilanthes sieberi subsp. *sieberi*	0.1	20		0.1	20	
Digitaria ammophila	0.1	20	WNG44-06	0.1	20	
Digitaria brownii	0.1	30		0.1	30	
Duperreya commixta	0.1	120		0.1	120	
Enneapogon polyphyllus	2	20				
Enneapogon robustissimus	0.1	30				
Eragrostis xerophila	0.1	40	WNG44-02	0.1	40	
Eremophila forrestii subsp. *forrestii*	3	200	WNG44-04	3	200	
Eremophila fraseri subsp. *fraseri*	0.1	60		0.1	60	
Eriachne mucronata	0.1	50		0.1	50	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	400		0.1	400	
Evolvulus alsinoides var. *villosicalyx*	0.1	15				
Grevillea berryana	0.1	150		0.1	150	
Hibiscus burtonii	0.1	40				
Hibiscus sturtii var. aff. *truncatus*	0.1	10	WNG44-08	0.1	10	
Maireana villosa	0.1	30		0.1	30	
Perotis rara	0.1	5		0.1	5	
Polycarpaea corymbosa var. *corymbosa*	0.1	20				
Psydrax suaveolens	0.1	100		0.1	100	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus polystachyus	0.1	20				
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	120		0.1	120	
Scaevola acacioides	0.1	120				
Senna artemisioides subsp. *helmsii*	0.1	110				
Senna glaucifolia	0.1	120		0.1	120	
Senna glutinosa subsp. *pruinosa*	0.1	120				
Senna glutinosa subsp. *x luerssenii*	0.1	210		0.1	210	
Sida ectogama	0.1	120		0.1	120	WNG44R-01
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1	30	WNG44-07	0.1	30	
Sida sp. L (A.M. Ashby 4202)	0.1	30				
Solanum lasiophyllum	0.1	5		0.1	5	
Solanum piceum	0.1	50	WNG44-05	0.1	50	
Triodia melvillei	0.5	30	WNG44-09	0.5	30	
Triodia pungens	3	80		3	80	
Triodia pungens	3	80		3	80	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG45

Described by Phase 1: BRMSC Phase 2: PL/CI Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19

Type Quadrat80 x 30 m

Central Coordinate 50K 670163 mE, 7444385 mN.

Habitat Low foothills near floodplain.

Soil Reddish brown clay loam.

Rock Type Ironstone.

Vegetation Phase 1: *Acacia catenulata* subsp. *occidentalis*, *A. aptaneura*, (*A. ayersiana* (narrow *phyllode* variant), *A. pruinocarpa*, *A. ayersiana* low open forest over *Eremophila forrestii* subsp. *forrestii*, (*Senna stricta*, *Rhagodia* sp. Hamersley (*M.* Trudgen 17794)) open shrubland over *Maireana villosa*, *Senna artemisioides* subsp. *helmsii* scattered low shrubs over *Triodia pungens* very open hummock grassland and *Cheilanthes sieberi* subsp. *sieberi*, (**Bidens bipinnata*) open herbland and *Enneapogon polyphyllus* open annual grassland.
Phase 2: *Acacia catenulata* subsp. *occidentalis*, *A. aptaneura*, (*A. ayersiana* (narrow *phyllode* variant), *A. pruinocarpa*, *A. ayersiana* low open forest over *Eremophila forrestii* subsp. *forrestii*, (*Senna stricta*, *Rhagodia* sp. Hamersley (*M.* Trudgen 17794)) open shrubland over *Maireana villosa*, *Senna artemisioides* subsp. *helmsii* scattered low shrubs over *Triodia pungens* very open hummock grassland and *Cheilanthes sieberi* subsp. *sieberi*, (**Bidens bipinnata*) open herbland and *Enneapogon polyphyllus* open annual grassland.

Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	30	WNG45-08			
Abutilon otocarpum	0.1	20				
Acacia adsurgens	0.1	120	WNG45-05	0.1	120	
Acacia aptaneura	12	600	WNG05-07=	12	600	
Acacia ayersiana	4	250	WNG45-10	4	250	
Acacia ayersiana (narrow phyllode variant)	5	500	45-11,12	5	500	
Acacia bivenosa	0.1	120		0.1	120	
Acacia catenulata subsp. *occidentalis*	18	550		18	550	
Acacia pruinocarpa	2	400		2	400	
Anthobolus leptomerioides	0.1	70		0.1	70	
Aristida contorta	0.1	10		0.1	10	
Aristida holathera var. *holathera*				0.1	30	
Aristida ingrata	0.1	50	WNG45-02	0.1	50	
Aristida obscura	0.1	30	WNG45-09	0.1	30	
Bidens bipinnata	1	40		1	40	
Cheilanthes sieberi subsp. *sieberi*	3	20		3	20	
Corchorus crozophorifolius	0.1	45				
Corchorus lasiocarpus subsp. *parvus*				0.1	40	
Cucumis variabilis	0.1	10		0.1	10	
Cymbopogon obtectus	0.1	70		0.1	70	
Digitaria ammophila	0.1	20	WNG37-02=	0.1	20	
Digitaria brownii	0.1	30	WNG35-01=	0.1	30	
Duperreya commixta	0.1	50		0.1	50	
Enchylaena tomentosa var. *tomentosa*	0.1	160		0.1	160	
Enneapogon lindleyanus	0.1	40		0.1	40	
Enneapogon polyphyllus	0.1	15		0.1	15	
Eremophila forrestii subsp. *forrestii*	4	170		4	170	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eremophila phyllopoda subsp. *obliqua*	0.1	120		0.1	120	
Evolvulus alsinoides var. *villosicalyx*	0.1	20		0.1	20	
Goodenia stobbsiana	0.1	80		0.1	80	
Hibiscus burtonii	0.1	40		0.1	40	
Hibiscus coatesii	0.1	80	WNG-BS-58=	0.1	80	
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)	0.1	150	WNG45-01	0.1	150	
Hibiscus sturtii var. *grandiflorus*	0.1	30	WNG-BS-43=	0.1	30	
Hibiscus sturtii var. *platychlamys*	0.1	40	WNG45-07	0.1	40	
Maireana planifolia x villosa	0.1	50	WNG05-13=	0.1	50	
Maireana villosa	0.5	40	WNG05-01=	0.5	40	
Nicotiana sp.	0.1	30	WNG45-04			
Panicum effusum				0.1	30	
Perotis rara	0.1	10	REL15-04=			
Polycarpaea corymbosa var. *corymbosa*	0.1	15		0.1	15	
Psydrax suaveolens	0.1	120		0.1	120	
Pterocaulon sphacelatum	0.1	30		0.1	30	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus helipteroides	0.1	20		0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	20		0.1	20	
Ptilotus polystachyus	0.1	40				
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.5	140		0.5	140	
Salsola australis	0.1	50		0.1	50	
Senna artemisioides subsp. *helmsii*	0.5	60		0.5	60	
Senna glaucifolia	0.1	100				
Senna glutinosa subsp. *x luerssenii*	0.1	120		0.1	120	
Senna notabilis	0.1	30				
Senna stricta	1	220	WNG45-06	1	220	
Sida echinocarpa	0.1	45		0.1	45	
Sida ectogama	0.1	110		0.1	110	
Sida fibulifera	0.1	20				
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	70		0.1	70	
Sida sp. L (A.M. Ashby 4202)				0.1	25	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	40				
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	35		0.1	35	
Themeda triandra	0.1	80		0.1	80	
Tribulus suberosus				0.1	40	
Triodia pungens	7	30		7	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG46
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 28-Aug-18 Phase 2: 05-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 668285 mE, 7444417 mN.
Habitat Plain with a scattering of pebbles and gravel.
Soil Red light clay.
Rock Type Ironstone, quartz.
Vegetation Phase 1: *Acacia macraneura*, (*A. ayersiana* (narrow *phyllode* variant), *A. catenulata* subsp. *occidentalis*, *A. aptaneura*) low woodland over *Sida ectogama* scattered shrubs over *Maireana villosa*, (*Ptilotus obovatus*) low open shrubland over *Triodia pungens*, *T. melvillei* very open hummock grassland and *Enneapogon robustissimus* very open tussock grassland.
Phase 2: *Acacia macraneura*, (*A. ayersiana* (narrow *phyllode* variant), *A. catenulata* subsp. *occidentalis A. aptaneura*) low woodland over *Sida ectogama* scattered shrubs over *Maireana villosa*, (*Ptilotus obovatus*) low open shrubland over *Triodia pungens*, *T. melvillei* very open hummock grassland and *Enneapogon robustissimus* very open tussock grassland.
Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	15		0.1	15	
Acacia aptaneura	2	450	WNG46-06	2	450	
Acacia ayersiana (narrow phyllode variant)	5	500	WNG44-03=	5	500	
Acacia catenulata subsp. *occidentalis*	5	650		5	650	
Acacia macraneura	10	650	WNG46-05	10	650	
Acacia pruinocarpa	0.1	500		0.1	500	
Aristida contorta	0.1	30		0.1	30	
Aristida ingrata	0.1	40	WNG42-09=	0.1	40	
Bidens bipinnata	0.1	40				
Brachyscome iberidifolia	0.1	5	WNG46-02			
Cheilanthes sieberi subsp. *sieberi*	0.1	30		0.1	30	
Cleome viscosa	0.1	60				
Cymbopogon ambiguus	0.1	80				
Digitaria ammophila	0.1	20	WNG44-06=	0.1	20	
Digitaria brownii	0.1	50		0.1	50	
Duperreya commixta	0.1	120		0.1	120	
Enneapogon polyphyllus				0.1	20	WANG46R-01
Enneapogon robustissimus	3	20		3	20	
Eremophila latrobei subsp. *filiformis*	0.1	110		0.1	110	
Eriachne pulchella	0.1	25				
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Gomphrena kanisii	0.1	30	WNG46-03			
Hibiscus burtonii	0.1	40		0.1	40	
Lepidium echinatum	0.1	5				
Maireana villosa	3	40		3	40	
Perotis rara	0.1	5				
Polycarpaea corymbosa var. *corymbosa*	0.1	15				
Psydrax suaveolens	0.1	100		0.1	100	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Pterocaulon sphacelatum	0.1	55		0.1	55	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.5	30		0.5	30	
Ptilotus polystachyus	0.1	15				
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	120		0.1	120	
Salsola australis	0.1	25		0.1	25	
Sclerolaena cornishiana	0.1	30				
Senna artemisioides subsp. *helmsii*	0.1	130	WNG46-01			
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	130	WNG46R-02
Senna glaucifolia	0.1	70		0.1	70	
Sida ectogama	1	130		1	130	
Sida platycalyx	0.1	40				
Sida sp. L (A.M. Ashby 4202)	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	50		0.1	50	
Stenopetalum anfractum	0.1	5	WNG02-16=			
Triodia melvillei	1	80		1	80	
Triodia pungens	2	30		2	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG47
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 691359 mE, 7436078mN.
Habitat Sparsely stony flat plain.
Soil Reddish brown light clay.
Rock Type Ironstone.
Vegetation Phase 1: *Acacia ayersiana* (narrow *phyllode* variant) low open woodland over *A. aneura*, (*A. aptaneura*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa*) tall shrubland over *Eremophila forrestii* subsp. *forrestii*, *E. galeata*, (*Anthobolus leptomerioides*) open shrubland over *Triodia melvillei* very open hummock grassland.
Phase 2: *Acacia ayersiana* (narrow *phyllode* variant) low open woodland over *A. aneura*, (*Eremophila galeata*, *A. aptaneura*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa*) tall shrubland over *E. forrestii* subsp. *forrestii*, (*Anthobolus leptomerioides*) open shrubland over *Triodia melvillei* very open hummock grassland.
Veg Condition Phase 1: Excellent.Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura	10	200	WNG47-08	10	200	
Acacia aptaneura	3	500	WNG47-04	3	500	
Acacia ayersiana	0.1	300		0.1	300	
Acacia ayersiana (narrow phyllode variant)	8	400	WNG45-12=	8	400	
Acacia catenulata subsp. *occidentalis*	2	300		2	300	WNG47R-01
Acacia pruinocarpa	1	350		1	350	
Acacia tetragonophylla	0.1	60				
Anthobolus leptomerioides	1	120		1	120	
Aristida contorta	0.1	25		0.1	25	
Cheilanthes sieberi subsp. *sieberi*	0.1	15		0.1	15	
Codonocarpus cotinifolius	0.1	20				
Digitaria ammophila	0.1	20	WNG37-02=	0.1	20	
Enneapogon polyphyllus	0.1	15				
Eragrostis setifolia	0.1	30	WNG47-07	0.1	30	
Eremophila forrestii subsp. *forrestii*	6	130		6	130	
Eremophila galeata	3	120	WNG47-01	3	250	
Eriachne pulchella	0.1	15				
Grevillea berryana	0.1	350		0.1	350	
Hibiscus burtonii	0.1	15				
Hibiscus sturtii var. aff. *truncatus*	0.1	10	WNG47-06			
Maireana villosa	0.1	20		0.1	20	
Panicum effusum	0.1	10	WNG47-05			
Psydrax suaveolens	0.1	150		0.1	150	
Ptilotus exaltatus	0.1	5				
Ptilotus obovatus var. *obovatus*	0.1	50				
Santalum lanceolatum	0.1	260		0.1	260	
Senna glaucifolia	0.1	140				
Sida ectogama	0.1	120	WNG47-10	0.1	120	
Solanum lasiophyllum	0.1	70		0.1	70	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Spermacoce brachystema	0.1	10	WNG47-03			
Sporobolus australasicus	0.1	10				
Triodia melvillei	8	40	WNG47-02	8	40	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG48
Described by Phase 1: PL/CI Phase 2: PL/CI Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 691992 mE, 7436094 mN.
Habitat Gently sloping footslope; immediately north of low hill and running into valley.
Soil Dark reddish brown light clay.
Rock Type Ironstone, quartz: 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus repullulans*, (*E. trivalva*) low open mallee woodland over *Acacia bivenosa* (wispy/weeping form) scattered tall shrubs over *Triodia wiseana* open hummock grassland.
Phase 2: *Eucalyptus repullulans*, (*E. trivalva*) low open mallee woodland over *Acacia bivenosa* (wispy/weeping form) scattered tall shrubs over *Triodia wiseana* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cunninghamii	0.1	40		0.1	40	
Acacia adsurgens	0.1	170		0.1	170	
Acacia bivenosa (wispy/weeping form)	1	350		1	350	
Acacia dictyophleba	0.1	40				
Acacia inaequilatera	0.1	50		0.1	50	
Acacia sibirica	0.1	90	WNG48-01	0.1	90	
Acacia synchronicia	0.1	220		0.1	220	
Acacia tenuissima	0.1	180		0.1	180	
Cynodon prostratus	0.1	2				
Duperreya commixta	0.1	120		0.1	120	
Enneapogon polyphyllus	0.1	10				
Eucalyptus leucophloia subsp. *leucophloia*	0.1	230		0.1	230	
Eucalyptus repullulans	4	250	PL95=	4	250	
Eucalyptus trivalva	1	370	PL96=	1	370	
Maireana georgei	0.1	50		0.1	50	
Ptilotus aervoides	0.1	5				
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus helipteroides	0.1	10				
Ptilotus obovatus var. *obovatus*	0.1	25		0.1	25	
Salsola australis	0.1	60		0.1	60	
Sclerolaena densiflora	0.1	10	WNG48-03			
Senna artemisioides subsp. *oligophylla*	0.1	20		0.1	20	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	30	WNG48-04	0.1	30	
Senna glutinosa subsp. *glutinosa*				0.1	40	
Senna glutinosa subsp. *x luerssenii*	0.1	90	WNG48-02	0.1	90	
Senna stricta	0.1	40		0.1	40	
Sporobolus australasicus	0.1	15				
Streptoglossa bubakii	0.1	5	WNG48-06			
Triodia angusta	0.1	40		0.1	40	
Triodia longiceps	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Triodia wiseana	15	40		15	40	

No Phase 1 photo taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG49

Described by Phase 1: PL/CI Phase 2: PL/CI Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 691739 mE, 7436203 mN.

Habitat Gently sloping footslope running into valley.

Soil Dark reddish brown light clay.

Rock Type Ironstone, quartz: 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Eucalyptus repullulans*, *E. trivalva* low open mallee woodland over *Maireana georgei* low open shrubland over *Triodia wiseana*, (*T. longiceps*) open hummock grassland.

Phase 2: *Eucalyptus repullulans*, *E. trivalva* low open mallee woodland over *Maireana georgei* low open shrubland over *Triodia wiseana*, (*T. longiceps*) open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	5	WNG49-06			
Acacia aptaneura	0.1	120		0.1	120	
Acacia bivenosa (wispy/weeping form)	0.1	150		0.1	150	
Acacia dictyophleba	0.1	80		0.1	80	
Acacia maitlandii	0.1	70		0.1	70	
Acacia pruinocarpa	0.1	70		0.1	70	
Acacia sibirica	0.1	60	WNG48-01=	0.1	60	
Acacia tenuissima	0.1	110		0.1	110	
Acacia tetragonophylla	0.1	80		0.1	80	
Aristida aff. *nitidula*	0.1	40	WNG49-05	0.1	40	
Aristida contorta	0.1	15		0.1	15	
Capparis lasiantha	0.1	120		0.1	120	
Cymbopogon obtectus	0.1	50		0.1	50	
Dichanthium sericeum subsp. *humilius*	0.1	25				
Duperreya commixta	0.1	60		0.1	60	
Enneapogon caerulescens	0.1	10		0.1	10	
Eremophila galeata	0.1	70		0.1	70	
Eremophila phyllopoda subsp. *obliqua*	0.1	40	WNG49-04	0.1	40	
Eremophila platycalyx subsp. *pardalota*	0.1	110	WNG49-03	0.1	110	
Eriachne mucronata (typical form)	0.1	60		0.1	60	
Eriachne pulchella	0.1	15				
Eucalyptus repullulans	1	500	WNG49-02	1	500	
Eucalyptus trivalva	2	410	PL96=	2	410	
Euphorbia australis var. *subtomentosa*	0.1	10	WNG49-07			
Hibiscus burtonii				0.1	25	
Iseilema dolichotrichum	0.1	5	WNG49-01			
Maireana georgei	4	60		4	60	
Maireana planifolia	0.1	60				
Ptilotus exaltatus	0.1	10		0.1	10	
Ptilotus obovatus var. *obovatus*				0.1	60	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Salsola australis	0.1	15		0.1	15	
Santalum lanceolatum	0.1	210		0.1	210	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40	WNG48-04=	0.1	40	
Senna glutinosa subsp. *x luerssenii*	0.1	100		0.1	100	
Sida echinocarpa	0.1	40		0.1	40	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	40				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	50		0.1	50	
Sporobolus australasicus	0.1	10				
Themeda triandra	0.1	70		0.1	70	
Triodia longiceps	2	40		2	40	
Triodia wiseana	11	60		11	60	

No Phase 1 photo taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG50

Described by Phase 1: MM/RM Phase 2: PL/CI Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 691516 mE, 7435990 mN.

Habitat Stony plain.

Soil Red light clay.

Rock Type Ironstone.

Vegetation Phase 1: *Acacia aneura*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa*, *A. aptaneura*, (*Eucalyptus trivalva*) low open woodland over *Eremophila forrestii* subsp. *forrestii*, *Anthobolus leptomerioides* open shrubland over *Eremophila fraseri* subsp. *fraseri* scattered low shrubs over *Triodia melvillei* very open hummock grassland.
Phase 2: *Acacia aneura*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa*, *A. aptaneura*, (*Eucalyptus trivalva*) low open woodland over *Eremophila forrestii* subsp. *forrestii*, *Anthobolus leptomerioides* open shrubland over *Eremophila fraseri* subsp. *fraseri* scattered low shrubs over *Triodia melvillei* very open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aneura	3	500	WNG50-14	3	500	
Acacia aptaneura	1	500	WNG50-12	1	500	
Acacia ayersiana	0.1	180	WNG50-13	0.1	180	
Acacia ayersiana (narrow phyllode variant)	0.1	500	WNG44-03=	0.1	500	
Acacia catenulata subsp. *occidentalis*	2.5	700		2.5	700	
Acacia pruinocarpa	2.5	450		2.5	450	
Acacia tetragonophylla	0.1	160		0.1	160	
Anthobolus leptomerioides	3	120				
Aristida contorta	0.1	30		0.1	30	
Aristida ingrata	0.1	60	WNG50-07	0.1	60	
Aristida obscura	0.1	20	WNG50-03	0.1	30	
Cheilanthes sieberi subsp. *sieberi*	0.1	20		0.1	20	
Chrysopogon fallax	0.1	60		0.1	60	
Digitaria ammophila	0.1	25		0.1	25	
Duperreya commixta	0.1	120		0.1	120	
Enneapogon polyphyllus	0.1	20				
Eragrostis cumingii	0.1	20				
Eragrostis pergracilis	0.1	20				
Eragrostis setifolia	0.1	20	WNG50-02	0.1	20	
Eremophila forrestii subsp. *forrestii*	5	120	WNG50-08	5	120	
Eremophila galeata	0.5	100	WNG50-10	0.5	100	
Eremophila latrobei	0.1	60		0.1	60	
Eriachne obtusa	0.1	40	WNG50-01	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	120		0.1	120	
Eucalyptus trivalva	0.5	350	WNG50-05	0.5	350	
Grevillea berryana	0.1	200		0.1	200	
Hibiscus burtonii	0.1	20		0.1	20	
Maireana villosa	0.1	40		0.1	40	
Olearia stuartii	0.1	60	WNG50-06			

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Perotis rara	0.1	5				
Psydrax suaveolens	0.1	140		0.1	140	
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	
Santalum lanceolatum	0.1	240		0.1	240	
Schizachyrium fragile	0.1	20				
Senna glaucifolia	0.1	70		0.1	70	
Seringia elliptica	0.1	30	WNG50-09	0.1	30	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	40		0.1	40	
Sida sp. L (A.M. Ashby 4202)	0.1	20		0.1	20	
Solanum centrale	0.1	40	WNG50-11	0.1	40	
Solanum lasiophyllum	0.1	70		0.1	70	
Themeda triandra	0.1	60				
Triodia melvillei	3	60		3	60	
Triodia wiseana	0.1	30		0.1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG51

Described by Phase 1: PL/CI Phase 2: BRMTB Date Phase 1: 30-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 687203 mE, 7436117 mN.

Habitat Slope of moderate hill.

Soil Dark reddish brown clay loam.

Rock Type Ironstone.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Acacia maitlandii* scattered shrubs over *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Gompholobium oreophilum*, Seringia *elliptica*) low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*, *T. pungens*) open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Acacia maitlandii* scattered shrubs over *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Gompholobium oreophilum*, Seringia *elliptica*) low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*, *T. pungens*) open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 1-2 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	25		0.1	25	
Acacia dictyophleba	0.1	15				
Acacia hamersleyensis	0.1	40		0.1	40	
Acacia inaequilatera	0.1	60		0.1	60	
Acacia maitlandii	0.5	170		0.5	170	
Acacia monticola				0.1	40	
Acacia pyrifolia var. *pyrifolia*	0.1	140		0.1	140	
Acacia tenuissima	0.1	60		0.1	60	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	15		0.1	15	
Corchorus lasiocarpus subsp. *parvus*	0.1	40		0.1	40	
Corymbia hamersleyana	1	600		1	600	
Cymbopogon ambiguus				0.1	25	
Dodonaea coriacea				0.1	20	
Duperreya commixta				0.1	10	
Eragrostis setifolia	0.1	25	WNG51-04			
Eremophila latrobei subsp. *latrobei*	0.1	100		0.1	100	
Eriachne lanata	0.1	35		0.1	35	
Eriachne mucronata (typical form)				0.1	25	
Eriachne pulchella	0.1	15				
Eucalyptus leucophloia subsp. *leucophloia*	2.5	500		2.5	500	
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Gompholobium oreophilum	1	40		1	40	
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	200		0.1	200	
Halgania gustafsenii var. Mid West (G. Perry 370)	3	40	PL94=	3	40	
Hibiscus coatesii	0.1	50		0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	25		0.1	25	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Indigofera monophylla	0.1	30		0.1	30	
Paraneurachne muelleri	0.1	40		0.1	40	
Petalostylis labicheoides	0.1	160		0.1	160	
Ptilotus rotundifolius	0.1	50		0.1	50	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	WNG51-02	0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	40	WNG51-01	0.1	40	
Senna ferraria	0.1	50		0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	110		0.1	110	
Senna glutinosa subsp. *pruinosa*	0.1	80		0.1	80	
Senna notabilis	0.1	30				
Seringia elliptica	1	50		1	50	
Sida echinocarpa	0.1	30				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40		0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	25	WNG51-03			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40		0.1	40	
Solanum centrale				0.1	20	WNG51R-01
Solanum horridum	0.1	20		0.1	20	
Solanum lasiophyllum	0.1	50		0.1	50	
Trichodesma zeylanicum var. *zeylanicum*	0.1	80				
Triodia pungens	1	40		1	40	
Triodia vanleeuwenii	10	30		10	30	
Triodia wiseana	2	40		2	40	
Vincetoxicum lineare				0.1	160	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG52

Described by Phase 1: MM/RM Phase 2: PL/CI Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 692001 mE, 7435769 mN.

Habitat Stony crest and hillslope to the west.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone, quartz, chert.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Acacia maitlandii*, *Gompholobium oreophilum*) low open shrubland over *Triodia vanleeuwenii*, *T. pungens* very open hummock grassland.

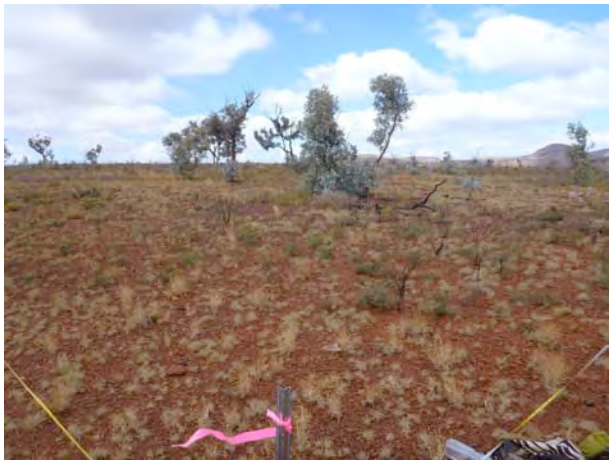
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Acacia maitlandii*, *Gompholobium oreophilum*) low open shrubland over *Triodia vanleeuwenii*, *T. pungens* very open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 1-2 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	25		0.1	25	
Acacia adsurgens	0.1	40		0.1	40	
Acacia bivenosa	0.1	80		0.1	80	
Acacia hamersleyensis	0.1	20	WNG52-09	0.1	20	
Acacia kempeana	0.1	40	WNG52-06	0.1	40	
Acacia maitlandii	1	35		1	35	
Acacia tenuissima	0.1	30		0.1	30	
Acacia tetragonophylla	0.1	60		0.1	60	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	30				
Codonocarpus cotinifolius	0.1	70		0.1	70	
Corchorus lasiocarpus (subsp. not determined)	0.1	60		0.1	60	
Cymbopogon ambiguus	0.1	25		0.1	25	
Eriachne pulchella	0.1	10				
Eucalyptus leucophloia subsp. *leucophloia*	15	450		15	450	
Gompholobium oreophilum	0.5	35		0.5	35	
Goodenia microptera	0.1	30				
Goodenia stobbsiana	0.1	25		0.1	25	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	140	WNG52-07	0.1	140	
Halgania gustafsenii var. Mid West (G. Perry 370)	2	40	WNG52-02	2	40	
Heliotropium inexplicitum	0.1	5	WNG52-10			
Hibiscus coatesii	0.1	45				
Hibiscus sturtii var. *campylochlamys*	0.1	20	WNG52-01	0.1	20	
Indigofera monophylla	0.1	25		0.1	25	
Jasminum didymum subsp. *lineare*	0.1	100		0.1	100	
Mirbelia viminalis	0.1	35		0.1	35	
Paraneurachne muelleri	0.1	25		0.1	25	
Ptilotus calostachyus	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus exaltatus	0.1	20				
Ptilotus rotundifolius	0.1	60		0.1	60	
Senna glaucifolia	0.1	35		0.1	35	
Senna glutinosa subsp. *glutinosa*	0.1	120	WNG52-03	0.1	120	
Senna glutinosa subsp. *pruinosa*	0.1	80		0.1	80	
Senna glutinosa subsp. *x luerssenii*				0.1	40	
Senna notabilis	0.1	30				
Seringia elliptica	0.1	50	WNG52-08	0.1	50	
Sida arenicola				0.1	70	
Sida echinocarpa	0.1	20				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	25		0.1	25	
Solanum centrale	0.1	30	WNG50-11=	0.1	30	
Solanum lasiophyllum	0.1	20		0.1	20	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	60	WNG52-05	0.1	60	
Triodia pungens	3	30		3	30	
Triodia vanleeuwenii	4	20		4	20	
Triodia wiseana	0.1	25		0.1	25	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG53
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 691163 mE, 7436014 mN.
Habitat Semi stony flat plain.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia aneura*, *A. aptaneura*, *A. pruinocarpa* low woodland to tall shrubland over *A. maitlandii* scattered tall shrubs over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia melvillei* very open hummock grassland.
Phase 2: *Acacia aneura*, *A. aptaneura*, *A. pruinocarpa* low woodland to tall shrubland over *A. maitlandii* scattered tall shrubs over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia melvillei* very open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens	0.1	110	WNG53-06			
Acacia aneura	7	250	WNG47-08=	7	250	
Acacia aptaneura	2	600	WNG47-04=	2	600	
Acacia bivenosa	0.1	230		0.1	230	
Acacia catenulata subsp. *occidentalis*				0.1	120	WNG53R-02
Acacia maitlandii	1	220		1	220	
Acacia pruinocarpa	2	450		2	450	
Anthobolus leptomerioides	0.1	80		0.1	80	
Aristida contorta	0.1	15		0.1	15	
Aristida ingrata	0.1	60	WNG53-05			
Aristida obscura	0.1	40	WNG-BS-62=	0.1	40	
Cheilanthes sieberi subsp. *sieberi*	0.1	10		0.1	10	
Codonocarpus cotinifolius	0.1	80		0.1	80	
Cymbopogon obtectus	0.1	60		0.1	60	
Digitaria ammophila	0.1	20	WNG37-02=	0.1	20	
Duperreya commixta	0.1	5		0.1	5	
Eragrostis setifolia	0.1	30	WNG47-07=	0.1	30	
Eremophila forrestii subsp. *forrestii*	5	130		5	130	
Eremophila galeata	0.1	100	WNG47-01=	0.1	100	
Eremophila longifolia				0.1	300	
Eremophila phyllopoda subsp. *obliqua*	0.1	150	WNG53-03	0.1	150	
Hibiscus burtonii	0.1	30				
Panicum effusum	0.1	30	WNG47-05=			
Paraneurachne muelleri	0.1	20		0.1	20	
Psydrax rigidula	0.1	70	WNG53-01			
Psydrax suaveolens	0.1	120		0.1	120	
Ptilotus exaltatus	0.1	20				
Ptilotus rotundifolius	0.1	5				
Santalum lanceolatum	0.1	80	WNG53-02	0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Schizachyrium fragile	0.1	15				
Senna glaucifolia	0.1	110		0.1	110	
Senna sp. Karijini (M.E. Trudgen *10392*)				0.1	70	WNG53R-03
Senna stricta	0.1	80		0.1	80	WNG53R-01
Seringia elliptica	0.1	70		0.1	70	
Solanum lasiophyllum	0.1	40		0.1	40	
Triodia melvillei	9	70		9	70	
Triodia vanleeuwenii	0.1	30	WNG53-04	0.1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG54

Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 689888 mE, 7436065 mN.

Habitat Stony plain.

Soil Red light clay.

Rock Type Ironstone, quartz, chert.

Vegetation Phase 1: *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia pruinocarpa* scattered tall shrubs over *Sida cardiophylla*, (*Halgania gustafsenii* var. Mid West (G. Perry 370) scattered low shrubs over *Triodia vanleeuwenii*, (*T. wiseana*, *T. melvillei*, *T. pungens*) open hummock grassland.
Phase 2: *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia pruinocarpa* scattered tall shrubs over *Sida cardiophylla*, (*Halgania gustafsenii* var. Mid West (G. Perry 370) scattered low shrubs over *Triodia vanleeuwenii*, (*T. wiseana*, *T. melvillei*, *T. pungens*) open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt <1 year ago. Phase 2: Burnt <1 year ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	120	WNG54-07			
Acacia aptaneura				0.1	200	WNG54R-01
Acacia cowleana	0.1	150	WNG54-04	0.1	150	
Acacia dictyophleba	0.1	20		0.1	20	
Acacia inaequilatera				0.1	200	
Acacia maitlandii	0.1	180		0.1	180	
Acacia pachyacra	0.1	55		0.1	55	
Acacia pruinocarpa	1	350		1	350	
Acacia tenuissima	0.1	110		0.1	110	
Amphipogon sericeus	0.1	30		0.1	30	
Androcalva luteiflora	0.1	120		0.1	120	
Aristida contorta	0.1	20		0.1	20	
Aristida holathera var. *holathera*	0.1	30		0.1	30	
Aristida latifolia	0.1	45		0.1	45	
Brunonia sp. Long hairs (D.E. Symon 2440)	0.1	30	WNG54-05			
Codonocarpus cotinifolius	0.1	50		0.1	50	
Corchorus lasiocarpus (subsp. not determined)	0.1	40		0.1	40	
Corymbia deserticola subsp. *deserticola*	1	500		1	500	
Cymbopogon ambiguus	0.1	40				
Dodonaea coriacea	0.1	20				
Enneapogon polyphyllus	0.1	40				
Eremophila forrestii subsp. *forrestii*	0.1	80		0.1	80	
Evolvulus alsinoides var. *villosicalyx*	0.1	40				
Gompholobium oreophilum	0.1	40		0.1	40	
Goodenia microptera	0.1	25		0.1	25	
Goodenia stobbsiana	0.1	20		0.1	20	
Hakea chordophylla	0.1	30		0.1	30	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.5	45	WNG52-02=	0.5	45	
Hibiscus burtonii	0.1	50		0.1	50	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hibiscus coatesii	0.1	50		0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	40	WNG54-02	0.1	40	
Indigofera monophylla	0.1	30		0.1	30	
Jasminum didymum subsp. *lineare*	0.1	120		0.1	120	
Paraneurachne muelleri	0.1	40		0.1	40	
Psydrax suaveolens				0.1	120	
Ptilotus calostachyus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	60				
Ptilotus rotundifolius	0.1	60		0.1	60	
Senna artemisioides subsp. *oligophylla*				0.1	50	WA19-02 =
Senna ferraria	0.1	200				
Senna glaucifolia	0.1	40		0.1	40	
Senna notabilis	0.1	25				
Seringia nephrosperma	0.1	60		0.1	60	
Sida arenicola	0.1	45		0.1	45	
Sida cardiophylla	1.5	40		1.5	40	
Sida echinocarpa	0.1	40		0.1	40	
Sida sp. L (A.M. Ashby 4202)	0.1	35	WNG54-03	0.1	35	
Solanum lasiophyllum	0.1	60		0.1	60	
Triodia melvillei	2	55	WNG54-01	2	55	
Triodia pungens	1	30	WNG54-06	1	30	
Triodia vanleeuwenii	8	30		8	30	
Triodia wiseana	2	30		2	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG55

Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 29-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 691063 mE, 7436166 mN.

Habitat Low undulating hills with stony surface.

Soil Reddish brown clay loam.

Rock Type Ironstone, quartz, small amount of *calcrete*: 1-25% pebbles, 26-50% gravel.

Vegetation Phase 1: *Eucalyptus trivalva* low open mallee forest over *Triodia wiseana*, (*T. pungens*, *T. longiceps*) very open hummock grassland.
Phase 2: *Eucalyptus trivalva* low open mallee forest over *Triodia wiseana*, (*T. pungens*, *T. longiceps*) very open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	0.1	50	WNG47-04=	0.1	50	
Acacia bivenosa	0.1	100		0.1	100	
Acacia dictyophleba	0.1	10				
Acacia maitlandii				0.1	200	
Acacia tenuissima	0.1	140	WNG55-05	0.1	140	
Anthobolus leptomerioides	0.1	90	WNG55-06	0.1	90	
Aristida contorta	0.1	20		0.1	20	
Aristida ingrata	0.1	30	WNG53-05=	0.1	30	
Aristida obscura	0.1	30	WNG-BS-62=			
Capparis lasiantha	0.1	40		0.1	40	
Cymbopogon ambiguus	0.1	40	WNG55-03			
Cymbopogon obtectus	0.1	70				
Digitaria brownii	0.1	60		0.1	60	
Duperreya commixta	0.1	150		0.1	150	
Enneapogon lindleyanus	0.1	20	WNG55-01	0.1	45	
Enneapogon polyphyllus	0.1	10				
Eremophila forrestii subsp. *forrestii*	0.1	60		0.1	60	
Eremophila longifolia	0.1	180		0.1	180	
Eucalyptus trivalva	40	400	WNG55-02	40	400	
Eulalia aurea	0.1	30	WNG55-04			
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Gossypium australe	0.1	30				
Hibiscus burtonii				0.1	20	
Indigofera monophylla	0.1	20				
Jasminum didymum subsp. *lineare*	0.1	70		0.1	70	
Maireana georgei	0.1	20				
Maireana planifolia x villosa	0.1	80	WNG05-13=			
Paraneurachne muelleri	0.1	40		0.1	40	
Psydrax suaveolens	0.1	120		0.1	120	
Ptilotus astrolasius	0.1	30		0.1	30	
Ptilotus exaltatus	0.1	10				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus helipteroides	0.1	10				
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	50	
Salsola australis	0.1	20		0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	100		0.1	100	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	60		0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	120				
Senna glutinosa subsp. *x luerssenii*	0.1	10		0.1	10	
Senna sp. Meekatharra (E. Bailey 1-26)	0.1	50		0.1	50	
Seringia elliptica	0.1	45		0.1	45	
Sida sp. dark green fruits (S. van Leeuwen 2260)				0.1	20	WNG55R-01
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	50				
Solanum horridum				0.1	10	
Solanum lasiophyllum	0.1	50		0.1	50	
Sporobolus australasicus	0.1	10				
Themeda triandra	0.1	70		0.1	70	
Triodia longiceps	1	60		1	60	
Triodia pungens	1	50		1	50	
Triodia wiseana	4	30		4	30	





West Angelas Beyond 2020 Phase 1 Site WNG56
Described by Phase 1: MM/RM Date 30-Aug-18
Type Quadrat50 x 50 m
Central Coordinate 50K 690702 mE, 7436106 mN.

Habitat Footslope to stony undulating plain.

Soil Red sandy clay loam.

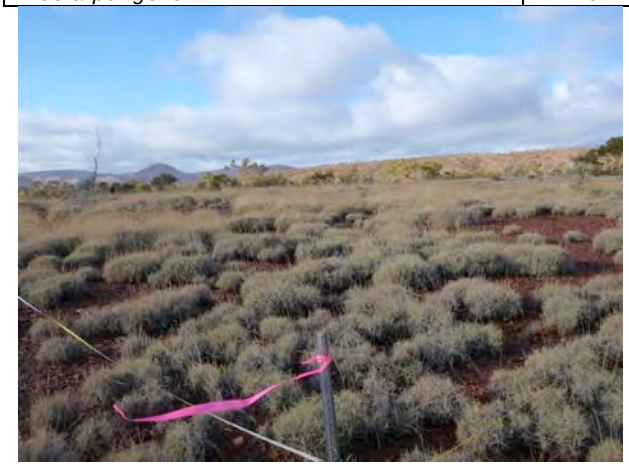
Rock Type Ironstone, quartz.

Vegetation *Eucalyptus gamophylla* scattered low mallees over *Acacia pruinocarpa* scattered low trees over *Triodia vanleeuwenii* hummock grassland.

Veg Condition Excellent.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Acacia kempeana	0.1	120	WNG56-04
Acacia pachyacra	0.1	150	
Acacia pruinocarpa	0.5	350	
Acacia rhodophloia	0.1	90	
Acacia sibirica (linear form)	0.1	120	WNG56-03
Amphipogon sericeus	0.1	30	
Anthobolus leptomerioides	0.1	90	
Aristida contorta	0.1	30	
Aristida holathera var. *holathera*	0.1	60	
Codonocarpus cotinifolius	0.1	170	
Cymbopogon ambiguus	0.1	60	
Digitaria ammophila	0.1	25	
Eragrostis setifolia	0.1	30	WNG56-01
Eremophila forrestii subsp. *forrestii*	0.1	60	
Eremophila phyllopoda subsp. *obliqua*	0.1	60	
Eucalyptus gamophylla	0.1	350	
Eulalia aurea	0.1	60	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	20	
Grevillea berryana	0.1	150	
Hakea chordophylla	0.1	20	
Maireana georgei	0.1	40	
Maireana planifolia	0.1	30	
Ptilotus astrolasius	0.1	35	
Ptilotus calostachyus	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	70	
Ptilotus rotundifolius	0.1	60	
Schizachyrium fragile	0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	60	
Senna glaucifolia	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	120	WNG56-02
Senna glutinosa subsp. *x luerssenii*	0.1	120	
Seringia nephrosperma	0.1	70	
Sida cardiophylla	0.1	50	
Sida sp. Supplejack Station (T.S. Henshall 2345)	0.1	25	WNG56-05
Solanum centrale	0.1	30	
Solanum lasiophyllum	0.1	20	
Triodia pungens	0.1	30	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG57
Described by Phase 1: BRMSC Phase 2: SCSS Date Phase 1: 30-Aug-18 Phase 2: 08-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 689734 mE, 7435846 mN.
Habitat Near footslope of east-west range to the south.
Soil Reddish brown clay loam.
Rock Type Ironstone: 1-25% outcropping, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia pruinocarpa* low open woodland (resprouting) over *Halgania gustafsenii* var. Mid West (G. Perry 370 low open shrubland over *Triodia pungens* open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia pruinocarpa* low open woodland (resprouting) over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia pungens* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 2-3 years ago. Phase 2: Burnt 2-3 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	25		0.1	25	
Acacia aptaneura	0.1	250	WNG57-10	0.1	250	
Acacia bivenosa	0.1	40		0.1	40	
Acacia cowleana				0.1	15	
Acacia kempeana	0.1	40	WNG57-15			
Acacia maitlandii	0.1	30		0.1	30	
Acacia pruinocarpa	2	150		2	150	
Acacia pyrifolia var. *pyrifolia*	0.1	60		0.1	60	
Acacia sibirica (linear form)	0.1	30	WNG57-02	0.1	30	
Amphipogon sericeus	0.1	20	WNG13-02=	0.1	20	
Androcalva luteiflora	0.1	40	WNG57-03	0.1	40	
Anthobolus leptomerioides	0.1	130		0.1	130	
Aristida contorta	0.1	10				
Codonocarpus cotinifolius	0.1	45		0.1	45	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	WNG19-02=	0.1	40	
Enneapogon caerulescens	0.1	30				
Eragrostis setifolia	0.1	30	WNG57-14			
Eremophila latrobei subsp. *latrobei*	0.1	50		0.1	50	
Eremophila platycalyx subsp. *pardalota*	0.1	40	WNG57-05			
Eriachne pulchella	0.1	10				
Eucalyptus gamophylla	0.1	110		0.1	110	
Eucalyptus leucophloia subsp. *leucophloia*	2	350		2	350	
Euphorbia sp.	0.1	5				
Fimbristylis dichotoma	0.1	20	WNG57-01			
Gompholobium oreophilum	0.1	30		0.1	30	
Goodenia microptera	0.1	20				
Goodenia muelleriana	0.1	10	WNG09-12=			
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	25				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hakea chordophylla	0.1	200		0.1	200	
Halgania gustafsenii var. Mid West (G. Perry 370)	3	30	WNG57-06	3	30	
Hibiscus burtonii				0.1	10	
Hibiscus coatesii	0.1	50	WNG25-01=	0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG21-05=	0.1	30	
Indigofera monophylla	0.1	30		0.1	30	
Oldenlandia crouchiana	0.1	20	WNG57-11			
Paraneurachne muelleri	0.1	30		0.1	30	
Peripleura virgata	0.1	15	WNG57-12	0.1	15	
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	5				
Ptilotus obovatus var. *obovatus*	0.1	20				
Ptilotus rotundifolius	0.1	60		0.1	60	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	WNG57-07	0.1	40	
Schizachyrium fragile	0.1	10				
Senna artemisioides subsp. *helmsii*	0.1	50		0.1	50	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*				0.1	10	
Senna glaucifolia	0.1	60		0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	50		0.1	50	
Senna glutinosa subsp. *pruinosa*	0.1	40		0.1	40	
Senna glutinosa subsp. x *luerssenii*	0.1	30		0.1	30	
Senna notabilis	0.1	15				
Sida arenicola	0.1	50		0.1	50	
Sida cardiophylla				0.1	15	
Sida echinocarpa	0.1	20		0.1	20	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	WNG57-04	0.1	20	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20				
Solanum horridum	0.1	15	WNG57-13	0.1	15	
Solanum lasiophyllum	0.1	20		0.1	20	
Triodia pungens	25	15	WNG57-09	25	15	
Triodia vanleeuwenii	0.1	10	WNG57-08	0.1	10	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG58
Described by Phase 1: MM/CI Phase 2: BRMTB Date Phase 1: 10-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 675395 mE, 7430895 mN.
Habitat Low stony rise. Gently sloping crest of a low stony rise, which is part of footslopes of the tall range of hills to the north (south aspect). Continuous layer of pebbles (51-75%) and some gravel and cobbles (1-25%).
Soil Dark reddish brown sandy clay loam.
Rock Type Chert and ?ironstone.
Vegetation Phase 1: *Eucalyptus socialis*, *E. trivalva* low mallee woodland over *Acacia bivenosa*, (*Indigofera monophylla*, *Ptilotus astrolasius*) low open shrubland over *Triodia wiseana*, (*Triodia pungens*) open hummock grassland.
Phase 2: *Eucalyptus socialis*, *E. trivalva* low mallee woodland over *Acacia bivenosa*, (*Indigofera monophylla*, *Ptilotus astrolasius*) low open shrubland over *Triodia wiseana*, (*Triodia pungens*) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cunninghamii	0.1	40	WNG58-03	0.1	40	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)				0.1	45	WNG58R-02
Acacia bivenosa	4	50		4	50	
Acacia tenuissima	0.1	70		0.1	70	
Amphipogon sericeus	0.1	40	WNG58-05	0.1	40	
Androcalva luteiflora	0.1	160		0.1	160	
Capparis lasiantha	0.1	30		0.1	30	
Codonocarpus cotinifolius	0.1	400		0.1	400	
Corchorus crozophorifolius	0.1	40		0.1	40	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG58-08	0.1	50	
Cullen leucochaites	0.1	140	WNG58-13	0.1	140	
Cymbopogon ambiguus				0.1	70	
Dodonaea lanceolata var. *lanceolata*				0.1	40	
Duperreya commixta	0.1	150		0.1	150	
Enneapogon lindleyanus	0.1	60				
Eucalyptus socialis subsp. *eucentrica*	6	260	WNG58-12	6	260	
Eucalyptus trivalva	6	230	WNG58-01	6	230	
Eucalyptus xerothermica	0.1	350		0.1	350	
Gomphrena kanisii	0.1	20	WNG58-04			
Gossypium robinsonii	0.1	160		0.1	160	
Heliotropium inexplicitum	0.1	5	WNG58-14			
Hibiscus sturtii var. *campylochlamys*	0.1	45	WNG58-02	0.1	45	
Indigofera monophylla	0.5	35		0.5	35	
Jasminum didymum subsp. *lineare*				0.1	70	
Lepidium pedicellosum	0.1	50		0.1	50	
Marsdenia australis	0.1	80		0.1	80	
Melhania oblongifolia				0.1	10	
Paraneurachne muelleri				0.1	50	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Phyllanthus maderaspatensis	0.1	50				
Pterocaulon sphacelatum	0.1	30				
Ptilotus astrolasius	0.5	50		0.5	50	
Ptilotus calostachyus	0.1	70		0.1	70	
Ptilotus clementii	0.1	30				
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Ptilotus rotundifolius	0.1	80		0.1	80	
Rhynchosia minima	0.1	60				
Rostellularia adscendens var. *latifolia*	0.1	20	WNG58-10	0.1	15	WNG58R-01
Salsola australis	0.1	40		0.1	40	
Santalum lanceolatum				0.1	160	
Senna artemisioides subsp. *oligophylla*	0.1	70	WNG58-09	0.1	70	
Senna glutinosa subsp. *glutinosa*	0.1	35		0.1	35	
Senna glutinosa subsp. *pruinosa*				0.1	160	
Senna glutinosa subsp. *x luerssenii*	0.1	30		0.1	30	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	65		0.1	65	
Solanum lasiophyllum	0.1	45		0.1	45	
Themeda triandra	1	70	WNG58-07	1	70	
Trichodesma zeylanicum var. *zeylanicum*	0.1	80		0.1	80	
Triodia pungens	3	35	WNG58-06	3	35	
Triodia wiseana	12	30		12	30	
Ventilago viminalis	0.1	140	WNG58-11	0.1	140	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG59
Described by Phase 1: BRMSC Phase 2: BRMTB Date Phase 1: 31-Aug-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 684393 mE, 7432161 mN.
Habitat Hillslope of east-west range.
Soil Reddish brown loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. x *luerssenii*, *Ptilotus obovatus* scattered low shrubs over *Triodia pungens* hummock grassland
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. x *luerssenii*, *Ptilotus obovatus* scattered low shrubs over *Triodia pungens* hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	40		0.1	40	
Acacia maitlandii	0.1	50				
Amphipogon sericeus	0.1	20	WNG13-02=	0.1	20	
Aristida contorta				0.1	15	
Aristida holathera var. *holathera*	0.1	30	WNG59-05			
Cymbopogon ambiguus	0.1	40	WNG59-02	0.1	40	
Eremophila fraseri subsp. *fraseri*	0.1	30		0.1	30	
Eriachne mucronata	0.1	30		0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	3	500		3	500	
Gomphrena kanisii	0.1	15	WNG59-04			
Hakea chordophylla	0.1	45				
Hakea lorea subsp. *lorea*				0.1	100	
Heliotropium inexplicitum	0.1	10	WNG59-01	0.1	10	
Hibiscus coatesii	0.1	40	WNG59-03	0.1	40	
Hibiscus sturtii var. *campylochlamys*	0.1	20	WNG39-02=			
Paraneurachne muelleri	0.1	40		0.1	40	
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus clementii	0.1	20				
Ptilotus exaltatus	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	
Ptilotus rotundifolius	0.1	80		0.1	80	
Salsola australis	0.1	30		0.1	30	
Senna glutinosa subsp. *glutinosa*	0.5	150		0.5	150	
Senna glutinosa subsp. *pruinosa*	0.1	100		0.1	100	
Senna glutinosa subsp. *x luerssenii*	0.1	70		0.1	70	
Senna notabilis	0.1	30				
Sida fibulifera	0.1	30		0.1	30	
Sida sp. Excedentifolia (J.L. Egan 1925)				0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30	WNG59-07	0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Solanum lasiophyllum	0.1	40		0.1	40	
Tribulus suberosus	0.1	30				
Triodia pungens	40	20	WNG59-06	40	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG60

Described by Phase 1: MM/RM Phase 2: BRMTB Date Phase 1: 30-Aug-18 Phase 2: 08-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 688859 mE, 7436205 mN.

Habitat Stony hillcrest sloping to the north east and north.

Soil Red sandy clay loam.

Rock Type Ironstone, quartz, chert.

Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii* scattered low shrubs over *Triodia vanleeuwenii* very open hummock grassland.

Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii* scattered low shrubs over *Triodia vanleeuwenii* very open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 1-2 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	25		0.1	25	
Acacia cowleana	0.1	30		0.1	30	
Acacia inaequilatera	0.1	30		0.1	30	
Acacia kempeana	0.1	60	WNG60-03	0.1	60	
Acacia maitlandii	1.5	35		1.5	35	
Acacia pruinocarpa	0.1	70		0.1	70	
Acacia sibirica (linear form)	0.1	60	WNG60-01	0.1	60	
Acacia tenuissima				0.1	20	
Acacia tetragonophylla				0.1	30	
Amphipogon sericeus	0.1	30		0.1	30	
Anthobolus leptomerioides	0.1	60	WNG60-05	0.1	60	
Corchorus lasiocarpus (subsp. not determined)	0.1	45		0.1	45	
Cymbopogon ambiguus	0.1	60				
Eremophila latrobei subsp. *latrobei*	0.1	60	WNG60-06	0.1	60	
Eucalyptus leucophloia subsp. *leucophloia*	2	600		2	600	
Fimbristylis dichotoma	0.1	15				
Gompholobium oreophilum	0.1	30		0.1	30	
Goodenia microptera	0.1	20				
Goodenia muelleriana	0.1	25				
Goodenia stobbsiana	0.1	40		0.1	40	
Goodenia triodiophila	0.1	40		0.1	40	
Hakea chordophylla	0.1	300		0.1	300	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1	35	WNG52-02=	0.1	35	
Heliotropium inexplicitum	0.1	15	REL18-05=			
Hibiscus coatesii	0.1	60		0.1	60	
Hibiscus sturtii var. *campylochlamys*	0.1	30	WNG54-02=	0.1	30	
Indigofera monophylla	0.1	25		0.1	25	
Oldenlandia crouchiana	0.1	10				
Paraneurachne muelleri	0.1	30		0.1	30	
Ptilotus calostachyus	0.1	60		0.1	60	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus exaltatus	0.1	30				
Ptilotus rotundifolius	0.1	60		0.1	60	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	30	WNG60-02	0.1	30	
Senna glutinosa subsp. *glutinosa*	0.1	60	WNG52-03=	0.1	60	
Senna glutinosa subsp. *pruinosa*	0.1	60		0.1	60	
Senna glutinosa subsp. *x luerssenii*	0.1	40		0.1	40	
Senna notabilis	0.1	30				
Sida arenicola	0.1	40		0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	WNG60-04	0.1	20	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	40		0.1	40	
Solanum lasiophyllum	0.1	30		0.1	30	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60		0.1	60	
Triodia pungens	0.1	25		0.1	25	
Triodia vanleeuwenii	5	25		5	25	
Triodia wiseana	0.1	30		0.1	30	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG61

Described by Phase 1: PL/CI Phase 2: SCSS Date Phase 1: 31-Aug-18 Phase 2: 10-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 687023 mE, 7432116 mN.

Habitat Gently sloping plain in broad valley.

Soil Dark reddish brown clay loam.

Rock Type Ironstone: 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Eucalyptus gamophylla* low open mallee woodland over *Acacia cowleana*, *Eremophila longifolia*, (*A. ayersiana*) tall open shrubland over *Eremophila forrestii* subsp. *forrestii*, *A. sibirica* (linear form) open shrubland over *Senna artemisioides* subsp. *helmsii*, *S. artemisioides* subsp. *oligophylla* x *helmsii*, *S. artemisioides* subsp. *oligophylla* low open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra* scattered tussock grasses.

Phase 2: *Eucalyptus gamophylla* low open mallee woodland over *Acacia cowleana*, *Eremophila longifolia*, (*A. ayersiana*) tall open shrubland over *Eremophila forrestii* subsp. *forrestii*, *A. sibirica* (linear form) open shrubland over *Senna artemisioides* subsp. *helmsii*, *S. artemisioides* subsp. *oligophylla* x *helmsii*, *S. artemisioides* subsp. *oligophylla* low open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra* scattered tussock grasses.

Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	25				
Acacia adsurgens	0.1	310		0.1	310	
Acacia aneura	0.1	250	WNG61-09	0.1	250	
Acacia aptaneura	0.1	220	WNG61-11	0.1	220	
Acacia ayersiana	1	210		1	210	
Acacia bivenosa	0.1	150		0.1	150	
Acacia cowleana	2	400	WNG61-10	2	400	
Acacia pachyacra	0.1	205		0.1	205	
Acacia pruinocarpa	0.1	110		0.1	110	
Acacia sibirica	0.1	210	WNG61-06	0.1	210	
Acacia sibirica (linear form)	1.5	170	WNG61-01	1.5	170	
Acacia steedmanii subsp. *borealis*	0.5	250		0.5	250	
Aristida contorta	0.1	25		0.1	25	
Aristida ingrata	0.1	60	WNG61-04			
Bidens bipinnata	0.1	40				
Capparis lasiantha	0.1	150		0.1	150	
Cymbopogon obtectus	0.1	45	WNG61-03	0.1	45	
Digitaria brownii	0.1	90		0.1	90	
Duperreya commixta	0.1	160		0.1	160	
Enneapogon polyphyllus	0.1	25				
Enneapogon robustissimus	0.1	50				
Eremophila forrestii subsp. *forrestii*	1	120		1	120	
Eremophila longifolia	2	310		2	310	
Eriachne mucronata	0.1	40		0.1	40	
Eriachne pulchella	0.1	10				
Eucalyptus gamophylla	4	550		4	550	
Evolvulus alsinoides var. *villosicalyx*	0.1	20				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Gossypium robinsonii	0.1	210		0.1	210	
Hibiscus sturtii var. *grandiflorus*	0.1	10				
Hibiscus sturtii var. *platychlamys*	0.1	25				
Jasminum didymum subsp. *lineare*	0.1	80		0.1	80	
Maireana planifolia	0.1	120				
Paraneurachne muelleri	0.1	40		0.1	40	
Ptilotus exaltatus	0.1	25				
Ptilotus obovatus var. *obovatus*	0.5	45		0.5	45	
Ptilotus rotundifolius	0.1	80		0.1	80	
Salsola australis	0.1	10				
Scaevola parvifolia subsp. *pilbarae*	0.1	35		0.1	35	
Senna artemisioides subsp. *filifolia*	0.1	80	WNG61-02			
Senna artemisioides subsp. *helmsii*	1	90		1	90	
Senna artemisioides subsp. *oligophylla*	0.5	90		0.5	90	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	1	70		1	70	
Senna glaucifolia	0.1	90	WNG61-12	0.1	90	
Senna glutinosa subsp. *x luerssenii*	0.1	160		0.1	160	
Seringia elliptica	0.1	40		0.1	40	
Sida sp. Supplejack Station (T.S. Henshall 2345)	0.1	30	WNG61-05			
Themeda triandra	1	120		1	120	
Triodia pungens	28	80	WNG61-08	28	80	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG62
Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 31-Aug-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 686423 mE, 7432081 mN.
Habitat Stony plain with cobbles, pebbles and gravel.
Soil Dark reddish brown sandy loam.
Rock Type Ironstone.
Vegetation Phase 1: *Eucalyptus gamophylla* low open mallee woodland over *Senna* spp. scattered shrubs over *Triodia pungens*, (*T. vanleeuwenii*) hummock grassland.
Phase 2: *Eucalyptus gamophylla* low open mallee woodland over *Senna* spp. scattered shrubs over *Triodia pungens*, (*T. vanleeuwenii*) hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens	0.1	125		0.1	125	
Acacia bivenosa	0.1	80		0.1	80	
Acacia dictyophleba	0.1	150		0.1	150	
Acacia pachyacra	0.1	130		0.1	130	
Acacia pyrifolia var. *pyrifolia*	0.1	60		0.1	60	
Aristida contorta	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	50		0.1	50	
Aristida ingrata	0.1	60	WNG62-05	0.1	60	
Aristida lazaridis	0.1	45	WNG62-07			
Corchorus lasiocarpus (subsp. not determined)	0.1	50		0.1	50	
Cymbopogon ambiguus	0.1	50		0.1	50	
Digitaria ammophila	0.1	20				
Digitaria brownii	0.1	80		0.1	80	
Duperreya commixta	0.1	130		0.1	130	
Enneapogon polyphyllus	0.1	40				
Enneapogon robustissimus	0.1	40				
Eragrostis setifolia	0.1	25		0.1	25	
Eriachne mucronata	0.1	30		0.1	30	
Eucalyptus gamophylla	6	550		6	550	
Euphorbia tannensis subsp. *eremophila*	0.1	30				
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Gossypium robinsonii	0.1	170		0.1	170	
Hibiscus burtonii	0.1	70		0.1	70	
Hybanthus aurantiacus	0.1	70				
Indigofera monophylla	0.1	35				
Jasminum didymum subsp. *lineare*	0.1	45		0.1	45	
Melhania oblongifolia	0.1	25				
Olearia stuartii	0.1	60	WNG62-04	0.1	60	
Paraneurachne muelleri	0.1	30		0.1	30	
Peripleura obovata	0.1	50	WNG62-08	0.1	50	
Ptilotus calostachyus	0.1	60				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus exaltatus	0.1	45		0.1	45	
Ptilotus obovatus var. *obovatus*	0.1	60		0.1	60	
Ptilotus rotundifolius	0.1	70		0.1	70	
Salsola australis	0.1	40		0.1	40	
Scaevola acacioides	0.1	60		0.1	60	
Scaevola parvifolia subsp. *pilbarae*	0.1	30		0.1	30	
Schizachyrium fragile	0.1	25				
Senna artemisioides subsp. *helmsii*	0.1	70		0.1	70	
Senna artemisioides subsp. *oligophylla*	0.1	70	WNG62-06	0.1	70	
Senna glutinosa subsp. *x luerssenii*	0.1	130		0.1	130	
Senna pleurocarpa var. *angustifolia*	0.1	50	WNG62-03	0.1	50	
Sida cardiophylla	0.1	60		0.1	60	
Sida echinocarpa	0.1	25				
Solanum centrale	0.1	40	WNG62-02			
Solanum lasiophyllum	0.1	50		0.1	50	
Triodia pungens	25	60	WNG62-01	25	60	
Triodia vanleeuwenii	10	40		10	40	





West Angelas Beyond 2020 Phase 1 Site WNG63
Described by Phase 1: BRMSC Date 31-Aug-18
Type Quadrat50 x 50 m
Central Coordinate 50K 682990 mE, 7431939 mN.

Habitat Low hillslope of a tall east-west range.

Soil Reddish brown loam.

Rock Type Ironstone: 1-25% outcropping, 1-25% boulders, 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Dampiera candicans*, *Dodonaea coriacea*, (*Goodenia stobbsiana*) low open shrubland over *Triodia wiseana*, (*T. pungens*) hummock grassland and *Cymbopogon ambiguus*, *Amphipogon sericeus* scattered tussock grasses.

Veg Condition Excellent.

Fire Age Burnt 2-3 years ago.

Species	Cover	Height (cm)	Specimen
Acacia kempeana	0.1	120	WNG56-04
Acacia pachyacra	0.1	150	
Acacia pruinocarpa	0.5	350	
Acacia rhodophloia	0.1	90	
Acacia sibirica (linear form)	0.1	120	WNG56-03
Amphipogon sericeus	0.1	30	
Anthobolus leptomerioides	0.1	90	
Aristida contorta	0.1	30	
Aristida holathera var. *holathera*	0.1	60	
Codonocarpus cotinifolius	0.1	170	
Cymbopogon ambiguus	0.1	60	
Digitaria ammophila	0.1	25	
Eragrostis setifolia	0.1	30	WNG56-01
Eremophila forrestii subsp. *forrestii*	0.1	60	
Eremophila phyllopoda subsp. *obliqua*	0.1	60	
Eucalyptus gamophylla	0.1	350	
Eulalia aurea	0.1	60	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	20	
Grevillea berryana	0.1	150	
Hakea chordophylla	0.1	20	
Maireana georgei	0.1	40	
Maireana planifolia	0.1	30	
Ptilotus astrolasius	0.1	35	
Ptilotus calostachyus	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	70	
Ptilotus rotundifolius	0.1	60	
Schizachyrium fragile	0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	60	
Senna glaucifolia	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	120	WNG56-02
Senna glutinosa subsp. *x luerssenii*	0.1	120	
Seringia nephrosperma	0.1	70	
Sida cardiophylla	0.1	50	
Sida sp. Supplejack Station (T.S. Henshall 2345)	0.1	25	WNG56-05
Solanum centrale	0.1	30	
Solanum lasiophyllum	0.1	20	
Triodia pungens	0.1	30	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG64
Described by Phase 1: PLMG Phase 2: SCSS Date Phase 1: 10-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 677707 mE, 7430400 mN.
Habitat Low rise in a broad area of undulating plain/low rises.
Soil Dark reddish brown clay loam.
Rock Type Ironstone, quartz, *calcrete*: Cobbles 1-25%, pebbles 26-50% and gravel 26-50%.
Vegetation Phase 1: *Eucalyptus repullulans*, (*E. trivalva*) low open mallee woodland over *Acacia bivenosa* (wispy/weeping form) scattered tall shrubs over *Triodia wiseana* open hummock grassland.
Phase 2: *Eucalyptus repullulans*, (*E. trivalva*) low open mallee woodland over *Acacia bivenosa* (wispy/weeping form) scattered tall shrubs over *Triodia wiseana* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cunninghamii	0.1	50		0.1	50	
Acacia 'aneura' sens. lat. (juvenile)	0.1	50	WNG64-07	0.1	50	
Acacia adoxa var. *adoxa*	0.1	40		0.1	40	
Acacia adsurgens	0.1	50				
Acacia bivenosa	3	50		3	50	
Acacia maitlandii	0.1	50		0.1	50	
Acacia pyrifolia var. *pyrifolia*				0.1	80	
Acacia tenuissima				0.1	40	WNG64R-02
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	25		0.1	25	
Capparis lasiantha	0.1	40		0.1	40	
Corchorus lasiocarpus subsp. *parvus*	0.1	40				
Cymbopogon sp.	0.1	40				
Duperreya commixta	0.1	50		0.1	50	
Enneapogon lindleyanus	0.1	40				
Enneapogon polyphyllus	0.1	25				
Eucalyptus repullulans	6	190	WNG64-01	6	190	
Eucalyptus trivalva	2	200	WNG64-02	2	200	
Goodenia muelleriana	0.1	25				
Goodenia stobbsiana	0.1	40		0.1	40	
Gossypium robinsonii	0.1	35				
Hakea chordophylla	0.1	120		0.1	120	
Heliotropium inexplicitum	0.1	20	WNG64-04	0.1	20	
Hibiscus coatesii	0.1	30				
Hibiscus sturtii var. *campylochlamys*	0.1	35		0.1	35	
Indigofera monophylla	0.1	30				
Jasminum didymum subsp. *lineare*	0.1	110		0.1	110	
Paraneurachne muelleri	0.1	30				
Ptilotus astrolasius	0.1	30		0.1	30	
Ptilotus calostachyus	0.1	80		0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus clementii	0.1	40				
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Senna artemisioides subsp. *helmsii*	0.1	40		0.1	40	
Senna ferraria x S. artemisioides subsp. *oligophylla*	0.1	80	WNG64-05			
Senna glaucifolia				0.1	80	WNG64R-01
Senna glutinosa subsp. *glutinosa*	0.1	140		0.1	140	
Senna glutinosa subsp. *x luerssenii*	0.1	70		0.1	70	
Senna sp. Karijini (M.E. Trudgen 10392)				0.1	80	WNG64R-03
Sida echinocarpa	0.1	40				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG64-06	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	60				
Solanum lasiophyllum				0.1	20	
Streptoglossa bubakii	0.1	25		0.1	25	
Templetonia egena	0.1	100		0.1	100	
Triodia pungens	13	30		13	30	
Triodia wiseana	10	30		10	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG65

Described by Phase 1: BRM/RM Phase 2: BRMTB Date Phase 1: 10-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 675621 mE, 7430702 mN.

Habitat Gentle south sloping footslope to plain.

Soil Dark reddish brown clay loam.

Rock Type Ironstone.

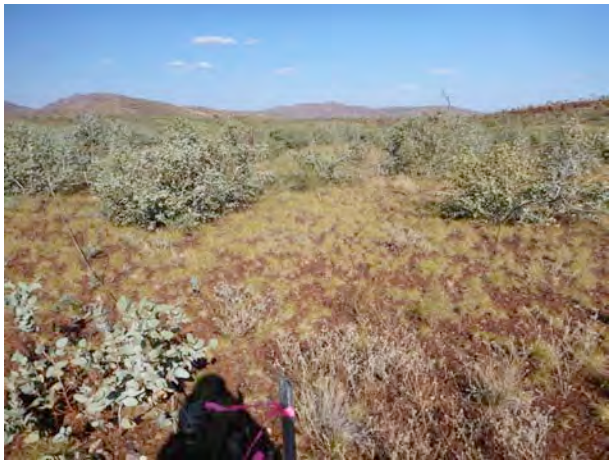
Vegetation Phase 1: *Eucalyptus trivalva*, *E. gamophylla*, *E. socialis* subsp. *eucentrica* low mallee woodland over *Acacia bivenosa* scattered shrubs over *Indigofera monophylla*, (*Scaevola parvifolia* subsp. *pilbarae*) low open shrubland over *Triodia wiseana*, (*T. pungens*) open hummock grassland and *Ptilotus calostachyus* very open herbland.
Phase 2: *Eucalyptus trivalva*, *E. gamophylla*, *E. socialis* subsp. *eucentrica* low mallee woodland over *Acacia bivenosa* scattered shrubs over *Indigofera monophylla*, (*Scaevola parvifolia* subsp. *pilbarae*) low open shrubland over *Triodia wiseana*, (*T. pungens*) open hummock grassland and *Ptilotus calostachyus* very open herbland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cunninghamii	0.1	35	WNG65-04	0.1	35	
Acacia bivenosa	0.5	120		0.5	120	
Acacia tenuissima	0.1	40	WNG65-02	0.1	40	
Amphipogon sericeus	0.1	40	WNG13-02=	0.1	40	
Capparis lasiantha	0.1	60		0.1	60	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG65-06	0.1	50	
Cymbopogon obtectus				0.1	120	
Dodonaea lanceolata var. *lanceolata*	0.1	60	WNG65-05	0.1	60	
Duperreya commixta	0.1	50		0.1	50	
Eucalyptus gamophylla	5	150		5	150	
Eucalyptus socialis subsp. *eucentrica*	4	180	WNG65-08	4	180	
Eucalyptus trivalva	7	180	WNG65-03	7	180	
Hakea chordophylla	0.1	200		0.1	200	
Heliotropium sp.				0.1	10	WNG65R-01
Hibiscus coatesii	0.1	30	WNG65-07			
Hibiscus sturtii var. *campylochlamys*	0.1	40	WNG21-05=	0.1	40	
Indigofera monophylla	2	50		2	50	
Jasminum didymum subsp. *lineare*				0.1	76	
Paraneurachne muelleri	0.1	40		0.1	40	
Ptilotus astrolasius	0.1	40		0.1	40	
Ptilotus calostachyus	3	40		3	40	
Ptilotus clementii	0.1	25				
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Ptilotus rotundifolius	0.5	80		0.5	80	
Santalum lanceolatum	0.1	190		0.1	190	
Scaevola parvifolia subsp. *pilbarae*	1	60		1	60	
Scaevola spinescens	0.1	110		0.1	110	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40		0.1	40	
Senna glutinosa subsp. *x luerssenii*	0.1	160		0.1	160	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	130		0.1	130	
Solanum lasiophyllum	0.1	40				
Triodia pungens	3	25	WNG65-01	3	25	
Triodia wiseana	12	25		12	25	
Vincetoxicum lineare	0.1	60	WNG65-09	0.1	60	





West Angelas Beyond 2020 Phase 1 Site WNG66
Described by Phase 1: PLMG Date 11-Sep-18
Type Quadrat50 x 50 m
Central Coordinate 50K 687554 mE, 7431236 mN.

Habitat Hillslope of *major* range.

Soil Dark reddish brown clay loam.

Rock Type Ironstone: 1-25% outcropping, 1-26% cobbles, 26-50% pebbles.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Goodenia stobbsiana*, *Acacia maitlandii*, *Corchorus lasiocarpus* subsp. *parvus*, Seringia *elliptica* low open shrubland over *Triodia pungens*, (*T. wiseana*) open hummock grassland.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	30	
Acacia bivenosa	0.1	50	
Acacia hamersleyensis	0.1	90	
Acacia maitlandii	1	70	
Acacia pachyacra	0.1	70	
Acacia pyrifolia var. *pyrifolia*	0.1	120	
Amphipogon sericeus	0.1	30	
Aristida holathera var. *holathera*	0.1	25	
Calytrix carinata	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	1	50	
Corymbia hamersleyana	2	210	
Dodonaea coriacea	0.1	50	
Eriachne mucronata (typical form)	0.1	35	
Eucalyptus leucophloia subsp. *leucophloia*	4	600	
Goodenia microptera	0.1	35	
Goodenia stobbsiana	2	40	
Goodenia triodiophila	0.1	25	
Hakea chordophylla	0.1	120	
Hibiscus coatesii	0.1	60	
Jasminum didymum subsp. *lineare*	0.1	80	
Mirbelia viminalis	0.1	60	
Paraneurachne muelleri	0.1	40	
Petalostylis labicheoides	0.1	220	
Ptilotus calostachyus	0.1	60	
Ptilotus exaltatus	0.1	25	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	WNG66-01
Senna glutinosa subsp. *glutinosa*	0.1	160	
Seringia elliptica	1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	WNG66-02
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	50	
Solanum centrale	0.1	40	
Tephrosia oxalidea	0.1	10	WNG66-03
Triodia pungens	10	30	
Triodia wiseana	3	30	



West Angelas Beyond 2020 Phase 1 Site WNG67
Described by BRM/RM Date 11-Sep-18
Type Quadrat
Central Coordinate 50K 685264 mE, 7431692 mN.
Habitat Midslope crest of moderate spur, northeast facing, on a moderate slope coming off a high ridge.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 26-50% outcropping, 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *E. gamophylla* scattered low mallees over *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Goodenia cusackiana*, G. *stobbsiana* scattered low shrubs over *Triodia pungens* open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	50	
Acacia maitlandii	0.1	45	
Acacia pachyacra	0.1	110	WNG67-09
Acacia pyrifolia var. *pyrifolia*	0.1	170	
Amphipogon sericeus	0.1	35	WNG13-02=
Aristida holathera var. *holathera*	0.1	35	
Capparis mitchellii	0.1	90	WNG67-05
Corchorus lasiocarpus subsp. *parvus*	0.1	30	WNG67-03
Corymbia ferriticola	0.1	50	WNG67-01
Cymbopogon ambiguus	0.1	60	
Eriachne mucronata	0.1	45	
Eucalyptus gamophylla	0.5	240	
Eucalyptus leucophloia subsp. *leucophloia*	9	600	
Evolvulus alsinoides var. *villosicalyx*	0.1	15	
Goodenia cusackiana	1.5	30	
Goodenia microptera	0.1	30	WNG67-04
Goodenia stobbsiana	0.5	40	
Goodenia triodiophila	0.1	30	
Hakea chordophylla	0.1	260	
Heliotropium inexplicitum	0.1	5	WNG19-04=
Hibiscus coatesii	0.1	20	WNG67-02
Paraneurachne muelleri	0.1	40	
Peripleura virgata	0.1	25	WNG67-06
Ptilotus calostachyus	0.1	110	
Ptilotus exaltatus	0.1	25	
Ptilotus rotundifolius	0.1	70	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40	
Senna ferraria	0.1	50	WNG67-07
Senna glaucifolia	0.1	100	WNG67-08
Senna glutinosa subsp. *glutinosa*	1	190	
Senna glutinosa subsp. *x luerssenii*	0.1	120	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	30	REL23-08=
Solanum lasiophyllum	0.1	35	
Triodia pungens	15	30	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG68
Described by Phase 1: MM/CI Phase 2: BRMTB Date Phase 1: 11-Sep-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 687788 mE, 7431848 mN.
Habitat Upper rocky hillslope below free face steep slope to the NW.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% large boulders, 1-25% boulders, 1-25% cobbles, 51-75% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia pachyacra* open shrubland over *Triodia wiseana*, (*T. pungens*) open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia pachyacra* open shrubland over *Triodia wiseana*, (*T. pungens*) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon lepidum	0.1	10	WNG68-08			
Acacia adsurgens	0.1	20	WNG68-11	0.1	20	
Acacia bivenosa	0.1	40		0.1	40	
Acacia maitlandii	0.1	30		0.1	30	
Acacia pachyacra	2.5	150		2.5	150	
Acacia pruinocarpa	0.1	50		0.1	50	
Amphipogon sericeus	0.1	40	WNG68-04	0.1	40	
Aristida contorta	0.1	35		0.1	35	
Aristida holathera var. *holathera*				0.1	25	
Cleome viscosa	0.1	30		0.1	30	
Corchorus crozophorifolius	0.1	45		0.1	45	
Cucumis variabilis				0.1	30	
Cymbopogon ambiguus	0.1	110		0.1	110	
Cynanchum pedunculatum	0.1	25	WNG68-12	0.1	25	
Digitaria ammophila				0.1	25	WNG68R-01
Dodonaea coriacea	0.1	40		0.1	40	
Duperreya commixta				0.1	100	
Enneapogon caerulescens	0.1	30		0.1	30	
Enneapogon lindleyanus	0.1	45		0.1	45	
Eremophila latrobei	0.1	50				
Eremophila platycalyx subsp. *pardalota*				0.1	45	WNG68R-02
Eriachne mucronata (typical form)	0.1	60		0.1	60	
Eucalyptus leucophloia subsp. *leucophloia*	1.5	600		1.5	600	
Euphorbia australis var. *hispidula*	0.1	5	WNG68-03			
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Fimbristylis dichotoma	0.1	35				
Gomphrena cunninghamii	0.1	15				
Goodenia muelleriana	0.1	20				
Goodenia stobbsiana	0.1	30				
Hakea chordophylla	0.1	180		0.1	180	
Hakea lorea subsp. *lorea*				0.1	60	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Heliotropium inexplicitum	0.1	10	WNG58-14=	0.1	10	
Hibiscus coatesii	0.1	80		0.1	80	
Hibiscus sturtii var. *campylochlamys*	0.1	40	WNG68-07	0.1	40	
Iseilema dolichotrichum	0.1	5	WNG68-05			
Paraneurachne muelleri	0.1	50		0.1	50	
Psydrax suaveolens	0.1	80		0.1	80	
Pterocaulon sphacelatum	0.1	20				
Ptilotus auriculifolius	0.1	5				
Ptilotus calostachyus	0.1	70		0.1	70	
Ptilotus clementii	0.1	25		0.1	25	
Ptilotus exaltatus	0.1	35		0.1	35	
Ptilotus obovatus var. *obovatus*	0.1	55		0.1	55	
Ptilotus rotundifolius	0.1	100		0.1	100	
Rhynchosia minima	0.1	15				
Salsola australis	0.1	30		0.1	30	
Schizachyrium fragile	0.1	25				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	35	WNG68-10	0.1	35	
Senna ferraria	0.1	120		0.1	120	
Senna glutinosa subsp. *glutinosa*	0.1	130		0.1	130	
Senna glutinosa subsp. *pruinosa*	0.1	50				
Senna glutinosa subsp. *x luerssenii*	0.1	60		0.1	60	
Sida echinocarpa	0.1	50				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WNG68-02	0.1	30	
Sida sp. L (A.M. Ashby 4202)	0.1	10	WNG68-06	0.1	10	
Solanum horridum	0.1	20		0.1	20	
Tribulus suberosus	0.1	45		0.1	45	
Triodia pungens	0.5	35	WNG68-01	0.5	35	
Triodia wiseana	15	30		15	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG69

Described by Phase 1: BRM/RM Phase 2: SCSS Date Phase 1: 11-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 680214 mE, 7429178 mN.

Habitat Broad drainage between hills in a north-south direction. Hills are east and west of site.

Soil Dark reddish brown clay loam.

Rock Type Ironstone: 1-25% pebbles, 1-25% gravel.

Vegetation Phase 1: *Corymbia hamersleyana* low woodland over *Acacia pyrifolia*, (*Petalostylis labicheoides*, *Ventilago viminalis*) tall open shrubland over *Indigofera georgei*, *Tephrosia rosea* var. Fortescue creeks (*M*.I.H. Brooker 2186) open shrubland over *Scaevola spinescens* scattered low shrubs over *Themeda triandra* closed tussock grassland and *Triodia pungens* scattered hummock grasses.

Phase 2: *Corymbia hamersleyana* low woodland over *Acacia pyrifolia*, (*Petalostylis labicheoides*, *Ventilago viminalis*) tall open shrubland over *Indigofera georgei*, *Tephrosia rosea* var. Fortescue creeks (*M*.I.H. Brooker 2186) open shrubland over *Scaevola spinescens* scattered low shrubs over *Themeda triandra* closed tussock grassland and *Triodia pungens* scattered hummock grasses.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa				0.1	50	
Acacia cowleana	0.1	230	WNG69-03	0.1	230	
Acacia maitlandii	0.1	45		0.1	45	
Acacia monticola				0.1	200	
Acacia pyrifolia var. *pyrifolia*	4	290		4	290	
Androcalva luteiflora	0.1	180	WNG69-10	0.1	180	
Aristida contorta	0.1	30				
Capparis lasiantha	0.1	50		0.1	50	
Chrysocephalum gilesii	0.1	20	WNG07-20=	0.1	20	
Chrysopogon fallax	0.1	80				
Corchorus lasiocarpus subsp. *parvus*	0.1	35	WNG19-02=	0.1	35	
Corymbia hamersleyana	18	600		18	600	
Digitaria brownii	0.1	60		0.1	60	
Dodonaea lanceolata var. *lanceolata*	0.1	170	WNG65-05=	0.1	170	
Duperreya commixta	0.1	270		0.1	270	
Enneapogon lindleyanus	0.1	40				
Enneapogon polyphyllus	0.1	30				
Eremophila longifolia	0.1	170		0.1	170	
Eriachne mucronata	0.1	35				
Eucalyptus xerothermica	0.1	320				
Eulalia aurea	0.1	60				
Goodenia microptera	0.1	25	WNG69-11			
Goodenia stellata	0.1	20	WNG69-09			
Gossypium robinsonii	0.1	180		0.1	180	
Heliotropium cunninghamii	0.1	30	WNG69-08			
Indigofera georgei	5	130		5	130	
Indigofera monophylla				0.1	30	
Jasminum didymum subsp. *lineare*	0.1	45		0.1	45	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Leiocarpa semicalva subsp. *semicalva*	0.1	35	WNG69-06			
Olearia stuartii	0.1	30	WNG69-02			
Paraneurachne muelleri	0.1	40		0.1	40	
Peripleura hispidula var. *hispidula*	0.1	40	WNG69-05			
Petalostylis labicheoides	2	350		2	350	
Pterocaulon sphacelatum	0.1	60		0.1	60	
Ptilotus astrolasius	0.1	50				
Ptilotus obovatus var. *obovatus*				0.1	40	
Rhynchosia minima				0.1	50	
Santalum lanceolatum	0.1	65		0.1	65	
Scaevola parvifolia subsp. *pilbarae*	0.1	30				
Scaevola spinescens	0.5	90		0.5	90	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	50	
Senna artemisioides subsp. *x artemisioides*				0.1	40	WNG69R-01
Seringia elliptica	0.1	45	WNG69-07	0.1	45	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	150				
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	4	160		4	160	
Themeda triandra	80	70		80	70	
Trichodesma zeylanicum var. *zeylanicum*	0.1	40				
Triodia pungens	1.5	30	WNG69-04	1.5	30	
Ventilago viminalis	0.5	320	WNG69-01	0.5	320	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG70

Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 11-Sep-18 Phase 2: 10-Apr-19

Type Quadrat25 x 100 m

Central Coordinate 50K 680258 mE, 7430303 mN.

Habitat Moderate drainage line, mostly bare creek bed max depth 1m, width 5m. Broad gravelly banks.

Soil Dark reddish brown clay loam.

Rock Type Ironstone: 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Corymbia hamersleyana* low open woodland over *Eucalyptus gamophylla* scattered low mallees over *Acacia monticola* tall open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra*, *Paraneurachne muelleri*, (*Eriachne mucronata*) very open tussock grassland.

Phase 2: *Corymbia hamersleyana* low open woodland over *Eucalyptus gamophylla* scattered low mallees over *Acacia monticola* tall open shrubland over *Triodia pungens* open hummock grassland and *Themeda triandra*, *Paraneurachne muelleri*, (*Eriachne mucronata*) very open tussock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon macrum	0.1	25	WNG70-16	0.1	25	
Acacia adoxa var. *adoxa*	0.1	30		0.1	30	
Acacia adsurgens	0.1	60	WNG70-12	0.1	60	
Acacia aptaneura				0.1	170	WNG70R-01
Acacia bivenosa	0.1	100		0.1	100	
Acacia cowleana	0.1	90	WNG70-03	0.1	90	
Acacia macraneura	0.1	350	WNG70-08			
Acacia maitlandii	0.1	60		0.1	60	
Acacia monticola	3	220		3	220	
Acacia pruinocarpa	0.1	210		0.1	210	
Acacia pyrifolia var. *pyrifolia*	0.1	350		0.1	350	
Acacia sp.				0.1	20	WNG70R-03
Acacia steedmanii subsp. *borealis*	0.1	220		0.1	220	
Acacia tenuissima	0.1	90				
Androcalva luteiflora	0.1	190		0.1	190	
Aristida contorta				0.1	5	
Capparis lasiantha	0.1	150		0.1	150	
Cheilanthes sieberi subsp. *sieberi*				0.1	15	
Chrysocephalum pterochaetum	0.1	50	WNG70-02			
Clerodendrum floribundum var. *angustifolium*				0.1	250	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	110	WNG70-01	0.1	110	
Corymbia hamersleyana	8	600	WNG70-18	8	600	
Digitaria brownii	0.1	60		0.1	60	
Dodonaea lanceolata var. *lanceolata*	0.1	120		0.1	120	
Duperreya commixta	0.1	210		0.1	210	
Eragrostis setifolia	0.1	30	WNG70-17			
Eriachne mucronata	0.5	40		0.5	40	
Eriachne tenuiculmis	0.1	60		0.1	60	
Eucalyptus gamophylla	1	280		1	280	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eulalia aurea	0.1	40	WNG70-05	0.1	40	
Euphorbia australis var. *hispidula*	0.1	10	WNG70-13b			
Euphorbia australis var. *subtomentosa*	0.1	6	WNG70-14			
Euphorbia biconvexa	0.1	60	WNG70-15			
Euphorbia trigonosperma	0.1	10	WNG70-13a			
Evolvulus alsinoides var. *villosicalyx*	0.1	10		0.1	10	
Gastrolobium grandiflorum	0.1	180	WNG70-06	0.1	180	
Glycine canescens	0.1	160		0.1	160	
Gompholobium oreophilum	0.1	70		0.1	70	
Goodenia cusackiana	0.1	30		0.1	30	
Goodenia microptera	0.1	10				
Goodenia stobbsiana	0.1	60		0.1	60	
Goodenia triodiophila	0.1	20				
Gossypium robinsonii	0.1	300		0.1	300	
Grevillea wickhamii subsp. *hispidula*	0.1	230	WNG70-04	0.1	230	
Hakea chordophylla	0.1	210		0.1	210	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1	45		0.1	45	
Heliotropium cunninghamii	0.1	25	WNG70-07	0.1	25	
Heliotropium inexplicitum	0.1	5	WNG58-14=			
Hibiscus coatesii	0.1	50				
Hibiscus sturtii var. *campylochlamys*	0.1	60	WNG70-21			
Indigofera monophylla	0.1	50		0.1	50	
Jasminum didymum subsp. *lineare*	0.1	100		0.1	100	
Marsdenia australis	0.1	140				
Olearia stuartii	0.1	40	WNG70-19	0.1	40	
Paraneurachne muelleri	3	50		3	50	
Peripleura obovata	0.1	10	WNG70-10			
Petalostylis labicheoides	0.1	250		0.1	250	
Polycarpaea corymbosa var. *corymbosa*	0.1	20				
Pterocaulon sphacelatum	0.1	20				
Ptilotus astrolasius	0.1	50		0.1	50	
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Santalum lanceolatum	0.1	140		0.1	140	
Scaevola parvifolia subsp. *pilbarae*	0.1	15		0.1	15	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	50		0.1	50	
Scaevola spinescens (broad form)	0.1	80		0.1	80	
Senna artemisioides subsp. *helmsii*	0.1	40		0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	45	WNG70-20	0.1	45	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	50	WNG70R-04
Senna artemisioides subsp. *x artemisioides x S. stricta*				0.1	180	WNG70R-02

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Senna glutinosa subsp. *glutinosa*	0.1	90		0.1	90	
Senna stricta	0.1	210	WNG70-09			
Seringia elliptica	0.1	50		0.1	50	
Setaria surgens	0.1	70	WNG70-11			
Sida arenicola	0.1	70				
Sida echinocarpa	0.1	70				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	120		0.1	120	
Themeda triandra	5	80		5	80	
Trachymene oleracea subsp. *oleracea*	0.1	70				
Triodia pungens	18	40		18	40	
Triodia wiseana				0.1	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG71
Described by Phase 1: PLMG Phase 2: BRMTB Date Phase 1: 12-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 675741 mE, 7429865 mN.
Habitat Breakaway on a low hill.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% boulders, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *Grevillea berryana*, *Acacia aptaneura*) low open forest over *Triodia pungens* open hummock grassland.
Phase 2: *Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *Grevillea berryana*, *Acacia aptaneura*) low open forest over *Triodia pungens* open hummock grassland.
Veg Condition Phase 1: Very Good; scattered **Bidens bipinnata*. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia aptaneura	1	220	WNG71-08	1	220	
Acacia catenulata subsp. *occidentalis*	40	700		40	700	
Acacia hamersleyensis	0.1	160		0.1	160	
Acacia incurvaneura	0.1	210	WNG71-07	0.1	210	
Acacia pruinocarpa	0.1	300		0.1	300	
Amaranthus cuspidifolius	0.1	40	WNG71-03			
Bidens bipinnata	0.1	25		0.1	25	
Capparis lasiantha	0.1	140		0.1	140	
Cheilanthes austrotenuifolia	0.1	25		0.1	25	
Cheilanthes brownii	0.1	10	WNG71-02	0.1	10	
Cleome viscosa	0.1	30				
Corymbia ferriticola				0.1	300	
Cucumis variabilis				0.1	180	
Cymbopogon ambiguus				0.1	20	
Digitaria ammophila	0.1	50		0.1	50	
Dodonaea pachyneura				0.1	240	
Duperreya commixta	0.1	25		0.1	25	
Enchylaena tomentosa var. *tomentosa*	0.1	30				
Enneapogon lindleyanus	0.1	60				
Enneapogon polyphyllus	0.1	25				
Eremophila latrobei subsp. *latrobei*	0.1	210		0.1	210	
Eriachne mucronata (typical form)	0.1	40		0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	8	750		8	750	
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Grevillea berryana	1	410		1	410	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	40	WNG71-06			
Indigofera gilesii	0.1	160		0.1	160	
Lobelia heterophylla subsp. *pilbarensis*	0.1	40		0.1	10	WNG71R-01
Olearia stuartii	0.1	60	WNG71-04			
Paspalidium clementii	0.1	25		0.1	25	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Peripleura virgata	0.1	30		0.1	30	
Psydrax suaveolens				0.1	180	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Rhagodia eremaea	0.1	100	WNG71-05	0.1	100	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	120	WNG71-01	0.1	120	
Rhodanthe margarethae	0.1	40				
Santalum lanceolatum	0.1	350		0.1	350	
Senna glutinosa subsp. *glutinosa*	0.1	170		0.1	170	
Senna glutinosa subsp. *x luerssenii*	0.1	170		0.1	170	
Solanum lasiophyllum	0.1	40		0.1	40	
Teucrium teucriiflorum	0.1	80		0.1	70	WNG71R-03
Themeda triandra	0.1	80		0.1	80	
Triodia pungens	13	50		13	50	

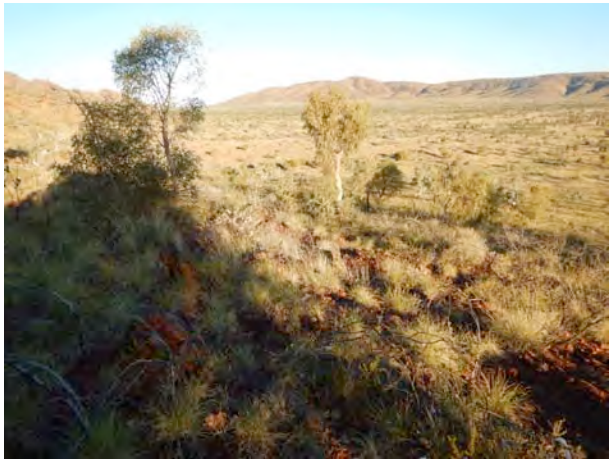




West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG72
Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 11-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 678172 mE, 7429429 mN.
Habitat Upper hillslope of moderate sized rocky hill; moderate slope to the southeast.
Soil Reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% cobbles, 26-50% pebbles, 1-25% gravel.
Vegetation Phase 1: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Acacia maitlandii*, *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Gompholobium oreophilum*, *Corchorus lasiocarpus* subsp. *lasiocarpus*) low shrubland over *Triodia wiseana*, *T. pungens* open hummock grassland
Phase 2: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Acacia maitlandii*, *Halgania gustafsenii* var. Mid West (G. Perry 370), (*Gompholobium oreophilum*, *Corchorus lasiocarpus* subsp. *lasiocarpus*) low shrubland over *Triodia wiseana*, *T. pungens* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	35		0.1	35	
Acacia hamersleyensis	0.1	40		0.1	40	
Acacia maitlandii	6	50		6	50	
Acacia pyrifolia var. *pyrifolia*	0.1	200		0.1	200	
Acacia tenuissima				0.1	15	WNG64R-02=
Amphipogon sericeus	0.1	40		0.1	40	
Androcalva luteiflora	0.1	110		0.1	110	
Capparis lasiantha	0.1	60		0.1	60	
Cheilanthes brownii				0.1	10	WNG72R-01
Chrysocephalum pterochaetum	0.1	30	WNG70-02=	0.1	30	
Clerodendrum floribundum var. *angustifolium*	0.1	160		0.1	160	
Codonocarpus cotinifolius				0.1	100	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.5	50				
Corchorus lasiocarpus subsp. *parvus*				0.5	50	
Corymbia hamersleyana	2	600		2	600	
Cymbopogon ambiguus	0.1	70		0.1	70	
Dampiera candicans	0.1	55		0.1	55	
Eremophila jucunda subsp. *pulcherrima*	0.1	50		0.1	50	
Eremophila latrobei	0.1	60		0.1	60	
Eriachne mucronata	0.1	45		0.1	45	
Eriachne pulchella	0.1	20				
Eucalyptus leucophloia subsp. *leucophloia*	1	500		1	500	
Euphorbia boophthona	0.1	10	WNG72-02			
Gompholobium oreophilum	1	45	WNG72-04	1	45	
Goodenia stobbsiana	0.1	60		0.1	60	
Goodenia triodiophila	0.1	20				
Hakea chordophylla	0.1	200		0.1	200	
Halgania gustafsenii var. Mid West (G. Perry 370)	4	50		4	50	
Heliotropium inexplicitum	0.1	10	WNG58-14=	0.1	10	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hibiscus coatesii	0.1	55				
Hibiscus sturtii var. *campylochlamys*	0.1	40	WNG72-01	0.1	40	
Hybanthus aurantiacus	0.1	30		0.1	30	
Indigofera monophylla	0.1	30		0.1	30	
Jasminum didymum subsp. *lineare*	0.1	170		0.1	170	
Mirbelia viminalis	0.1	50		0.1	50	
Paraneurachne muelleri	0.1	50		0.1	50	
Paspalidium clementii	0.1	4	WNG72-03			
Ptilotus astrolasius	0.1	40				
Ptilotus calostachyus	0.1	80		0.1	80	
Ptilotus clementii	0.1	40				
Santalum lanceolatum	0.1	95		0.1	95	
Schizachyrium fragile	0.1	35				
Senna artemisioides subsp. *helmsii*	0.1	30		0.1	30	
Senna artemisioides subsp. *oligophylla*				0.1	40	
Senna ferraria	0.1	170		0.1	170	
Senna glutinosa subsp. *glutinosa*	0.1	60		0.1	60	
Senna glutinosa subsp. *x luerssenii*	0.1	90		0.1	90	
Sida echinocarpa	0.1	40				
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	WNG68-02=	0.1	40	
Solanum lasiophyllum	0.1	50		0.1	50	
Tephrosia oxalidea				0.1	5	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	60		0.1	60	
Triodia pungens	8	40		8	40	
Triodia wiseana	8	40		8	40	
Vincetoxicum lineare				0.1	80	WNG72R-03





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG73
Described by Phase 1: BRM/RM Phase 2: BRMTB Date Phase 1: 12-Sep-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 679842 mE, 7431690 mN.
Habitat Crest of low hill, including upper slopes.
Soil Dark reddish brown sandy clay loam.
Rock Type Basalt, some ironstone: 1-25% outcropping, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* low open shrubland over *Triodia wiseana* open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia bivenosa* low open shrubland over *Triodia wiseana* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adsurgens	0.1	35	WNG73-03	0.1	35	
Acacia bivenosa	3	60		3	60	
Acacia tenuissima	0.1	50		0.1	50	
Amphipogon sericeus	0.1	40	WNG13-02=	0.1	40	
Aristida contorta				0.1	45	WNG73R-01
Cymbopogon ambiguus	0.1	50		0.1	50	
Eriachne mucronata	0.1	30				
Eriachne mucronata (typical form)				0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	1.5	600		1.5	600	
Fimbristylis dichotoma	0.1	20	WNG73-01	0.1	20	
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	350		0.1	350	
Hibiscus coatesii	0.1	5		0.1	5	
Paraneurachne muelleri	0.1	30		0.1	30	
Polygala glaucifolia	0.1	10	WNG73-02			
Ptilotus calostachyus	0.1	50		0.1	50	
Ptilotus exaltatus	0.1	25		0.1	25	
Ptilotus obovatus var. *obovatus*	0.1	20		0.1	20	
Ptilotus rotundifolius	0.1	70		0.1	70	
Scaevola acacioides				0.1	30	
Scaevola spinescens	0.1	50				
Schizachyrium fragile	0.1	15		0.1	15	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	15	
Senna glutinosa subsp. *glutinosa*				0.1	30	
Sida echinocarpa	0.1	40				
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20				
Solanum centrale	0.1	25				
Themeda triandra	0.1	45		0.1	45	
Triodia wiseana	20	30		20	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG74

Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 12-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 679092 mE, 7429297 mN.

Habitat Upper to midslope of moderately tall hill. Moderate slope to the southwest.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone: 1-25% outcropping, 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation Phase 1: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Halgania gustafsenii* var. Mid West (G. Perry 370), *Mirbelia viminalis*, (*Acacia maitlandii*) low open shrubland over *Triodia wiseana*, (*T. pungens*) very open hummock grassland.

Phase 2: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Halgania gustafsenii* var. Mid West (G. Perry 370), *Mirbelia viminalis*, (*Acacia maitlandii*) low open shrubland over *Triodia wiseana*, (*T. pungens*) very open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	40		0.1	40	
Acacia bivenosa	0.1	55		0.1	55	
Acacia cowleana	0.1	35	WNG74-03			
Acacia dictyophleba	0.1	75		0.1	75	
Acacia maitlandii	0.5	85		0.5	85	
Acacia pruinocarpa	0.1	90		0.1	90	
Acacia pyrifolia var. *pyrifolia*	0.1	200		0.1	200	
Acacia steedmanii subsp. *borealis*	0.1	190		0.1	190	
Acacia tenuissima	0.1	50				
Acacia tenuissima	0.1	50				
Amphipogon sericeus	0.1	30		0.1	30	
Androcalva luteiflora	0.1	120		0.1	120	
Aristida contorta	0.1	20				
Aristida holathera var. *holathera*	0.1	35				
Aristida latifolia	0.1	70	WNG74-02			
Codonocarpus cotinifolius	0.1	30		0.1	30	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	45		0.1	45	
Corymbia hamersleyana	2	600		2	600	
Cymbopogon ambiguus	0.1	70		0.1	70	
Dampiera candicans	0.1	50		0.1	50	
Digitaria brownii	0.1	80		0.1	80	
Dodonaea coriacea	0.1	40		0.1	40	
Dodonaea lanceolata var. *lanceolata*	0.1	45		0.1	45	
Duperreya commixta	0.1	200		0.1	200	
Enneapogon caerulescens	0.1	10				
Enneapogon lindleyanus	0.1	40				
Eriachne mucronata	0.1	50		0.1	50	
Eriachne pulchella	0.1	5				
Eucalyptus leucophloia subsp. *leucophloia*	1	600		1	600	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eulalia aurea	0.1	50	WNG74-04	0.1	50	
Fimbristylis dichotoma	0.1	30				
Goodenia stobbsiana	0.1	40		0.1	40	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	120		0.1	120	
Hakea lorea subsp. *lorea*	0.1	50	WNG74-10	0.1	50	
Halgania gustafsenii var. Mid West (G. Perry 370)	5	45		5	45	
Heliotropium inexplicitum	0.1	5	WNG58-14=	0.1	5	
Hibiscus coatesii	0.1	90		0.1	90	
Hibiscus sturtii var. *campylochlamys*	0.1	35	WNG74-01	0.1	35	
Jasminum didymum subsp. *lineare*	0.1	120		0.1	120	
Mirbelia viminalis	4	70		4	70	
Olearia stuartii	0.1	30	WNG74-07	0.1	30	
Paraneurachne muelleri	0.1	50		0.1	50	
Peripleura virgata	0.1	25	WNG74-05			
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus clementii	0.1	30				
Ptilotus obovatus var. *obovatus*	0.1	55		0.1	55	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	20		0.1	20	
Schizachyrium fragile	0.1	30				
Senna artemisioides subsp. *oligophylla*	0.1	55	WNG74-11	0.1	45	WNG74R-01
Senna ferraria	0.1	75		0.1	75	
Senna glutinosa subsp. *glutinosa*	0.1	110		0.1	110	
Senna glutinosa subsp. *x luerssenii*	0.1	80				
Seringia elliptica	0.1	50		0.1	50	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40		0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45		0.1	45	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	20		0.1	20	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	190		0.1	190	
Streptoglossa bubakii				0.1	15	
Tephrosia oxalidea	0.1	5	WNG74-08	0.1	5	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	70	WNG74-09	0.1	70	
Tribulus suberosus	0.1	30				
Triodia pungens	2	40		2	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	50		0.1	50	
Triodia wiseana	6	40		6	40	
Vincetoxicum lineare	0.1	50		0.1	50	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG75
Described by Phase 1: BRM/RM Phase 2: BRMTB Date Phase 1: 12-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 675545 mE, 7429988 mN.
Habitat Moderated east facing midslope of a high ridge.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low woodland over Seringia *elliptica*, (*Sida* sp. Pilbara (A.A. Mitchell PRP 1543), *Goodenia stobbsiana*) low open shrubland over *Triodia pungens* open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low woodland over Seringia *elliptica*, (*Sida* sp. Pilbara (A.A. Mitchell PRP 1543), *Goodenia stobbsiana*) low open shrubland over *Triodia pungens* open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago / No sign of recent fire. Phase 2: Burnt 3-5 years ago / No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	40	WNG75-03	0.1	40	
Acacia bivenosa	0.1	110		0.1	110	
Acacia cowleana	0.1	50	WNG75-11	0.1	50	
Acacia maitlandii	0.1	170		0.1	170	
Acacia pruinocarpa	0.1	170		0.1	170	
Acacia tenuissima				0.1	30	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	25		0.1	25	
Aristida holathera var. *holathera*	0.1	35		0.1	35	
Aristida pruinosa	0.1	120	WNG75-09	0.1	65	WNG75R-03
Capparis lasiantha	0.1	80		0.1	80	
Corchorus lasiocarpus subsp. *parvus*	0.1	70	WNG19-02=	0.1	70	
Corymbia hamersleyana	0.5	450		0.5	450	
Cymbopogon ambiguus	0.1	90		0.1	90	
Dodonaea lanceolata var. *lanceolata*	0.1	160	WNG75-09	0.1	160	
Duperreya commixta	0.1	35		0.1	35	
Dysphania rhadinostachya	0.1	15				
Enneapogon caerulescens				0.1	10	WNG75R-07
Enneapogon polyphyllus	0.1	20		0.1	20	
Eremophila latrobei subsp. *latrobei*	0.1	90		0.1	90	
Eriachne mucronata	0.1	30		0.1	30	
Eriachne pulchella	0.1	10		0.1	10	
Eucalyptus leucophloia subsp. *leucophloia*	11	600		11	600	
Eulalia aurea	0.1	40		0.1	40	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	WNG75-08	0.1	20	
Goodenia stobbsiana	0.5	35		0.5	35	
Goodenia triodiophila	0.1	20		0.1	20	
Hakea chordophylla	0.1	550		0.1	550	
Heliotropium inexplicitum	0.1	15	WNG19-04=			

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Heliotropium sp.				0.1	5	WNG75R-05
Hibiscus burtonii	0.1	70				
Hibiscus coatesii	0.1	70	WNG-BS-58=	0.1	70	
Hibiscus sturtii var. *campylochlamys*				0.1	40	
Maireana villosa	0.1	30	WNG05-01=	0.1	30	
Panicum effusum				0.1	35	WNG75R-04
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium clementii	0.1	15	WNG75-10			
Peripleura virgata	0.1	30	WNG75-07	0.1	30	
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus exaltatus	0.1	30				
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	25	WNG75-06	0.1	25	
Schizachyrium fragile	0.1	15				
Senna ferraria	0.1	160	WNG67-07=	0.1	160	
Senna glutinosa subsp. *glutinosa*	0.1	80		0.1	80	
Senna glutinosa subsp. *pruinosa*	0.1	30		0.1	30	
Seringia elliptica	2.5	60	WNG75-02	2.5	60	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	45	WNG75-05	0.1	45	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	1	35	WNG75-01	1	35	
Solanum lasiophyllum	0.1	70		0.1	70	
Solanum sp.				0.1	30	WNG75R-01
Tephrosia oxalidea				0.1	5	WNG75R-06
Triodia pungens	20	30		20	30	
Triodia wiseana				0.1	45	





West Angelas Beyond 2020 Phase 1 Site WNG76
Described by MM/CI Date 12-Sep-18
Type Quadrat50 x 50 m
Central Coordinate 50K 676892 mE, 7429002 mN.
Habitat Crest and slope of gently undulating low stony rise.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone, chert: 1-25% cobbles, 51-75% pebbles, 1-25% gravel.
Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia aptaneura* scattered low trees over *E. gamophylla* low open mallee woodland over *Acacia tenuissima* tall open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) hummock grassland.
Veg Condition Excellent.
Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	240	
Acacia aptaneura	1	400	WNG76-01
Acacia bivenosa	0.1	180	
Acacia cowleana	0.1	130	
Acacia pyrifolia var. *pyrifolia*	0.1	350	
Acacia tenuissima	2.5	220	
Amphipogon sericeus	0.1	50	
Aristida latifolia	0.1	110	WNG74-02=
Brunonia sp. Long hairs (D.E. Symon 2440)	0.1	40	
Chrysocephalum pterochaetum	0.1	25	WNG70-02=
Cymbopogon ambiguus	0.1	80	
Digitaria ammophila	0.1	30	WNG76-03
Dodonaea lanceolata var. *lanceolata*	0.1	70	
Duperreya commixta	0.1	170	
Enneapogon polyphyllus	0.1	35	
Eriachne pulchella	0.1	15	
Eucalyptus gamophylla	5	500	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	300	
Eulalia aurea	0.1	60	WNG74-04=
Fimbristylis dichotoma	0.1	40	
Gompholobium oreophilum	0.1	5	
Goodenia microptera	0.1	20	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	50	
Hakea chordophylla	0.1	110	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1	55	
Indigofera monophylla	0.1	40	
Jasminum didymum subsp. *lineare*	0.1	120	
Paraneurachne muelleri	0.1	55	
Peripleura virgata	0.1	30	WNG74-05=
Ptilotus calostachyus	0.1	110	
Ptilotus obovatus var. *obovatus*	0.1	70	
Schizachyrium fragile	0.1	20	
Senna artemisioides subsp. *helmsii*	0.1	40	WNG76-02
Senna glaucifolia	0.1	80	
Senna glutinosa subsp. *glutinosa*	0.1	200	
Seringia elliptica	0.1	50	
Solanum lasiophyllum	0.1	55	
Themeda triandra	0.1	70	
Triodia pungens	2	50	
Triodia vanleeuwenii	43	50	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG77

Described by Phase 1: PLMG Phase 2: BRMTB Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 677716 mE, 7429967 mN.

Habitat Hillslope of moderate hill.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone: 1-25% outcropping, 1-25% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Acacia pyrifolia* var. *pyrifolia* scattered tall shrubs over *A. maitlandii* open shrubland over *Halgania gustafsenii* var. Mid West (G. Perry 370), Seringia *elliptica*, (*A. adoxa* var. *adoxa*, *Corchorus lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia pungens*, (*T. wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland.

Phase 2: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *Acacia pyrifolia* var. *pyrifolia* scattered tall shrubs over *A. maitlandii* open shrubland over *Halgania gustafsenii* var. Mid West (G. Perry 370), Seringia *elliptica*, (*A. adoxa* var. *adoxa*, *Corchorus lasiocarpus* subsp. *parvus*) low open shrubland over *Triodia pungens*, (*T. wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland.

Veg Condition Phase 1: Excellent. Phase 2: Excellent.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	1	30		1	30	
Acacia aptaneura				0.1	60	WNG77R-01
Acacia bivenosa				0.1	60	
Acacia maitlandii	3	140		3	140	
Acacia marramamba	0.1	130		0.1	130	
Acacia pruinocarpa	0.1	100		0.1	100	
Acacia pyrifolia var. *pyrifolia*	1	250		1	250	
Acacia steedmanii subsp. *borealis*	0.1	130		0.1	130	
Acacia tenuissima				0.1	40	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	50				
Brunonia sp. Long hairs (D.E. Symon 2440)	0.1	30	WNG77-02	0.1	45	WNG77R-07
Chrysocephalum pterochaetum	0.1	40	WNG77-06			
Clerodendrum floribundum var. *angustifolium*	0.1	160		0.1	160	
Corchorus lasiocarpus subsp. *parvus*	1	80		1	80	
Corymbia hamersleyana	3	600		3	600	
Cucumis variabilis				0.1	100	
Cymbopogon ambiguus	0.1	80		0.1	80	
Dodonaea lanceolata var. *lanceolata*	0.1	70		0.1	70	
Duperreya commixta	0.1	120		0.1	120	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	15				
Enneapogon caerulescens	0.1	25				
Enneapogon polyphyllus	0.1	30				
Eremophila jucunda subsp. *pulcherrima*	0.1	60		0.1	60	
Eriachne aristidea	0.1	25				
Eriachne pulchella	0.1	20		0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	700		0.5	700	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Euphorbia australis var. *hispidula*	0.1	8	WNG77-07			
Euphorbia boophthona	0.1	20				
Evolvulus alsinoides var. *villosicalyx*				0.1	15	
Gastrolobium grandiflorum	0.1	140		0.1	140	
Goodenia stobbsiana	0.1	50		0.1	50	
Goodenia triodiophila	0.1	50		0.1	50	
Gossypium robinsonii	0.1	260		0.1	260	
Hakea chordophylla				0.1	100	
Halgania gustafsenii var. Mid West (G. Perry 370)	3	50		3	50	
Heliotropium sp.				0.1	7	WNG77R-06
Hibiscus coatesii	0.1	50		0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	45		0.1	45	
Hybanthus aurantiacus	0.1	35		0.1	35	
Indigofera monophylla	0.1	50		0.1	50	
Jasminum didymum subsp. *lineare*	0.1	90		0.1	90	
Oldenlandia crouchiana	0.1	20		0.1	5	WNG77R-05
Panicum effusum	0.1	45				
Paraneurachne muelleri	0.1	40		0.1	40	
Paspalidium clementii	0.1	20				
Peripleura virgata	0.1	30	WNG77-01			
Polycarpaea corymbosa var. *corymbosa*	0.1	25				
Pterocaulon sphacelatum	0.1	10				
Ptilotus astrolasius	0.1	30				
Ptilotus calostachyus	0.1	120		0.1	120	
Ptilotus exaltatus	0.1	40				
Ptilotus fusiformis	0.1	30	WNG77-03			
Schizachyrium fragile	0.1	25				
Senna ferraria	0.1	200		0.1	200	
Senna glaucifolia x				0.1	30	WNG77R-04
Senna glutinosa subsp. *glutinosa*	0.1	120		0.1	120	
Senna glutinosa subsp. *pruinosa*	0.1	70		0.1	70	
Senna glutinosa subsp. *x luerssenii*	0.1	90		0.1	90	
Seringia elliptica	2	60		2	60	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30		0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	60		0.1	60	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	100				
Solanum horridum	0.1	25		0.1	25	
Solanum kentrocaule	0.1	80		0.1	80	
Solanum lasiophyllum				0.1	90	WNG77R-03
Sporobolus australasicus	0.1	15				
Tephrosia oxalidea				0.1	20	WNG77R-02
Themeda triandra	0.1	80		0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Triodia pungens	8	40		8	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.5	45		0.5	45	
Triodia wiseana	2	40		2	40	
Vincetoxicum lineare	0.1	70		0.1	70	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG78

Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 12-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 676296 mE, 7429102 mN.

Habitat Broad stony plain, gentle slope to the south, southeast.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone: 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Acacia aneura*, (*A. aptaneura*, *A. pruinocarpa*, *Hakea lorea* subsp. *lorea*, *Eucalyptus xerothermica*, *E. leucophloia* subsp. *leucophloia*) low open forest over *E. gamophylla* scattered low mallees over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland and *Perotis rara*, (*Aristida contorta*) very open annual grassland and **Bidens bipinnata*, (*Cheilanthes sieberi* var. *sieberi*) very open herbland.

Phase 2: *Acacia aneura*, (*A. aptaneura*, *A. pruinocarpa*, *Hakea lorea* subsp. *lorea*, *Eucalyptus xerothermica*, *E. leucophloia* subsp. *leucophloia*) low open forest over *E. gamophylla* scattered low mallees over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland and *Perotis rara*, (*Aristida contorta*) very open annual grassland and **Bidens bipinnata*, (*Cheilanthes sieberi* var. *sieberi*) very open herbland.

Veg Condition Phase 1: Very Good; lots of *Bidens bipinnata*. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	20				
Acacia aneura	35	800	WNG78-01	35	800	
Acacia aptaneura	5	800	WNG78-05	5	800	
Acacia pruinocarpa	1	900		1	900	
Aristida contorta	1	40		1	40	
Aristida obscura	0.1	40	WNG78-04	0.1	40	
Bidens bipinnata	3	40		3	40	
Capparis lasiantha	0.1	220		0.1	220	
Cheilanthes sieberi subsp. *sieberi*	1	30		1	30	
Chrysopogon fallax	0.1	70		0.1	70	
Cucumis variabilis	0.1	50		0.1	50	
Digitaria ammophila				0.1	40	
Digitaria brownii	0.1	50		0.1	50	
Digitaria ctenantha	0.1	50				
Enneapogon lindleyanus	0.1	50		0.1	50	
Enneapogon polyphyllus	0.1	35		0.1	35	
Eremophila forrestii subsp. *forrestii*	3	140		3	140	
Eremophila fraseri subsp. *fraseri*	0.1	30		0.1	30	
Eremophila longifolia	0.1	300		0.1	300	
Eucalyptus gamophylla	0.5	900		0.5	900	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	700		0.5	700	
Eucalyptus xerothermica	1	800		1	800	
Eulalia aurea	0.1	50		0.1	50	
Euphorbia australis var. *hispidula*	0.1	10	WNG78-06			
Euphorbia drummondii	0.1	20	WNG78-02	0.1	20	
Evolvulus alsinoides var. *villosicalyx*	0.1	20		0.1	20	
Fimbristylis dichotoma	0.1	45		0.1	45	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hakea lorea subsp. *lorea*	1	800		1	800	
Hibiscus burtonii	0.1	30		0.1	30	
Jasminum didymum subsp. *lineare*	0.1	110		0.1	110	
Maireana villosa	0.1	40		0.1	40	
Nicotiana sp.	0.1	40		0.1	40	
Panicum effusum	0.1	30	WNG78-03	0.1	30	
Peripleura hispidula var. *hispidula*	0.1	20	WNG78-08	0.1	20	
Perotis rara	3	20				
Psydrax latifolia	0.1	25		0.1	25	
Psydrax suaveolens	0.1	110		0.1	110	
Ptilotus exaltatus	0.1	20				
Ptilotus helipteroides	0.1	20				
Ptilotus obovatus var. *obovatus*	0.1	70		0.1	70	
Ptilotus rotundifolius	0.1	60		0.1	60	
Rhagodia eremaea	0.1	140		0.1	140	
Santalum lanceolatum	0.1	180		0.1	180	
Scaevola spinescens (broad form)	0.1	30		0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	100	WNG78-09			
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	100	WNG78R-01
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	90		0.1	90	
Sida sp. L (A.M. Ashby 4202)	0.1	40		0.1	40	
Solanum horridum				0.1	40	
Sporobolus australasicus	0.1	15				
Teucrium teucriiflorum	0.1	70	WNG78-07	0.1	70	
Themeda triandra	0.1	110		0.1	110	
Triodia pungens	3	45		3	45	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG79
Described by Phase 1: BRM/RM Phase 2: BRMTB Date Phase 1: 13-Sep-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 679126 mE, 7431922 mN.
Habitat Midslope of a steep east facing slope.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone, BIF, chert: 1-25% outcropping, 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* hummock grassland and *Eriachne mucronata*, (*Cymbopogon ambiguus*) very open tussock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* hummock grassland and *Eriachne mucronata*, (*Cymbopogon ambiguus*) very open tussock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	45	WNG79-01	0.1	45	
Acacia bivenosa	0.1	60		0.1	60	
Acacia tenuissima	0.1	60	WNG79-02	0.1	60	
Amphipogon sericeus	0.1	30	WNG13-02=	0.1	30	
Capparis mitchellii	0.1	70	WNG79-04	0.1	70	
Cheilanthes brownii	0.1	20		0.1	20	
Corchorus lasiocarpus subsp. *parvus*				0.1	35	
Cymbopogon ambiguus	0.5	30		0.5	30	
Digitaria brownii				0.1	20	WNG79R-01
Duperreya commixta				0.1	100	
Eriachne mucronata	4	35				
Eriachne mucronata (typical form)				4	35	
Eucalyptus leucophloia subsp. *leucophloia*	5	650		5	650	
Goodenia microptera	0.1	20				
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	60		0.1	60	
Hibiscus coatesii	0.1	45	WNG-BS-58=	0.1	45	
Paraneurachne muelleri	0.1	40		0.1	40	
Peripleura obovata	0.1	30	WNG79-03	0.1	30	
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	30		0.1	30	
Ptilotus rotundifolius	0.1	70		0.1	70	
Scaevola acacioides				0.1	20	
Scaevola spinescens	0.1	30				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	40		0.1	40	
Senna ferraria	0.1	160	WNG67-07=	0.1	160	
Senna glutinosa subsp. *glutinosa*	0.1	110		0.1	110	
Senna glutinosa subsp. *x luerssenii x*				0.1	40	WNG79R-02
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	30		0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Solanum lasiophyllum	0.1	40		0.1	40	
Themeda triandra	0.1	45		0.1	45	
Triodia pungens	35	30		35	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG80

Described by Phase 1: MM/CI Phase 2: PL/CI Date Phase 1: 12-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 675513 mE, 7429192 mN.

Habitat Crest of low stony ridge; footslope of tall range to the north.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Corymbia hamersleyana*, (*C. deserticola* subsp. *deserticola*, *Hakea chordophylla*) low open woodland over *Eucalyptus gamophylla* scattered low mallees over *Gompholobium oreophilum* scattered low shrubs over *Triodia vanleeuwenii* open hummock grassland.
Phase 2: *Corymbia hamersleyana*, (*C. deserticola* subsp. *deserticola*, *Hakea chordophylla*) low open woodland over *Eucalyptus gamophylla* scattered low mallees over *Gompholobium oreophilum* scattered low shrubs over *Triodia vanleeuwenii* open hummock grassland.

Veg Condition Phase 1: Excellent. Very old track through east side of *quadrat*; doesn't affect condition. Phase 2: Excellent. Very old track through east side of *quadrat*; doesn't affect condition.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	25		0.1	25	
Acacia bivenosa	0.1	40		0.1	40	
Acacia cowleana	0.1	170		0.1	170	
Acacia maitlandii				0.1	25	
Acacia steedmanii subsp. *borealis*	0.1	60		0.1	60	
Acacia tenuissima	0.1	80		0.1	80	
Amphipogon sericeus	0.1	40		0.1	40	
Androcalva luteiflora	0.1	170		0.1	170	
Aristida holathera var. *holathera*	0.1	50		0.1	50	
Brunonia sp. Long hairs (D.E. Symon 2440)	0.1	20		0.1	20	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	50		0.1	50	
Corymbia deserticola subsp. *deserticola*	1	600		1	600	
Corymbia hamersleyana	2	600		2	600	
Cymbopogon ambiguus	0.1	45		0.1	45	
Enneapogon caerulescens	0.1	20		0.1	20	
Enneapogon polyphyllus	0.1	50				
Eriachne mucronata	0.1	45		0.1	45	
Eucalyptus gamophylla	0.1	150		0.1	150	
Eulalia aurea	0.1	70	WNG74-04=	0.1	70	
Fimbristylis dichotoma	0.1	30		0.1	30	
Gompholobium oreophilum	1.5	45		1.5	45	
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	10		0.1	10	
Hakea chordophylla	0.5	350		0.5	350	
Heliotropium inexplicitum	0.1	5	WNG58-14=	0.1	5	
Hibiscus sturtii var. *campylochlamys*	0.1	35	WNG80-02	0.1	35	
Indigofera monophylla	0.1	40		0.1	40	
Isotropis parviflora	0.1	5	WNG80-03	0.1	5	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Jasminum didymum subsp. *lineare*	0.1	140		0.1	140	
Peripleura virgata	0.1	40	WNG74-05=			
Polycarpaea corymbosa var. *corymbosa*	0.1	15				
Polycarpaea holtzei	0.1	2				
Ptilotus astrolasius	0.1	20		0.1	20	
Ptilotus calostachyus	0.1	9		0.1	9	
Ptilotus rotundifolius	0.1	90		0.1	90	
Schizachyrium fragile	0.1	15				
Senna artemisioides subsp. *helmsii*	0.1	70		0.1	70	
Senna artemisioides subsp. *oligophylla*	0.1	50		0.1	50	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	5	WNG80-01	0.1	5	
Senna ferraria	0.1	190		0.1	190	
Senna glutinosa subsp. *glutinosa*	0.1	100		0.1	100	
Sida echinocarpa	0.1	40				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70		0.1	70	
Solanum lasiophyllum	0.1	5		0.1	5	
Themeda triandra	0.5	70		0.5	70	
Trachymene oleracea subsp. *oleracea*	0.1	15				
Triodia pungens	0.1	40		0.1	40	
Triodia vanleeuwenii	15	20		15	20	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG81
Described by Phase 1: PLMG Phase 2: BRMTB Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 681401 mE, 7430436 mN.
Habitat Footslope and crest of low hill to west or range.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Corymbia deserticola* subsp. *deserticola* low open woodland over *Eucalyptus gamophylla* low open mallee woodland over *Gompholobium oreophilum*, *Acacia adoxa* var. *adoxa* low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*) open hummock grassland.
Phase 2: *Corymbia deserticola* subsp. *deserticola* low open woodland over *Eucalyptus gamophylla* low open mallee woodland over *Gompholobium oreophilum*, *Acacia adoxa* var. *adoxa* low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	2	40		2	40	
Acacia adsurgens	0.1	100		0.1	100	
Acacia cowleana	0.1	30		0.1	30	
Acacia pyrifolia var. *pyrifolia*	0.1	160		0.1	160	
Acacia tenuissima	0.1	140	WNG81-01	0.1	80	
Amphipogon sericeus	0.1	40		0.1	40	
Amyema sanguinea var. *pulchra*	0.1	50	WNG81-04	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	0.1	40		0.1	40	
Corymbia deserticola subsp. *deserticola*	3	600		3	600	
Cymbopogon ambiguus	0.1	80		0.1	80	
Cymbopogon obtectus	0.1	50		0.1	50	
Dodonaea lanceolata var. *lanceolata*	0.1	80		0.1	80	
Duperreya commixta	0.1	50		0.1	50	
Enneapogon lindleyanus	0.1	50				
Eriachne mucronata (arid form) (MET 12 736)	0.1	40	WNG81-02	0.1	40	
Eucalyptus gamophylla	3	320		3	320	
Fimbristylis dichotoma	0.1	30				
Gompholobium oreophilum	3	40		3	40	
Goodenia stobbsiana	0.1	25		0.1	25	
Goodenia triodiophila	0.1	35		0.1	35	
Hakea chordophylla	1	400		1	400	
Hibiscus coatesii	0.1	30		0.1	30	
Hibiscus sturtii var. *campylochlamys*	0.1	35		0.1	35	
Indigofera monophylla	0.1	40		0.1	40	
Isotropis parviflora				0.1	10	
Jasminum didymum subsp. *lineare*	0.1	110		0.1	110	
Panicum effusum	0.1	45		0.1	45	
Paraneurachne muelleri				0.1	30	
Ptilotus calostachyus	0.1	80		0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus obovatus var. *obovatus*				0.1	60	
Scaevola acacioides	0.1	50		0.1	50	
Schizachyrium fragile	0.1	30				
Senna glutinosa subsp. *pruinosa x*				0.1	170	WNG81R-01
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*	0.1	120	WNG81-03	0.1	120	
Senna glutinosa subsp. *x luerssenii*				0.1	60	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40		0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40		0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	60		0.1	60	
Triodia vanleeuwenii	11	30		11	30	
Triodia wiseana	0.5	50		0.5	50	





West Angelas Beyond 2020 Phase 1 Site WNG82
Described by MM/CI Date 13-Sep-18
Type Quadrat10 x 150 m
Central Coordinate 50K 676078mE, 7430104 mN.
Habitat East bank of moderate-sized drainage line, flowing south between low rocky hills.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.
Vegetation *Eucalyptus xerothermica*, (*Corymbia hamersleyana*) low open woodland over *Petalostylis labicheoides*, (*Acacia pyrifolia* var. *pyrifolia*, *Gossypium robinsonii*) tall open shrubland over *A. bivenosa*, (*Androcalva luteiflora*) open shrubland over *Themeda triandra* tussock grassland and *Triodia longiceps*, (*T. pungens*) very open hummock grassland.
Veg Condition Very Good; scattered weeds at eastern end near track.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	110	WNG82-05
Acacia bivenosa	6	130	
Acacia cowleana	0.1	100	
Acacia maitlandii	0.1	120	
Acacia pyrifolia var. *pyrifolia*	0.1	300	
Acacia steedmanii subsp. *borealis*	0.1	240	
Acacia tenuissima	0.1	60	
Androcalva luteiflora	1	130	
Aristida contorta	0.1	40	
Bidens bipinnata	0.1	40	
Capparis lasiantha	0.1	140	
Codonocarpus cotinifolius	0.1	200	
Corchorus crozophorifolius	0.1	55	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	90	
Corymbia hamersleyana	0.1	320	
Crotalaria medicaginea var. *neglecta*	0.1	40	
Cucumis variabilis	0.1	40	
Dipteracanthus australasicus subsp. *australasicus*	0.1	35	WNG82-07
Dodonaea lanceolata var. *lanceolata*	0.1	170	
Duperreya commixta	0.1	200	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	35	WNG82-03
Ehretia saligna var. *saligna*	0.1	190	
Enneapogon lindleyanus	0.1	60	
Enneapogon robustissimus	0.1	80	WNG82-04
Eucalyptus gamophylla	0.1	200	
Eucalyptus xerothermica	4	950	
Eulalia aurea	0.1	80	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	25	WNG82-12
Gomphrena cunninghamii	0.1	20	
Goodenia cusackiana	0.1	30	
Goodenia muelleriana	0.1	30	
Gossypium robinsonii	0.1	240	
Hakea chordophylla	0.1	250	
Hakea lorea subsp. *lorea*	0.1	100	
Indigofera georgei	0.1	120	
Indigofera monophylla	0.1	40	
Jasminum didymum subsp. *lineare*	0.1	90	
Leiocarpa semicalva subsp. *semicalva*	0.1	30	WNG82-08
Lepidium pedicellosum	0.1	60	
Malvastrum americanum	0.1	70	
Marsdenia australis	0.1	250	
Olearia fluvialis	0.1	40	WNG82-09
Paraneurachne muelleri	0.1	60	
Peripleura hispidula var. *hispidula*	0.1	40	WNG82-01
Petalostylis labicheoides	3	270	
Phyllanthus maderaspatensis	0.1	40	
Pterocaulon sphacelatum	0.1	40	
Ptilotus astrolasius	0.1	50	
Ptilotus calostachyus	0.1	90	
Ptilotus exaltatus	0.1	5	
Rhagodia eremaea	0.1	80	

Rhynchosia minima	0.1	40	
Santalum lanceolatum	0.1	90	
Senna artemisioides subsp. *filifolia*	0.1	80	WNG82-06
Senna artemisioides subsp. *oligophylla*	0.1	110	WNG82-11
Sida sp. L (A.M. Ashby 4202)	0.1	15	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	140	
Sigesbeckia orientalis	0.1	40	
Solanum kentrocaule	0.1	110	WNG82-10
Sporobolus australasicus	0.1	15	
Stylobasium spathulatum	0.1	110	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.1	50	
Themeda triandra	70	110	
Trichodesma zeylanicum var. *zeylanicum*	0.1	70	
Triodia longiceps	3	40	
Triodia pungens	1	50	
Triraphis mollis	0.1	110	WNG82-02
Ventilago viminalis	0.1	250	



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG83
Described by Phase 1: PLMG Phase 2: BRMTB Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 680722 mE, 7431452 mN.
Habitat Steep slope (south) of *major* hill.
Soil Dark reddish brown clay loam.
Rock Type Ironstone: 1-25% outcropping, 1-25% pebbles, 1-25% gravel.
Vegetation Phase 1: *Eucalyptus trivalva*, *E. pilbarensis*, *E. kingsmillii*, (*Corymbia hamersleyana*, *E. leucophloia* subsp. *leucophloia*) low open woodland over *Goodenia stobbsiana* scattered low shrubs over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.
Phase 2: *Eucalyptus trivalva*, *E. pilbarensis*, *E. kingsmillii*, (*Corymbia hamersleyana*, *E. leucophloia* subsp. *leucophloia*) low open woodland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	60		0.1	60	
Acacia maitlandii	0.1	50		0.1	50	
Acacia tenuissima	0.1	60		0.1	60	
Amphipogon sericeus	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	40		0.1	40	
Chrysocephalum pterochaetum	0.1	50	WNG77-06=	0.1	50	
Codonocarpus cotinifolius				0.1	40	
Corchorus lasiocarpus subsp. *parvus*	0.1	50		0.1	50	
Corymbia hamersleyana	0.5	400		0.5	400	
Cymbopogon ambiguus	0.1	50		0.1	50	
Cynanchum pedunculatum	0.1	25	WNG83-05	0.1	25	
Dodonaea lanceolata var. *lanceolata*	0.1	60		0.1	60	
Duperreya commixta				0.1	170	
Enneapogon lindleyanus	0.1	40		0.1	40	
Eriachne mucronata (typical form)	0.1	30	WNG83-04	0.1	30	
Eucalyptus kingsmillii	2	200	WNG83-07	2	200	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	300		0.1	300	
Eucalyptus pilbarensis	2	200	WNG83-01	2	200	
Eucalyptus trivalva	5	150	WNG83-06	5	150	
Eulalia aurea				0.1	25	
Goodenia stobbsiana	2	45		0.1	45	
Goodenia triodiophila	0.1	25		0.1	25	
Hakea lorea subsp. *lorea*	0.1	70		0.1	70	
Jasminum didymum subsp. *lineare*	0.1	70		0.1	70	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	0.1	110		0.1	110	
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)	0.1	50		0.1	50	
Olearia stuartii	0.1	15	WNG83-02	0.1	15	
Panicum effusum				0.1	20	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Paraneurachne muelleri	0.1	40		0.1	40	
Peripleura obovata	0.1	25	WNG83-03	0.1	25	
Peripleura virgata	0.1	20		0.1	20	
Pterocaulon sphacelatum	0.1	20				
Ptilotus calostachyus				0.1	70	
Ptilotus exaltatus	0.1	30				
Ptilotus obovatus var. *obovatus*				0.1	40	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40		0.1	40	
Senna ferraria	0.1	80		0.1	80	
Senna glutinosa subsp. *glutinosa*	0.1	100		0.1	100	
Senna notabilis	0.1	50				
Seringia nephrosperma				0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30		0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45				
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40		0.1	40	
Solanum horridum				0.1	25	
Solanum kentrocaule	0.1	90		0.1	90	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	50		0.1	50	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	5	40		5	40	
Triodia wiseana	7	40		7	40	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG84

Described by Phase 1: MM/CI Phase 2: SCSS Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19

Type Quadrat50 x 50 m

Central Coordinate 50K 680878 mE, 7429267 mN.

Habitat Stony footslope at base of tall hills. Gentle slope to the west and southwest.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone: 1-25% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Corymbia deserticola* subsp. *deserticola*, (*Hakea chordophylla*) scattered low trees over *Eucalyptus gamophylla* scattered low mallees over *Halgania gustafsenii* var. Mid West (G. Perry 370), *Gompholobium oreophilum* scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland and *Amphipogon sericeus* scattered tussock grasses.

Phase 2: *Corymbia deserticola* subsp. *deserticola*, (*Hakea chordophylla*) scattered low trees over *Eucalyptus gamophylla* scattered low mallees over *Halgania gustafsenii* var. Mid West (G. Perry 370), *Gompholobium oreophilum* scattered low shrubs over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland and *Amphipogon sericeus* scattered tussock grasses.

Veg Condition Phase 1: Very Good; very old track in *quadrat* and some other old earthworks; no effect on vegetation. Phase 2: Very Good; very old track in *quadrat* and some other old earthworks; no effect on vegetation.

Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	30		0.1	30	
Acacia adsurgens	0.1	100		0.1	100	
Acacia bivenosa	0.1	120		0.1	120	
Acacia cowleana	0.1	120		0.1	120	
Acacia pruinocarpa	0.1	140		0.1	140	
Acacia sibirica	0.1	70	WNG84-05	0.1	70	
Acacia steedmanii subsp. *borealis*	0.1	180		0.1	180	
Acacia tenuissima	0.1	100		0.1	100	
Amphipogon sericeus	2	50		2	50	
Amyema sanguinea var. *pulchra*	0.1	60				
Aristida contorta	0.1	15				
Codonocarpus cotinifolius	0.1	80		0.1	80	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	55		0.1	55	
Corymbia deserticola subsp. *deserticola*	1	450		1	450	
Cymbopogon ambiguus	0.1	70		0.1	70	
Dampiera candicans	0.1	55				
Dodonaea coriacea	0.1	70		0.1	70	
Duperreya commixta	0.1	180		0.1	180	
Eragrostis setifolia	0.1	35	WNG84-04			
Eremophila longifolia	0.1	120		0.1	120	
Eucalyptus gamophylla	0.5	250		0.5	250	
Fimbristylis dichotoma	0.1	30		0.1	30	
Gompholobium oreophilum	0.5	50		0.5	50	
Goodenia microptera	0.1	30				
Goodenia stobbsiana	0.1	50				
Goodenia triodiophila	0.1	40				
Gossypium robinsonii	0.1	220		0.1	220	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hakea chordophylla	0.5	330		0.5	330	
Halgania gustafsenii var. Mid West (G. Perry 370)	1	60		1	60	
Heliotropium heteranthum	0.1	2				
Heliotropium inexplicitum	0.1	5	WNG58-14=			
Hibiscus coatesii	0.1	60				
Hibiscus sturtii var. *campylochlamys*	0.1	35	WNG84-03	0.1	35	
Indigofera monophylla	0.1	40		0.1	40	
Jasminum didymum subsp. *lineare*	0.1	130		0.1	130	
Paraneurachne muelleri	0.1	50		0.1	50	
Psydrax latifolia	0.1	40		0.1	40	
Ptilotus astrolasius	0.1	50				
Ptilotus calostachyus	0.1	110		0.1	110	
Ptilotus rotundifolius	0.1	90		0.1	90	
Santalum lanceolatum	0.1	190		0.1	190	
Scaevola parvifolia subsp. *pilbarae*	0.1	15		0.1	15	
Schizachyrium fragile	0.1	30		0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	110		0.1	110	
Senna artemisioides subsp. *oligophylla*	0.1	60	WNG84-02	0.1	60	
Senna ferraria	0.1	210		0.1	210	
Senna notabilis	0.1	20				
Seringia elliptica	0.1	40		0.1	40	
Sida arenicola	0.1	90				
Sida cardiophylla	0.1	50				
Sida sp. Excedentifolia (J.L. Egan 1925)				0.1	20	WNG84R-01
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70		0.1	70	
Solanum centrale	0.1	25	WNG84-01			
Themeda triandra	0.1	80		0.1	80	
Triodia pungens	6	40		6	40	
Triodia vanleeuwenii	9	25		9	25	
Vincetoxicum lineare	0.1	170		0.1	170	

Phase 1 photo not taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG85
Described by Phase 1: BRM/RM Phase 2: SCSS Date Phase 1: 13-Sep-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 680478 mE, 7431333 mN.
Habitat Upper slope of south facing hillslope. Elevation 1005m.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *E. repullulans*, (*E. kingsmillii*) low open mallee woodland over *Scaevola* sp. Mt Bruce (M.E. Trudgen 1333), (Seringia *elliptica*) low open shrubland over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Eriachne mucronata* very open tussock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *E. repullulans*, (*E. kingsmillii*) low open mallee woodland over *Scaevola* sp. Mt Bruce (M.E. Trudgen 1333), (Seringia *elliptica*) low open shrubland over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland and *Eriachne mucronata* very open tussock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia bivenosa	0.1	40		0.1	40	
Acacia cowleana				0.1	35	
Acacia hamersleyensis				0.1	15	WNG85R-03
Acacia maitlandii	0.1	100	WNG85-07	0.1	100	
Acacia pruinocarpa	0.1	180		0.1	180	
Acacia pyrifolia var. *pyrifolia*	0.1	230		0.1	230	
Acacia steedmanii subsp. *borealis*				0.1	5	
Acacia tenuissima				0.1	30	
Amphipogon sericeus	0.1	30	WNG13-02=	0.1	30	
Cassytha capillaris	0.1	30		0.1	30	
Codonocarpus cotinifolius				0.1	20	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	WNG19-02=	0.1	60	
Corymbia hamersleyana	1	400		1	400	
Cryptandra monticola				0.1	20	WNG85R-01
Cymbopogon ambiguus	0.1	40		0.1	40	
Dodonaea lanceolata var. *lanceolata*	0.1	45	WNG65-05=	0.1	45	
Duperreya commixta				0.1	120	
Enneapogon lindleyanus				0.1	20	WNG85R-04
Eremophila jucunda subsp. *pulcherrima*				0.1	20	
Eriachne mucronata	5	40		5	40	
Eucalyptus kingsmillii	2	150	WNG85-03	2	150	
Eucalyptus leucophloia subsp. *leucophloia*	2	550		2	550	
Eucalyptus repullulans	5	100	WNG85-01	5	100	
Goodenia stobbsiana	0.1	30		0.1	30	
Goodenia triodiophila	0.1	30		0.1	30	
Hakea chordophylla	0.1	80		0.1	80	
Hakea lorea subsp. *lorea*				0.1	110	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Hibiscus coatesii	0.1	40	WNG85-04	0.1	40	
Indigofera monophylla				0.1	40	
Jasminum didymum subsp. *lineare*				0.1	80	
Marsdenia australis	0.1	120	WNG85-06	0.1	120	
Olearia stuartii	0.1	20	WNG85-05	0.1	20	WNG85R-02
Paraneurachne muelleri				0.1	30	
Peripleura virgata				0.1	20	WNG85R-05
Ptilotus astrolasius	0.1	30				
Ptilotus calostachyus	0.1	60		0.1	60	
Ptilotus exaltatus	0.1	15				
Scaevola acacioides				0.1	30	
Scaevola parvifolia subsp. *pilbarae*				0.1	10	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	3	30	RMOP10a=	3	30	
Senna glaucifolia				0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	110		0.1	110	
Senna glutinosa subsp. *x luerssenii*				0.1	5	
Seringia elliptica	0.5	45	WNG75-02=	0.5	45	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30		0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	5	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40		0.1	40	
Solanum horridum				0.1	5	
Solanum kentrocaule	0.1	80		0.1	80	
Solanum lasiophyllum				0.1	50	
Themeda triandra				0.1	50	WNG87R-02=
Triodia pungens	0.1	30		0.1	30	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	1	30		1	30	
Triodia wiseana	20	30		20	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG86
Described by Phase 1: PLMG Phase 2: PL/CI Date Phase 1: 14-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 687889 mE, 7432593 mN.
Habitat Broad plain in valley.
Soil Reddish brown light clay to clay loam.
Rock Type Ironstone: 1-25% pebbles.
Vegetation Phase 1: *Eucalyptus xerothermica* scattered low trees over *Senna pleurocarpa* var. *angustifolia* scattered low shrubs over *Themeda triandra*, (*Digitaria ammophila*) open tussock grassland and *Triodia pungens* very open hummock grassland.
Phase 2: *Eucalyptus xerothermica* scattered low trees over *Senna pleurocarpa* var. *angustifolia* scattered low shrubs over *Themeda triandra*, (*Digitaria ammophila*) open tussock grassland and *Triodia pungens* very open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	40				
Acacia adsurgens	0.1	85		0.1	85	
Acacia aneura	0.1	30		0.1	30	
Acacia bivenosa	0.1	90		0.1	90	
Acacia cowleana				0.1	140	
Acacia maitlandii	0.1	60		0.1	60	
Acacia pachyacra	0.1	80		0.1	80	
Acacia pruinocarpa	0.1	100		0.1	100	
Acacia tenuissima	0.1	100		0.1	100	
Alternanthera nana	0.1	25				
Aristida contorta	1	30		1	30	
Aristida ingrata	0.1	80	WNG86-03	0.1	80	
Boerhavia coccinea	0.1	35				
Cheilanthes sieberi subsp. *sieberi*	0.1	35				
Chrysocephalum apiculatum subsp. *pilbarense*	0.1	40	WNG86-06	0.1	40	
Chrysocephalum gilesii	0.1	45	WNG86-02			
Chrysopogon fallax	0.1	90		0.1	90	
Cleome viscosa	0.1	30		0.1	30	
Codonocarpus cotinifolius	0.1	100		0.1	100	
Corchorus lasiocarpus subsp. *parvus*	0.1	50				
Cucumis variabilis	0.1	160		0.1	160	
Cymbopogon obtectus	0.1	100		0.1	100	
Digitaria ammophila	2	60		2	60	
Duperreya commixta	0.1	25		0.1	25	
Enneapogon polyphyllus	0.1	40				
Eragrostis cumingii	0.1	25				
Eucalyptus xerothermica	1.5	700		1.5	700	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	30				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Evolvulus alsinoides var. *villosicalyx*	0.1	25		0.1	25	
Gossypium robinsonii	0.1	230				
Hakea lorea subsp. *lorea*	0.1	260		0.1	260	
Hibiscus burtonii	0.1	40				
Hibiscus sturtii var. *platychlamys*	0.1	60				
Jasminum didymum subsp. *lineare*	0.1	70				
Paspalidium rarum	0.1	25		0.1	25	
Peripleura hispidula var. *hispidula*	0.1	30	WNG86-05	0.1	30	
Psydrax suaveolens	0.1	40		0.1	40	
Pterocaulon sphacelatum	0.1	25		0.1	25	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Rhagodia sp. Hamersley (M. Trudgen 17794)				0.1	40	
Salsola australis	0.1	30		0.1	30	
Sclerolaena cornishiana	0.1	40		0.1	40	
Senna pleurocarpa var. *angustifolia*	1	60		1	60	
Seringia elliptica	0.1	50		0.1	50	
Sida cardiophylla	0.1	60		0.1	60	
Sida sp. L (A.M. Ashby 4202)	0.1	25	WNG86-07	0.1	25	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	80		0.1	80	
Solanum ferocissimum				0.1	40	WNG86R-01
Solanum lasiophyllum	0.1	50		0.1	50	
Themeda triandra	25	90	WNG86-01	25	90	
Triodia pungens	7	50		7	50	
Vittadinia dissecta var. *hirta*	0.1	30	WNG86-04			

No Phase 1 photo taken



West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG87
Described by Phase 1: PLMG Phase 2: SCSS Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 679406 mE, 7430523 mN.
Habitat Gentle rocky slope below hills to the south.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone, quartz.
Vegetation Phase 1: *Eucalyptus leucophloia* subsp. *leucophloia* low woodland over *Templetonia egena* scattered shrubs over *Indigofera monophylla* scattered low shrubs over *Triodia pungens* very open hummock grassland.
Phase 2: *Eucalyptus leucophloia* subsp. *leucophloia* low woodland over *Templetonia egena* scattered shrubs over *Indigofera monophylla* scattered low shrubs over *Triodia pungens* very open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cunninghamii	0.1	60		0.1	60	
Acacia aptaneura	0.1	200	WNG87-02	0.1	200	
Acacia bivenosa	0.1	110		0.1	110	
Acacia cowleana				0.1	20	
Acacia maitlandii	0.1	30		0.1	30	
Acacia rhodophloia				0.1	10	
Acacia tenuissima	0.1	30				
Amphipogon sericeus	0.1	30		0.1	30	
Aristida contorta	0.1	30		0.1	30	
Capparis lasiantha	0.1	60		0.1	60	
Corchorus lasiocarpus subsp. *parvus*				0.1	20	WNG87R-01
Cymbopogon sp.	0.1	50		0.1	50	
Digitaria brownii	0.1	40				
Duperreya commixta				0.1	50	
Enneapogon lindleyanus	0.1	60				
Eragrostis setifolia	0.1	25	WNG87-03			
Eriachne mucronata (typical form)	0.1	40		0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	22	800		22	800	
Eulalia aurea	0.1	80		0.1	80	
Goodenia microptera	0.1	25				
Goodenia muelleriana	0.1	20				
Goodenia stobbsiana	0.1	40				
Hakea chordophylla	0.1	60		0.1	60	
Heliotropium inexplicitum	0.1	10	WNG87-01			
Hibiscus coatesii	0.1	35				
Hibiscus sturtii var. *campylochlamys*	0.1	40		0.1	40	
Indigofera monophylla	0.5	40		0.5	40	
Jasminum didymum subsp. *lineare*	0.1	50				
Paraneurachne muelleri	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus calostachyus	0.1	50				
Ptilotus clementii	0.1	25				
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*				0.1	30	
Senna glutinosa subsp. *glutinosa*	0.1	130		0.1	130	
Senna glutinosa subsp. *pruinosa*	0.1	80		0.1	80	
Senna glutinosa subsp. *x luerssenii*	0.1	160		0.1	160	
Sida arenicola	0.1	40				
Sida echinocarpa	0.1	50		0.1	50	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30		0.1	30	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70		0.1	70	
Solanum lasiophyllum	0.1	45		0.1	45	
Streptoglossa bubakii	0.1	50		0.1	50	
Templetonia egena	1	190		1	190	
Tephrosia oxalidea	0.1	20				
Themeda triandra	0.1	80		0.1	50	WNG87R-02
Triodia pungens	9	40		9	40	
Triodia vanleeuwenii				0.1	5	
Vincetoxicum lineare	0.1	70				





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG88
Described by Phase 1: BRM/RM Phase 2: BRMTB Date Phase 1: 14-Sep-18 Phase 2: 10-Apr-19
Type Quadrat50 x 50 m
Central Coordinate 50K 684172 mE, 7431646 mN.
Habitat Upper slope of a large hill, facing north. Elevation 1035m.
Soil Dark reddish brown sandy clay loam.
Rock Type Ironstone, basalt: 1-25% outcropping, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation Phase 1: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) scattered low trees over *E. kingsmillii*, (*E. gamophylla*) low open mallee woodland over *Goodenia stobbsiana* scattered low shrubs over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland.
Phase 2: *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) scattered low trees over *E. kingsmillii*, (*E. gamophylla*) low open mallee woodland over *Goodenia stobbsiana* scattered low shrubs over *Triodia wiseana*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) open hummock grassland.
Veg Condition Phase 1: Excellent. Phase 2: Excellent.
Fire Age Phase 1: Burnt 3-5 years ago. Phase 2: Burnt 3-5 years ago.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia cowleana	0.1	60		0.1	60	
Acacia maitlandii	0.1	90		0.1	90	
Acacia marramamba				0.1	20	
Acacia pyrifolia var. *pyrifolia*	0.1	160		0.1	160	
Amphipogon sericeus				0.1	20	
Aristida holathera var. *holathera*	0.1	40		0.1	40	
Codonocarpus cotinifolius	0.1	120		0.1	120	
Corchorus lasiocarpus subsp. *parvus*	0.1	40		0.1	40	
Corymbia hamersleyana	1	350		1	350	
Cymbopogon ambiguus	0.1	30		0.1	30	
Cymbopogon obtectus	0.1	45		0.1	45	
Dodonaea coriacea	0.1	45		0.1	45	
Enneapogon lindleyanus				0.1	25	
Eriachne mucronata	0.1	30		0.1	30	
Eucalyptus gamophylla	0.5	160		0.5	160	
Eucalyptus kingsmillii	5	250	WNG90-01	5	250	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	150		0.1	150	
Evolvulus alsinoides var. *villosicalyx*				0.1	10	
Goodenia stobbsiana	0.5	30		0.5	30	
Goodenia triodiophila	0.1	30				
Hakea chordophylla	0.1	70		0.1	70	
Hibiscus coatesii	0.1	60	WNG85-04=	0.1	60	
Leiocarpa semicalva subsp. *semicalva*	0.1	30	WNG90-05			
Panicum effusum	0.1	35	WNG90-04			
Paraneurachne muelleri	0.1	40		0.1	40	
Peripleura virgata	0.1	30	WNG90-02	0.1	30	
Polygala glaucifolia	0.1	3	WNG90-07			
Pterocaulon sphacelatum	0.1	40				
Ptilotus calostachyus	0.1	80		0.1	80	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ptilotus exaltatus	0.1	40		0.1	40	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	20		0.1	20	
Schizachyrium fragile	0.1	10				
Senna glutinosa subsp. *glutinosa*	0.1	130		0.1	130	
Senna notabilis	0.1	40		0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	15		0.1	15	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20		0.1	20	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	50		0.1	50	
Solanum horridum	0.1	20	WNG90-06	0.1	20	
Triodia pungens				1	35	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	5	30		5	30	
Triodia wiseana	20	30		20	30	





West Angelas Beyond 2020 Phase 1 & Phase 2 Site WNG89

Described by	Phase 1: BRM/RM Phase 2: SCSS	Date	Phase 1: 13-Sep-18 Phase 2: 10-Apr-19
Type	Quadrat50 x 50 m		
Central Coordinate	50K 680328 mE, 7429703 mN.		
Habitat	Drainage, floodplain with a creek.		
Soil	Dark reddish brown loam.		
Rock Type	Ironstone, riverstone: 1-25% cobbles, 1-25% pebbles, 1-25% gravel.		
Vegetation	Phase 1: *Corymbia hamersleyana*, (*Eucalyptus xerothermica*) low open woodland over *Petalostylis labicheoides*, (*Grevillea wickhamii*, *Gossypium robinsonii*, *Acacia pyrifolia*) tall open shrubland over *Androcalva luteiflora* scattered shrubs over *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*Corchorus lasiocarpus* subsp. *parvus*) low shrubland over *Themeda triandra*, (*Eriachne mucronata*, *Digitaria brownii*, *Enneapogon lindleyanus*, *Cymbopogon ambiguus*) tussock grassland and *Triodia pungens* very open hummock grassland. Phase 2: *Corymbia hamersleyana*, (*Eucalyptus xerothermica*) low open woodland over *Petalostylis labicheoides*, (*Grevillea wickhamii*, *Gossypium robinsonii*, *Acacia pyrifolia*) tall open shrubland over *Androcalva luteiflora* scattered shrubs over *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*Corchorus lasiocarpus* subsp. *parvus*) low shrubland over *Themeda triandra*, (*Eriachne mucronata*, *Digitaria brownii*, *Enneapogon lindleyanus*, *Cymbopogon ambiguus*) tussock grassland and *Triodia pungens* very open hummock grassland.		
Veg Condition	Phase 1: Excellent. Phase 2: Excellent.		
Fire Age	Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.		

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia adoxa var. *adoxa*				0.1	40	
Acacia bivenosa	0.1	50		0.1	50	
Acacia cowleana	0.1	150	WNG69-03=	0.1	150	
Acacia maitlandii	0.1	45		0.1	45	
Acacia monticola	0.1	190		0.1	190	
Acacia pyrifolia var. *pyrifolia*	0.5	220		0.5	220	
Acacia steedmanii subsp. *borealis*	0.1	230	WNG89-08	0.1	230	
Androcalva luteiflora	1	180		1	180	
Capparis lasiantha	0.1	40		0.1	40	
Chrysocephalum gilesii	0.1	20	WNG07-20=			
Corchorus lasiocarpus subsp. *parvus*	1	40	WNG19-02=	1	40	
Corymbia hamersleyana	9	600		9	600	
Crotalaria medicaginea var. *neglecta*	0.1	20				
Cucumis variabilis				0.1	100	
Cymbopogon ambiguus	0.5	150		0.5	150	
Digitaria brownii	1	40		1	40	
Dodonaea lanceolata var. *lanceolata*	0.1	140		0.1	140	
Duperreya commixta	0.1	60		0.1	60	
Enneapogon lindleyanus	1	40		1	40	
Enneapogon robustissimus	0.1	50	WNG89-05			
Eremophila longifolia	0.1	140		0.1	140	
Eriachne flaccida				0.1	30	WNG89R-02
Eriachne mucronata	2	35		2	35	
Eucalyptus xerothermica	0.1	400		0.1	400	
Eulalia aurea	0.1	50				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	20	WNG89-09			
Evolvulus alsinoides var. *villosicalyx*	0.1	20				
Gastrolobium grandiflorum				0.1	50	
Glycine canescens				0.1	20	
Goodenia microptera	0.1	30				
Goodenia muelleriana	0.1	30	WNG89-03			
Gossypium robinsonii	1	350		1	350	
Grevillea wickhamii	1	230		1	230	
Hakea chordophylla	0.1	180		0.1	180	
Heliotropium cunninghamii	0.1	25	WNG69-08=	0.1	25	
Hibiscus sturtii var. *platychlamys*	0.1	40	WNG89-06			
Indigofera monophylla	0.1	50		0.1	50	
Jasminum didymum subsp. *lineare*	0.1	30		0.1	30	
Olearia stuartii	0.1	35	WNG89-01	0.1	35	
Paraneurachne muelleri	0.1	45		0.1	45	
Peripleura obovata	0.1	30	WNG89-02	0.1	30	
Petalostylis labicheoides	6	350		6	350	
Pterocaulon sphacelatum	0.1	30	WNG89-04	0.1	30	
Ptilotus astrolasius	0.1	40		0.1	40	
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	45		0.1	45	
Rhynchosia minima	0.1	30				
Santalum lanceolatum				0.1	60	
Scaevola parvifolia subsp. *pilbarae*	0.1	30		0.1	30	
Scaevola spinescens	0.1	60		0.1	60	
Senna artemisioides subsp. *helmsii*	0.1	70		0.1	70	
Senna artemisioides subsp. *oligophylla x S. stricta*				0.1	190	WNG89R-01
Senna stricta	0.1	190				
Setaria surgens	0.1	30	WNG89-07	0.1	30	
Sida echinocarpa	0.1	60				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	120		0.1	120	
Solanum horridum				0.1	20	WNG89R-03
Solanum lasiophyllum				0.1	50	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	20	60		20	60	
Themeda triandra	35	70		35	70	
Trichodesma zeylanicum var. *zeylanicum*	0.1	30				
Triodia pungens	8	30		8	30	
Ventilago viminalis	0.1	250	WNG69-01=	0.1	250	





West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WAF03R
Described by Phase 1: PLSV Phase 2: PL/CI Date Phase 1: 17-Aug-14 Phase 2: 08-Apr-19
Type Quadrat 50m x 50m
Central Coordinate 50K 692532mE ,7434509 mN.

Habitat Major drainage flowline in valley between hills.

Soil Reddish brown sandy loam.

Rock Type Ironstone; cobble 1-25%, pebbles 1-25%, gravel 1-25%.

Vegetation Phase 1: *Eucalyptus xerothermica, E. trivalva, Acacia aptaneura* low open woodland over *Petalostylis labicheoides* tall open shrubland over *Androcalva luteiflora, Keraudrenia velutina* subsp. *elliptica* open shrubland over *Bothriochloa ewartiana, Themeda triandra* very open tussock grassland and *Triodia pungens* very open hummock grassland.

Phase 2: *Eucalyptus xerothermica*, *Acacia aptaneura* low open woodland over *E. trivalva* low open mallee woodland over *Petalostylis labicheoides* tall open shrubland over *Androcalva luteiflora*, Seringia *elliptica* low open shrubland over *Triodia pungens* very open hummock grassland and *Bothriochloa ewartiana*, *Themeda triandra* very open tussock grassland.

Veg Condition Phase 1: Very Good Phase 2: Excellent.

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	30		0.1	30	
Abutilon otocarpum	0.1	15		0.1	15	
Abutilon sp. Pilbara (W.R. Barker 2025)	0.1	20				
Acacia aptaneura	2	500	WAF03-02	2	500	
Acacia ayersiana	0.1	210	WAF03-05	0.1	210	
Acacia catenulata subsp. *occidentalis*	0.1	400	WAF-PL51=	0.1	400	
Acacia dictyophleba				0.1	60	
Acacia maitlandii	0.1	180		0.1	180	
Acacia pachyacra	0.1	100		0.1	100	
Acacia pruinocarpa	0.1	250		0.1	250	
Acacia tenuissima	0.1	110		0.1	110	
Amphipogon sericeus	0.1	25	WAF-CF05=			
Androcalva luteiflora	1	90		1	90	
Aristida contorta	0.1	25				
Aristida ingrata	0.1	110	WAF03-08	0.1	110	
Aristida latifolia	0.1	30	WAF03-07	0.1	30	
Bidens bipinnata	0.1	20				
Bothriochloa ewartiana	5	70	WAF03-01	5	70	
Chrysocephalum gilesii	0.1	15	WAF01-06=	0.1	15	
Chrysopogon fallax	0.1	110		0.1	110	
Corchorus lasiocarpus subsp. *parvus*	0.1	30				
Cymbopogon ambiguus	0.1	70		0.1	70	
Digitaria ammophila	0.1	10		0.1	10	
Digitaria brownii	0.1	50		0.1	50	
Duperreya commixta	0.1	200		0.1	200	
Enchylaena tomentosa var. *tomentosa*	0.1	50		0.1	50	
Enneapogon lindleyanus	0.1	35				
Enneapogon polyphyllus	0.1	30		0.1	30	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Enneapogon robustissimus	0.1	50				
Eremophila forrestii subsp. *forrestii*	0.1	80		0.1	80	
Eucalyptus trivalva	3	500	WAFPL56=	3	500	
Eucalyptus xerothermica	4	900		4	900	
Eulalia aurea				0.1	90	
Evolvulus alsinoides var. *villosicalyx*	0.1	15				
Hakea chordophylla	0.1	180		0.1	180	
Hibiscus burtonii	0.1	35		0.1	35	
Hibiscus coatesii	0.1	40				
Isotropis atropurpurea	0.1	30				
Malvastrum americanum	0.1	15				
Olearia stuartii	0.1	15	WAF03-03			
Panicum effusum	0.1	20				
Paraneurachne muelleri	0.1	30		0.1	30	
Paspalidium clementii				0.1	40	
Peripleura sp.				0.1	25	WAF03R-01
Petalostylis labicheoides	4	230		4	230	
Psydrax suaveolens				0.1	50	
Pterocaulon sphacelatum	0.1	30	WAF01-05=	0.1	30	
Ptilotus calostachyus	0.1	80				
Ptilotus exaltatus	0.1	30		0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	40		0.1	40	
Rhagodia sp. Hamersley (M. Trudgen 17794)				0.1	160	
Salsola australis	0.1	40		0.1	40	
Santalum lanceolatum	0.1	180				
Scaevola parvifolia subsp. *pilbarae*	0.1	35		0.1	35	
Scaevola spinescens	0.1	50	WAF03-09			
Senna artemisioides subsp. *x artemisioides*				0.1	140	WAF03R-02
Senna glutinosa subsp. *glutinosa*	0.1	110		0.1	110	
Seringia elliptica	1	60		1	60	
Sida echinocarpa	0.1	45	WAF03-10			
Sida sp. dark green fruits (S. van Leeuwen 2260)				0.1	40	
Sida sp. L (A.M. Ashby 4202)	0.1	15		0.1	15	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	100		0.1	100	
Solanum horridum	0.1	30		0.1	30	
Solanum lasiophyllum	0.1	25		0.1	25	
Themeda triandra	2	60		2	60	
Triodia pungens	2	40		2	40	





West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WAF09R
Described by Phase 1: PLSV Phase 2: Date Phase 1: 18-Aug-14 Phase 2:
Type Quadrat 50 x 50 m
Central Coordinate 50K 691343 mE, 7435406 mN.

Habitat Depression/flowline in valley - feeding drainage line to *E.*

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone; cobble 1-25%, pebbles 51-75%, gravel 26-50%.

Vegetation Phase 1: *Eucalyptus trivalva* low *mallee* forest over *Androcalva luteiflora, Senna artemisioides* subsp. x *artemisioides, Acacia steedmanii* subsp. *borealis,* (*A. maitlandii*) tall open shrubland over *Themeda triandra* very open tussock grassland and *Triodia pungens* very open hummock grassland.

Phase 2: *Eucalyptus trivalva*, (*E. gamophylla*) low open mallee forest over *Androcalva luteiflora*, (*Senna artemisioides* subsp. x *artemisioides*, *Acacia steedmanii* subsp. *borealis*, *Acacia maitlandii*) tall shrubland over *Triodia pungens* very open hummock grassland and *Themeda triandra* very open tussock grassland.

Veg Condition Phase 1: Excellent. Phase 2:

Fire Age Phase 1: Very long unburnt. Phase 2:

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon otocarpum	0.1	30				
Acacia adsurgens				0.1	130	WAF09R-03
Acacia aneura				0.1	250	WAF09R-01
Acacia aptaneura	0.1	400	WAF09-06	0.1	400	
Acacia bivenosa	0.1	180		0.1	180	
Acacia catenulata subsp. *occidentalis*	0.1	190		0.1	190	
Acacia maitlandii	0.5	220		0.5	220	
Acacia pruinocarpa	0.1	45		0.1	45	
Acacia pyrifolia var. *pyrifolia*	0.1	170				
Acacia steedmanii subsp. *borealis*	1	290		1	290	
Acacia tenuissima				0.1	100	
Amphipogon sericeus	0.1	30				
Androcalva luteiflora	8	230		8	230	
Aristida contorta	0.1	30		0.1	30	
Aristida holathera var. *holathera*	0.1	45				
Aristida inaequiglumis	0.1	100	WAF09-02	0.1	100	
Aristida pruinosa	0.1	160	WAF-PL58=			
Chrysopogon fallax	0.1	120				
Codonocarpus cotinifolius	0.1	220				
Corchorus lasiocarpus subsp. *parvus*	0.1	40		0.1	40	
Corymbia hamersleyana	0.1	450		0.1	450	
Cymbopogon obtectus	0.1	120				
Digitaria ammophila	0.1	40		0.1	40	
Digitaria brownii	0.1	40		0.1	40	
Dodonaea lanceolata var. *lanceolata*	0.1	170		0.1	170	
Duperreya commixta	0.1	200		0.1	200	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	30	WAF09-04			
Enneapogon lindleyanus	0.1	40				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Enneapogon polyphyllus	0.1	35				
Eriachne mucronata	0.1	40				
Eriachne mucronata (typical form)				0.1	40	
Eucalyptus gamophylla	0.5	450		0.5	450	
Eucalyptus trivalva	32	450		32	450	
Euphorbia australis var. *hispidula*	0.1	10	WAF09-05			
Evolvulus alsinoides var. *villosicalyx*				0.1	10	
Goodenia microptera	0.1	35				
Goodenia stobbsiana	0.1	40				
Gossypium robinsonii	0.1	80				
Hibiscus burtonii				0.1	15	
Hibiscus coatesii				0.1	20	
Hibiscus sturtii var. *campylochlamys*	0.1	25		0.1	25	
Indigofera monophylla	0.1	45		0.1	45	
Jasminum didymum subsp. *lineare*	0.1	250		0.1	250	
Panicum effusum	0.1	25		0.1	25	
Paraneurachne muelleri	0.1	45		0.1	45	
Pterocaulon sphacelatum	0.1	40	WAF01-05=			
Ptilotus astrolasius	0.1	45		0.1	45	
Ptilotus calostachyus	0.1	70				
Ptilotus exaltatus	0.1	35		0.1	35	
Ptilotus helipteroides	0.1	10				
Ptilotus obovatus var. *obovatus*	0.1	50		0.1	50	
Salsola australis	0.1	40				
Santalum lanceolatum	0.1	190		0.1	190	
Scaevola parvifolia subsp. *pilbarae*	0.1	30				
Senna artemisioides subsp. *helmsii*	0.1	45		0.1	45	
Senna artemisioides subsp. *oligophylla*	0.1	120	WAF09-03	0.1	120	
Senna artemisioides subsp. *x artemisioides*	1	140		1	140	WAF09R-04
Senna ferraria	0.1	110	WAF09-08	0.1	110	
Senna glaucifolia	0.1	180	WAF09-07	0.1	180	
Senna glutinosa subsp. *x luerssenii*	0.1	45				
Senna notabilis	0.1	20				
Senna pleurocarpa var. *angustifolia*	0.1	30				
Seringia nephrosperma	0.1	45		0.1	45	
Sida echinocarpa	0.1	40		0.1	40	
Sida sp. L (A.M. Ashby 4202)	0.1	40	WAF09-01	0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	130		0.1	130	
Solanum lasiophyllum	0.1	50		0.1	50	
Themeda triandra	3	90		3	90	WAF09R-02
Triodia pungens	8	45		8	45	
Triodia wiseana	0.1	40				

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Vincetoxicum lineare	0.1	25				

No photo taken in 2014



West Angelas Beyond 2020 Phase 1 Site WNG-REL01
Described by PLMG Date 22-Aug-18
Type Relevé
Central Coordinate 50K 663563mE7441154 mN
Habitat Narrow flowline running E-W.
Soil Reddish brown stony clay loam.
Rock Type
Vegetation *Acacia catenulata* subsp. *occidentalis*, (*A. citrinoviridis*, *A. pruinocarpa*) low open forest over *A. incurvaneura*, *A. rhodophloia* scattered tall shrubs over *Triodia pungens* open hummock grassland.
Veg Condition Excellent.
Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia ayersiana	0.1	400	
Acacia catenulata subsp. *occidentalis*	20	800	REL01-01
Acacia citrinoviridis	10	700	
Acacia incurvaneura	1	280	PL05=
Acacia maitlandii	0.1	220	
Acacia marramamba	0.1	250	
Acacia pruinocarpa	5	650	
Acacia rhodophloia	1	300	
Acacia tetragonophylla	0.1	150	
Anthobolus leptomerioides	0.1	90	
Corymbia deserticola subsp. *deserticola*	0.1	700	
Eremophila phyllopoda subsp. *obliqua*	0.1	100	REL01-03
Glycine canescens	0.1	50	
Hakea lorea subsp. *lorea*	0.1	250	
Hibiscus burtonii	0.1	50	
Indigofera georgei	0.1	80	REL01-02
Maireana planifolia	0.1	60	
Paraneurachne muelleri	0.1	40	
Psydrax suaveolens	0.1	190	
Ptilotus obovatus var. *obovatus*	0.1	60	
Senna glutinosa subsp. *x luerssenii*	0.1	160	
Senna stricta	0.1	130	
Sida sp. L (A.M. Ashby 4202)	0.1	30	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	160	
Solanum piceum	0.1	80	PL14=
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.1	40	
Themeda triandra	0.1	110	
Triodia pungens	15	40	



West Angelas Beyond 2020 Phase 1 Site WNG-REL02
Described by MM/RM Date 25-Aug-18
Type Relevéelevé
Central Coordinate 50K 668667 mE7440600 mN
Habitat Moderate east-west creek through a broad plain.
Soil Dark reddish brown loam.
Rock Type Relevéiverstone, ironstone.
Vegetation *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Gossypium robinsonii*, *Androcalva luteiflora* tall open shrubland over *Acacia citrinoviridis*, (*Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)) open shrubland over *Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186), (*Corchorus lasiocarpus* subsp. *parvus*) low shrubland over *Themeda triandra*, (*Eriachne mucronata*) open tussock grassland with *Triodia pungens* very open hummock grassland.
Veg Condition Very Good; scattered weeds.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon otocarpum	0.1	10	
Acacia 'aneura' sens. lat. (juvenile)	0.1	80	REL02-06
Acacia aptaneura	0.1	700	REL02-08
Acacia bivenosa	0.1	100	
Acacia citrinoviridis	3	150	
Acacia monticola	0.1	100	
Acacia pyrifolia var. *pyrifolia*	0.1	60	
Amaranthus cuspidifolius	0.1	30	REL02-04
Androcalva luteiflora	5	220	
Bidens bipinnata	0.1	60	
Corchorus crozophorifolius	0.1	80	
Corchorus lasiocarpus subsp. *parvus*	4	70	REL02-03
Corymbia hamersleyana	1	600	
Cucumis variabilis	0.1	120	
Cymbopogon ambiguus	0.1	70	REL02-05
Dicladanthera forrestii	0.1	30	REL02-01
Digitaria brownii	0.1	70	
Dipteracanthus australasicus subsp. *australasicus*	0.1	20	
Dodonaea viscosa subsp. *mucronata*	0.1	100	REL02-07
Duperreya commixta	0.1	120	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	40	REL02-09
Enneapogon lindleyanus	0.1	30	
Enneapogon robustissimus	0.1	60	
Eragrostis tenellula	0.1	20	
Eriachne mucronata	4	30	
Eriachne pulchella	0.1	15	
Eriachne tenuiculmis	0.1	60	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	200	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)	0.1	20	REL02-02
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Gomphrena cunninghamii	0.1	15	
Gossypium robinsonii	5	250	
Hybanthus aurantiacus	0.1	40	
Indigofera georgei	0.1	100	
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	50	
Melhania oblongifolia	0.1	40	
Paraneurachne muelleri	0.1	40	
Petalostylis labicheoides	0.1	150	
Phyllanthus maderaspatensis	0.1	30	
Pluchea dentex	0.1	30	
Polycarpaea longiflora	0.1	20	
Pterocaulon sphacelatum	0.1	15	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	60	
Rhagodia eremaea	0.1	50	
Salsola australis	0.1	15	
Senna artemisioides subsp. *helmsii*	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	150	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	1	200	
Solanum piceum	0.1	120	WNG02-06=
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	8	80	
Themeda triandra	8	40	
Triodia pungens	3	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL03
Described by BRMSC Date 22-Aug-18 Type Relevé
Central Coordinate 50K 665022 mE 7440382 mN

Habitat Drainage between two gentle sloped hills on broader repeating landform.

Soil Reddish brown clay loam.

Rock Type Relevéiverstone, ironstone.

Vegetation *Acacia catenulata* subsp. *occidentalis*, *A. macraneura*, (*A. aneura*, *A. pruinocarpa*, *A. aptaneura*, *Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *E. gamophylla* scattered low mallees over *Corchorus lasiocarpus* subsp. *parvus*, *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90) scattered low shrubs over *Triodia pungens* very open hummock grassland with *Paraneurachne muelleri* scattered tussock grasses.

Veg Condition Excellent.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia aneura	2	450	WNG01-08=
Acacia aptaneura	1	300	REL03-01
Acacia bivenosa	0.1	250	
Acacia catenulata subsp. *occidentalis*	20	450	
Acacia citrinoviridis	0.1	500	
Acacia dictyophleba	0.1	100	
Acacia macraneura	10	500	WNG05-06=
Acacia pachyacra	0.1	200	REL03-09
Acacia pruinocarpa	1	400	
Acacia tetragonophylla	0.1	100	
Anthobolus leptomerioides	0.1	50	
Bidens bipinnata	0.1	20	
Corchorus lasiocarpus subsp. *parvus*	1	40	REL03-02
Cymbopogon sp.	0.1	50	
Digitaria brownii	0.1	20	
Duperreya commixta	0.1	70	
Enchylaena tomentosa var. *tomentosa*	0.1	50	
Enneapogon lindleyanus	0.1	40	REL03-05
Eremophila forrestii subsp. *forrestii*	0.1	100	
Eremophila longifolia	0.1	30	REL03-10
Eucalyptus gamophylla	0.5	250	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	400	
Hibiscus burtonii	0.1	40	
Hibiscus coatesii	0.1	40	REL03-03
Hibiscus sturtii var. *campylochlamys*	0.1	30	REL03-06
Hibiscus sturtii var. *grandiflorus*	0.1	20	REL03-04
Indigofera monophylla	0.1	30	
Maireana villosa	0.1	30	WNG05-01=
Paraneurachne muelleri	1	30	
Ptilotus calostachyus	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	70	
Rhagodia eremaea	0.1	40	
Santalum lanceolatum	0.1	280	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	70	
Senna glutinosa subsp. *glutinosa*	0.1	40	
Senna glutinosa subsp. *x luerssenii*	0.1	120	
Senna notabilis	0.1	10	
Senna stricta	0.1	90	REL03-12
Seringia elliptica	0.1	70	REL03-11
Sida cardiophylla	0.1	20	REL03-07
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	100	WNG05-19=
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.5	80	
Solanum horridum	0.1	20	REL03-08
Solanum lasiophyllum	0.1	20	
Themeda triandra	0.1	120	
Triodia pungens	5	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL04
Described by PL/CI Date 26-Aug-18 Type Relevé
Central Coordinate 50K 670912 mE7442929 mN
Habitat Gorge with BIF outcropping.
Soil Dark reddish brown sandy clay loam.
Rock Type BIF.
Vegetation *Callitris columellaris*, (*Corymbia ferriticola*, *Acacia aptaneura*) low woodland over *Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low shrubland over *Triodia pungens* open hummock grassland over *Aristida burbidgeae* very open tussock grassland.
Veg Condition Very Good; scattered weeds.
Fire Age Very long unburnt.
Notes

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	25	
Acacia aptaneura	2	500	REL04-13
Acacia ayersiana	0.1	180	
Acacia pruinocarpa	0.1	180	
Amyema fitzgeraldii	0.1	60	
Aristida burbidgeae	9	40	
Astrotricha hamptonii	0.1	190	
Bidens bipinnata	0.1	40	
Callitris columellaris	12	750	REL04-01
Capparis lasiantha	0.1	45	
Capparis mitchellii	1	320	
Cheilanthes austrotenuifolia	0.1	20	REL04-06
Cheilanthes brownii	0.1	15	REL04-03
Corymbia ferriticola	6	500	
Cucumis variabilis	0.1	20	
Cymbopogon ambiguus	0.1	110	
Cymbopogon obtectus	0.1	80	
Cynanchum pedunculatum	0.1	35	REL04-08
Digitaria ammophila	0.1	40	
Digitaria brownii	0.1	40	
Dodonaea viscosa subsp. *mucronata*	0.1	160	
Duperreya commixta	0.1	80	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	25	REL04-14
Enchylaena tomentosa var. *tomentosa*	0.1	35	
Enneapogon polyphyllus	0.1	40	
Enneapogon robustissimus	0.1	50	
Eremophila petrophila subsp. *petrophila*	0.1	160	REL04-09
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.1	160	
Eriachne mucronata (arid form) (MET 12 736)	0.1	25	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Ficus brachypoda	0.1	50	
Maireana planifolia	0.1	60	
Olearia stuartii	0.1	45	
Oxalis sp. Pilbara (M.E. Trudgen 12725)	0.1	15	
Paraceterach reynoldsii	0.1	20	REL04-02
Parietaria cardiostegia	0.1	25	
Paspalidium clementii	0.1	25	
Peripleura hispidula var. *hispidula*	0.1	25	REL04-04
Pilbara *trudgenii*	0.1	80	
Psydrax latifolia	0.1	420	
Pterocaulon sphacelatum	0.1	40	REL04-07
Ptilotus obovatus var. *obovatus*	13	70	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	40	
Senna ferraria	0.1	60	
Setaria dielsii	0.1	50	REL04-11
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40	
Sigesbeckia orientalis	0.1	40	
Solanum ferocissimum	0.1	25	REL04-12
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	80	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60	
Triodia pungens	12	40	REL04-05

No photo taken

West Angelas Beyond 2020 Phase 1 Site WNG-REL05
Described by BRMSC Date 23-Aug-18 Type Relevé
Central Coordinate 50K 668941 mE 7440868 mN

Habitat Moderately steep slope of low hill on plain at base of high ridge.

Soil Reddish brown clay loam.

Rock Type Ironstone. 1-25% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation *Acacia aptaneura*, (*A. pruinocarpa*) low woodland over *Eremophila phyllopoda* subsp. *obliqua* open shrubland over *Triodia pungens* open hummock grassland

Veg Condition Excellent.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Abutilon lepidum	0.1	30	
Acacia aptaneura	21	400	WNG05-07=
Acacia bivenosa	0.1	30	
Acacia pruinocarpa	3	500	
Acacia tetragonophylla	0.1	210	
Aristida ingrata	0.1	60	REL05-08
Aristida jerichoensis var. *subspinulifera*	0.1	45	REL05-13
Bidens bipinnata	0.1	30	
Cheilanthes brownii	0.1	20	
Cheilanthes sieberi subsp. *sieberi*	0.1	10	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	
Cymbopogon ambiguus	0.1	30	
Digitaria ammophila	0.1	20	REL05-14
Duperreya commixta	0.1	50	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	10	REL05-10
Enchylaena tomentosa var. *tomentosa*	0.1	40	
Enneapogon lindleyanus	0.1	40	
Enneapogon polyphyllus	0.1	15	
Eremophila jucunda subsp. *pulcherrima*	0.1	120	REL05-04
Eremophila phyllopoda subsp. *obliqua*	5	140	REL05-02
Euphorbia australis var. *hispidula*	0.1	5	REL05-06
Evolvulus alsinoides var. *villosicalyx*	0.1	25	
Gomphrena cunninghamii	0.1	10	
Goodenia muelleriana	0.1	20	
Grevillea berryana	1	500	
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)	0.1	120	REL05-15
Hibiscus sturtii var. aff. *truncatus*	0.1	30	REL05-07
Maireana georgei	0.1	60	
Maireana melanocoma	0.1	35	
Maireana planifolia	0.1	30	
Maireana tomentosa subsp. *tomentosa*	0.1	50	REL05-16
Maireana triptera	0.1	30	WNG-BS-05=
Maireana villosa	0.1	50	WNG05-01=
Peripleura virgata	0.1	15	REL05-01
Perotis rara	0.1	5	
Polycarpaea corymbosa var. *corymbosa*	0.1	12	
Psydrax suaveolens	0.1	50	
Ptilotus exaltatus	0.1	10	
Ptilotus obovatus var. *obovatus*	0.1	35	
Ptilotus schwartzii var. *schwartzii*	0.1	40	
Rhagodia eremaea	0.1	80	
Schizachyrium fragile	0.1	10	
Senna artemisioides subsp. *helmsii*	0.1	25	
Senna glutinosa subsp. *x luerssenii*	0.1	30	
Senna stricta	0.1	30	
Sida echinocarpa	0.1	90	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	45	WNG05-19=
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1	40	PL11=
Solanum horridum	0.1	30	WING05- =
Solanum lasiophyllum	0.1	60	
Streptoglossa decurrens	0.1	35	REL05-12
Triodia pungens	15	20	REL05-05



West Angelas Beyond 2020 Phase 1 Site WNG-REL06
Described by PL/RM Date 23-Aug-18 Type Relevé
Central Coordinate 50K 670251 mE 7441604 mN

Habitat Minor drainage.

Soil Reddish brown clay loam.

Rock Type Relevéiverstone, ironstone.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia pruinocarpa* scattered low trees over *Petalostylis labicheoides*, (*Acacia monticola*, *A. pyrifolia* var. *pyrifolia*, *Gossypium robinsonii*) tall open shrubland over *Tephrosia rosea* var. Fortescue creeks (*M*.l.H. Brooker 2186) low open shrubland over *Triodia pungens* very open hummock grassland and *Themeda triandra*, (*Eriachne mucronata*) very open tussock grassland.

Veg Condition Very Good.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon lepidum	0.1	50	
Abutilon otocarpum	0.1	15	
Acacia monticola	2	300	
Acacia pruinocarpa	0.5	200	
Acacia pyrifolia var. *pyrifolia*	2	220	
Acacia tenuissima	0.1	40	
Aristida pruinosa	0.1	110	REL06-03
Bidens bipinnata	0.1	40	
Chrysocephalum gilesii	0.1	25	PL07=
Cleome viscosa	0.1	40	
Corchorus crozophorifolius	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	
Corymbia deserticola subsp. *deserticola*	0.1	300	
Cucumis variabilis	0.1	80	
Digitaria brownii	0.1	70	
Duperreya commixta	0.1	160	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	20	REL06-02
Enneapogon lindleyanus	0.1	50	
Enneapogon polyphyllus	0.1	25	
Enneapogon robustissimus	0.1	50	
Eriachne mucronata (typical form)	1	40	
Eucalyptus leucophloia subsp. *leucophloia*	1	900	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	40	REL06-01
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Gomphrena cunninghamii	0.1	20	
Gossypium australe	0.1	60	
Gossypium robinsonii	1	250	
Indigofera monophylla	0.1	60	
Jasminum didymum subsp. *lineare*	0.1	110	
Leiocarpa semicalva subsp. *semicalva*	0.1	25	REL06-06
Panicum effusum	0.1	25	REL06-05
Paraneurachne muelleri	0.1	30	
Peripleura hispidula var. *hispidula*	0.1	40	REL06-04
Petalostylis labicheoides	7	320	
Polycarpaea longiflora	0.1	25	
Ptilotus exaltatus	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	50	
Rhynchosia minima	0.1	40	
Santalum lanceolatum	0.1	180	
Senna notabilis	0.1	20	
Seringia nephrosperma	0.1	50	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	150	
Sporobolus australasicus	0.1	25	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	9	80	
Themeda triandra	3	110	
Trichodesma zeylanicum var. *zeylanicum*	0.1	70	
Triodia pungens	9	40	



West Angelas Beyond 2020 Phase 1 Site WNG-REL07
Described by BRMSC Date 24-Aug-18 Type Relevé
Central Coordinate 50K 668056 mE 7441389 mN

Habitat South slope of east-west ridge near top saddle.

Soil Reddish brown clay loam.

Rock Type Shale. 1-25% outcropping, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Acacia aptaneura* low woodland over *Eremophila jucunda* subsp. *pulcherrima*, (*E. forrestii* subsp. *forrestii*, *Rhagodia eremaea*) shrubland over *Indigofera monophylla*, (*Ptilotus obovatus*) low shrubland over *Triodia pungens* scattered hummock grasses and *Enneapogon lindleyanus* scattered tussock grasses.

Veg Condition Very Good.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Abutilon lepidum	0.1	20	
Acacia aptaneura	20	500	WNG05-07=
Acacia tetragonophylla	0.5	200	
Acrachne racemosa	0.1	30	WNG-BS-07=
Bidens bipinnata	0.1	20	
Capparis lasiantha	0.1	90	
Cucumis variabilis	0.1	140	
Dipteracanthus australasicus subsp. *australasicus*	0.5	30	WNG07-13=
Enneapogon lindleyanus	0.5	30	
Enneapogon polyphyllus	0.1	15	REL07-01
Eremophila forrestii subsp. *forrestii*	1	120	REL07-02
Eremophila jucunda subsp. *pulcherrima*	20	120	REL05-04=
Eriachne mucronata	0.1	30	
Hibiscus burtonii	0.1	30	
Indigofera monophylla	20	60	WNG-BS-09=
Maireana planifolia	0.1	30	
Psydrax suaveolens	0.1	250	
Ptilotus obovatus var. *obovatus*	5	60	
Rhagodia eremaea	1	120	
Salsola australis	0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	140	
Senna artemisioides subsp. *oligophylla*	0.1	150	
Senna glutinosa subsp. *glutinosa*	0.1	140	
Solanum horridum	0.1	30	
Solanum lasiophyllum	0.1	50	
Solanum piceum	0.1	120	
Triodia pungens	0.5	30	WNG-BS-08=



West Angelas Beyond 2020 Phase 1 Site WNG-REL08
Described by MM/CI Date 23-Aug-18 Type Relevé
Central Coordinate 50K 666109 mE 7440583 mN

Habitat Moderate-sized drainage line, draining north to south, through a broad stony plain.

Soil Red sandy clay loam.

Rock Type Ironstone. 1-25% pebbles, 1-25% gravel.

Vegetation *Corymbia hamersleyana* scattered low trees over *Petalostylis labicheoides*, (*Acacia* '*aneura*' sens. lat.) tall shrubland over *Themeda triandra* open tussock grassland with *Triodia pungens*, (*T. longiceps*) very open hummock grassland.

Veg Condition Very Good; occasional weeds.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	5	220	REL08-03
Acacia bivenosa	0.1	180	
Acacia pruinocarpa	0.1	70	
Alternanthera nana	0.1	20	
Aristida contorta	0.1	30	
Chrysocephalum gilesii	0.1	40	REL08-01
Codonocarpus cotinifolius	0.1	210	
Corymbia hamersleyana	1.5	900	REL08-06
Cucumis variabilis	0.1	40	
Cullen pogonocarpum	0.1	60	REL08-05
Digitaria brownii	0.1	80	
Digitaria ctenantha	0.1	50	
Dipteracanthus australasicus subsp. *australasicus*	0.1	40	
Duperreya commixta	0.1	110	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	15	
Enneapogon polyphyllus	0.1	40	
Eremophila longifolia	0.1	130	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	380	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	20	REL08-10
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Gomphrena kanisii	0.1	35	REL08-04
Goodenia microptera	0.1	30	
Goodenia stellata	0.1	15	
Gossypium australe	0.1	120	
Hibiscus sturtii var. *grandiflorus*	0.1	40	WNG14-06=
Hibiscus sturtii var. *platychlamys*	0.1	45	
Indigofera georgei	0.1	70	
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	50	
Maireana villosa	0.1	40	
Malvastrum americanum	0.1	70	
Panicum effusum	0.1	60	REL08-02
Paraneurachne muelleri	0.1	40	
Paspalidium clementii	0.1	30	
Peripleura hispidula var. *hispidula*	0.1	70	REL08-08
Petalostylis labicheoides	25	250	
Phyllanthus maderaspatensis	0.1	40	
Pterocaulon sphacelatum	0.1	70	
Ptilotus exaltatus	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	80	
Ptilotus polystachyus	0.1	50	
Rhagodia eremaea	0.1	110	
Salsola australis	0.1	55	
Senna artemisioides subsp. *filifolia*	0.1	130	REL08-09
Senna artemisioides subsp. *helmsii*	0.1	70	
Senna notabilis	0.1	20	
Seringia elliptica	0.1	70	REL08-11
Sida sp. L (A.M. Ashby 4202)	0.1	25	REL08-07
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	180	
Solanum piceum	0.1	60	WNG02-06=
Sporobolus australasicus	0.1	10	
Themeda triandra	12	80	
Trichodesma zeylanicum var. *zeylanicum*	0.1	40	
Triodia longiceps	0.1	50	
Triodia pungens	3	50	
Triraphis mollis	0.1	40	



West Angelas Beyond 2020 Phase 1 Site WNG-REL09
Described by BRMSC Date 24-Aug-18 Type Relevé
Central Coordinate 50K 670557 mE 7440434 mN
Habitat Small drainage N-S
Soil Reddish brown clay loam.
Rock Type Ironstone. 26-50% pebbles, 26-50% gravel.
Vegetation *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Eucalyptus gamophylla* scattered low mallees over *Acacia monticola*, *Petalostylis labicheoides*, (*A. cowleana*) tall closed scrub over *Paraneurachne muelleri*, *Themeda triandra* very open tussock grassland with *Triodia pungens* scattered hummock grasses.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	70	REL09-08
Acacia ancistrocarpa	0.1	60	
Acacia bivenosa	0.1	100	
Acacia cowleana	5	220	REL09-04
Acacia maitlandii	0.1	80	
Acacia monticola	40	280	
Acacia tenuissima	0.1	80	
Aristida holathera var. *holathera*	0.1	20	REL09-05
Codonocarpus cotinifolius	0.1	500	
Corchorus lasiocarpus subsp. *parvus*	0.1	100	
Corymbia deserticola subsp. *deserticola*	0.5	600	
Cymbopogon ambiguus	0.1	50	
Digitaria ammophila	0.1	60	REL05-14=
Dodonaea lanceolata var. *lanceolata*	0.1	150	REL09-09
Duperreya commixta	0.1	130	
Eucalyptus gamophylla	0.5	250	
Gastrolobium grandiflorum	0.5	200	WNG-BS-14=
Glycine canescens	0.1	150	REL09-07
Goodenia stobbsiana	0.1	30	
Hibiscus burtonii	0.1	60	
Hibiscus coatesii	0.1	120	REL09-02
Hibiscus sturtii var. *campylochlamys*	0.1	30	REL09-01
Paraneurachne muelleri	1.5	50	
Petalostylis labicheoides	40	280	
Santalum lanceolatum	0.1	80	
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. *oligophylla*	0.1	40	
Senna glaucifolia	0.1	100	
Seringia elliptica	1	100	
Sida arenicola	0.1	120	
Sida cardiophylla	0.1	50	REL09-06
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	120	
Themeda triandra	1	100	
Triodia pungens	1	30	



West Angelas Beyond 2020 Site WNG-REL10

Described by Phase 1: MM/RM Phase 2: BRMTB Date Phase 1: 26-Aug-18 Phase 2: 06-Apr-19

Type Quadrat10x 150m

Central Coordinate 50K 665780 mE, 7442435 mN.

Habitat Gully flowing south to southeast.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone, riverstone. 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Acacia incurvaneura*, (*A. aptaneura*, *A. pruinocarpa*, *Corymbia ferriticola*, *Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *Dodonaea pachyneura* tall open shrubland over *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) scattered shrubs over *Harnieria kempeana* subsp. *muelleri*, (*Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.
Phase 2: *Acacia incurvaneura*, (*A. aptaneura*, *A. pruinocarpa*, *Corymbia ferriticola*, *Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *Dodonaea pachyneura*, (*Eremophila* sp. Hamersley Range (K. Walker KW 136)) tall open shrubland over *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) scattered shrubs over *Harnieria kempeana* subsp. *muelleri*, (*Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.

Veg Condition Phase 1: Very Good; scattered **Bidens bipinnata*. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon cryptopetalum	0.1	35	REL10-01			
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)				0.1	30	WREL10R-04
Acacia aneura	0.1	250	REL10-09	0.1	250	
Acacia aptaneura	5	300	REL10-10	5	300	
Acacia bivenosa	0.1	230		0.1	230	
Acacia incurvaneura	30	900	REL10-04	30	900	
Acacia marramamba	0.1	60		0.1	60	
Acacia pruinocarpa	2	900		2	900	
Amyema fitzgeraldii	0.1	30		0.1	30	
Anthobolus leptomerioides	0.1	150	REL10-11	0.1	150	
Aristida burbidgeae	0.1	50	REL10-06	0.1	50	
Astrotricha hamptonii	0.1	100		0.1	100	
Bidens bipinnata	0.1	40		0.1	40	
Brachychiton acuminatus	0.1	450		0.1	450	
Cheilanthes austrotenuifolia	0.1	20	REL10-05	0.1	20	
Cheilanthes brownii	0.1	20	REL10-03	0.1	20	
Corymbia ferriticola	1	800		1	800	
Cucumis variabilis	0.1	140				
Cymbopogon ambiguus	0.1	140		0.1	140	
Digitaria ammophila				0.1	30	WREL10R-02
Dodonaea pachyneura	3	220		3	220	
Dodonaea petiolaris	0.1	160		0.1	160	
Duperreya commixta	0.1	250		0.1	250	
Enchylaena tomentosa var. *tomentosa*	0.1	70		0.1	70	
Enneapogon lindleyanus	0.1	60		0.1	60	
Eremophila latrobei subsp. *latrobei*	0.1	130	REL10-02	0.1	130	
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.5	200		0.5	200	
Eriachne mucronata	0.1	40		0.1	40	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eucalyptus leucophloia subsp. *leucophloia*	1	500		1	500	
Evolvulus alsinoides var. *villosicalyx*				0.1	7	
Glycine canescens	0.1	180		0.1	180	
Gomphrena cunninghamii	0.1	20		0.1	20	
Harnieria kempeana subsp. *muelleri*	20	50		20	50	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.5	180	MM-OP20=	0.5	180	
Lepidium oxytrichum	0.1	15				
Lobelia heterophylla subsp. *pilbarensis*	0.1	20				
Maireana planifolia x villosa				0.1	40	WREL10R-03
Maireana villosa	0.1	50		0.1	50	
Marsdenia australis	0.1	150		0.1	150	
Paraneurachne muelleri	0.1	40				
Paspalidium clementii	0.1	30		0.1	30	
Pterocaulon sphacelatum	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	9	40		9	40	
Rhagodia eremaea	0.1	20		0.1	20	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	100		0.1	100	
Rhodanthe margarethae				0.1	15	WREL10R-07
Rhodanthe polakii	0.1	20	REL10-08			
Salsola australis	0.1	100		0.1	100	
Santalum lanceolatum				0.1	230	
Senna ferraria	0.1	120		0.1	120	
Senna glaucifolia				0.1	220	WREL10R-01
Senna glutinosa subsp. *glutinosa*	0.1	80		0.1	80	
Sida sp. L (A.M. Ashby 4202)	0.1	20	REL10-07			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	15				
Solanum horridum				0.1	5	
Solanum lasiophyllum	0.1	80		0.1	80	
Themeda triandra	0.1	70		0.1	70	
Tribulus suberosus	0.1	80		0.1	80	
Triodia pungens	8	40		8	40	
Tripogonella loliiformis				0.1	7	WREL10R-06
Vincetoxicum lineare				0.1	30	





West Angelas Beyond 2020 Phase 1 Site WNG-REL11
Described by BRMSC Date 27-Aug-18 Type Relevé
Central Coordinate50K 669153 mE7441934 mN

Habitat Minor creek banks of a drainage channel.

Soil Reddish brown sandy loam.

Rock Type 1-25% pebbles, 1-25% gravel.

Vegetation *Corymbia hamersleyana* scattered low trees over *Petalostylis labicheoides*, (*Acacia monticola*, *Androcalva luteiflora*) tall closed shrubland over *Santalum lanceolatum* scattered shrubs over Seringia *elliptica*, *Tephrosia rosea* var. Fortescue creeks (*M*.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra*, (*Paraneurachne muelleri*) very open tussock grassland with *Triodia pungens* scattered hummock grasses.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	140	WNG27-04=
Acacia aptaneura	0.1	50	WNG-BS-32=
Acacia cowleana	0.1	100	REL09-04=
Acacia dictyophleba	0.1	50	
Acacia monticola	18	220	
Acacia pruinocarpa	0.1	120	
Androcalva luteiflora	2	280	
Aristida ? ingrata	0.1	70	REL11-03
Aristida contorta	0.1	40	
Aristida holathera var. *holathera*	0.1	20	
Codonocarpus cotinifolius	0.1	300	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG19-02=
Corymbia deserticola subsp. *deserticola*	0.1	500	
Corymbia hamersleyana	1.5	600	
Cymbopogon sp.	0.1	20	
Digitaria brownii	0.1	70	
Duperreya commixta	0.1	60	
Eriachne mucronata	0.1	30	
Eucalyptus gamophylla	0.1	300	
Goodenia microptera	0.1	12	
Gossypium robinsonii	0.1	300	
Hibiscus burtonii	0.1	60	
Hibiscus coatesii	0.1	50	REL11-01
Hibiscus sturtii var. *campylochlamys*	0.1	20	WNG21-05=
Indigofera monophylla	0.1	35	
Isotropis sp. Arid zone (G. Byrne 2775)	0.1	80	WNG-BS-42=
Jasminum didymum subsp. *lineare*	0.1	80	
Paraneurachne muelleri	1	30	
Petalostylis labicheoides	55	300	
Ptilotus exaltatus	0.1	40	
Santalum lanceolatum	1	120	
Seringia elliptica	0.5	50	
Sida arenicola	0.1	160	
Sida cardiophylla	0.1	50	REL11-02
Sida echinocarpa	0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70	
Solanum lasiophyllum	0.1	20	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.5	60	
Themeda triandra	3	60	
Trichodesma zeylanicum var. *zeylanicum*	0.1	40	
Triodia pungens	0.5	40	



West Angelas Beyond 2020 Phase 1 Site WNG-REL12
Described by MM/RM Date 26-Aug-18 Type Relevé
Central Coordinate50K 670466 mE7442720 mN

Habitat Scree slope of rock face and upper hillslope. Steep south aspect.

Soil Reddish brown sandy clay loam.

Rock Type Ironstone. 1-25% boulder, 1-25% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation *Acacia aptaneura*, *Grevillea saxicola*, (*Callitris columellaris*, *Ficus brachypoda*, *Corymbia ferriticola*) low woodland over *Eremophila* sp. Hamersley Range (K. Walker KW 136) scattered tall shrubs over *Ptilotus obovatus*, (*Olearia stuartii*) low shrubland over *Eriachne* aff. *mucronata* very open tussock grassland.

Veg Condition Very Good.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	50	REL12-03
Acacia aptaneura	15	900	REL12-11
Acacia bivenosa	0.1	300	
Acacia tetragonophylla	0.1	120	
Astrotricha hamptonii	0.1	80	
Bidens bipinnata	0.1	40	
Callitris columellaris	3	700	
Capparis lasiantha	0.1	50	
Cheilanthes austrotenuifolia	0.1	15	REL10-05=
Cheilanthes brownii	0.1	20	REL10-03=
Cleome viscosa	0.1	40	
Corymbia ferriticola	0.5	500	
Cucumis variabilis	0.1	40	
Cymbopogon ambiguus	0.1	70	
Cyperus cunninghamii subsp. *cunninghamii*	0.1	40	REL12-07
Dodonaea petiolaris	0.1	180	
Duperreya commixta	0.1	120	
Dysphania saxatilis	0.1	15	REL12-01
Enneapogon lindleyanus	0.1	30	
Enneapogon robustissimus	0.1	40	
Eremophila latrobei subsp. *latrobei*	0.1	190	REL10-02=
Eremophila petrophila subsp. *petrophila*	0.1	450	REL12-09
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.5	450	
Eriachne aff. *mucronata*	5	25	REL12-05
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Ficus brachypoda	1	600	
Grevillea saxicola	10	800	
Lepidium oxytrichum	0.1	5	
Lobelia heterophylla subsp. *pilbarensis*	0.1	10	
Maireana planifolia x villosa	0.1	45	REL12-06
Marsdenia australis	0.1	60	
Olearia stuartii	1	40	MM-OP22=
Paspalidium clementii	0.1	5	
Peripleura hispidula var. *hispidula*	0.1	25	REL12-10
Peripleura virgata	0.1	30	REL12-02
Pilbara *trudgenii*	0.1	40	
Psydrax latifolia	0.1	220	
Pterocaulon sphacelatum	0.1	40	
Ptilotus obovatus var. *obovatus*	15	60	
Rhagodia eremaea	0.1	120	
Rhodanthe margarethae	0.1	30	
Salsola australis	0.1	40	
Senna ferraria	0.1	170	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40	
Sigesbeckia orientalis	0.1	30	
Solanum horridum	0.1	5	
Solanum nigrum	0.1	30	REL12-08
Triodia pungens	0.1	30	
Vincetoxicum lineare	0.1	140	



West Angelas Beyond 2020 Phase 1 Site WNG-REL13
Described by PL/CI Date 30-Aug-18 Type Relevé
Central Coordinate50K 687113 mE7435982 mN
Habitat Minor drainage.
Soil Dark reddish brown clay loam.
Rock Type Ironstone. 1-25% cobbles, 1-25% pebbles. 1-25% gravel.
Vegetation *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides* tall open shrubland over *Androcalva luteiflora*, (*Acacia monticola*) open shrubland over *Themeda triandra*, (*Eriachne mucronata*) open tussock grassland with *Triodia pungens*, (*T. wiseana*) very open hummock grassland.
Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	40	
Acacia bivenosa	0.1	80	
Acacia maitlandii	0.1	150	
Acacia monticola	0.5	190	
Acacia pruinocarpa	0.1	170	
Acacia pyrifolia var. *pyrifolia*	0.1	160	
Androcalva luteiflora	3	180	
Aristida contorta	0.1	25	
Capparis lasiantha	0.1	40	
Clerodendrum floribundum var. *angustifolium*	0.1	100	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Corymbia hamersleyana	6	700	
Cymbopogon ambiguus	0.1	110	
Dodonaea lanceolata var. *lanceolata*	0.1	160	
Dodonaea viscosa subsp. *mucronata*	0.1	150	REL13-02
Duperreya commixta	0.1	180	
Eriachne mucronata (typical form)	0.5	40	
Eriachne pulchella	0.1	10	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Gompholobium oreophilum	0.1	40	
Goodenia stobbsiana	0.1	40	
Gossypium robinsonii	0.1	170	
Grevillea wickhamii subsp. *hispidula*	0.1	18	
Hibiscus coatesii	0.1	60	
Hibiscus sturtii var. *campylochlamys*	0.1	30	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	40	
Indigofera monophylla	0.1	50	
Jasminum didymum subsp. *lineare*	0.1	110	
Melhania oblongifolia	0.1	40	
Petalostylis labicheoides	3	260	
Pluchea dunlopii	0.1	40	REL13-01
Pterocaulon sphacelatum	0.1	50	REL13-03
Ptilotus calostachyus	0.1	70	
Ptilotus exaltatus	0.1	20	
Santalum lanceolatum	0.1	160	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	30	WNG51-02=
Senna glutinosa subsp. *glutinosa*	0.1	220	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	40	
Solanum phlomoides	0.1	50	
Themeda triandra	7	90	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60	
Triodia pungens	3	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	45	
Triodia wiseana	0.1	40	

No photo taken

West Angelas Beyond 2020 Site WNG-REL14

Described by Phase 1: MM/RM Phase 2: PL/CI Date Phase 1: 26-Aug-18 Phase 2: 05-Apr-19

Type QuadratR

Central Coordinate 50K 670353 mE, 7442757 mN.

Habitat Scree slope of rock face and upper hillslope. Steep south aspect.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone.

Vegetation Phase 1: *Acacia aptaneura*, (*Grevillea saxicola*, *Callitris columellaris*) low woodland over *Eremophila* sp. Hamersley Range (K. Walker KW 136) scattered tall shrubs over *Ptilotus obovatus*, (*Olearia stuartii*) low shrubland over *Eriachne* aff. *mucronata* very open tussock grassland and *Triodia pungens* scattered hummock grasses.
Phase 2: *Acacia aptaneura*, (*Grevillea saxicola*, *Callitris columellaris*) low woodland over *Eremophila* sp. Hamersley Range (K. Walker KW 136) scattered tall shrubs over *Ptilotus obovatus*, (*Olearia stuartii*) low shrubland over *Eriachne* aff. *mucronata* very open tussock grassland and *Triodia pungens* scattered hummock grasses.

Veg Condition Phase 1: Very Good; some weeds. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*, **Solanum nigrum*).

Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon leucopetalum				0.1	30	WRELR14-03
Acacia aptaneura	20	800	REL12-11=	20	800	
Amaranthus interruptus	0.1	45	REL14-05	0.1	45	
Amyema fitzgeraldii	0.1	30		0.1	30	
Aristida burbidgeae	0.1	40		0.1	40	
Astrotricha hamptonii	0.1	80		0.1	80	
Bidens bipinnata	0.1	50		0.1	50	
Callitris columellaris	1	800		1	800	
Capparis lasiantha	0.1	40		0.1	40	
Capparis mitchellii	0.1	320		0.1	320	
Cheilanthes austrotenuifolia	0.1	15	REL10-05=	0.1	15	
Cheilanthes brownii	0.1	15	REL10-03=	0.1	15	
Codonocarpus cotinifolius	0.1	300		0.1	300	
Corymbia ferriticola	0.1	250		0.1	250	
Cucumis variabilis				0.1	100	
Cymbopogon ambiguus	0.1	80		0.1	80	
Cyperus cunninghamii subsp. *cunninghamii*	0.1	30		0.1	30	
Digitaria brownii	0.1	45	REL14-06	0.1	45	
Duperreya commixta	0.1	200		0.1	200	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	20	REL14-04			
Dysphania saxatilis	0.1	15	REL12-01=	0.1	15	
Enchylaena tomentosa var. *tomentosa*				0.1	50	
Enneapogon polyphyllus				0.1	25	
Eremophila latrobei subsp. *latrobei*	0.1	90		0.1	90	
Eremophila petrophila subsp. *petrophila*	0.1	280		0.1	280	
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.5	600		0.5	600	
Eriachne aff. *mucronata*	8	20	REL12-05=	8	20	
Eriachne mucronata	0.1	40		0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	170		0.1	170	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Ficus brachypoda				0.1	40	
Grevillea saxicola	3	800		3	800	
Iseilema membranaceum	0.1	20	REL14-03			
Lobelia heterophylla subsp. *pilbarensis*	0.1	20		0.1	20	
Maireana villosa				0.1	40	WREL14R-02
Marsdenia australis	0.1	120		0.1	120	
Nicotiana benthamiana	0.1	160		0.1	160	
Olearia stuartii	5	40	MM-OP22=	5	40	WREL14R-01
Oxalis sp. Pilbara (M.E. Trudgen 12725)	0.1	20	RMOP02=			
Paraneurachne muelleri				0.1	40	
Parietaria cardiostegia	0.1	5	REL14-01	0.1	5	
Paspalidium clementii				0.1	15	
Peripleura hispidula var. *hispidula*	0.1	25		0.1	25	
Peripleura virgata	0.1	25	REL12-02=	0.1	25	
Pilbara *trudgenii*	0.5	70		0.5	70	
Psydrax latifolia	0.1	150		0.1	150	
Pterocaulon sphacelatum	0.1	50		0.1	50	
Ptilotus obovatus var. *obovatus*	15	60		15	60	
Rhagodia sp. Hamersley (M. Trudgen 17794)				0.1	60	
Rhodanthe margarethae	0.1	120		0.1	120	
Senna ferraria	0.1	180		0.1	180	
Senna glutinosa subsp. *glutinosa*	0.1	120		0.1	120	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40		0.1	40	
Sigesbeckia orientalis	0.1	25				
Solanum ferocissimum	0.1	50	REL14-02	0.1	50	
Solanum horridum	0.1	5		0.1	5	
Solanum lasiophyllum	0.1	40		0.1	40	
Solanum nigrum	0.1	20				
Trichodesma zeylanicum var. *zeylanicum*	0.1	170				
Triodia pungens	0.5	40		0.5	40	





West Angelas Beyond 2020 Phase 1 Site WNG-REL15
Described by BRMSC Date 26-Aug-18 Type Relevé
Central Coordinate50K 662536 mE7444472 mN

Habitat Flat plain; Mulga grove area.

Soil Reddish brown clay loam.

Rock Type Ironstone. 1-25% pebbles, 25-50% gravel.

Vegetation *Acacia macraneura*, *A. aneura*, *A. aptaneura*, (*A. pruinocarpa*) low open forest over *Sida ectogama* open shrubland over *Eremophila forrestii* subsp. *forrestii* scattered low shrubs over *Cheilanthes sieberi* subsp. *sieberi* very open herbland over *Triodia pungens* very open hummock grassland with *Chrysopogon fallax* scattered tussock grasses and *Eragrostis cumingii* very open annual grassland.

Veg Condition Very Good; scattered **Bidens bipinnata*.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Acacia aneura	20	250	REL15-07
Acacia aptaneura	15	350	WNG01-02=
Acacia ayersiana	0.1	280	
Acacia macraneura	10	300	WNG-BS-37=
Acacia macraneura	20	700	WNG05-06=
Acacia pruinocarpa	5	600	
Alternanthera nana	0.1	15	
Aristida contorta	0.1	20	
Aristida obscura	0.1	50	REL15-08
Aristida pruinosa	0.1	50	WNG29-09=
Bidens bipinnata	0.1	60	
Brachyscome iberidifolia	0.1	5	REL15-01
Calandrinia ptychosperma	0.1	5	REL15-02
Cheilanthes sieberi subsp. *sieberi*	3	20	
Chrysocephalum gilesii	0.1	5	WNG07-20=
Chrysopogon fallax	1	60	
Cucumis variabilis	0.1	60	
Digitaria ammophila	0.1	40	REL15-03
Digitaria brownii	0.1	40	
Duperreya commixta	0.1	30	
Enneapogon polyphyllus	0.1	20	
Enneapogon robustissimus	0.1	40	REL15-09
Eragrostis cumingii	3	5	REL15-05
Eremophila forrestii subsp. *forrestii*	1	70	
Eriachne mucronata	0.1	30	
Evolvulus alsinoides var. *villosicalyx*	0.1	5	
Goodenia prostrata	0.1	5	WNG-BS-45=
Maireana planifolia x villosa	0.1	50	REL15-06
Maireana villosa	0.1	30	
Perotis rara	0.1	10	REL15-04
Polycarpaea corymbosa var. *corymbosa*	0.1	10	
Psydrax latifolia	0.1	150	
Ptilotus exaltatus	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	150	
Ptilotus polystachyus	0.1	40	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	50	
Salsola australis	0.1	20	
Sida ectogama	6	120	WNG05-09=
Stenopetalum anfractum	0.1	5	WNG29-14=
Themeda triandra	0.1	60	
Triodia pungens	3	30	



West Angelas Beyond 2020 Site WNG-REL16

Described by Phase 1: MM/RM Phase 2: SCSS Date Phase 1: 27-Aug-18 Phase 2: 05-Apr-19

Type QuadratR

Central Coordinate 50K 670864 mE, 7442775 mN.

Habitat Steep gully flowing south.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone. 1-25% outcropping, 1-25% large boulders, 1-25% boulders, 26-50% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation Phase 1: *Callitris columellaris*, (*Corymbia ferriticola*) woodland over *Ficus brachypoda*, *Capparis mitchellii*, (*Acacia macraneura*, *Grevillea saxicola*) low open woodland over *Ptilotus obovatus* low open shrubland over *Aristida burbidgeae* very open tussock grassland.

Phase 2: *Callitris columellaris*, (*Corymbia ferriticola*) woodland over *Ficus brachypoda*, *Capparis mitchellii*, (*Acacia macraneura*, *Grevillea saxicola*) low open woodland over *Ptilotus obovatus* low open shrubland over *Aristida burbidgeae* very open tussock grassland.

Veg Condition Phase 1: Very Good; scattered weeds. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: No sign of recent fire. Phase 2: No sign of recent fire.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	200	REL16-04	0.1	200	
Acacia bivenosa	0.1	60		0.1	60	
Acacia incurvaneura	0.1	300	REL16-08	0.1	300	
Acacia macraneura	2	130	REL16-01	2	130	
Acacia tetragonophylla	0.1	130		0.1	130	
Amaranthus cuspidifolius	0.1	40	REL16-05	0.1	40	
Amyema fitzgeraldii	0.1	40		0.1	40	
Aristida burbidgeae	5	60		5	60	
Astrotricha hamptonii	0.1	200		0.1	200	
Bidens bipinnata	0.1	40		0.1	10	WREL16R-03
Brachychiton acuminatus	0.1	600		0.1	600	
Callitris columellaris	15	1100		15	1100	
Capparis lasiantha	0.1	70		0.1	70	
Capparis mitchellii	3	500		3	500	
Capparis spinosa subsp. *nummularia*				0.1	5	
Cheilanthes austrotenuifolia	0.1	20	REL16-02	0.1	20	
Cheilanthes brownii	0.1	20	REL16-03	0.1	20	
Clerodendrum floribundum var. *angustifolium*				0.1	10	
Corymbia ferriticola	5	1100		5	1100	
Cucumis variabilis	0.1	100				
Cymbopogon ambiguus	0.1	80		0.1	80	
Dodonaea petiolaris	0.1	90		0.1	90	
Dodonaea viscosa subsp. *mucronata*	0.1	150		0.1	150	
Duperreya commixta	0.1	140		0.1	140	
Dysphania saxatilis	0.1	20				
Enchylaena tomentosa var. *tomentosa*	0.1	60				
Enneapogon lindleyanus	0.1	60		0.1	60	
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.1	180		0.1	180	
Eriachne mucronata	0.1	40		0.1	30	WREL16R-01

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Eucalyptus leucophloia subsp. *leucophloia*	0.1	700		0.1	700	
Ficus brachypoda	3	350		3	350	
Grevillea saxicola	1	900		1	900	
Hakea lorea subsp. *lorea*	0.1	120		0.1	120	
Hibiscus burtonii	0.1	60				
Lepidium oxytrichum	0.1	10				
Lobelia heterophylla subsp. *pilbarensis*	0.1	20				
Marsdenia australis	0.1	130		0.1	130	
Nicotiana benthamiana	0.1	40		0.1	40	
Olearia stuartii	0.1	50	MM-OP22=	0.1	50	
Oxalis sp. Pilbara (M.E. Trudgen 12725)	0.1	15				
Paraceterach reynoldsii	0.1	20	REL16-07	0.1	20	
Paraneurachne muelleri				0.1	30	
Parietaria cardiostegia	0.1	30				
Paspalidium clementii	0.1	6		0.1	6	
Peripleura hispidula var. *hispidula*	0.1	40		0.1	40	
Pilbara *trudgenii*	0.1	80		0.1	80	
Psydrax latifolia	0.1	180		0.1	180	
Psydrax suaveolens				0.1	40	
Pterocaulon sphacelatum	0.1	50		0.1	50	
Ptilotus obovatus var. *obovatus*	9	60		9	60	
Rhagodia eremaea	0.1	90		0.1	90	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	90		0.1	90	WREL16R-04
Rhodanthe margarethae	0.1	80				
Salsola australis	0.1	60		0.1	60	
Santalum lanceolatum	0.1	250		0.1	250	
Senna glutinosa subsp. *glutinosa*	0.1	120		0.1	120	
Setaria dielsii	0.1	30	REL16-06	0.1	30	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	30				
Sigesbeckia orientalis	0.1	40				
Solanum ferocissimum				0.1	10	WREL16R-02
Solanum horridum	0.1	10		0.1	10	
Solanum nigrum	0.1	40				
Themeda triandra	0.1	60		0.1	60	
Triodia pungens	0.1	40		0.1	40	





West Angelas Beyond 2020 Phase 1 Site WNG-REL17
Described by PL/CI Date 30-Aug-18 Type Relevé
Central Coordinate50K 690887 mE7436202 mN

Habitat Minor drainage between area of very undulating plain.

Soil Dark reddish brown clay loam.

Rock Type Ironstone. 1-25% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation *Eucalyptus xerothermica*, *Corymbia hamersleyana* scattered low trees over *E. trivalva* low mallee woodland over *Acacia monticola* tall open shrubland over *Androcalva luteiflora* open shrubland over *Triodia pungens* open hummock grassland with *Themeda triandra* very open tussock grassland.

Veg Condition Excellent.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	40	
Abutilon otocarpum	0.1	30	
Acacia aptaneura	0.1	110	
Acacia hamersleyensis	0.1	210	
Acacia maitlandii	0.1	210	
Acacia monticola	3	310	
Acacia pruinocarpa	0.1	180	
Acacia sibirica (linear form)	0.1	190	REL17-05
Androcalva luteiflora	4	190	
Aristida contorta	0.1	25	
Aristida holathera var. *holathera*	0.1	45	
Capparis lasiantha	0.1	50	
Corymbia hamersleyana	0.1	500	
Dodonaea lanceolata var. *lanceolata*	0.1	180	
Duperreya commixta	0.1	170	
Enneapogon caerulescens	0.1	10	
Enneapogon polyphyllus	0.1	25	
Eremophila longifolia	0.1	130	
Eriachne mucronata	0.1	30	
Eucalyptus trivalva	1	300	REL17-02
Eucalyptus trivalva	11	400	
Eucalyptus xerothermica	0.5	650	
Euphorbia australis var. *hispidula*	0.1	8	REL17-03
Euphorbia boophthona	0.1	40	
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Gastrolobium grandiflorum	0.1	190	
Gossypium robinsonii	0.1	210	
Hibiscus sturtii var. *campylochlamys*	0.1	10	
Indigofera monophylla	0.1	40	
Jasminum didymum subsp. *lineare*	0.1	160	
Paraneurachne muelleri	0.1	40	
Paspalidium clementii	0.1	15	
Pterocaulon sphacelatum	0.1	40	REL13-03=
Ptilotus exaltatus	0.1	20	
Santalum lanceolatum	0.1	170	
Scaevola parvifolia subsp. *pilbarae*	0.1	40	
Senna artemisioides subsp. *filifolia*	0.1	70	REL17-06
Senna glaucifolia	0.1	110	REL17-01
Senna glutinosa subsp. *glutinosa*	0.1	160	
Seringia elliptica	0.1	40	
Sida sp. L (A.M. Ashby 4202)	0.1	40	REL17-04
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	60	
Solanum horridum	0.1	30	
Themeda triandra	5	80	
Triodia pungens	12	45	
Triodia wiseana	0.1	50	



West Angelas Beyond 2020 Phase 1 Site WNG-REL18
Described by MM/RM Date 27-Aug-18 Type Relevé
Central Coordinate50K 663993 mE7442637 mN

Habitat Hillcrest, gently sloping north.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Senna glutinosa* subsp. *pruinosa*, *S. glutinosa* subsp. *glutinosa* scattered shrubs over *Acacia maitlandii*, (Seringia *elliptica*) low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	20	
Acacia maitlandii	4	50	
Acacia marramamba	0.1	80	
Acacia tenuissima	0.1	60	
Aristida contorta	0.1	30	
Aristida holathera var. *holathera*	0.1	30	
Codonocarpus cotinifolius	0.1	30	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	45	
Dampiera candicans	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	1	700	
Goodenia microptera	0.1	25	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	40	
Hakea chordophylla	0.1	500	
Heliotropium inexplicitum	0.1	10	REL18-01
Hibiscus sturtii var. *campylochlamys*	0.1	40	REL18-02
Indigofera monophylla	0.1	25	
Paraneurachne muelleri	0.1	45	
Ptilotus calostachyus	0.1	90	
Ptilotus clementii	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	50	
Ptilotus rotundifolius	0.1	100	
Senna glutinosa subsp. *glutinosa*	0.5	140	
Senna glutinosa subsp. *pruinosa*	1	120	
Senna glutinosa subsp. *x luerssenii*	0.1	110	
Senna notabilis	0.1	30	
Senna stricta	0.1	40	REL18-03
Seringia elliptica	1	60	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	25	WNG36-02=
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50	
Solanum lasiophyllum	0.1	50	
Tribulus suberosus	0.1	50	
Triodia pungens	3	30	
Triodia vanleeuwenii	12	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL19
Described by BRMSC Date 30-Aug-18 Type Relevé
Central Coordinate50K 689519 mE7436069 mN

Habitat Broad flood area with breakaways nearby.

Soil Reddish brown sandy loam.

Rock Type Ironstone. 1-25% boulder, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Acacia monticola*, (*Dodonaea petiolaris*, *Androcalva luteiflora*, *Santalum lanceolatum*) tall closed scrub over *Themeda triandra* very open tussock grassland.

Veg Condition Excellent.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	40	REL19-05
Acacia 'aneura' sens. lat. (juvenile)	0.1	200	REL19-07
Acacia catenulata subsp. *occidentalis*	0.1	400	REL19-06
Acacia hamersleyensis	0.1	350	REL19-02
Acacia maitlandii	0.5	150	
Acacia monticola	35	400	
Acacia pruinocarpa	0.1	120	
Acacia pyrifolia var. *pyrifolia*	0.1	150	
Acacia tetragonophylla	0.1	60	
Androcalva luteiflora	3	220	
Bidens bipinnata	0.1	20	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WNG19-02=
Corymbia hamersleyana	5	500	
Cymbopogon ambiguus	0.1	90	REL19-03
Dipteracanthus australasicus subsp. *australasicus*	0.1	60	
Dodonaea lanceolata var. *lanceolata*	9	250	REL19-01
Duperreya commixta	0.1	50	
Eriachne mucronata	0.1	30	
Eucalyptus gamophylla	0.1	500	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	400	
Euphorbia drummondii	0.1	30	REL19-04
Gastrolobium grandiflorum	0.1	150	
Gossypium robinsonii	0.1	150	
Jasminum didymum subsp. *lineare*	0.1	80	
Melhania oblongifolia	0.1	30	
Petalostylis labicheoides	45	400	
Pterocaulon sphacelatum	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	50	
Rhynchosia minima	0.1	50	
Santalum lanceolatum	2	400	
Senna artemisioides subsp. *helmsii*	0.1	80	
Themeda triandra	4	50	
Triodia pungens	0.1	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL20
Described by BRMSC Date 30-Aug-18 Type Relevé
Central Coordinate50K 687718 mE7435722 mN

Habitat Drainage among low hills and footslopes, draining northeast.

Soil Reddish brown sandy loam.

Rock Type Ironstone, riverstone. 26-50% cobbles, 26-50% pebbles, 26-50% gravel.

Vegetation *Corymbia hamersleyana* low woodland over *Acacia monticola* tall open shrubland *Gossypium robinsonii*, *Petalostylis labicheoides* open shrubland over *Androcalva luteiflora* scattered shrubs over *Themeda triandra* tussock grassland with *Triodia pungens* scattered hummock grasses.

Veg Condition Excellent.

Fire Age Burnt 1-2 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	60	
Acacia monticola	3	350	
Acacia pyrifolia var. *pyrifolia*	0.1	80	
Androcalva luteiflora	1	80	
Clerodendrum floribundum var. *angustifolium*	0.1	100	
Corymbia hamersleyana	12	700	
Cymbopogon ambiguus	0.1	70	
Digitaria brownii	0.1	40	REL20-03
Dodonaea lanceolata var. *lanceolata*	0.1	100	REL19-01=
Duperreya commixta	0.1	50	
Eragrostis exigua	0.1	60	REL20-04
Eriachne mucronata	0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	700	
Euphorbia drummondii	0.1	30	REL19-04=
Gastrolobium grandiflorum	0.1	90	
Gossypium robinsonii	5	150	
Grevillea wickhamii subsp. *hispidula*	2	150	REL20-01
Indigofera monophylla	0.1	45	
Jasminum didymum subsp. *lineare*	0.1	70	
Petalostylis labicheoides	4	200	
Pterocaulon sphacelatum	0.1	30	REL20-02
Ptilotus exaltatus	0.1	30	
Santalum lanceolatum	0.1	130	
Senna glutinosa subsp. *glutinosa*	0.1	40	
Senna notabilis	0.1	40	
Sporobolus australasicus	0.1	10	
Themeda triandra	35	60	
Trichodesma zeylanicum var. *zeylanicum*	0.1	30	
Triodia pungens	1	30	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	30	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL21
Described by MM/RM Date 30-Aug-18 Type Relevé
Central Coordinate50K 688538 mE7435890 mN

Habitat Drainage of undulating plain east-west direction, stony and pebbly.

Soil Reddish brown sandy clay loam to loamy sand.

Rock Type Ironstone, quartz.

Vegetation *Corymbia hamersleyana* low open woodland over *Eucalyptus gamophylla* low open mallee woodland over *Acacia cowleana*, (*Gastrolobium grandiflorum*) shrubland over *Aristida holathera* var. *holathera* very open annual grassland with *Themeda triandra* scattered tussock grasses and *Triodia pungens* scattered hummock grasses.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.1	70	REL18-02
Acacia adsurgens	0.1	60	
Acacia 'aneura' sens. lat. (juvenile)	0.1	50	REL18-03
Acacia cowleana	15	90	REL18-06
Acacia maitlandii	0.1	50	
Acacia monticola	0.1	60	
Acacia steedmanii subsp. *borealis*	0.1	110	
Acacia tenuissima	0.1	60	
Androcalva luteiflora	0.1	90	
Anthobolus leptomerioides	0.1	10	
Aristida holathera var. *holathera*	9	40	
Codonocarpus cotinifolius	0.1	70	
Corchorus lasiocarpus (subsp. not determined)	0.1	60	
Corymbia hamersleyana	3	600	
Cymbopogon ambiguus	0.1	60	
Dodonaea lanceolata var. *lanceolata*	0.1	80	
Duperreya commixta	0.1	100	
Eriachne mucronata	0.1	40	
Eucalyptus gamophylla	5	200	
Eulalia aurea	0.1	40	
Evolvulus alsinoides var. *villosicalyx*	0.1	25	
Gastrolobium grandiflorum	1.5	150	
Gompholobium oreophilum	0.1	40	
Goodenia microptera	0.1	40	
Goodenia stobbsiana	0.1	30	
Gossypium robinsonii	0.1	110	
Heliotropium inexplicitum	0.1	5	REL18-05
Hibiscus brachychlaenus	0.1	50	REL18-08
Hibiscus coatesii	0.1	40	
Hibiscus sturtii var. *campylochlamys*	0.1	25	REL18-04
Indigofera monophylla	0.1	30	
Jasminum didymum subsp. *lineare*	0.1	55	
Paraneurachne muelleri	0.1	40	
Santalum lanceolatum	0.1	100	
Scaevola parvifolia subsp. *pilbarae*	0.1	40	
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	25	REL18-07
Senna ferraria	0.1	60	
Senna notabilis	0.1	30	
Seringia elliptica	0.1	30	
Sida arenicola	0.1	70	
Sida cardiophylla	0.1	60	
Sida sp. L (A.M. Ashby 4202)	0.1	50	WNG56-05=
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70	
Themeda triandra	1	60	REL18-01
Trichodesma zeylanicum var. *zeylanicum*	0.1	120	
Triodia pungens	1	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL22
Described by MM/RM Date 31-Aug-18 Type Relevé
Central Coordinate50K 680087 mE7432806 mN

Habitat Minor north-south drainage with 100% cover of cobbles, pebbles and gravel.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone, riverstone.

Vegetation *Acacia ayersiana*, *A. aptaneura*, *A. aneura*, *Corymbia deserticola* subsp. *deserticola*) low open forest over *A. bivenosa* scattered shrubs over *Triodia pungens* very open hummock grassland.

Veg Condition Excellent.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Acacia aneura	1	400	REL20-02
Acacia aptaneura	15	500	REL20-04
Acacia aptaneura	2	400	REL20-01
Acacia ayersiana	15	500	
Acacia bivenosa	0.5	160	
Acacia pruinocarpa	0.1	180	
Acacia sibirica (linear form)	0.1	350	REL20-05
Aristida contorta	0.1	25	
Aristida ingrata	0.1	40	WNG62-05=
Corymbia deserticola subsp. *deserticola*	1	600	
Cymbopogon ambiguus	0.1	80	
Digitaria brownii	0.1	45	
Enneapogon polyphyllus	0.1	20	
Eremophila forrestii subsp. *forrestii*	0.1	100	
Eremophila longifolia	0.1	200	
Eucalyptus gamophylla	0.1	450	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Hibiscus burtonii	0.1	20	
Perotis rara	0.1	5	
Psydrax suaveolens	0.1	140	
Schizachyrium fragile	0.1	20	
Senna glaucifolia	0.1	160	
Senna glutinosa subsp. *glutinosa*	0.1	220	
Senna glutinosa subsp. *x luerssenii*	0.1	160	
Sida sp. L (A.M. Ashby 4202)	0.1	30	
Solanum lasiophyllum	0.1	60	
Themeda triandra	0.1	50	
Triodia pungens	3	30	REL20-03
Triodia vanleeuwenii	0.1	30	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Phase 1 Site WNG-REL23
Described by BRM/RM Date 11-Sep-18 Type Relevé
Central Coordinate50K 684711 mE7431860 mN

Habitat North aspect rocky gully with large boulders and small waterfalls.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone. 26-50% outcropping, 26-50% larger boulder, 26-50% boulder, 26-50% cobbles, 26-50% pebbles, 1-25% gravel.

Vegetation *Acacia catenulata* subsp. *occidentalis*, *A. aptaneura*, (*A. pruinocarpa*) low open forest over *Eremophila* sp. Hamersley Range (K. Walker KW 136), (*Dodonaea pachyneura*) scattered tall shrubs over *Ptilotus obovatus* scattered low shrubs over *Aristida burbidgeae*, (*Eriachne mucronata*, *Cymbopogon ambiguus*) very open tussock grassland with *Triodia pungens*, *T.* sp. Mt Ella (M.E. Trudgen 12739) scattered hummock grasses.

Veg Condition Very Good.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Abutilon lepidum	0.1	25	
Abutilon otocarpum	0.1	20	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	160	REL23-04
Acacia aptaneura	20	600	REL23-01
Acacia bivenosa	0.1	70	
Acacia catenulata subsp. *occidentalis*	25	600	REL23-14
Acacia mulganeura	0.1	70	REL23-16
Acacia pruinocarpa	5	400	
Aristida burbidgeae	5	70	REL23-03
Astrotricha hamptonii	0.1	110	
Bidens bipinnata	0.1	40	
Capparis mitchellii	0.1	170	REL23-12
Cheilanthes brownii	0.1	20	REL23-18
Cleome viscosa	0.1	60	
Corchorus crozophorifolius	0.1	70	
Corymbia ferriticola	0.1	250	
Cucumis variabilis	0.1	90	
Cymbopogon ambiguus	0.5	60	
Cynanchum pedunculatum	0.1	100	REL23-09
Digitaria ammophila	0.1	30	REL23-11
Dodonaea pachyneura	0.5	250	
Dodonaea petiolaris	0.1	160	
Duperreya commixta	0.1	120	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	20	REL23-06
Enchylaena tomentosa var. *tomentosa*	0.1	45	
Enneapogon lindleyanus	0.1	40	
Enneapogon polyphyllus	0.1	30	
Eremophila sp. Hamersley Range (K. Walker KW 136)	1.5	400	REL23-02
Eriachne mucronata	1.5	30	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	90	
Eulalia aurea	0.1	40	
Euphorbia trigonosperma	0.1	30	REL23-05
Ficus brachypoda	0.1	70	
Gomphrena cunninghamii	0.5	20	
Hibiscus burtonii	0.1	40	
Hibiscus sp. Mt Robinson (G. Byrne 3537)	0.1	20	REL23-10
Hibiscus sturtii	0.1	40	
Maireana planifolia	0.1	40	REL23-13
Peripleura hispidula var. *hispidula*	0.1	30	REL23-07
Petalostylis labicheoides	0.1	160	
Pterocaulon sphacelatum	0.1	50	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	2	50	
Rhagodia eremaea	0.1	70	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	140	
Rhynchosia minima	0.1	15	
Senna glutinosa subsp. *glutinosa*	0.1	140	
Sida ectogama	0.1	140	REL23-17
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	35	REL23-08
Themeda triandra	0.1	70	
Tribulus suberosus	0.1	40	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60	
Triodia pungens	1	30	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.5	40	
Triumfetta leptacantha	0.1	30	REL23-15



West Angelas Beyond 2020 Phase 1 Site WNG-REL24
Described by MM/CI Date 11-Sep-18 Type Relevé
Central Coordinate50K 687683 mE7431535

Habitat Narrow rocky gully draining northwest of moderate sized hills.

Soil Dark reddish brown sandy loam.

Rock Type Ironstone. 1-25% outcropping, 1-25% large boulder, 1-25% boulder, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Acacia catenulata* subsp. *occidentalis*, (*A. incurvaneura*, *Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *Dodonaea pachyneura* scattered low shrubs over *Aristida burbidgeae*, (*Cymbopogon ambiguus*) very open tussock grassland with *Triodia pungens* scattered hummock grasses.

Veg Condition Very Good; scattered *Bidens bipinnata*.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	40	REL24-07
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	40	REL24-03
Acacia aptaneura	0.1	550	REL24-08
Acacia catenulata subsp. *occidentalis*	25	900	
Acacia incurvaneura	4	480	REL24-10
Acacia pruinocarpa	3	50	
Achyranthes aspera	0.1	60	
Aristida burbidgeae	2	15	REL24-01
Bidens bipinnata	0.1	10	
Bothriochloa sp.	0.1	60	REL24-09
Capparis lasiantha	0.1	80	
Capparis mitchellii	0.1	400	
Cheilanthes austrotenuifolia	0.1	10	
Cheilanthes brownii	0.1	10	REL24-02
Cleome viscosa	0.1	80	
Clerodendrum floribundum var. *angustifolium*	0.1	220	
Corchorus crozophorifolius	0.1	80	
Corymbia ferriticola	0.1	400	
Cucumis variabilis	0.1	50	
Cymbopogon ambiguus	0.5	70	
Digitaria ammophila	0.1	60	REL24-13
Digitaria brownii	0.1	40	
Dodonaea pachyneura	0.5	70	
Duperreya commixta	0.1	120	
Enchylaena tomentosa var. *tomentosa*	0.1	50	
Enneapogon lindleyanus	0.1	10	
Eremophila latrobei subsp. *latrobei*	0.1	230	REL24-11
Eriachne mucronata	0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	2	900	
Euphorbia drummondii	0.1	10	REL24-05
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Glycine canescens	0.1	150	
Gomphrena cunninghamii	0.1	25	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	150	REL24-14
Indigofera fractiflexa subsp. *fractiflexa*	0.1	15	
Jasminum didymum subsp. *lineare*	0.1	130	
Nicotiana benthamiana	0.1	60	
Olearia stuartii	0.1	50	REL24-04
Oxalis sp. Pilbara (M.E. Trudgen 12725)	0.1	2	
Paspalidium clementii	0.1	10	
Peripleura hispidula var. *hispidula*	0.1	15	REL24-06
Petalostylis labicheoides	0.1	190	
Ptilotus fusiformis	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	50	
Rhagodia eremaea	0.1	70	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.1	120	
Rhynchosia minima	0.1	30	
Salsola australis	0.1	30	
Santalum lanceolatum	0.1	450	
Senna glutinosa subsp. *glutinosa*	0.1	100	
Sida sp. L (A.M. Ashby 4202)	0.1	20	WNG68-06=
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	20	
Solanum lasiophyllum	0.1	50	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	70	REL24-12
Triodia pungens	2	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	50	
Ventilago viminalis	0.1	300	



West Angelas Beyond 2020 Phase 1 Site WNG-REL25
Described by PLMG Date 12-Sep-18 Type Relevé
Central Coordinate50K 678962 mE7431434 mN

Habitat Gorge at base of waterfall.

Soil Dark reddish brown *silty* clay loam.

Rock Type Ironstone. 1-25% outcropping, 1-25% large boulder, 1-25% boulder, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Callitris columellaris*, (*Corymbia ferriticola*, *Acacia aptaneura*) low woodland over *Senna glutinosa* subsp. *glutinosa*, *Rhagodia eremaea* scattered shrubs over *Ptilotus obovatus*, P. *incanus* scattered low shrubs over *Aristida burbidgeae*, *Cymbopogon ambiguus*, *Enneapogon lindleyanus*, *Paspalidium constrictum*, *Eriachne mucronata* very open tussock grassland with *Triodia pungens* scattered hummock grasses.

Veg Condition Very Good.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Abutilon otocarpum	0.1	40	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	190	
Acacia aptaneura	2	800	REL25-01
Acacia tenuissima	0.1	60	REL25-11
Aristida burbidgeae	1	50	
Astrotricha hamptonii	0.1	190	
Bidens bipinnata	0.1	40	
Callitris columellaris	8	900	
Capparis mitchellii	0.1	350	
Capparis spinosa subsp. *nummularia*	0.1	60	
Cheilanthes austrotenuifolia	0.1	10	
Cheilanthes brownii	0.1	15	REL25-06
Cleome viscosa	0.1	40	
Clerodendrum floribundum var. *angustifolium*	0.1	170	
Corchorus crozophorifolius	0.1	60	
Corymbia ferriticola	3	800	
Cymbopogon ambiguus	1	120	
Digitaria ammophila	0.1	40	
Dodonaea viscosa subsp. *mucronata*	0.1		
Duperreya commixta	1	160	
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	25	REL25-08
Enchylaena tomentosa var. *tomentosa*	0.1	50	
Enneapogon lindleyanus	1	60	
Eriachne mucronata (typical form)	0.5	40	
Ficus brachypoda	0.1	110	
Hibiscus coatesii	0.1	25	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	70	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	25	
Jasminum didymum subsp. *lineare*	0.1	60	
Lobelia heterophylla subsp. *pilbarensis*	0.1	25	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	0.1	110	REL25-10
Nicotiana occidentalis subsp. *obliqua*	0.1	35	REL25-05
Olearia xerophila	0.1	40	REL25-04
Oxalis sp. Pilbara (M.E. Trudgen 12725)	0.1	20	
Panicum effusum	0.1	30	
Paraceterach reynoldsii	0.1	25	
Paspalidium constrictum	1	30	REL25-03
Peripleura hispidula var. *hispidula*	0.1	25	REL25-02
Pimelea microcephala subsp. *microcephala*	0.1	170	REL25-13
Prostanthera albiflora	0.1	120	
Psydrax latifolia	0.1	160	
Pterocaulon sphacelatum	0.1	50	
Ptilotus exaltatus	0.1	40	
Ptilotus obovatus var. *obovatus*	1.5	80	REL25-09
Rhagodia eremaea	1	160	
Rhodanthe margarethae	0.1	40	
Senna glutinosa subsp. *glutinosa*	1	180	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40	
Sigesbeckia orientalis	0.1	30	
Solanum horridum	0.1	25	
Solanum kentrocaule	0.1	140	
Solanum lasiophyllum	0.1	60	
Sonchus oleraceus	0.1	25	
Teucrium disjunctum	0.1	60	REL25-07
Themeda triandra	0.1	70	
Trichodesma zeylanicum var. *zeylanicum*	0.1	140	
Triodia pungens	1	50	



West Angelas Beyond 2020 Site WNG-REL26

Described by Phase 1: PLMG Phase 2: PL/CI Date Phase 1: 13-Sep-18 Phase 2: 09-Apr-19

Type QuadratR

Central Coordinate 50K 679379 mE, 7432212 mN.

Habitat South-east facing gorge.

Soil Dark reddish brown clay loam.

Rock Type Ironstone, shale, quartz.

Vegetation Phase 1: *Callitris columellaris*, (*Corymbia ferriticola*, *Acacia* '*aneura*' sens. lat) low woodland over *Eriachne mucronata* scattered tussock grasses.
Phase 2: *Callitris columellaris*, (*Corymbia ferriticola*, *Acacia* '*aneura*' sens. lat) low woodland over *Eremophila* sp. Hamersley Range (K. Walker KW 136) scattered shrubs over *Eriachne mucronata* scattered tussock grasses.

Veg Condition Phase 1: Very Good. Phase 2: Very Good; presence of weeds (**Bidens bipinnata*).

Fire Age Phase 1: Very long unburnt. Phase 2: Very long unburnt.

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	1	800	REL26-01			
Acacia aptaneura				1	800	WREL26R-01
Acacia hamersleyensis	0.1	310		0.1	310	
Amyema fitzgeraldii	0.1	60		0.1	60	
Aristida burbidgeae				0.1	40	
Bidens bipinnata	0.1	25		0.1	25	
Brachychiton acuminatus	0.1	50		0.1	50	
Callitris columellaris	25	900		25	900	
Capparis mitchellii	0.1	260		0.1	260	
Capparis spinosa subsp. *nummularia*	0.1	60		0.1	60	
Cheilanthes austrotenuifolia	0.1	25				
Cheilanthes brownii	0.1	10		0.1	10	
Clerodendrum floribundum var. *angustifolium*	0.1	250		0.1	250	
Corymbia ferriticola	2	220		2	220	
Cucumis variabilis	0.1	70		0.1	70	
Cymbopogon ambiguus	0.1	80		0.1	80	
Digitaria ammophila	0.1	60		0.1	60	
Digitaria brownii	0.1	80		0.1	80	WREL26R-03
Dodonaea pachyneura	0.1	190		0.1	190	
Dodonaea viscosa subsp. *mucronata*	0.1	30	REL26-04	0.1	30	
Duperreya commixta	0.1	160		0.1	160	
Enchylaena tomentosa var. *tomentosa*	0.1	110		0.1	110	
Enneapogon lindleyanus	0.1	60		0.1	60	
Enneapogon robustissimus	0.1	90		0.1	90	
Eremophila sp. Hamersley Range (K. Walker KW 136)	0.1	170		1	170	
Eriachne mucronata (typical form)	2	40		2	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	800		0.1	800	
Euphorbia drummondii				0.1	10	WREL26R-02
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	10	REL26-07			
Evolvulus alsinoides var. *villosicalyx*				0.1	25	

Species	Phase 1			Phase 2		
	Cover (%)	Height (cm)	Specimen	Cover (%)	Height (cm)	Specimen
Gomphrena cunninghamii	0.1	20		0.1	20	
Hibiscus burtonii	0.1	30		0.1	30	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	190		0.1	190	
Indigofera monophylla	0.1	50		0.1	50	
Jasminum didymum subsp. *lineare*	0.1	90		0.1	90	
Maireana villosa	0.1	45		0.1	45	
Olearia xerophila	0.1	50	REL26-03	0.1	50	
Peripleura hispidula var. *hispidula*	0.1	30	REL26-06	0.1	30	
Ptilotus exaltatus	0.1	40		0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	60	REL26-05	0.1	60	
Rhagodia eremaea	0.1	60	REL26-02	0.1	60	
Rhodanthe margarethae	0.1	25				
Santalum lanceolatum	0.1	80		0.1	80	
Schizachyrium fragile	0.1	30				
Senecio hamersleyensis	0.1	20	PL117=			
Senna glutinosa subsp. *glutinosa*				0.1	160	
Sida sp. L (A.M. Ashby 4202)				0.1	25	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	45		0.1	45	
Solanum horridum	0.1	25		0.1	25	
Solanum lasiophyllum	0.1	100		0.1	100	
Themeda triandra	0.1	80		0.1	80	
Triodia pungens	0.1	60		0.1	60	
Vincetoxicum lineare	0.1	60		0.1	60	





West Angelas Beyond 2020 Phase 1 Site WNG-REL27
Described by PLMG Date 12-Sep-18 Type Relevé
Central Coordinate50K 675463 mE7429814 mN

Habitat Moderately steep breakaway with *minor* gullies.

Soil Dark reddish brown *silty* clay loam.

Rock Type Ironstone. 1-25% outcropping, 1-25% boulder, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *A. pruinocarpa*, *A. aptaneura*) low open forest over *Triodia pungens* very open hummock grassland.

Veg Condition Very Good.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	1	700	REL27-02
Acacia catenulata subsp. *occidentalis*	31	900	
Acacia hamersleyensis	0.1	60	
Acacia pruinocarpa	2	700	
Aristida ingrata	0.1	70	REL27-01
Aristida obscura	0.1	30	
Astrotricha hamptonii	0.1	280	
Bidens bipinnata	0.1	40	
Capparis lasiantha	0.1	90	
Cheilanthes austrotenuifolia	0.1	25	
Cheilanthes brownii	0.1	20	WNG71-02=
Cymbopogon ambiguus	0.1	70	
Dodonaea viscosa subsp. *mucronata*	0.1	80	
Duperreya commixta	0.1	100	
Enneapogon polyphyllus	0.1	30	
Eremophila jucunda subsp. *pulcherrima*	0.1	70	
Eremophila latrobei subsp. *latrobei*	0.1	170	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	4	800	
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)	0.1	25	
Evolvulus alsinoides var. *villosicalyx*	0.1	15	
Grevillea berryana	0.5	60	
Hakea chordophylla	0.1	70	
Hibiscus burtonii	0.1	25	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	40	
Lobelia heterophylla subsp. *pilbarensis*	0.1	40	
Olearia stuartii	0.1	50	WNG71-04=
Paspalidium clementii	0.1	30	
Psydrax suaveolens	0.1	70	
Rhagodia eremaea	0.1	110	
Schizachyrium fragile	0.1	30	
Senna glutinosa subsp. *glutinosa*	0.1	110	
Senna glutinosa subsp. *pruinosa*	0.1	210	
Senna sp. Meekatharra (E. Bailey 1-26)	0.1	40	
Seringia elliptica	0.1	50	
Sida sp. L (A.M. Ashby 4202)	0.1	25	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	40	
Solanum lasiophyllum	0.1	50	
Templetonia egena	0.1	170	
Teucrium teucriiflorum	0.1	50	
Themeda triandra	0.1	80	
Triodia pungens	9	40	
Vincetoxicum lineare	0.1	20	



West Angelas Beyond 2020 Phase 1 Site WNG-REL28
Described by MM/CI Date 13-Sep-18 Type Relevé
Central Coordinate50K 677544 mE7429428 mN

Habitat Barely incised drainage line, draining south through low stony rises.

Soil Dark reddish brown loamy sand.

Rock Type Fluvial. 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Eucalyptus xerothermica*, (*Corymbia hamersleyana*, *Hakea chordophylla*) low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* var. *pyrifolia*, *Gossypium robinsonii* scattered tall shrubs over *A. bivenosa* scattered shrubs over *Themeda triandra* tussock grassland with *Triodia pungens* scattered hummock grasses.

Veg Condition Very Good.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia 'aneura' sens. lat. (juvenile)	0.1	190	REL32-06
Acacia bivenosa	0.5	130	
Acacia maitlandii	0.1	70	
Acacia pyrifolia var. *pyrifolia*	0.5	210	
Alternanthera nana	0.1	30	
Androcalva luteiflora	0.1	180	
Bothriochloa ewartiana	0.1	110	REL32-05
Capparis lasiantha	0.1	10	
Corchorus lasiocarpus (subsp. not determined)	0.1	70	
Corymbia hamersleyana	1	900	
Cullen pogonocarpum	0.1	30	REL32-02
Digitaria ctenantha	0.1	50	
Dipteracanthus australasicus subsp. *australasicus*	0.1	40	
Duperreya commixta	0.1	240	
Ehretia saligna var. *saligna*	0.1	170	
Enneapogon lindleyanus	0.1	35	
Enneapogon robustissimus	0.1	60	WNG82-04=
Enteropogon ramosus	0.1	70	
Eriachne mucronata (typical form)	0.1	55	
Eucalyptus xerothermica	4	950	
Gossypium robinsonii	0.5	210	
Hakea chordophylla	0.5	800	
Heliotropium cunninghamii	0.1	25	REL32-04
Hibiscus coatesii	0.1	40	
Hibiscus sturtii var. *campylochlamys*	0.1	30	REL32-07
Indigofera georgei	0.1	80	
Jasminum didymum subsp. *lineare*	0.1	110	
Leiocarpa semicalva subsp. *semicalva*	0.1	35	REL32-03
Malvastrum americanum	0.1	40	
Melhania oblongifolia	0.1	40	
Paraneurachne muelleri	0.1	50	
Peripleura hispidula var. *hispidula*	0.1	30	WNG82-01=
Petalostylis labicheoides	1	300	
Pterocaulon sphacelatum	0.1	40	
Ptilotus astrolasius	0.1	50	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	40	
Santalum lanceolatum	0.1	140	
Scaevola spinescens (broad form)	0.1	70	
Senna artemisioides subsp. *helmsii*	0.1	80	REL32-01
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	110	
Sporobolus australasicus	0.1	10	
Streptoglossa decurrens	0.1	50	
Themeda triandra	60	10	
Trichodesma zeylanicum var. *zeylanicum*	0.1	30	
Triodia pungens	1	40	



West Angelas Beyond 2020 Phase 1 Site WNG-REL29
Described by BRM/RM Date 12-Sep-18 Type Relevé
Central Coordinate50K 675536 mE7430207 mN
Habitat Creek flood bank flowing east-west, curving around to the north-west. Between two ridges.
Soil Dark reddish brown loamy sand.
Rock Type Ironstone, riverstone, chert, mudstone. 1-25% cobbles, 26-50% pebbles, 26-50% gravel.
Vegetation *Eucalyptus xerothermica* low woodland over *Petalostylis labicheoides*, (*Acacia pyrifolia* var. *pyrifolia*, *Gossypium robinsonii*, *Stylobasium spathulatum*) tall open shrubland over *A. bivenosa*, (*Androcalva luteiflora*, *Sida* sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)) shrubland over *Ptilotus obovatus*, *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra*, (*Eriachne mucronata*) tussock grassland with *Triodia longiceps*, (*T. pungens*) very open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	12	120	
Acacia maitlandii	0.1	45	
Acacia pyrifolia var. *pyrifolia*	2	260	
Androcalva luteiflora	0.5	180	
Anthobolus leptomerioides	0.1	50	REL29-02
Corchorus crozophorifolius	0.1	30	
Corchorus lasiocarpus subsp. *parvus*	0.1	45	WNG19-02=
Cucumis variabilis	0.1	120	
Cullen leucochaites	0.1	140	REL29-12
Cymbopogon ambiguus	0.1	70	REL29-15
Dipteracanthus australasicus subsp. *australasicus*	0.1	60	WNG07-13=
Dodonaea lanceolata var. *lanceolata*	0.1	140	WNG75-09=
Dodonaea viscosa subsp. *mucronata*	0.1	140	REL29-05
Duperreya commixta	0.1	160	
Enneapogon lindleyanus	0.1	40	
Eragrostis sp.	0.1	30	
Eriachne mucronata	3	45	
Eucalyptus gamophylla	0.1	350	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	500	
Eucalyptus xerothermica	12	600	
Eulalia aurea	0.1	60	REL29-13
Evolvulus alsinoides var. *villosicalyx*	0.1	15	
Goodenia muelleriana	0.1	20	REL29-08
Gossypium robinsonii	0.5	300	
Hakea chordophylla	0.1	400	
Indigofera georgei	0.1	100	
Indigofera monophylla	0.1	30	
Jasminum didymum subsp. *lineare*	0.1	80	
Leiocarpa semicalva subsp. *semicalva*	0.1	30	REL29-04
Olearia fluvialis	0.1	35	REL29-14
Paraneurachne muelleri	0.1	30	
Petalostylis labicheoides	7	350	
Phyllanthus maderaspatensis	0.1	35	
Polycarpaea longiflora	0.1	20	
Ptilotus astrolasius	0.1	40	
Ptilotus exaltatus	0.1	40	
Ptilotus obovatus var. *obovatus*	1	50	
Rhynchosia minima	0.1	20	
Rostellularia adscendens var. *latifolia*	0.1	15	REL29-06
Santalum lanceolatum	0.1	180	
Senna artemisioides subsp. *filifolia*	0.1	70	REL29-01
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	110	
Setaria verticillata	0.1	30	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.5	140	
Solanum lasiophyllum	0.1	50	
Sporobolus australasicus	0.1	5	
Stylobasium spathulatum	0.5	250	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	0.5	45	
Themeda triandra	32	70	
Trichodesma zeylanicum var. *zeylanicum*	0.1	60	
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)	0.1	60	REL29-09
Triodia longiceps	5	30	REL29-10
Triodia pungens	1	30	REL29-11
Triraphis mollis	0.1	15	REL29-07
Ventilago viminalis	0.1	300	WNG69-01=



West Angelas Beyond 2020 Phase 1 Site WNG-REL30
Described by PLMG Date 11-Sep-18 Type Relevé
Central Coordinate50K 685159 mE7431737 mN

Habitat Gully/gorge sloping north to northeast.

Soil Dark reddish brown clay loam.

Rock Type Ironstone, BIF. 1-25% outcropping, 1-25% cobbles, 1-25% pebbles, 1-25% gravel.

Vegetation *Acacia aptaneura*, *A. pruinocarpa*, *A. ayersiana*, *A. catenulata* subsp. *occidentalis*, *Callitris columellaris* (*Corymbia ferriticola*) low woodland over *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Dodonaea pachyneura* open shrubland over *Ptilotus obovatus*, (*Corchorus crozophorifolius*) low open shrubland over *Triodia pungens*, (*T.* sp. Mt Ella (M.E. Trudgen 12739)) very open hummock grassland with *Aristida burbidgeae*, *Cymbopogon ambiguus*, *Eriachne mucronata* very open tussock grassland.

Veg Condition Good; some **Bidens bipinnata*.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	10	
Acacia aptaneura	6	700	
Acacia ayersiana	3	600	
Acacia catenulata subsp. *occidentalis*	3	600	
Acacia pruinocarpa	4	600	
Aristida burbidgeae	3	35	
Astrotricha hamptonii	0.1	220	
Bidens bipinnata	0.1	40	
Callitris columellaris	3	600	
Capparis mitchellii	0.1	250	
Cheilanthes brownii	0.1	10	REL30-02
Cleome viscosa	0.1	30	
Corchorus crozophorifolius	1	50	
Corymbia ferriticola	0.5	400	
Cucumis variabilis	0.1	25	
Cymbopogon ambiguus	3	10	
Cynanchum pedunculatum	0.1	25	REL30-05
Dodonaea pachyneura	1	160	
Dodonaea viscosa subsp. *mucronata*	0.1	160	
Duperreya commixta	0.1	160	
Dysphania melanocarpa forma leucocarpa	0.1	25	REL30-08
Enchylaena tomentosa var. *tomentosa*	0.1	40	
Enneapogon lindleyanus	0.1	60	REL30-07
Enneapogon polyphyllus	0.1	25	
Eremophila sp. Hamersley Range (K. Walker KW 136)	2	190	
Eriachne mucronata (typical form)	2	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	80	
Gomphrena cunninghamii	0.1	20	
Hibiscus coatesii	0.1	80	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	60	
Maireana planifolia x villosa	0.1	30	REL30-01
Olearia stuartii	0.1	35	REL30-04
Peripleura hispidula var. *hispidula*	0.1	35	REL30-03
Pterocaulon sphacelatum	0.1	35	REL30-06
Ptilotus obovatus var. *obovatus*	3	60	
Salsola australis	0.1	30	
Senna artemisioides subsp. *helmsii*	0.1	60	
Senna glutinosa subsp. *glutinosa*	0.1	170	
Senna glutinosa subsp. *glutinosa x S. stricta*	0.1	230	
Senna venusta	0.1	110	
Solanum kentrocaule	0.1	160	
Solanum lasiophyllum	0.1	30	
Streptoglossa decurrens	0.1	25	
Themeda triandra	0.1	80	
Trichodesma zeylanicum var. *zeylanicum*	0.1	100	
Triodia pungens	2	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.5	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA01
Described by	BRMTB	Date	05-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 667727 mE	7441820 mN	
Habitat	Upper slope of high ridge, adjacent to hilltop.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone, chert, shale; boulder 1-25%, cobble 26-50%, pebble 1-25%, gravel 1-25%.		
Vegetation	*Acacia aptaneura*, (*Grevillea saxicola*) low woodland over *Eremophila jucunda* subsp. *pulcherrima*, (*E. cuneifolia*, *E. phyllopoda* subsp. *obliqua*, *Sida ectogama*, *E. latrobei* subsp. *latrobei*) shrubland over *Dodonaea petiolaris* scattered low shrubs over *Triodia pungens* scattered hummock grasses.		
Veg Condition	Excellent.		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	20	600	WA01-05
Acacia catenulata subsp. *occidentalis*		500	WA01-X01
Digitaria ammophila	0.1	25	WA01-08
Dodonaea petiolaris	0.5	80	WA01-02
Duperreya commixta	0.1	180	
Enneapogon caerulescens	0.1	30	WA01-07
Enneapogon lindleyanus	0.1	40	WA01-14
Eremophila cuneifolia	1.5	180	WA01-09
Eremophila jucunda subsp. *pulcherrima*	20	190	
Eremophila latrobei subsp. *latrobei*	0.5	180	
Eremophila phyllopoda subsp. *obliqua*	1	180	WA01-10
Eucalyptus leucophloia subsp. *leucophloia*	0.1	320	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Gomphrena cunninghamii	0.1	10	WA01-06
Grevillea saxicola	5	800	WA01-01
Hibiscus burtonii	0.1	40	
Maireana villosa	0.1	30	WA01-11
Paraneurachne muelleri	0.1	30	
Psydrax suaveolens	0.1	5	
Rhagodia sp. Hamersley (*M.* Trudgen 17794)	0.1	180	WA01-04
Scaevola acacioides	0.1	140	
Senna glutinosa subsp. x *luerssenii* x	0.1	180	WA01-12
Senna stricta	0.1	180	WA01-13
Sida ectogama	1	120	WA01-03
Solanum lasiophyllum	0.1	40	
Tribulus suberosus	0.1	130	
Triodia pungens	0.5	60	
Triodia vanleeuwenii	0.1	30	WA01-16
Vincetoxicum *lineare*	0.1	110	



West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WA02

Described by SCSS Date 06-Apr-19

Type Quadrat 50 x 50 m

Central Coordinate 50K 697227 mE 7441109 mN

Habitat Hilltop.

Soil Reddish brown clay loam.

Rock Type Ironstone; outcrop 1-25%, cobble 1-25%, pebble 50-75%, gravel 1-25%.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Hakea chordophylla* scattered tall shrubs over *Acacia hilliana*, Seringia *elliptica* low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*) hummock grassland and *Eriachne lanata* scattered tussock grasses.

Veg Condition Excellent.

Fire Age No sign of recent fire.

Species	Cover	Height (cm)	Specimen
Acacia atkinsiana	0.1	50	WA02-06
Acacia hilliana	3	50	
Acacia maitlandii	0.1	150	
Acacia pyrifolia var. *pyrifolia*	0.1	30	
Capparis lasiantha	0.1	50	
Corymbia hamersleyana	1	500	
Duperreya commixta	0.1	50	
Eremophila latrobei subsp. *latrobei*	0.1	100	
Eriachne lanata	0.5	20	WA02-04
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	3	600	
Eulalia aurea	0.1	30	
Gompholobium oreophilum	0.1	30	
Goodenia triodiophila	0.1	20	
Hakea chordophylla	1	500	
Paraneurachne muelleri	0.1	20	
Ptilotus calostachyus	0.1	10	
Ptilotus rotundifolius	0.1	60	
Santalum lanceolatum	0.1	150	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	20	WA02-03
Senna artemisioides subsp. *oligophylla*	0.1	50	WA02-02
Senna ferraria	0.1	230	WA02-07
Senna glutinosa subsp. *glutinosa*	0.1	120	
Senna glutinosa subsp. *glutinosa* x	0.1	80	WA02-08
Senna glutinosa subsp. *pruinosa*	0.1	120	
Seringia *elliptica*	3	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	10	WA02-01
Solanum lasiophyllum	0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	40	WA02-05
Triodia vanleeuwenii	40	30	
Triodia wiseana	3	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WA03

Described by	SCSS	Date	06-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 697308 mE	7441460 mN	
Habitat	Hillslope intersected with gullies/outcroppings.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Acacia monticola*, (*Hakea chordophylla*, *Petalostylis labicheoides*) tall shrubland over *A. hilliana* scattered low shrubs over *Triodia vanleeuwenii*, *T. wiseana*, (*T. pungens*) hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		
Notes	Fire patches through greater area, Pebble Mouse mound in *quadrat*. Greater slope area is littered with *minor* drainages and rocky outcrops.		

Species	Cover	Height (cm)	Specimen
Acacia hilliana	0.5	30	
Acacia maitlandii	1	200	
Acacia monticola	11	250(400)	
Acacia tenuissima	0.1	120	WA03-01
Corymbia hamersleyana	1	400	
Cymbopogon obtectus	0.1	30	
Dodonaea coriacea	0.1	40	
Eriachne lanata	0.5	20	WA02-04=
Eucalyptus leucophloia subsp. *leucophloia*	2	600	
Gompholobium oreophilum	0.1	50	
Goodenia triodiophila	0.1	5	
Hakea chordophylla	0.5	300	
Petalostylis labicheoides	1	210(350)	
Psydrax suaveolens	0.1	110	
Ptilotus obovatus var. *obovatus*	0.1	20	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	50	WA02-03=
Senna glutinosa subsp. *glutinosa*	0.1	100	
Senna glutinosa subsp. x *luerssenii*	0.1	80	
Solanum lasiophyllum	0.1	5	
Triodia pungens	5	40	
Triodia vanleeuwenii	25	20	
Triodia wiseana	15	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WA04
Described by SCSS Date 06-Apr-19
Type Quadrat 50m x 50m
Central Coordinate 50K 695998 mE 7441075 mN
Habitat Rocky hill top, low hills.
Soil Reddish brown clay loam.
Rock Type Ironstone.
Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Hakea chordophylla* scattered tall shrubs over *Acacia hilliana*, *Mirbelia viminalis*, Seringia *elliptica* scattered low shrubs over *Triodia vanleeuwenii*, (*T. wiseana*) open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 1-2 years ago.

Species	Cover	Height (cm)	Specimen
Acacia hilliana	0.5	20	
Acacia maitlandii	0.1	20	
Acacia monticola	0.1	60	
Amphipogon sericeus	0.1	20	
Codonocarpus cotinifolius	0.1	80	
Corchorus lasiocarpus subsp. *parvus*	0.1	30	WA04-03
Cymbopogon sp.	0.1	10	
Dampiera candicans	0.1	30	
Dodonaea coriacea	0.1	40	
Eremophila latrobei subsp. *latrobei*	0.1	40	
Eriachne lanata	0.1	30	WA02-04=
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	3	800	
Gompholobium oreophilum	0.1	20	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	20	
Hakea chordophylla	1	400	
Hibiscus sturtii var. *campylochlamys*	0.1	10	WA04-01
Hibiscus sturtii var. *campylochlamys*	0.1	15	WA04-05
Indigofera monophylla	0.1	20	
Mirbelia viminalis	0.5	30	
Ptilotus calostachyus	0.1	50	
Ptilotus rotundifolius	0.1	50	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	20	WA02-03=
Senna artemisioides subsp. *oligophylla*	0.1	40	WA04-02
Senna glutinosa subsp. *glutinosa*	0.1	100	
Senna glutinosa subsp. *pruinosa*	0.1	20	
Seringia *elliptica*	0.1	20	
Sida arenicola	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20	WA04-04
Solanum horridum	0.1	20	
Solanum lasiophyllum	0.1	20	
Tephrosia oxalidea	0.1	2	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	40	WA02-05=
Triodia pungens	0.1	10	
Triodia vanleeuwenii	15	5	
Triodia wiseana	2	8	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA05

Described by	SCSS	Date 06-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 694610 mE	7440707 mN
Habitat	Hilltop/slope of low basalt hill.	
Soil	Grey brown sandy clay loam.	
Rock Type	Basalt.	
Vegetation	*Acacia inaequilatera* tall open shrubland over *Gossypium australe*, *Sida echinocarpa* scattered low shrubs over *Triodia wiseana* hummock grassland with *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) scattered tussock grasses.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	30	
Acacia inaequilatera	3	350	
Acacia tenuissima	0.1	40	WA03-01=
Aristida contorta	0.1	5	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	30	WA05-01
Cymbopogon ambiguus	0.1	50	
Eriachne mucronata (typical form)	0.1	30	
Gossypium australe	0.1	40	
Hakea lorea subsp. *lorea*	0.1	120	
Indigofera rugosa	0.1	20	
Senna artemisioides subsp. *oligophylla*	0.1	30	WA04-02=
Senna glutinosa subsp. *glutinosa*	0.1	90	
Senna glutinosa subsp. *pruinosa*	0.1	50	
Sida echinocarpa	0.1	30	
Solanum horridum	0.1	10	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	1	50	
Trichodesma zeylanicum var. *zeylanicum*	0.1	20	
Triodia wiseana	31	10	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA06

Described by	PL/CI	Date 06-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 696944 mE	7441887 mN
Habitat	Low rise, in undulating valley.	
Soil	Dark reddish brown clay loam.	
Rock Type	Ironstone, some quartz.	
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia ancistrocarpa* scattered shrubs over *Triodia wiseana*, *T. vanleeuwenii* open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height (cm)	Specimen
Acacia ancistrocarpa	1	170	
Acacia bivenosa (wispy/weeping form)	0.1	70	
Acacia maitlandii	0.1	80	
Acacia tenuissima	0.1	50	
Amphipogon sericeus	0.1	25	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Corymbia hamersleyana	0.1	60	
Dampiera candicans	0.1	25	
Dodonaea coriacea	0.1	45	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	1	260	
Goodenia microptera	0.1	20	
Goodenia muelleriana	0.1	25	
Goodenia triodiophila	0.1	30	
Gossypium australe	0.1	40	
Hakea chordophylla	0.1	60	
Heliotropium sp.	0.1	10	WA06-01
Hibiscus coatesii	0.1	20	
Hibiscus sturtii var. *campylochlamys*	0.1	40	
Indigofera monophylla	0.1	40	
Paraneurachne muelleri	0.1	30	
Ptilotus astrolasius	0.1	30	
Ptilotus calostachyus	0.1	50	
Ptilotus exaltatus	0.1	40	
Ptilotus rotundifolius	0.1	70	
Senna artemisioides subsp. *oligophylla*	0.1	40	
Senna glutinosa subsp. *glutinosa*	0.1	140	
Senna glutinosa subsp. *pruinosa*	0.1	50	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30	
Solanum lasiophyllum	0.1	60	
Tephrosia sp. NW *Eremaean* (*S.* van Leeuwen et al. PBS 0356) PN	0.1	10	WA06-02
Themeda triandra	0.1	100	
Triodia vanleeuwenii	5	30	
Triodia wiseana	6	10	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA07
Described by	PL/CI	Date	06-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 696633 mE	7442201 mN	
Habitat	Sloping plain, north slope gentle, in valley.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, quartz; some *calcrete* in area.		
Vegetation	*Eucalyptus socialis* subsp. *eucentrica* low open mallee woodland over *Abutilon cunninghamii*, *Senna artemisioides* subsp. *oligophylla* scattered low shrubs over *Triodia wiseana*, (*T. angusta*) open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.5	60	
Acacia bivenosa (wispy/weeping form)	0.1	120	
Acacia synchronicia	0.1	120	
Acacia tetragonophylla	0.1	40	
Aristida contorta	0.1	15	
Aristida holathera var. *holathera*	0.1	50	
Capparis lasiantha	0.1	100	
Cassytha capillaris	0.1	20	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	40	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Cymbopogon obtectus	0.1	60	
Duperreya commixta	0.1	110	
Enneapogon caerulescens	0.1	20	
Eucalyptus socialis subsp. *eucentrica*	5	130	WA07-01
Eulalia aurea	0.1	50	
Goodenia microptera	0.1	25	
Gossypium robinsonii	0.1	50	
Hibiscus coatesii	0.1	70	
Hibiscus sturtii var. *campylochlamys*	0.1	40	
Paraneurachne muelleri	0.1	25	
Ptilotus astrolasius	0.1	40	
Ptilotus clementii	0.1	15	
Ptilotus exaltatus	0.1	45	
Ptilotus obovatus var. *obovatus*	0.1	40	
Senna artemisioides subsp. *oligophylla*	0.5	40	
Senna glutinosa subsp. *glutinosa*	0.1	60	
Senna glutinosa subsp. *glutinosa* x	0.1	50	
Sida echinocarpa	0.1	50	
Sida fibulifera	0.1	15	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	
Solanum horridum	0.1	25	
Solanum phlomoides	0.1	60	
Triodia angusta	3	25	
Triodia wiseana	8	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA08
Described by	PL/CI	Date	06-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 688963 mE	7440200 mN	
Habitat	Low rise.		
Soil	Dark reddish brown clay loam.		
Rock Type	Basalt; cobble 1-25%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Acacia inaequilatera* tall open shrubland over *Triodia wiseana* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia dictyophleba	0.1	50	
Acacia inaequilatera	2.5	400	
Acacia maitlandii	0.1	210	
Anthobolus leptomerioides	0.1	110	
Aristida contorta	0.1	20	
Aristida holathera var. *holathera*	0.1	40	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	40	WA08-02
Corchorus lasiocarpus subsp. *parvus*	0.1	50	
Cymbopogon ambiguus	0.1	70	
Cymbopogon obtectus	0.1	45	
Eremophila fraseri subsp. *fraseri*	0.1	50	
Evolvulus alsinoides var. *villosicalyx*	0.1	25	
Fimbristylis dichotoma	0.1	30	WA08-01
Goodenia microptera	0.1	25	
Goodenia muelleriana	0.1	25	
Hakea chordophylla	0.1	60	
Heliotropium sp.	0.1	15	WA08-04
Hibiscus coatesii	0.1	70	
Indigofera rugosa	0.1	40	
Paraneurachne muelleri	0.1	25	
Ptilotus rotundifolius	0.1	80	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Senna glutinosa subsp. *pruinosa*	0.1	25	
Senna glutinosa subsp. x *luerssenii*	0.1	15	
Sida echinocarpa	0.1	50	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	20	
Streptoglossa decurrens	0.1	60	
Swainsona maccullochiana	0.1	100	
Themeda triandra	0.1	90	
Tricoryne sp. Hamersley Range (*S.* van Leeuwen 915)	0.1	40	WA08-03
Triodia wiseana	11	40	
Tripogonella *loliiformis*	0.5	25	

No photo taken

West Angelas Beyond 2020 Beyond 2020 Phase 2		Site WA09
Described by	BRMTB	Date 11-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 695037 mE	7442518 mN
Habitat	Plain/gentle foot slopes between high ranges.	
Soil	Pink to grey white sandy (light) clay loam.	
Rock Type	Calcrete with quartz, ironstone; outcrop 1-25%, cobble 1-25%, pebbles 26-50%, gravel 1-25%.	
Vegetation	*Eucalyptus repullulans* scattered low trees over *Melaleuca eleuterostachya* low shrubland over *Triodia wiseana* open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	No sign of recent fire.	

Species	Cover	Height (cm)	Specimen
Acacia bivenosa (wispy/weeping form)	0.1	190	
Eucalyptus repullulans	1.5	260	WA09-01
Melaleuca eleuterostachya	15	100	WA09-02
Senna artemisioides subsp. *oligophylla*	0.1	100	WA09-03
Triodia wiseana	20	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA10
Described by	PL/CI	Date	06-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 689336 mE	7441868 mN	
Habitat	Upper slope of *major* hill, north of smaller hills.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone.		

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *E. kingsmillii* low open mallee woodland over *Acacia maitlandii*, *Petalostylis labicheoides*, *A. hamersleyensis* open shrubland over *Mirbelia viminalis*, (*Halgania gustafsenii* var. Mid West (G. Perry 370)) low open shrubland over *Triodia vanleeuwenii*, (*T. wiseana*) open hummock grassland and *Themeda* sp. Mt Barricade (M.E. Trudgen 2471), *Eriachne lanata* scattered tussock grasses.

Veg Condition Excellent.

Fire Age Burnt 1-2 years ago.

Species	Cover	Height (cm)	Specimen
Acacia hamersleyensis	0.5	110	
Acacia maitlandii	1.5	190	
Acacia pruinocarpa	0.1	80	
Acacia pyrifolia var. *pyrifolia*	0.1	100	
Acacia tenuissima	0.1	50	
Amphipogon sericeus	0.1	30	
Androcalva luteiflora	0.1	90	
Cassytha capillaris	0.1	30	
Codonocarpus cotinifolius	0.1	110	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Corymbia hamersleyana	1	100	
Cymbopogon obtectus	0.1	60	
Diplatia grandibractea	0.1	50	
Dodonaea lanceolata var. *lanceolata*	0.1	50	WA10-02
Eremophila latrobei subsp. *latrobei*	0.1	60	
Eriachne lanata	0.5	30	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus kingsmillii	2	160	
Eucalyptus leucophloia subsp. *leucophloia*	4	900	
Goodenia stobbsiana	0.1	40	
Hakea chordophylla	0.1	400	
Halgania gustafsenii var. Mid West (G. Perry 370)	1	40	WA10-01
Hibiscus coatesii	0.1	20	
Hibiscus sturtii var. *campylochlamys*	0.1	30	
Jasminum didymum subsp. *lineare*	0.1	60	
Mirbelia viminalis	2	40	
Peripleura obovata	0.1	30	WA10-03
Petalostylis labicheoides	1	170	
Ptilotus calostachyus	0.1	90	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	
Senna ferraria	0.1	70	
Senna glutinosa subsp. *glutinosa*	0.1	100	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	40	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	70	
Solanum phlomoides	0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	1	50	WA10-04
Triodia pungens	1	30	
Triodia vanleeuwenii	20	30	
Triodia wiseana	4	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA11
Described by	BRMTB	Date	07-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 687113 mE	7442085 mN	
Habitat	Hill crest/ridge.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone; outcrop 1-25%, boulder 1-25%, cobble 1-25%, pebble 26-50%, gravel 26-50%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii*, (*Petalostylis labicheoides*) tall open shrubland over *Triodia wiseana* hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia maitlandii	4	250	
Acacia pruinocarpa	0.1	220	
Acacia pyrifolia var. *pyrifolia*	0.1	350	
Acacia rhodophloia	0.1	45	WA11-10
Acacia tenuissima	0.1	160	WA11-03
Capparis lasiantha	0.1	110	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	WA11-04
Eremophila latrobei subsp. *filiformis*	0.1	60	WA11-06
Eremophila phyllopoda subsp. *obliqua*	0.1	50	WA11-08
Eriachne lanata	0.1	20	WA11-01B
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus gamophylla	0.1	300	
Eucalyptus leucophloia subsp. *leucophloia*	1.5	600	
Goodenia stobbsiana	0.1	40	
Hakea chordophylla	0.1	450	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1	15	WA11-02
Jasminum didymum subsp. *lineare*	0.1	40	
Paraneurachne muelleri	0.1	20	
Petalostylis labicheoides	0.5	380	
Ptilotus rotundifolius	0.1	70	
Senna glutinosa subsp. *glutinosa*	0.1	30	
Seringia *elliptica*	0.1	40	WA11-05
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	WA11-07
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	10	WA11-09
Solanum lasiophyllum	0.1	30	
Triodia pungens	0.1	40	
Triodia wiseana	35	60	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA12

Described by	BRMTB	Date	07-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 687279 mE	7442673 mN	
Habitat	Rocky lower slope between moderate-high ranges.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone; outcropping 1-25%, large boulder 1-25%, boulder 1-25%, cobble 26-50%, pebbles 26-50%, gravel 1-25%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia brizoides*, (*T. pungens*, *T. wiseana*) open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	70	WA12-02
Acacia bivenosa	0.1	30	
Acacia maitlandii	0.1	12	
Acacia pachyacra	0.1	70	WA12-12
Acacia pruinocarpa	0.1	100	
Capparis mitchellii	0.1	150	WA12-07
Capparis spinosa subsp. *nummularia*	0.1	170	
Cleome viscosa	0.1	10	
Cymbopogon ambiguus	0.1	20	
Eriachne lanata	0.1	30	WA11-01B=
Eriachne mucronata (typical form)	0.1	15	
Eucalyptus leucophloia subsp. *leucophloia*	1	900	
Heliotropium sp.	0.1	10	WA12-14
Hibiscus coatesii	0.1	50	
Hibiscus sturtii var. *campylochlamys*	0.1	15	
Jasminum didymum subsp. *lineare*	0.1	70	
Paraneurachne muelleri	0.1	20	
Pterocaulon sphacelatum	0.1	30	WA12-04
Ptilotus calostachyus	0.1	90	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	30	
Salsola australis	0.1	35	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	20	
Senna ferraria	0.1	7	WA12-05
Senna ferraria x	0.1	45	
Senna glutinosa subsp. *glutinosa*	0.1	120	
Senna glutinosa subsp. *pruinosa*	0.1	20	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	25	WA12-13
Solanum lasiophyllum	0.1	45	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	50	WA12-03
Trichodesma zeylanicum var. *zeylanicum*	0.1	20	
Triodia brizoides	20	15	WA12-01
Triodia brizoides	0.1	20	WA12-09
Triodia pungens	2	30	WA12-08
Triodia wiseana	0.5	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA13
Described by	BRMTB	Date	08-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 687931 mE	7441921 mN	

Habitat Plain/lower alluvial spur surrounded by breakaways and high ranges; cut through with creeks to north leading to *major* gorge.

Soil Reddish brown clay loam and grey brown sandy clay loam.

Rock Type Ironstone, basalt, chert; outcropping 1-25%, cobbles 1-25%, pebbles 1-25%, gravel 26-50%.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia tenuissima*, (*A. dictyophleba*, *A. maitlandii*) tall open shrubland over *Triodia wiseana* hummock grassland.

Veg Condition Excellent.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	0.1	130	WA13-02
Acacia dictyophleba	1.5	220	
Acacia maitlandii	0.5	220	
Acacia pruinocarpa	0.1	40	
Acacia tenuissima	3.5	200	WA13-01
Cymbopogon ambiguus	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	1	480	
Gossypium robinsonii	0.1	230	
Hakea chordophylla	0.1	330	
Indigofera monophylla	0.1	30	
Jasminum didymum subsp. *lineare*	0.1	90	
Senna artemisioides subsp. *oligophylla*	0.1	40	WA13-03
Senna glutinosa subsp. *glutinosa*	0.1	180	
Senna glutinosa subsp. *pruinosa*	0.1	70	
Themeda triandra	0.1	50	
Triodia wiseana	55	35	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA14
Described by	SCSS	Date	07-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 689399 mE	7441234 mN	
Habitat	Hilltop, rounded.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Hakea chordophylla* scattered shrubs over *Mirbelia viminalis* scattered low shrubs over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	110	
Acacia dictyophleba	0.1	10	
Acacia maitlandii	0.1	10	
Acacia pyrifolia var. *pyrifolia*	0.1	110	
Amphipogon sericeus	0.1	10	
Corchorus lasiocarpus subsp. *parvus*	0.1	30	WA04-03=
Corymbia hamersleyana	1	300	
Cymbopogon ? obtectus	0.1	30	
Dampiera candicans	0.1	20	
Dodonaea lanceolata var. *lanceolata*	0.1	30	WA14-02
Eriachne mucronata	0.1	20	
Eucalyptus leucophloia subsp. *leucophloia*	3	600	
Gompholobium oreophilum	0.1	20	
Goodenia stobbsiana	0.1	30	
Goodenia triodiophila	0.1	15	WA14-03
Hakea chordophylla	0.1	120	
Hibiscus sturtii var. *campylochlamys*	0.1	15	WA04-01=
Mirbelia viminalis	1	30	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	30	WA02-03=
Senna ferraria	0.1	30	WA14-01
Senna glutinosa subsp. *glutinosa*	0.1	100	
Seringia *elliptica*	0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	15	WA04-04=
Solanum lasiophyllum	0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	30	
Triodia vanleeuwenii	10	5	
Triodia wiseana	5	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA15

Described by	SCSS	Date 07-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 690215 mE	7441268 mN
Habitat	hill upper slope/semi-top.	
Soil	Reddish brown clay loam.	
Rock Type	Ironstone.	
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Hakea chordophylla* scattered tall shrubs over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height (cm)	Specimen
Acacia maitlandii	0.1	20	
Acacia pruinocarpa	0.1	60	
Acacia pyrifolia var. *pyrifolia*	0.1	150	
Acacia tenuissima	0.1	10	WA03-01=
Amphipogon sericeus	0.1	20	
Cassytha capillaris	0.1	10	
Corchorus lasiocarpus subsp. *parvus*	0.1	15	WA04-03=
Corchorus lasiocarpus subsp. *parvus*	0.1	30	
Corymbia hamersleyana	1	300	
Cymbopogon ambiguus	0.1	50	
Dampiera candicans	0.1	20	
Dodonaea lanceolata var. *lanceolata*	0.1	40	WA14-02=
Eriachne lanata	0.1	20	WA02-04=
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	2	700	
Gompholobium oreophilum	0.1	30	
Goodenia stobbsiana	0.1	10	
Grevillea wickhamii	0.1	60	
Hakea chordophylla	0.5	300	
Hibiscus coatesii	0.1	10	
Hibiscus sturtii var. *campylochlamys*	0.1	10	WA04-01=
Paraneurachne muelleri	0.1	20	
Petalostylis labicheoides	0.1	150	
Ptilotus calostachyus	0.1	40	
Ptilotus exaltatus	0.1	15	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	30	WA02-03=
Senna ferraria	0.1	30	WA14-01=
Senna ferraria	0.1	150	
Senna glutinosa subsp. *pruinosa*	0.1	50	
Seringia *elliptica*	0.5	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20	WA04-04=
Solanum lasiophyllum	0.1	30	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	30	WA02-05=
Triodia pungens	0.1	10	
Triodia vanleeuwenii	10	10	
Triodia wiseana	10	15	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA16
Described by	PL/CI	Date	07-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 694395 mE	7442895 mN	
Habitat	Calcrete plain, just north of low *calcrete* rise.		
Soil	Reddish brown clay loam to light clay.		
Rock Type	Calcrete, mudstone, ironstone.		
Vegetation	*Eucalyptus socialis* subsp. *eucentrica*, *E. repullulans* low open mallee woodland over *Melaleuca eleuterostachya* open shrubland over *Triodia angusta*, (*T. wiseana*) open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire / Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa (wispy/weeping form)	0.1	180	
Acacia dictyophleba	0.1	25	
Acacia pachyacra	0.1	90	WA16-04
Enneapogon polyphyllus	0.1	25	
Eucalyptus repullulans	1	250	WA16-02
Eucalyptus socialis subsp. *eucentrica*	2	300	WA16-01
Goodenia microptera	0.1	25	
Gossypium australe	0.1	30	
Hibiscus coatesii	0.1	40	
Melaleuca eleuterostachya	3	120	
Paraneurachne muelleri	0.1	30	
Pterocaulon serrulatum var. *velutinum*	0.1	25	
Ptilotus clementii	0.1	30	
Ptilotus exaltatus	0.1	20	
Salsola australis	0.1	25	
Senna artemisioides subsp. *oligophylla*	0.1	25	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	50	
Solanum phlomoides	0.1	40	
Streptoglossa bubakii	0.1	30	WA16-03
Triodia angusta	10	60	
Triodia wiseana	2	50	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA17

Described by	PL/CI	Date	08-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 689339 mE	7440117 mN	
Habitat	Floodplain in valley.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone; pebble 1-25%, gravel 26-50%.		
Vegetation	*Eucalyptus xerothermica* low open mallee woodland over *Acacia aptaneura*, *A. bivenosa* (wispy weeping form) tall open shrubland over *A. sibirica* (linear form) open shrubland over *Triodia wiseana* open hummock grassland and *Themeda triandra* scattered tussock grasses.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	30	WA17-05
Acacia aptaneura	2	400	
Acacia bivenosa (wispy/weeping form)	2	300	
Acacia dictyophleba	0.1	240	
Acacia maitlandii	0.1	170	
Acacia pruinocarpa	0.5	400	
Acacia pyrifolia var. *pyrifolia*	0.1	40	
Acacia sibirica	0.1	220	WA17-04
Acacia sibirica (linear form)	1	90	WA17-03
Acacia synchronicia	0.1	190	
Acacia tetragonophylla	0.1	260	
Androcalva luteiflora	0.1	140	
Anthobolus leptomerioides	0.1	90	
Aristida contorta	0.1	25	
Aristida holathera var. *holathera*	0.1	40	
Aristida sp.	0.1	45	
Capparis lasiantha	0.1	50	
Cymbopogon ambiguus	0.1	60	
Digitaria brownii	0.1	50	
Duperreya commixta	0.1	500	
Enchylaena tomentosa var. *tomentosa*	0.1	35	WA17-06
Enneapogon lindleyanus	0.1	40	
Eragrostis eriopoda	0.1	40	
Eremophila cuneifolia	0.1	60	WA17-02
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus xerothermica	3	800	
Euphorbia sp. (*boophthona/tannensis*)	0.1	60	
Evolvulus alsinoides var. *villosicalyx*	0.1	30	
Hakea lorea subsp. *lorea*	0.1	300	
Hibiscus burtonii	0.1	60	
Hibiscus coatesii	0.1	60	
Jasminum didymum subsp. *lineare*	0.1	220	
Olearia stuartii	0.1	60	
Paraneurachne muelleri	0.1	40	
Peripleura obovata	0.1	25	WA17-01
Psydrax latifolia	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	70	
Scaevola spinescens	0.1	50	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	190	
Senna glutinosa subsp. *pruinosa*	0.1	140	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	70	
Solanum horridum	0.1	40	
Solanum lasiophyllum	0.1	90	
Themeda triandra	0.5	60	
Triodia wiseana	20	60	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA18

Described by BRMTB — Date 08-Apr-19

Type Quadrat — 50 x 50 m

Central Coordinate 50K 687863 mE — 7441522 mN

Habitat Ridge; gentle upper crest/slope to north toward breakaway; *major* range, rocky.

Soil Dark reddish brown sandy clay loam.

Rock Type Ironstone; outcrop 1-25%, boulder 1-25%, cobble 1-25%, pebble 26-50%, gravel 1-25%.

Vegetation *Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low open woodland over *Acacia hamersleyensis* scattered tall shrubs over *Triodia wiseana* hummock grassland.

Veg Condition Excellent.

Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	0.1	330	WA18-08
Acacia bivenosa	0.1	150	
Acacia hamersleyensis	0.3	500	
Acacia maitlandii	0.1	300	
Acacia pruinocarpa	0.1	240	
Acacia pyrifolia var. *pyrifolia*	0.1	300	
Acacia sibirica	0.1	110	WA18-03
Acacia tenuissima	0.1	70	WA11-03=
Amyema miquelii	0.1	150	WA18-02
Cassytha capillaris	0.1	10	
Clerodendrum floribundum var. *angustifolium*	0.1	30	
Corymbia hamersleyana	0.5	350	
Cymbopogon ambiguus	0.1	15	
Dodonaea lanceolata var. *lanceolata*	0.1	130	
Duperreya commixta	0.1	60	
Eremophila latrobei subsp. *filiformis*	0.1	170	
Eriachne lanata	0.5	30	WA18-01B
Eriachne mucronata (typical form)	0.1	45	
Eucalyptus gamophylla	0.1	230	
Eucalyptus kingsmillii	0.1	230	WA18-07
Eucalyptus leucophloia subsp. *leucophloia*	5	500	
Goodenia triodiophila	0.1	15	
Hakea chordophylla	0.1	310	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1	20	WA11-02=
Jasminum didymum subsp. *lineare*	0.1	180	
Petalostylis labicheoides	0.1	300	
Psydrax latifolia	0.1	190	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	30	
Senna ferraria	0.1	15	
Senna glutinosa subsp. *glutinosa*	0.1	210	
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1	45	WA18-04
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	25	WA18-05
Solanum lasiophyllum	0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	50	WA18-07
Triodia pungens	0.1	35	
Triodia wiseana	35	50	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA19
Described by	SCSS	Date	08-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 692411 mE	7441648 mN	
Habitat	Low lying valley in hill top range, E-W.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone; cobble 1-25%, pebble 50-75%, gravel 1-25%.		
Vegetation	*Eucalyptus trivalva* low mallee woodland over *Triodia wiseana*, *T. longiceps* hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa (wispy/weeping form)	0.1	300	
Acacia pruinocarpa	0.1	190	
Acacia synchronicia	0.1	30	
Capparis lasiantha	0.1	60	
Cymbopogon ambiguus	0.1	60	
Dodonaea lanceolata var. *lanceolata*	0.1	110	WA19-03
Duperreya commixta	0.1	30	
Eremophila latrobei subsp. *latrobei*	0.1	110	
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus trivalva	25	300	WA19-01
Jasminum didymum subsp. *lineare*	0.1	30	
Maireana georgei	0.1	30	
Paraneurachne muelleri	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	50	
Senna artemisioides subsp. *oligophylla*	0.1	120	WA19-02
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20	
Themeda triandra	0.1	60	WAREL08=
Triodia longiceps	15	60	
Triodia pungens	0.1	50	
Triodia wiseana	25	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA20

Described by	PL/CI	Date	09-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 687321 mE	7432035 mN	
Habitat	Footslopes, valley, ranges to the south.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus gamophylla* low open mallee woodland over *Acacia cowleana* scattered tall shrubs over *A. bivenosa* scattered shrubs over *Senna artemisioides* subsp. *helmsii* scattered low shrubs over *Triodia pungens*, *T. vanleeuwenii* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	140	
Acacia aptaneura	0.1	210	
Acacia ayersiana	0.1	210	
Acacia bivenosa	1	170	
Acacia cowleana	1	240	
Acacia kempeana	0.1	100	WA20-01
Acacia tenuissima	0.1	240	
Aristida contorta	0.1	25	
Aristida holathera var. *holathera*	0.1	40	
Cleome viscosa	0.1	40	
Cymbopogon sp.	0.1	20	
Digitaria brownii	0.1	40	
Duperreya commixta	0.1	250	
Eucalyptus gamophylla	6	500	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	300	
Hakea chordophylla	0.1	40	
Indigofera monophylla	0.1	50	
Jasminum didymum subsp. *lineare*	0.1	110	
Paraneurachne muelleri	0.1	40	
Ptilotus calostachyus	0.1	80	
Ptilotus exaltatus	0.1	40	
Ptilotus exaltatus	0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	50	
Ptilotus rotundifolius	0.1	50	
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. *helmsii*	1	75	
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)	0.1	50	WA20-02
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	70	
Senna artemisioides subsp. x *artemisioides*	0.1	140	WA20-03
Senna ferraria	0.1	160	
Senna glutinosa subsp. *pruinosa*	0.1	90	
Senna glutinosa subsp. x *luerssenii*	0.1	160	
Senna sp. Meekatharra (*E.* Bailey 1-26)	0.1	80	
Senna stricta	0.1	80	
Seringia *elliptica*	0.1	40	
Solanum lasiophyllum	0.1	70	
Triodia pungens	7	60	
Triodia vanleeuwenii	4	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA21
Described by	PL/CI	Date	10-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693142 mE	7442686 mN	
Habitat	plain, gently sloping east.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, quartz, mudstone, *calcrete*; pebbles 26-50%, gravel 1-25%.		
Vegetation	*Eucalyptus repullulans*, *E. socialis* subsp. *eucentrica* low open mallee woodland over *Triodia wiseana*, *T. angusta* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		
Notes	Mixed fire age: 50% burnt 1-2 years ago, 50% burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.1	50	
Acacia bivenosa (wispy/weeping form)	0.1	60	
Acacia synchronicia	0.1	50	
Amphipogon sericeus	0.1	25	
Aristida contorta	0.1	20	
Enneapogon caerulescens	0.1	30	
Enneapogon lindleyanus	0.1	40	
Eucalyptus repullulans	3	160	WA21-04
Eucalyptus socialis subsp. *eucentrica*	2	150	
Goodenia microptera	0.1	25	
Heliotropium sp.	0.1	20	WA21-03
Hibiscus coatesii	0.1	10	WA21-01
Jasminum didymum subsp. *lineare*	0.1	80	
Paraneurachne muelleri	0.1	40	
Paspalidium clementii	0.1	30	
Ptilotus astrolasius	0.1	40	
Ptilotus calostachyus	0.1	60	
Ptilotus exaltatus	0.1	20	
Ptilotus rotundifolius	0.1	40	
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna glaucifolia	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	40	
Senna glutinosa subsp. *glutinosa* x	0.1	50	WA21-02
Senna glutinosa subsp. *pruinosa*	0.1	25	
Sida echinocarpa	0.1	40	
Sida fibulifera	0.1	20	
Solanum horridum	0.1	30	
Solanum lasiophyllum	0.1	40	
Solanum phlomoides	0.1	50	
Triodia angusta	5	30	
Triodia wiseana	6	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA22
Described by	PL/CI	Date	10-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693956 mE	7442551 mN	
Habitat	gentle slope, footslope range to south.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, quartz, *calcrete*.		
Vegetation	*Eucalyptus socialis* subsp. *eucentrica* scattered low mallees over *Melaleuca eleuterostachya* low open shrubland over *Triodia angusta*, *T. wiseana* very open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.1	50	
Acacia bivenosa (wispy/weeping form)	0.1	140	
Acacia kempeana	0.1	50	
Aristida contorta	0.1	20	
Aristida holathera var. *holathera*	0.1	25	
Enneapogon caerulescens	0.1	20	
Enneapogon lindleyanus	0.1	30	
Eremophila sp.	0.1	25	WA22-01
Eucalyptus socialis subsp. *eucentrica*	1.5	150	
Goodenia muelleriana	0.1	25	
Heliotropium cunninghamii	0.1	20	WA22-02
Hibiscus coatesii	0.1	20	WA21-01=
Hibiscus sturtii var. *campylochlamys*	0.1	50	
Melaleuca eleuterostachya	3	90	
Paraneurachne muelleri	0.1	40	
Pterocaulon sp.	0.1	50	
Ptilotus astrolasius	0.1	40	
Ptilotus calostachyus	0.1	50	
Ptilotus clementii	0.1	40	
Ptilotus exaltatus	0.1	50	
Senna artemisioides subsp. *oligophylla*	0.1	40	
Senna notabilis	0.1	45	
Solanum phlomoides	0.1	40	
Trichodesma zeylanicum var. *zeylanicum*	0.1	70	
Triodia angusta	3	20	
Triodia wiseana	5	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA23

Described by	PL/CI	Date	10-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693733 mE	7443411 mN	
Habitat	Slope; hill slope below range.		
Soil	Dark reddish brown *silty* clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia brizoides*, (*T. wiseana*) open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	50	
Acacia catenulata subsp. *occidentalis*	0.1	100	
Acacia pruinocarpa	0.1	25	
Amphipogon sericeus	0.1	5	
Aristida contorta	0.1	25	
Aristida holathera var. *holathera*	0.1	40	
Capparis lasiantha	0.1	70	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Cymbopogon ambiguus	0.1	40	
Duperreya commixta	0.1	160	
Enneapogon lindleyanus	0.1	30	
Enneapogon robustissimus	0.1	60	
Eragrostis sp.	0.1	25	WA23-01
Eucalyptus leucophloia subsp. *leucophloia*	6	900	
Goodenia muelleriana	0.1	40	
Hakea chordophylla	0.1	30	
Hibiscus coatesii	0.1	80	
Hibiscus sturtii var. *campylochlamys*	0.1	45	
Jasminum didymum subsp. *lineare*	0.1	110	
Maireana georgei	0.1	40	
Maytenus sp. Mt Windell (*S.* van Leeuwen 846)	0.1	80	
Paraneurachne muelleri	0.1	40	
Peripleura virgata	0.1	25	
Ptilotus astrolasius	0.1	40	
Ptilotus calostachyus	0.1	60	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	50	
Ptilotus rotundifolius	0.1	70	
Senna artemisioides subsp. *oligophylla*	0.1	40	
Senna glutinosa subsp. *glutinosa*	0.1	160	
Senna glutinosa subsp. x *luerssenii*	0.1	60	
Sida echinocarpa	0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	80	
Solanum horridum	0.1	20	
Themeda triandra	0.1	80	
Triodia brizoides	12	40	
Triodia pungens	0.1	40	
Triodia wiseana	3	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA24

Described by	PL/CI	Date	10-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693087 mE	7442030 mN	
Habitat	Hill crest; E-W range.		
Soil	Dark reddish brown *silty* clay loam.		
Rock Type	Ironstone; outcropping 1-25%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. gamophylla* low open mallee woodland over *Acacia maitlandii*, *Halgania gustafsenii* var. Mid West (G. Perry 370), Seringia *elliptica* low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) very open hummock		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia maitlandii	1	100	
Acacia pyrifolia var. *pyrifolia*	0.1	60	
Acacia tenuissima	0.1	25	
Amphipogon sericeus	0.1	25	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	
Corymbia hamersleyana	0.1	250	
Dampiera candicans	0.1	50	
Eriachne mucronata (arid form) (MET 12 736)	0.1	40	
Eucalyptus gamophylla	2	200	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	400	
Gompholobium oreophilum	0.1	40	
Goodenia stobbsiana	0.1	40	
Goodenia triodiophila	0.1	40	
Hakea chordophylla	0.1	300	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.5	40	
Hibiscus sturtii var. *campylochlamys*	0.1	30	
Indigofera monophylla	0.1	40	
Marsdenia australis	0.1	90	
Mirbelia viminalis	0.1	40	
Pterocaulon sphacelatum	0.1	60	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	60	
Senna ferraria	0.1	140	
Senna glutinosa subsp. *glutinosa*	0.1	140	
Senna glutinosa subsp. *pruinosa*	0.1	140	
Seringia *elliptica*	1	50	
Sida arenicola	0.1	40	
Sida echinocarpa	0.1	40	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30	WA24-01
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	40	
Triodia pungens	0.5	40	
Triodia vanleeuwenii	8	25	WA24-02



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA25
Described by	BRMTB	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693158 mE	7439954 mN	
Habitat	Lower slope of low basalt range/outcrop.		
Soil	Dark reddish brown clay loam.		
Rock Type	Basalt; boulder 1-25%, cobble 26-50%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Acacia inaequilatera* scattered tall shrubs over *Triodia wiseana* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa (wispy/weeping form)	0.1	50	
Acacia dictyophleba	0.1	40	
Acacia inaequilatera	1.5	300	
Acacia pruinocarpa	0.1	70	
Acacia tenuissima	0.1	15	WA25-12
Aristida contorta	0.1	15	
Corchorus lasiocarpus subsp. *parvus*	0.1	20	WA25-03
Cymbopogon ambiguus	0.1	15	WA25-06
Enneapogon caerulescens	0.1	25	WA25-08
Euphorbia careyi	0.1	15	WA25-11
Goodenia muelleriana	0.1	20	WA25-05
Heliotropium chrysocarpum	0.1	7	WA25-10
Heliotropium sp.	0.1	5	WA25-02
Hibiscus coatesii	0.1	63	
Hibiscus sturtii var. *campylochlamys*	0.1	20	
Paraneurachne muelleri	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	35	
Ptilotus rotundifolius	0.1	40	
Ptilotus sp.	0.1	10	
Senna artemisioides subsp. *oligophylla*	0.1	10	
Senna artemisioides subsp. *oligophylla*	0.1	25	WA25-09
Senna glutinosa subsp. *glutinosa*	0.1	30	
Sida echinocarpa	0.1	20	WA25-13
Solanum sp.	0.1	20	WA25-07
Swainsona maccullochiana	0.1	40	WA25-04
Themeda triandra	0.1	20	
Trichodesma zeylanicum var. *zeylanicum*	0.1	25	
Tricoryne sp. Hamersley Range (*S.* van Leeuwen 915)	0.1	25	WA25-01
Triodia wiseana	15	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA26
Described by	BRMTB	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693158 mE	7439954 mN	
Habitat	Lower slope of low basalt range/outcrop.		
Soil	Dark reddish brown clay loam.		
Rock Type	Basalt; boulder 1-25%, cobble 26-50%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Acacia inaequilatera* scattered tall shrubs over *Triodia wiseana* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	20	
Acacia aptaneura	8	700	WA26-06
Acacia bivenosa	0.1	40	
Acacia kempeana	0.1	700	WA26-17
Acacia tetragonophylla	0.1	120	
Anthobolus leptomerioides	0.1	60	WA26-14
Aristida contorta	0.1	10	
Aristida sp.	0.1	60	WA26-13
Bidens bipinnata	0.1	20	WA26-02
Boerhavia coccinea	0.1	10	WA26-10
Bothriochloa ewartiana	5	50	WA26-09
Capparis lasiantha	0.1	120	
Cenchrus ciliaris	0.1	10	
Chrysopogon fallax	0.1	70	WA26-08
Cleome viscosa	0.1	10	
Corchorus tridens	0.1	5	
Cucumis variabilis	0.1	20	
Cymbopogon ambiguus	0.1	60	
Dipteracanthus australasicus subsp. *australasicus*	2	10	
Duperreya commixta	0.1	30	
Dysphania sp.	0.1	2	
Enneapogon lindleyanus	0.1	15	WA26-03
Enneapogon robustissimus	0.1	60	
Eremophila forrestii subsp. *forrestii*	0.1	110	
Eremophila longifolia	1	150(400)	
Eucalyptus xerothermica	6	500	
Eulalia aurea	0.1	60	
Euphorbia biconvexa	0.1	10	WA26-11
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Hakea lorea subsp. *lorea*	0.1	50	
Heliotropium cunninghamii	0.1	10	WA26-18
Hibiscus sturtii var. *platychlamys*	0.1	30	WA26-16
Jasminum didymum subsp. *lineare*	0.1	50	
Maireana planifolia	0.1	40	WA26-12
Malvastrum americanum	0.1	30	
Panicum effusum	0.1	30	WA26-04
Paraneurachne muelleri	2	30	
Paspalidium constrictum	0.1	15	WA26-15
Pterocaulon sphacelatum	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	80	
Rhagodia eremaea	0.1	60	
Salsola australis	0.1	30	
Santalum lanceolatum	1	250	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	80	
Senna artemisioides subsp. x *artemisioides*	2	200	WA26-05
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	10	WA26-01
Solanum lasiophyllum	0.1	60	
Solanum sp.	0.1	15	
Themeda triandra	15	70	
Triodia longiceps	0.1	70	
Triodia pungens	0.1	40	
Triodia wiseana	2	50	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site WA27
Described by	SCSS	Date 11-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 690938 mE	7441102 mN
Habitat	Drainage between low hills.	
Soil	Reddish brown clay loam.	
Rock Type	Ironstone; cobble 1-25, pebble 26-50, gravel 1-25.	
Vegetation	*Eucalyptus trivalva*, (*E. repullulans*) low open mallee forest to low mallee woodland over *Triodia wiseana*, *T. longiceps*, (*T. pungens*) hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.1	30	WA27-06
Acacia aptaneura	0.1	250	WA27-03
Acacia bivenosa	0.1	200	
Acacia synchronicia	0.1	100	
Acacia tenuissima	0.1	80	
Aristida contorta	0.1	10	
Capparis lasiantha	0.1	50	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	40	WA27-05
Cymbopogon sp.	0.1	10	
Duperreya commixta	0.1	150	
Eucalyptus repullulans	5	400	WA27-02
Eucalyptus trivalva	26	400	WA27-01
Hibiscus sturtii var. *campylochlamys*	0.1	20	WA27-04
Jasminum didymum subsp. *lineare*	0.1	250	
Lepidium pedicellosum	0.1	20	
Paraneurachne muelleri	0.1	30	
Peripleura obovata	0.1	15	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	70	
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	50	
Senna glutinosa subsp. x *luerssenii*	0.1	50	
Solanum lasiophyllum	0.1	30	
Triodia longiceps	10	110	
Triodia pungens	5	30	
Triodia wiseana	20	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA28

Described by	SCSS	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 691976 mE	7442213 mN	
Habitat	Hilltop.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone; outcrop 1-25%, cobble 1-25%, pebble 26-50%, gravel 26-50%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *E. gamophylla* scattered low mallees over *Triodia vanleeuwenii*, *T. pungens* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	0.1	40	WA28-01
Acacia maitlandii	0.1	5	
Acacia pruinocarpa	0.1	80	
Acacia pyrifolia var. *pyrifolia*	0.1	40	
Acacia sibirica	0.1	30	WA28-03
Capparis lasiantha	0.1	50	
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	20	WA27-05=
Cymbopogon ambiguus	0.1	40	
Eremophila latrobei subsp. *latrobei*	0.1	50	
Eucalyptus gamophylla	1	150	
Eucalyptus leucophloia subsp. *leucophloia*	3	600	
Gompholobium oreophilum	0.1	20	
Goodenia stobbsiana	0.1	20	
Hakea chordophylla	0.1	100	
Hibiscus coatesii	0.1	70	
Hibiscus sturtii var. *campylochlamys*	0.1	30	
Paraneurachne muelleri	0.1	30	
Petalostylis labicheoides	0.1	80	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	20	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Senna glaucifolia	0.1	50	WA28-05
Senna glaucifolia	0.1	70	
Senna glaucifolia x *S. glutinosa* subsp. *glutinosa*	0.1	20	WA28-02
Senna glutinosa subsp. *glutinosa*	0.1	50	
Senna glutinosa subsp. *pruinosa*	0.1	40	
Seringia *elliptica*	0.1	30	
Sida arenicola	0.1	10	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	10	
Themeda triandra	0.1	50	WA28-04
Triodia pungens	0.1	15	
Triodia vanleeuwenii	0.1	5	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA29
Described by	PL/CI	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 689690 mE	7443204 mN	
Habitat	Plain, broad valley between ranges.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, quartz; pebbles 1-25%, gravel 1-25%; mostly bare.		
Vegetation	*Eucalyptus xerothermica* low open woodland over *Acacia aptaneura*, (*A. pruinocarpa*) tall scrub over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Androcalva luteiflora* scattered low shrubs over *Triodia wiseana*, (*T. pungens*) very open hummock grassland and *Themeda triandra*, (*Aristida contorta*) very open tussock grassland.		
Veg Condition	Good; **Bidens bipinnata* N=5000, **Malvastrum americanum* N=60.		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	25	
Acacia aptaneura	30	800	
Acacia aptaneura	15	800	WA29-01
Acacia bivenosa	0.1	100	
Acacia pruinocarpa	1	700	
Acacia tetragonophylla	0.1	120	
Androcalva luteiflora	0.5	60	
Aristida contorta	1	25	WA29-02
Aristida ingrata	0.1	100	WA29-03
Aristida latifolia	0.1	50	WA29-06
Bidens bipinnata	0.1	20	
Boerhavia coccinea	0.1	30	
Capparis lasiantha	0.1	120	
Cheilanthes sieberi subsp. *sieberi*	0.1	20	
Chrysopogon fallax	0.1	70	
Cleome viscosa	0.1	5	
Corchorus lasiocarpus subsp. *parvus*	0.1	40	
Cucumis variabilis	0.1	190	
Cymbopogon ambiguus	0.1	80	
Digitaria ammophila	0.1	40	
Digitaria brownii	0.1	70	
Duperreya commixta	0.1	220	
Enchylaena tomentosa var. *tomentosa*	0.1	60	WA29-07
Enneapogon lindleyanus	0.1	25	
Enneapogon polyphyllus	0.1	30	
Enneapogon robustissimus	0.1	60	
Eremophila forrestii subsp. *forrestii*	2	160	
Eremophila longifolia	0.1	60	
Eriachne mucronata	0.1	40	WA29-04
Eucalyptus xerothermica	2	700	
Eulalia aurea	0.1	90	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Fimbristylis sp.	0.1	5	
Gossypium robinsonii	0.1	80	
Hibiscus burtonii	0.1	90	
Hibiscus sturtii var. *grandiflorus*	0.1	25	
Hibiscus sturtii var. *platychlamys*	0.1	90	
Jasminum didymum subsp. *lineare*	0.1	80	
Maireana planifolia x *villosa*	0.1	45	WA29-05
Maireana villosa	0.1	50	
Malvastrum americanum	0.1	30	
Panicum effusum	0.1	25	
Pterocaulon sp.	0.1	80	
Ptilotus exaltatus	0.1	40	
Ptilotus obovatus var. *obovatus*	0.1	100	
Rhagodia sp. Hamersley (*M.* Trudgen 17794)	0.1	180	
Rhynchosia minima	0.1	25	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	140	
Sida echinocarpa	0.1	50	
Sida fibulifera	0.1	20	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	30	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	80	
Solanum horridum	0.1	30	
Solanum lasiophyllum	0.1	50	
Teucrium teucriiflorum	0.1	80	
Themeda triandra	6	80	
Triodia pungens	1	50	
Triodia wiseana	2	70	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA30
Described by	PL/CI	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 689614 mE	7443450 mN	
Habitat	Flood plain/broad flow.		
Soil	Dark reddish brown clay loam; some areas of light clay.		
Rock Type	N*A*.		
Vegetation	*Eucalyptus xerothermica* low open woodland over *Acacia aptaneura* tall open shurbland over *Androcalva luteiflora* open shrubland over *Isotropis* sp. Arid zone (G. Byrne 2775) low open shrubland over *Themeda triandra* tussock grassland.		
Veg Condition	Very Good; **Bidens bipinnata*, **Malvastrum americanum*.		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	6	800	
Acacia bivenosa (wispy/weeping form)	0.1	100	
Acacia dictyophleba	0.1	500	
Alternanthera nana	0.1	20	
Amyema fitzgeraldii	0.1	40	
Androcalva luteiflora	2	190	
Bidens bipinnata	0.1	90	
Boerhavia coccinea	0.1	25	
Chrysopogon fallax	0.1	25	
Cucumis variabilis	0.1	190	
Duperreya commixta	0.1	170	
Eremophila longifolia	0.1	240	
Eucalyptus xerothermica	8	800	
Eulalia aurea	0.1	70	
Evolvulus alsinoides var. *villosicalyx*	0.1	25	
Gossypium robinsonii	0.1	140	
Isotropis sp. Arid zone (G. Byrne 2775) PN	2	50	
Malvastrum americanum	0.1	60	
Pterocaulon sp.	0.1	60	
Ptilotus obovatus var. *obovatus*	0.1	70	
Rhynchosia minima	0.1	25	
Santalum lanceolatum	0.1	240	
Senna artemisioides subsp. x *artemisioides*	0.1	60	WA30-01
Sida fibulifera	0.1	25	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	40	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	40	
Solanum ferocissimum	0.1	10	WA30-02
Themeda triandra	40	120	



West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WA31
Described by PL/CI Date 11-Apr-19 Type Quadrat 50 x 50 m
Central Coordinate 50K 689482 mE 7442267 mN
Habitat Steep slope, immediately north of range and free face.
Soil Dark reddish brown *silty* clay loam.
Rock Type Ironstone.
Vegetation *Acacia inaequilatera*, *A. pachyacra* scattered shrubs over *Triodia brizoides*, *T. wiseana* very open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 1-2 years ago.

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	70	
Acacia dictyophleba	0.1	60	
Acacia inaequilatera	0.5	170	
Acacia inaequilatera	0.1	170	
Acacia pachyacra	0.5	110	
Acacia pruinocarpa	0.1	100	
Aristida holathera var. *holathera*	0.1	40	
Boerhavia gardneri	0.1	25	
Cymbopogon ambiguus	0.1	70	
Digitaria brownii	0.1	40	
Enneapogon caerulescens	0.1	30	
Enneapogon lindleyanus	0.1	40	
Eriachne mucronata (typical form)	0.1	30	
Euphorbia careyi	0.1	25	WA31-02
Goodenia muelleriana	0.1	10	
Gossypium australe	0.1	90	
Gossypium robinsonii	0.1	45	
Hakea chordophylla	0.1	50	
Heliotropium cunninghamii	0.1	25	WA31-03
Hibiscus coatesii	0.1	60	
Indigofera monophylla	0.1	40	
Paraneurachne muelleri	0.1	30	
Polycarpaea longiflora	0.1	25	
Ptilotus astrolasius	0.1	40	
Ptilotus rotundifolius	0.1	60	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	50	
Senna glutinosa subsp. *pruinosa*	0.1	140	
Senna glutinosa subsp. x *luerssenii*	0.1	100	
Sida echinocarpa	0.1	30	
Solanum horridum	0.1	25	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	60	
Trichodesma zeylanicum var. *zeylanicum*	0.1	80	
Triodia brizoides	6	30	WA31-01
Triodia wiseana	3	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site WA32
Described by	SCSS	Date 11-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 692302 mE	7441936 mN
Habitat	Hilltops of large range.	
Soil	Reddish brown clay loam.	
Rock Type	Ironstone; cobble 1-25%, pebble 26-50%, gravel 26-50%.	
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eucalyptus gamophylla* low open mallee woodland over *Hakea chordophylla* scattered tall shrubs over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia vanleeuwenii*, (*T. pungens*) open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height (cm)	Specimen
Acacia maitlandii	0.1	10	
Acacia pyrifolia var. *pyrifolia*	0.1	70	
Amphipogon sericeus	0.1	10	
Aristida contorta	0.1	10	
Aristida sp.	0.1	50	
Codonocarpus cotinifolius	0.1	50	
Corchorus sp.	0.1	30	
Cymbopogon ambiguus	0.1	50	
Dampiera candicans	0.1	50	
Dodonaea coriacea	0.1	5	
Eremophila latrobei subsp. *latrobei*	0.1	30	
Eriachne lanata	0.1	15	WA02-04=
Eriachne mucronata	0.1	20	
Eucalyptus gamophylla	3	250	
Eucalyptus leucophloia subsp. *leucophloia*	1	500	
Gompholobium oreophilum	0.1	20	
Goodenia stobbsiana	0.1	10	
Hakea chordophylla	1	500	
Halgania gustafsenii var. Mid West (G. Perry 370)	2	30	
Hibiscus coatesii	0.1	40	
Hibiscus sturtii var. *grandiflorus*	0.1	20	
Indigofera monophylla	0.1	10	
Paraneurachne muelleri	0.1	30	
Ptilotus calostachyus	0.1	30	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	15	
Senna glaucifolia	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	80	
Senna glutinosa subsp. *pruinosa*	0.1	60	
Seringia *elliptica*	0.1	30	
Sida arenicola	0.1	20	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	
Solanum lasiophyllum	0.1	15	
Triodia pungens	2	10	
Triodia vanleeuwenii	10	5	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA33
Described by	BRMTB	Date	11-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 693302 mE	7440911 mN	
Habitat	Plain, slopes/ridges to N, S and *E.*		
Soil	Dark reddish brown: patches of cracking clay, patches of *silty* clay loam.		
Rock Type	Ironstone (chert); Cobble 1-25%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Acacia aptaneura* tall shrubland over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia wiseana* very open hummock grassland and *Aristida* spp., (*Themeda triandra*) very open tussock grassland.		
Veg Condition	Good; cattle tracks, scats, grazing; some **Bidens bipinnata*, **Malvastrum americanum*.		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Abutilon cryptopetalum	0.1	100	WA33-13
Acacia aptaneura	5	450	WA33-10
Acacia aptaneura	20	700	WA33-01A
Acacia tetragonophylla	0.1	280	
Aristida contorta	0.1	25	
Aristida sp.	4	10	WA33-19
Aristida sp.	1	80	WA33-02A
Bidens bipinnata	0.1	5	
Capparis lasiantha	0.1	330	
Cheilanthes sieberi subsp. *sieberi*	0.1	10	
Cheilanthes sieberi subsp. *sieberi*	0.1	15	WA33-03
Chrysopogon fallax	0.1	1	
Cleome viscosa	0.1	30	
Digitaria ammophila	0.1	40	WA33-22
Duperreya commixta	0.1	300	
Enchylaena tomentosa var. *tomentosa*	0.1	40	WA33-05
Enneapogon lindleyanus	0.1	15	WA33-20
Eremophila forrestii subsp. *forrestii*	6	170	
Evolvulus alsinoides var. *villosicalyx*	0.1	15	
Iseilema membranaceum	0.1	5	WA33-07
Jasminum didymum subsp. *lineare*	0.1	20	WA33-12
Malvastrum americanum	0.1	10	
Oldenlandia crouchiana	0.1	20	WA33-14
Paraneurachne muelleri	0.1	20	
Phyllanthus maderaspatensis	0.1	5	WA33-06
Pittosporum angustifolium	0.1	190	WA33-11
Ptilotus exaltatus	0.1	35	
Ptilotus gomphrenoides	0.1	15	WA33-15
Ptilotus obovatus var. *obovatus*	0.1	80	
Rhagodia sp. Hamersley (*M.* Trudgen 17794)	0.1	170	WA33-24
Senna artemisioides subsp. *oligophylla*	0.1	150	
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)	0.1	105	WA33-18
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)	0.1	120	WA33-01B
Senna glutinosa subsp. *glutinosa*	0.1	190	
Sida sp.	0.1	10	WA33-17
Solanum horridum	0.1	15	
Solanum lasiophyllum	0.1	30	WA33-09
Spermacoce brachystema	0.1	15	WA33-04
Streptoglossa bubakii	0.1	40	WA33-16
Teucrium teucriiflorum	0.1	60	WA33-21
Themeda triandra	1	50	
Triodia pungens	0.1	30	
Triodia wiseana	2	35	
Vigna lanceolata var. *lanceolata*	0.1	10	WA33-08



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WA34

Described by	SCSS	Date	12-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 694325 mE	7441810 mN	
Habitat	Hilltop.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone; cobble 1-25%, pebbles 1-25%, gravel 26-50%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Hakea chordophylla* scattered tall shrubs over *Triodia vanleeuwenii* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia hamersleyensis	0.1	20	WA32-19=
Acacia maitlandii	0.1	15	
Acacia monticola	0.1	60	
Acacia pruinocarpa	0.1	50	
Codonocarpus cotinifolius	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	
Cymbopogon ambiguus	0.1	20	
Dampiera candicans	0.1	30	
Dodonaea coriacea	0.1	50	
Duperreya commixta	0.1	30	
Eragrostis setifolia	0.1	20	
Eremophila latrobei subsp. *latrobei*	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	1	500	
Goodenia stobbsiana	0.1	10	
Hakea chordophylla	1	250	
Hibiscus sturtii var. *campylochlamys*	0.1	30	
Mirbelia viminalis	0.1	50	
Ptilotus astrolasius	0.1	20	
Ptilotus calostachyus	0.1	20	
Ptilotus exaltatus	0.1	2	
Senna ferraria	0.1	120	
Senna glutinosa subsp. *glutinosa*	0.1	20	
Senna glutinosa subsp. *glutinosa*	0.1	110	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	30	
Solanum lasiophyllum	0.1	40	
Solanum phlomoides	0.1	60	WA34-01
Triodia pungens	0.1	30	
Triodia vanleeuwenii	25	30	
Triodia wiseana	0.1	30	



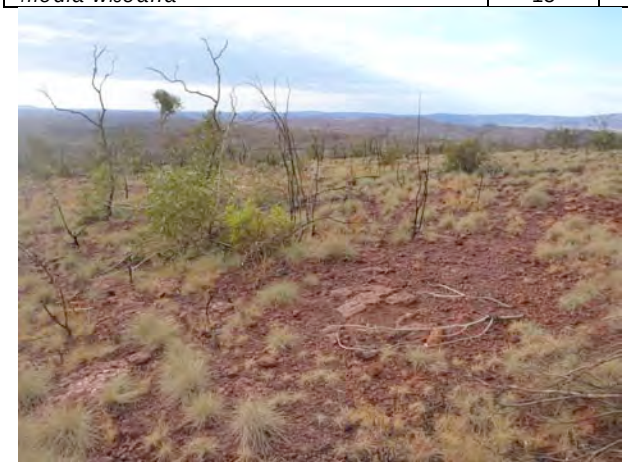
West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WA35
Described by	PL/CI	Date	12-Apr-19
Type	Quadrat	50 x 50 m	
Central Coordinate	50K 688687 mE	7441454 mN	
Habitat	Major range, moderate slope.		
Soil	Dark reddish brown *silty* clay loam.		
Rock Type	Ironstone.		

Vegetation *Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over *E. kingsmillii* low open mallee woodland over *Triodia wiseana* open hummock grassland and *Eriachne lanata* scattered tussock grasses.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia hamersleyensis	0.1	140	
Acacia maitlandii	0.1	90	
Acacia pyrifolia var. *pyrifolia*	0.1	150	
Amphipogon sericeus	0.1	30	
Aristida holathera var. *holathera*	0.1	40	
Aristida sp.	0.1	50	
Cassytha capillaris	0.1	25	
Corymbia hamersleyana	0.5	600	
Cymbopogon ambiguus	0.1	80	
Dodonaea coriacea	0.1	30	
Duperreya commixta	0.1	160	
Eriachne lanata	0.5	45	
Eriachne mucronata (arid form) (MET 12 736)	0.1	30	
Eucalyptus kingsmillii	4	160	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	80	
Goodenia stobbsiana	0.1	40	
Goodenia triodiophila	0.1	40	
Gossypium robinsonii	0.1	60	
Hibiscus coatesii	0.1	70	
Jasminum didymum subsp. *lineare*	0.1	80	
Mirbelia viminalis	0.1	50	
Paraneurachne muelleri	0.1	40	
Petalostylis labicheoides	0.1	140	
Ptilotus calostachyus	0.1	70	
Ptilotus obovatus var. *obovatus*	0.1	50	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	
Senna artemisioides subsp. *oligophylla*	0.1	45	
Senna ferraria	0.1	150	
Senna glutinosa subsp. *glutinosa*	0.1	140	
Senna glutinosa subsp. *glutinosa* x	0.1	60	WA35-02
Senna glutinosa subsp. *pruinosa*	0.1	90	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	WA35-01
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	40	
Solanum phlomoides	0.1	40	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	60	
Triodia pungens	0.1	50	
Triodia wiseana	15	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site WA37
Described by	PL/CI	Date 12-Apr-19
Type	Quadrat	50 x 50 m
Central Coordinate	50K 688323 mE	7441931 mN
Habitat	Hill crest of *major* range.	
Soil	Dark reddish brown *silty* clay loam.	
Rock Type	Ironstone.	
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland and *E. kingsmillii*, (*E. gamophylla*) low open mallee woodland over *Acacia hamersleyensis*, (*A. pruinocarpa*, *Hakea chordophylla*) tall open shrubland over *Triodia wiseana* open hummock grassland and *Eriachne lanata* scattered tussock grasses.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height (cm)	Specimen
Acacia dictyophleba	0.1	90	
Acacia hamersleyensis	3	240	
Acacia maitlandii	0.1	120	
Acacia pruinocarpa	1	400	
Acacia pyrifolia var. *pyrifolia*	0.1	120	
Acacia tenuissima	0.1	100	
Aristida contorta	0.1	25	
Cymbopogon ambiguus	0.1	120	
Digitaria ammophila	0.1	60	
Digitaria brownii	0.1	40	
Diplatia grandibractea	0.1	150	
Duperreya commixta	0.1	140	
Eriachne lanata	0.5	40	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus gamophylla	0.5	420	
Eucalyptus kingsmillii	4	300	
Eucalyptus leucophloia subsp. *leucophloia*	4	700	
Goodenia triodiophila	0.1	30	
Hakea chordophylla	0.5	300	
Jasminum didymum subsp. *lineare*	0.1	160	
Petalostylis labicheoides	0.1	120	
Ptilotus calostachyus	0.1	80	
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1	40	
Senna glutinosa subsp. *glutinosa*	0.1	160	
Seringia *elliptica*	0.1	50	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	40	
Triodia pungens	2	50	
Triodia wiseana	18	60	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-01
Described by	BRMTB	Date	04-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 670039 mE	7440631 mN	
Habitat	Drainage; *minor* narrow drainage N-S, south of high range.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, chert, mudrock; pebble 1-25%, gravel 1-25%.		
Vegetation	*Corymbia hamersleyana* scattered low trees and *Eucalyptus gamophylla* low open mallee woodland over *Acacia monticola*, *A. cowleana* tall open scrub over *Petalostylis labicheoides* open shrubland over *Triodia pungens* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	150	
Acacia aptaneura	0.1	80	WAREL01-01
Acacia bivenosa	0.1	100	
Acacia cowleana	25	300	
Acacia eriopoda	2.5	130	
Acacia monticola	40	280	
Acacia tenuissima	0.1	200	
Aristida holathera var. *holathera*	0.1	40	
Codonocarpus cotinifolius	0.1	70	
Corchorus lasiocarpus subsp. *parvus*	0.1	100	
Corymbia hamersleyana	0.5	500	
Digitaria brownii	0.1	70	
Duperreya commixta	0.1	400	
Eremophila longifolia	0.1	130	
Eucalyptus gamophylla	3.5	450	
Gastrolobium grandiflorum	0.1	150	
Hibiscus sturtii var. *campylochlamys*	0.1	130	
Indigofera monophylla	0.1	40	
Jasminum didymum subsp. *lineare*	0.1	100	
Paraneurachne muelleri	0.1	45	
Petalostylis labicheoides	0.1	130	
Ptilotus obovatus var. *obovatus*	0.1	45	
Senna artemisioides subsp. *oligophylla* x *S. ferraria*	0.1	100	
Senna glutinosa subsp. *glutinosa*	0.1	190	
Seringia *elliptica*	0.1	100	
Sida arenicola	0.1	160	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	50	
Themeda triandra	0.1	70	
Triodia pungens	12	60	WAREL01-02
Vincetoxicum *lineare*	0.1	180	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-02
Described by	BRMTB	Date	05-Apr-19
Type	Relevé	10 x 200 m	
Central Coordinate	50K 669514 mE	7440985 mN	
Habitat	Minor drainage, fed by several smaller flows; south of *major* range.		
Soil	Dark reddish brown sandy loam.		
Rock Type	Ironstone, mudrock, chert.		
Vegetation	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Petalostylis labicheoides*, *Acacia monticola*, (*A. citrinoviridis*) tall open scrub over *Androcalva luteiflora*, (*Tephrosia rosea* var. Fortescue creeks (*M.*I.H. Brooker 2186)) open shrubland over *Themeda triandra* very open tussock grassland and *Triodia pungens* very open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia bivenosa	0.1	150	
Acacia citrinoviridis	0.5	240	
Acacia cowleana	0.1	210	
Acacia monticola	25	220	
Acacia pruinocarpa	0.1	160	
Acacia pyrifolia var. *pyrifolia*	0.1	160	
Acacia sp.	0.1	70	WAREL02-05
Androcalva luteiflora	5	100	WAREL02-01
Aristida contorta	0.1	30	
Aristida holathera var. *holathera*	0.1	30	
Capparis lasiantha	0.1	90	
Cleome viscosa	0.1	7	
Codonocarpus cotinifolius	0.1	300	
Corchorus crozophorifolius	0.1	70	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	
Corymbia hamersleyana	0.5	500	
Cymbopogon ambiguus	0.1	70	
Digitaria brownii	0.1	40	WAREL02-06
Dodonaea lanceolata var. *lanceolata*	0.1	100	WAREL02-03
Duperreya commixta	0.1	150	
Enneapogon lindleyanus	0.1	30	
Enneapogon polyphyllus	0.1	20	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	400	
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Gastrolobium grandiflorum	0.1	100	
Gossypium australe	0.1	120	
Gossypium robinsonii	0.1	230	
Hibiscus coatesii	0.1	50	
Hybanthus aurantiacus	0.1	20	
Indigofera monophylla	0.1	35	
Paraneurachne muelleri	0.1	75	
Petalostylis labicheoides	35	300	
Phyllanthus maderaspatensis	0.1	30	
Polycarpaea longiflora	0.1	20	
Pterocaulon sphacelatum	0.1	100	
Ptilotus exaltatus	0.1	30	
Ptilotus obovatus var. *obovatus*	0.1	40	
Rhynchosia minima	0.1	40	
Santalum lanceolatum	0.1	100	
Senna glutinosa subsp. *glutinosa*	0.1	120	
Seringia *elliptica*	0.1	70	WAREL02-02
Setaria verticillata	0.1	100	WAREL02-04
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	90	
Solanum lasiophyllum	0.1	20	
Tephrosia rosea var. Fortescue creeks (*M.*I.H. Brooker 2186)	0.5	130	
Themeda triandra	5	60	
Triodia pungens	3	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-03
Described by	BRMTB	Date	06-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 665237 mE	7440438 mN	
Habitat	Minor flow, in plain between *major* ranges. Broad and shallow in some places.		
Soil	Dark reddish brown sandy loam.		
Rock Type	Chert, ironstone.		
Vegetation	*Acacia aptaneura*, *A. catenulata*, (*A. pruinocarpa*, *Eucalyptus leucophloia* subsp. *leucophloia*) low open woodland over Seringia *nephrosperma*, *A. bivenosa*, *Ptilotus obovatus* open shrubland over *Triodia pungens* very open hummock grassland and *Themeda triandra* scattered tussock grasses and **Bidens bipinnata* scattered herbs.		
Veg Condition	Very Good; **Bidens bipinnata*.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	30	WAREL03-04
Acacia aptaneura	3	350	WAREL03-02
Acacia ayersiana	0.1	450	WAREL03-13
Acacia bivenosa	3	180	
Acacia catenulata subsp. *occidentalis*	3	600	
Acacia pruinocarpa	0.5	600	
Amphipogon sericeus	0.1	30	
Aristida contorta	0.1	10	
Bidens bipinnata	0.5	10	
Capparis lasiantha	0.1	150	
Cheilanthes sieberi subsp. *sieberi*	0.1	10	WAREL03-17
Chrysopogon fallax	0.1	40	
Codonocarpus cotinifolius	0.1	400	
Corchorus crozophorifolius	0.1	45	
Corchorus lasiocarpus subsp. *parvus*	0.1	20	
Cucumis variabilis	0.1	40	
Digitaria brownii	0.1	35	
Dipteracanthus australasicus subsp. *australasicus*	0.1	40	
Duperreya commixta	0.1	200	
Enchylaena tomentosa var. *tomentosa*	0.1	40	
Enneapogon robustissimus	0.1	60	WAREL03-06
Eragrostis setifolia	0.1	40	WAREL03-18
Eremophila forrestii subsp. *forrestii*	0.1	70	
Eremophila jucunda subsp. *pulcherrima*	0.1	50	
Eremophila longifolia	0.1	280	
Eucalyptus leucophloia subsp. *leucophloia*	1	600	
Euphorbia sp. (*biconvexa*/*coghlanii*/trigonosperma; sterile)	0.1	5	
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Glycine canescens	0.1	150	WAREL03-05
Goodenia stellata	0.1	10	WAREL03-11
Gossypium robinsonii	0.1	250	
Hakea lorea subsp. *lorea*	0.1	500	
Hibiscus burtonii	0.1	50	
Hibiscus coatesii	0.1	120	
Hibiscus sturtii var. *grandiflorus*	0.1	45	WAREL03-10
Hibiscus sturtii var. *platychlamys*	0.1	40	WAREL03-01
Indigofera monophylla	0.1	40	
Paraneurachne muelleri	0.1	20	
Pterocaulon sphacelatum	0.1	90	
Ptilotus exaltatus	0.1	50	
Ptilotus obovatus var. *obovatus*	2.5	150	
Rhagodia eremaea	0.1	45	
Salsola australis	0.1	30	
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)	0.1	110	WAREL03-08
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	15	WAREL03-19
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Senna artemisioides subsp. x *artemisioides*	0.1	120	WAREL03-03
Senna glutinosa subsp. x *luerssenii*	0.1	100	
Seringia *elliptica*	0.1	110	WAREL03-15
Seringia *nephrosperma*	3	150	WAREL03-09
Sida cardiophylla	0.1	35	WAREL03-16
Sida sp. dark green fruits (*S.* van Leeuwen 2260)	0.1	120	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	45	WAREL03-07
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	185	
Solanum lasiophyllum	0.1	60	
Solanum piceum	0.1	130	
Themeda triandra	0.5	50	
Tribulus suberosus	0.1	60	
Triodia pungens	4	40	
Vincetoxicum *lineare*	0.1	80	

Species	Cover	Height (cm)	Specimen
Vincetoxicum *lineare*	0.1	180	WAREL03-12



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-04
Described by	BRMTB	Date	06-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 670622 mE	7440772 mN	
Habitat	Broad *minor creekline* (not incised).		
Soil	Dark reddish brown sandy loam.		
Rock Type	Ironstone, chert.		
Vegetation	*Eucalyptus gamophylla* low open mallee woodland over *Acacia monticola*, (*Codonocarpus cotinifolius*) tall open scrub over *Triodia pungens* very open hummock grassland and *Themeda triandra* very open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height (cm)	Specimen
Acacia adsurgens	0.1	100	WAREL04-01
Acacia aptaneura	0.1	40	WAREL04-06
Acacia monticola	65	230	
Acacia pruinocarpa	0.1	120	
Acacia tenuissima	0.1	120	WAREL04-04
Codonocarpus cotinifolius	1	450	
Corymbia deserticola subsp. *deserticola*	0.1	400	
Corymbia hamersleyana	0.1	120	
Duperreya commixta	0.1	170	
Eucalyptus gamophylla	3	350	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	150	
Gastrolobium grandiflorum	0.1	170	
Goodenia stobbsiana	0.1	60	
Hibiscus burtonii	0.1	70	WAREL04-08
Hibiscus sturtii var. *campylochlamys*	0.1	45	WAREL04-03
Indigofera monophylla	0.1	10	
Paraneurachne muelleri	0.1	60	
Senna ferraria	0.1	220	
Seringia *elliptica*	0.1	80	WAREL04-02
Sida fibulifera	0.1	60	WAREL04-05
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	110	WAREL04-07
Themeda triandra	3	70	
Triodia pungens	3	50	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-05
Described by	SCSS	Date	06-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 696425 mE	7441672 mN	
Habitat	Deep gully, rocky.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Corymbia hamersleyana*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *Ficus brachypoda*) low open woodland over *Acacia hamersleyensis* scattered tall shrubs over *A. monticola*, (*Gossypium robinsonii*, *Petalostylis labicheoides*) tall shrubland to shrubland over *Themeda triandra*, (*Cymbopogon ambiguus*) open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	80	WAREL05-02
Acacia bivenosa	0.1	80	
Acacia dictyophleba	0.1	50	
Acacia hamersleyensis	1	250	WAREL05-09
Acacia maitlandii	0.1	50	
Acacia monticola	15	150	
Acacia pruinocarpa	0.1	210	
Achyranthes aspera	0.1	50	
Androcalva luteiflora	0.1	120	
Aristida burbidgeae	0.1	40	WAREL05-06
Boerhavia coccinea	0.1	5	WAREL05-12
Capparis lasiantha	0.1	50	
Capparis spinosa subsp. *nummularia*	0.1	50	
Cheilanthes brownii	0.1	5	
Clerodendrum floribundum var. *angustifolium*	0.1	60	WAREL05-05
Codonocarpus cotinifolius	0.1	500	
Corymbia hamersleyana	1	700	
Cucumis variabilis	0.1	10	
Cymbopogon ambiguus	3	110	
Dodonaea lanceolata var. *lanceolata*	0.1	40	
Dodonaea pachyneura	0.1	180	
Duperreya commixta	0.1	50	
Enneapogon robustissimus	0.1	50	
Eremophila longifolia	0.1	60	
Eriachne lanata	0.1	20	WA02-04=
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	600	
Euphorbia trigonosperma	0.1	10	WAREL05-10
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Ficus brachypoda	0.1	500	WAREL05-04
Goodenia stobbsiana	0.1	5	
Gossypium robinsonii	3	120	
Grevillea wickhamii	0.1	210	
Hibiscus coatesii	0.1	30	WAREL05-11
Hibiscus coatesii	0.1	30	
Hybanthus aurantiacus	0.1	10	
Indigofera monophylla	0.1	20	WAREL05-08
Paspalidium rarum	0.1	20	WAREL05-07
Petalostylis labicheoides	5	350	
Senna ferraria	0.1	150	
Senna venusta	0.1	50	
Sida sp. Barlee Range (*S.* van Leeuwen 1642)	0.1	20	WAREL05-01
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	80	
Solanum lasiophyllum	0.1	20	
Themeda triandra	10	50	
Triodia pungens	0.1	30	
Ventilago viminalis	0.1	50	WAREL05-03



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-06
Described by	PL/CI	Date	06-Apr-19
Type	Relevé	20 x 30 m	
Central Coordinate	50K 697269 mE	7442225 mN	
Habitat	Plain; gently sloping north.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone, quartz.		
Vegetation	*Acacia macraneura*, *A. ayersiana*, (*A. tetragonophylla*) tall open scrub over *Eremophila forrestii* subsp. *forrestii*, *E. platycalyx* subsp. *pardalota* open shrubland over *Triodia brizoides*, *T. wiseana* open hummock grassland and *Aristida obscura* very open bunch grassland.		
Veg Condition	Very Good; **Bidens bipinnata*, cattle scats and trampling.		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Acacia ayersiana	20	700	
Acacia macraneura	24	800	WAREL06-07
Acacia sibirica	1	190	WAREL06-03
Acacia synchronicia	0.1	140	
Acacia tetragonophylla	3	300	
Amyema fitzgeraldii	0.1	60	
Anthobolus leptomerioides	0.1	200	
Aristida obscura	3	40	
Aristida pruinosa	0.1	110	WAREL06-04
Bidens bipinnata	0.1	10	
Capparis lasiantha	0.1	160	
Cheilanthes sieberi subsp. *sieberi*	0.1	25	
Chrysopogon fallax	0.1	120	
Cucumis variabilis	0.1	10	
Digitaria ammophila	0.1	25	
Duperreya commixta	0.1	80	
Eragrostis setifolia	0.1	15	WAREL06-02
Eremophila forrestii subsp. *forrestii*	6	240	
Eremophila platycalyx subsp. *pardalota*	2	200	WAREL06-06
Jasminum didymum subsp. *lineare*	0.1	70	
Maireana georgei	0.1	40	
Olearia stuartii	0.1	80	
Psydrax suaveolens	0.1	150	
Santalum lanceolatum	0.1	270	
Senna glutinosa subsp. x *luerssenii*	0.1	170	
Senna sp. Meekatharra (*E.* Bailey 1-26)	0.1	120	WAREL06-05
Sida sp. dark green fruits (*S.* van Leeuwen 2260)	0.1	40	
Solanum lasiophyllum	0.1	70	
Triodia brizoides	3	40	WAREL06-01
Triodia wiseana	2	40	
Vincetoxicum *lineare*	0.1	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-07
Described by	SCSS	Date	06-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 694689 mE	7440349 mN	
Habitat	Creek/drainage 10-15 m wide E-W, flowing east.		
Soil	Reddish brown sand.		
Rock Type	Ironstone, basalt, chert riverstone.		
Vegetation	*Eucalyptus victrix* open forest over *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Themeda triandra* tussock grassland and *Cyperus vaginatus* open sedgeland.		
Veg Condition	Very Good; **Vachellia farnesiana*, **Bidens bipinnata*.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon amplum	0.1	60	WAREL07-02
Acacia bivenosa	0.1	80	
Acacia dictyophleba	0.1	250	
Acacia maitlandii	0.1	120	
Androcalva luteiflora	0.1	50	
Bidens bipinnata	0.1	5	WAREL07-03
Cymbopogon ambiguus	0.1	30	
Cyperus vaginatus	3	40	
Enneapogon robustissimus	0.1	30	
Eucalyptus victrix	20	1000	
Eucalyptus victrix	20	1200	WAREL07-01
Glycine canescens	0.1	20	WAREL07-05
Gossypium sturtianum var. *sturtianum*	0.1	60	
Melaleuca bracteata	4	300	
Melaleuca glomerata	2	250	
Pluchea dentex	0.1	30	
Pterocaulon sphacelatum	0.1	2	
Rhynchosia minima	0.1	10	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	30	
Stemodia grossa	0.1	20	
Themeda triandra	35	50	
Triodia longiceps	0.1	70	
Vachellia farnesiana	0.1	180	
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	0.1	20	WAREL07-04



West Angelas Beyond 2020 Beyond 2020 Phase 2 Site WAREL-08
Central Coordinate 50K 689496 mE 7441592 mN
Habitat Drainage running east-west.
Soil Reddish brown clay loam; some sand on slopes.
Rock Type Ironstone, riverstone.
Vegetation *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Petalostylis labicheoides*, *Gossypium robinsonii*, *Acacia monticola* open shrubland over *Themeda triandra* tussock grassland and *Triodia pungens* open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 1-2 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	20	WAREL08-03
Acacia bivenosa	0.1	120	
Acacia maitlandii	0.1	30	
Acacia monticola	1	150	
Acacia pruinocarpa	0.1	60	
Acacia pyrifolia var. *pyrifolia*	0.1	80	
Androcalva luteiflora	0.1	120	
Capparis lasiantha	0.1	30	
Clerodendrum floribundum var. *angustifolium*	0.1	180	REL05-05=
Corymbia hamersleyana	0.1	600	
Cymbopogon ambiguus	0.1	80	WAREL08-02
Dodonaea lanceolata var. *lanceolata*	0.1	80	WA14-02=
Dodonaea viscosa subsp. *mucronata*	0.1	30	
Duperreya commixta	0.1	70	
Eucalyptus leucophloia subsp. *leucophloia*	3	700	
Gossypium robinsonii	1	60	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	80	WAREL08-04
Indigofera fractiflexa subsp. *fractiflexa*	0.1	30	
Indigofera gilesii	0.1	20	
Jasminum didymum subsp. *lineare*	0.1	20	
Olearia stuartii	0.1	20	WAREL08-05
Petalostylis labicheoides	1	150	
Ptilotus obovatus var. *obovatus*	0.1	30	
Santalum lanceolatum	0.1	120	
Senna glutinosa subsp. *glutinosa*	0.1	110	
Senna glutinosa subsp. *pruinosa*	0.1	40	
Senna glutinosa subsp. x *luerssenii*	0.1	120	
Seringia *elliptica*	0.1	30	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	20	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	10	
Solanum horridum	0.1	15	
Solanum lasiophyllum	0.1	20	
Themeda triandra	50	50	WAREL08-01
Triodia pungens	15	10	
Ventilago viminalis	0.1	120	REL11-02=



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-09
Described by	SCSS	Date	07-Apr-19
Type	Relevé	20 x 30 m	
Central Coordinate	50K 691383 mE	7442208 mN	
Habitat	Rocky slope.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Acacia ayersiana*, *A. catenulata* subsp. *occidentalis* low open forest over *Eriachne mucronata* open tussock grassland.		
Veg Condition	Very Good: presence of weeds (**Bidens bipinnata*).		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	0.1	200	REL11-01A=
Acacia ayersiana	25	600	
Acacia catenulata subsp. *occidentalis*	8	500	WAREL09-02
Acacia catenulata subsp. *occidentalis*	8	600	WAREL09-05
Acacia pruinocarpa	1	400	
Acacia rhodophloia	0.1	300	WAREL09-03
Bidens bipinnata	0.1	20	
Cheilanthes brownii	0.1	10	WAREL09-04
Cheilanthes sieberi subsp. *sieberi*	0.1	5	
Corymbia ferriticola	2	500	
Dodonaea pachyneura	0.1	100	
Eremophila latrobei subsp. *latrobei*	0.1	100	
Eriachne mucronata (typical form)	15	30	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	400	
Grevillea berryana	1	500	WAREL09-01
Ptilotus obovatus var. *obovatus*	0.1	40	
Senna glaucifolia	0.1	200	
Solanum horridum	0.1	10	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WAREL-10
Described by BRMTB — Date 07-Apr-19
Type Relevé — 15 x 200 m
Central Coordinate 50K 687371 mE — 7442532 mN
Habitat Gorge; long deep gorge between *major* ranges.
Soil Dark reddish brown sandy loam.
Rock Type Ironstone; outcropping 1-25%, large boulder 76-100%, boulder 1-25%, cobble 1-25%, pebble 1-25%, gravel 1-25%.
Vegetation *Callitris columellaris*, *Acacia pruinocarpa* open forest over *Corymbia ferriticola*, *A. aptaneura* low open woodland over *Capparis mitchellii*, (*Eremophila* sp. Hamersley Range (K. Walker KW 136)) scattered tall shrubs over *Aristida burbidgeae* scattered tussock grasses.
Veg Condition Excellent.
Fire Age Very long unburnt.

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	1	900	WAREL10-08
Acacia hamersleyensis	0.1	600	
Acacia pruinocarpa	0.1	800	
Acacia pruinocarpa	5	1100	WAREL10-06
Amaranthus undulatus	0.1	12	WAREL10-09
Aristida burbidgeae	1.5	70	REL12-02=
Astrotricha hamptonii	0.1	100	
Cajanus cinereus	0.1	190	WABM21=
Callitris columellaris	35	1200	WAREL10-01
Capparis lasiantha	0.1	150	
Capparis mitchellii	1	230	
Capparis spinosa subsp. *nummularia*	0.1	180	
Cheilanthes brownii	0.1	10	
Clerodendrum floribundum var. *angustifolium*	0.1	400	WAREL10-05
Corymbia ferriticola	5	600	
Cymbopogon ambiguus	0.1	90	
Dipteracanthus australasicus subsp. *australasicus*	0.1	15	
Dodonaea pachyneura	0.1	260	
Dodonaea viscosa subsp. *mucronata*	0.1	170	WABM12=
Duperreya commixta	0.1	800	
Eremophila sp. Hamersley Range (K. Walker KW 136) PN	0.5	250	
Ficus brachypoda	0.1	400	WAREL10-04
Gossypium robinsonii	0.1	350	
Grevillea berryana	0.1	240	WAREL10-10
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	90	WDH-TB04=
Indigofera fractiflexa subsp. *fractiflexa*	0.1	20	WABM22=
Nicotiana benthamiana	0.1	100	WAREL10-07
Pandorea pandorana	0.1	600	
Psydrax latifolia	0.1	500	
Ptilotus obovatus var. *obovatus*	0.1	100	
Rhagodia sp. Hamersley (*M.* Trudgen 17794)	0.1	120	
Santalum spicatum	0.1	400	
Senna glutinosa subsp. *glutinosa*	0.1	130	
Stylobasium spathulatum	0.1	210	
Themeda triandra	0.1	70	
Triodia pungens	0.1	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	25	
Vincetoxicum *flexuosum*	0.1	500	WAREL10-03



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-11
Described by	SCSS	Date	07-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 691349 mE	7441001 mN	
Habitat	Small sloped ridge, ~ 30 - 40 m wide, south aspect.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *A. aptaneura*) low woodland over *Triodia pungens* very open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia aptaneura	2	700	WREL11-01A
Acacia catenulata subsp. *occidentalis*	15	600	REL09-02=
Acacia catenulata subsp. *occidentalis*	20	600	REL09-05=
Acacia pruinocarpa	0.1	700	
Capparis lasiantha	0.1	110	
Cymbopogon ambiguus	0.1	80	
Cynanchum viminale subsp. *australe*	0.1	60	
Dodonaea pachyneura	0.1	150	
Eremophila latrobei subsp. *latrobei*	0.1	80	
Eriachne mucronata (typical form)	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	3	500	
Grevillea berryana	0.1	80	
Jasminum didymum subsp. *lineare*	0.1	100	
Mirbelia viminalis	0.1	30	
Psydrax suaveolens	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	30	
Senna glutinosa subsp. *glutinosa*	0.1	170	
Senna glutinosa subsp. x *luerssenii*	0.1	150	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	30	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	0.1	30	
Triodia pungens	8	40	
Ventilago viminalis	0.1	150	WAREL11-02



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-12
Described by	BRMTB	Date	07-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 687904 mE	7440996 mN	
Habitat	Steep gully, N-S through high range.		
Soil	Dark reddish brown clay loam.		
Rock Type	Ironstone (chert); very large boulders 76-100%.		
Vegetation	*Callitris columellaris*, (*Corymbia ferriticola*) low woodland over *Pandorea pandorana* scattered tall shrubs over *Capparis mitchellii*, (*Dodonaea viscosa* subsp. *mucronata*) open shrubland over *Ptilotus obovatus* low open shrubland over *Themeda triandra*, *Aristida burbidgeae* scattered tussock grasses.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	140	WAREL12-15
Acacia aptaneura	0.1	400	WAREL12-07
Acacia hamersleyensis	0.1	220	WDH-TB07=
Aristida burbidgeae	0.5	40	WAREL12-02
Astrotricha hamptonii	0.1	120	
Callitris columellaris	25	850	WAREL12-05
Capparis lasiantha	0.1	40	
Capparis mitchellii	2.5	100	
Cheilanthes austrotenuifolia	0.1	4	WAREL12-06
Cheilanthes brownii	0.1	5	
Corymbia ferriticola	3	700	
Cymbopogon ambiguus	0.1	90	
Digitaria brownii	0.1	40	WAREL12-01
Dodonaea pachyneura	0.1	130	
Dodonaea viscosa subsp. *mucronata*	0.5	180	WABM-12=
Duperreya commixta	0.1	110	
Enneapogon robustissimus	0.1	60	WAREL12-08
Eremophila jucunda subsp. *pulcherrima*	0.1	110	
Eriachne mucronata (typical form)	0.1	65	
Eucalyptus leucophloia subsp. *leucophloia*	0.1	650	
Euphorbia trigonosperma	0.1	15	WAREL12-03
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	0.1	140	WDH-TB04=
Jasminum didymum subsp. *lineare*	0.1	40	WAREL12-13
Jasminum didymum subsp. *lineare*	0.1	40	
Maireana planifolia	0.1	110	WAREL12-10
Olearia stuartii	0.1	25	WABM-05=
Pandorea pandorana	1	860	WABM-10=
Paspalidium clementii	0.1	40	WAREL12-16
Pittosporum angustifolium	0.1	90	WAREL12-17
Psydrax latifolia	0.1	120	
Pterocaulon sphacelatum	0.1	50	
Ptilotus obovatus var. *obovatus*	3	100	
Santalum lanceolatum	0.1	70	WAREL12-09
Santalum lanceolatum	0.1	180	
Senna glutinosa subsp. *glutinosa*	0.1	150	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	30	
Solanum horridum	0.1	15	
Teucrium disjunctum	0.1	40	WAREL12-11
Teucrium disjunctum	0.1	50	WAREL12-14
Themeda triandra	1	90	
Triodia pungens	0.1	40	WAREL12-04



West Angelas Beyond 2020 Beyond 2020 Phase 2 — Site WAREL-13

Described by	PL/CI	Date	07-Apr-19
Type	Relevé		25 x 100 m
Central Coordinate	50K 694847 mE		7442666 mN
Habitat	Minor-moderate drainage, N-*S.*		
Soil	Reddish brown clay on banks, sandy clay loam in bed.		
Rock Type	Some *calcrete*, ironstone.		

Vegetation: *Eucalyptus xerothermica* low woodland over *Petalostylis labicheoides* (*Acacia bivenosa* (wispy weeping form)) tall open shrubland over *Androcalva luteiflora* scattered shrubs over *Eulalia* sp. Three Rivers Station (*B.*Forsyth AQ789133), *Themeda triandra*, *Eulalia aurea*, (*Eriachne tenuiculmis*) open tussock grassland.

Veg Condition: Very Good: presence of weeds (**Bidens bipinnata* N=200).

Fire Age: Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon amplum	0.1	40	WAREL13-01
Abutilon cunninghamii	0.1	65	
Abutilon fraseri subsp. *fraseri*	0.1	30	
Abutilon otocarpum	0.1	60	
Acacia bivenosa (wispy/weeping form)	0.5	300	
Acacia dictyophleba	0.1	100	
Acacia maitlandii	0.1	70	
Achyranthes aspera	0.1	50	
Alternanthera nana	0.1	15	
Androcalva luteiflora	1	160	
Bidens bipinnata	0.1	20	
Boerhavia coccinea	0.1	25	
Cleome viscosa	0.1	35	
Cymbopogon ambiguus	0.1	120	
Digitaria brownii	0.1	30	
Dodonaea viscosa subsp. *mucronata*	0.1	40	
Duperreya commixta	0.1	160	
Enneapogon robustissimus	0.1	50	
Eremophila longifolia	0.1	90	
Eriachne tenuiculmis	1	40	
Eucalyptus xerothermica	11	900	
Eulalia aurea	1	60	WAREL13-07
Eulalia aurea	2	80	
Eulalia sp. (Three Rivers Station, *B.*Forsyth AQ6789133)	6	40	
Euphorbia biconvexa	0.1	40	WAREL13-05
Evolvulus alsinoides var. *decumbens*	0.1	30	
Glycine canescens	0.1	100	
Goodenia muelleriana	0.1	25	
Goodenia stellata	0.1	30	WAREL13-06
Gossypium robinsonii	0.1	170	
Indigofera georgei	0.1	70	
Isotropis sp. Arid zone (G. Byrne 2775) PN	0.1	70	
Jasminum didymum subsp. *lineare*	0.1	60	
Malvastrum americanum	0.1	30	
Melhania oblongifolia	0.1	40	
Petalostylis labicheoides	6	300	
Phyllanthus maderaspatensis	0.1	40	
Pluchea dunlopii	0.1	50	WAREL13-04
Polymeria ambigua	0.1	25	
Pterocaulon sphacelatum	0.1	60	
Ptilotus exaltatus	0.1	30	
Rhynchosia minima	0.1	30	
Santalum lanceolatum	0.1	90	
Scaevola amblyanthera var. *centralis*	0.1	20	WAREL13-02
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. x *artemisioides*	0.1	60	WAREL13-03
Sida fibulifera	0.1	25	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	60	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	120	
Themeda triandra	4	80	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-14
Described by	PL/CI	Date	07-Apr-19
Type	Relevé	25 x 100 m	
Central Coordinate	50K 694656 mE	7443437 mN	
Habitat	Major drainage.		
Soil	Reddish brown sandy clay loam bed, clay loam to clay banks.		
Rock Type	Ironstone, riverstone.		
Vegetation	*Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* subsp. *pyrifolia* tall open shrubland over *Gossypium sturtianum* open shrubland over *Themeda triandra*, *Cymbopogon ambiguus* (*procerus* form), *Eulalia aurea*, *Aristida lazaridis*, (*Dichanthium fecundum*, *Enteropogon ramosus*) open tussock grassland.		
Veg Condition	Very Good: presence of weeds (**Bidens bipinnata*, **Vachellia farnesiana*).		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon amplum	0.1	60	
Acacia dictyophleba	0.1	250	
Acacia pachyacra	0.1	100	
Acacia pyrifolia var. *pyrifolia*	1	220	
Alternanthera denticulata	0.1	30	
Alternanthera nana	0.1	25	
Ammannia multiflora	0.1	30	WAREL14-01
Aristida lazaridis	1	80	
Bidens bipinnata	0.1	30	
Boerhavia coccinea	0.1	20	
Boerhavia repleta	0.1	20	
Centipeda minima subsp. *macrocephala*	0.1	8	
Cheilanthes austrotenuifolia	0.1	10	WAREL14-05
Cleome viscosa	0.1	30	
Corchorus tridens	0.1	30	WAREL14-02
Crotalaria medicaginea var. *neglecta*	0.1	50	
Cucumis variabilis	0.1	30	
Cymbopogon ambiguus	3	120	
Cyperus vaginatus	0.1	90	
Dichanthium fecundum	0.5	90	WDH-PL10=
Enneapogon robustissimus	0.1	60	
Enteropogon ramosus	0.5	90	
Eragrostis elongata	0.1	40	
Eragrostis tenellula	0.1	30	
Eriachne tenuiculmis	0.1	40	
Eucalyptus camaldulensis subsp. *refulgens*	5	1600	
Eucalyptus victrix	6	700	
Eucalyptus xerothermica	1	900	
Eulalia aurea	2	90	
Eulalia sp. (Three Rivers Station, *B.*Forsyth AQ6789133)	0.1	30	
Euphorbia biconvexa	0.1	30	WAREL14-03
Glycine canescens	0.1	40	
Glycine canescens	0.1	60	WAREL14-06
Goodenia muelleriana	0.1	30	
Gossypium robinsonii	0.1	200	
Gossypium sturtianum var. *sturtianum*	5	190	
Ipomoea plebeia	0.1	50	
Isotropis sp. Arid zone (G. Byrne 2775) PN	0.1	60	
Jasminum didymum subsp. *lineare*	0.1	70	
Marsilea hirsuta	0.1	10	WAREL14-04
Panicum decompositum	0.1	100	WDH-PL08=
Petalostylis labicheoides	3	260	
Phyllanthus maderaspatensis	0.1	40	
Polymeria ambigua	0.1	25	
Santalum lanceolatum	0.1	200	
Senna artemisioides subsp. x *artemisioides*	0.1	70	
Senna notabilis	0.1	40	
Sida fibulifera	0.1	25	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	60	
Themeda triandra	3	90	
Urochloa piligera	0.1	25	WDH-PL11=
Vachellia farnesiana	0.1	90	
Vigna lanceolata var. *lanceolata*	0.1	40	
Wahlenbergia tumidifructa	0.1	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-15
Described by	SCSS	Date	07-Apr-19
Type	Relevé	50 x 50 m	
Central Coordinate	50K 693823 mE	7440887 mN	
Habitat	Slope/ridge of N breakaway, N aspect.		
Soil	Reddish brown clay loam (not much though).		
Rock Type	Ironstone; outcrop 50-75%, cobble 1-25%, pebble 1-25%, gravel 1-25%.		
Vegetation	*Acacia catenulata* subsp. *occidentalis*, *A. aptaneura*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *Eremophila forrestii* subsp. *forrestii*, (*Senna stricta*) shrubland over *Triodia pungens* open hummock grassland.		
Veg Condition	Very Good: presence of weeds (**Bidens bipinnata*).		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Acacia aneura	1	500	WAREL15-08
Acacia aptaneura	10	600	WAREL15-03
Acacia catenulata subsp. *occidentalis*	20	600	WAREL15-01
Acacia catenulata subsp. *occidentalis*	20	600	WAREL15-02
Acacia pruinocarpa	0.1	400	
Acacia rhodophloia	0.1	300	WAREL15-05
Aristida obscura	0.1	30	WAREL15-04
Aristida sp.	0.1	120	WAREL15-07
Bidens bipinnata	0.1	20	
Capparis lasiantha	0.1	50	
Cymbopogon ambiguus	0.1	20	
Dodonaea lanceolata var. *lanceolata*	0.1	110	
Duperreya commixta	0.1	50	
Enneapogon sp.	0.1	15	
Eremophila forrestii subsp. *forrestii*	5	120	
Eremophila latrobei subsp. *latrobei*	0.1	60	
Eriachne mucronata	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	1	600	
Psydrax suaveolens	0.1	70	
Ptilotus obovatus var. *obovatus*	0.1	40	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	80	
Senna glutinosa subsp. x *luerssenii*	0.1	100	
Senna stricta	1	130	
Sida sp. dark green fruits (*S.* van Leeuwen 2260)	0.1	50	WAREL15-06
Teucrium teucriiflorum	0.1	70	WAREL15-09
Triodia pungens	12	30	
Triodia vanleeuwenii	0.1	15	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-16
Described by	PL/CI	Date	08-Apr-19
Type	Relevé	10 x 60 m	
Central Coordinate	50K 687127 mE	7435613 mN	
Habitat	Gorge, narrow footslopes of hills.		
Soil	Reddish brown sandy clay loam.		
Rock Type	Ironstone.		

Vegetation *Ficus brachypoda*, *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Gossypium robinsonii*, *Grevillea wickhamii* tall open shrubland over *Dodonaea viscosa* subsp. *mucronata* (*Indigofera fractiflexa* subsp. *fractiflexa*) low open shrubland over *Themeda triandra*, *Eriachne mucronata* (typical form), *Cymbopogon ambiguus* very open tussock grassland and *Triodia pungens* scattered hummock grasses.

Veg Condition	Very Good: presence of weeds (**Bidens bipinnata* N=50).
Fire Age	Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	20	
Acacia aptaneura	0.1	400	
Acacia hamersleyensis	0.1	190	
Acacia maitlandii	0.1	120	
Acacia pyrifolia var. *pyrifolia*	0.1	120	
Aristida burbidgeae	0.1	70	
Bidens bipinnata	0.1	40	
Capparis lasiantha	0.1	100	
Capparis spinosa subsp. *nummularia*	0.1	60	
Cheilanthes brownii	0.1	15	WAREL16-02
Clerodendrum floribundum var. *angustifolium*	0.1	80	
Corymbia hamersleyana	1	500	
Cucumis variabilis	0.1	60	
Cymbopogon ambiguus	0.5	110	
Digitaria ammophila	0.1	70	
Dodonaea viscosa subsp. *mucronata*	1.5	90	
Duperreya commixta	0.1	90	
Eremophila jucunda subsp. *pulcherrima*	0.1	70	
Eriachne mucronata (typical form)	0.5	40	
Eucalyptus leucophloia subsp. *leucophloia*	1	700	
Euphorbia trigonosperma	0.1	25	WAREL16-01
Evolvulus alsinoides var. *villosicalyx*	0.1	25	
Ficus brachypoda	2	400	
Glycine canescens	0.1	60	
Gossypium robinsonii	2	300	
Grevillea wickhamii	1	320	
Hakea chordophylla	0.1	110	
Indigofera fractiflexa subsp. *fractiflexa*	0.5	70	
Jasminum didymum subsp. *lineare*	0.1	90	
Marsdenia australis	0.1	25	
Olearia xerophila	0.1	50	
Ptilotus obovatus var. *obovatus*	0.1	70	
Santalum lanceolatum	0.1	240	
Senna ferraria	0.1	150	
Senna glutinosa subsp. *glutinosa*	0.1	160	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	40	
Solanum horridum	0.1	40	
Themeda triandra	1	70	
Triodia pungens	0.1	40	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	0.1	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-17
Described by	PL/CI	Date	09-Apr-19
Type	Relevé	50 x 50 m	
Central Coordinate	50K 676290 mE	7429383 mN	
Habitat	Plain, undulating valley south of Mt. Ella.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone.		
Vegetation	*Acacia aptaneura*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low open forest over *Eremophila forrestii* subsp. *forrestii* low open shrubland over *Triodia pungens* very open hummock grassland and *Enneapogon lindleyanus*, (*Digitaria ammophila*) very open tussock grassland.		
Veg Condition	Very Good: presence of weeds (**Bidens bipinnata*, N=500).		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Abutilon otocarpum	0.1	25	
Acacia aneura	0.1	160	
Acacia aptaneura	45	700	
Acacia catenulata subsp. *occidentalis*	0.1	40	WAREL17-01
Acacia pruinocarpa	0.1	200	
Aristida contorta	0.1	25	
Bidens bipinnata	0.1	40	
Capparis lasiantha	0.1	260	
Cheilanthes sieberi subsp. *sieberi*	0.1	25	
Chrysopogon fallax	0.1	70	
Cymbopogon obtectus	0.1	80	
Digitaria ammophila	0.5	40	
Duperreya commixta	0.1	80	
Enneapogon lindleyanus	2	40	
Enneapogon polyphyllus	0.1	20	
Eremophila forrestii subsp. *forrestii*	2	160	
Eucalyptus leucophloia subsp. *leucophloia*	0.5	600	
Evolvulus alsinoides var. *villosicalyx*	0.1	20	
Fimbristylis dichotoma	0.1	20	
Hakea lorea subsp. *lorea*	0.1	100	
Hibiscus sturtii var. *platychlamys*	0.1	80	
Maireana planifolia	0.1	60	
Maireana villosa	0.1	40	
Nicotiana sp.	0.1	40	
Peripleura hispidula var. *hispidula*	0.1	40	
Psydrax suaveolens	0.1	140	
Ptilotus obovatus var. *obovatus*	0.1	70	
Rhagodia eremaea	0.1	170	
Senna artemisioides subsp. *helmsii*	0.1	50	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna glaucifolia	0.1	80	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	40	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	90	
Solanum lasiophyllum	0.1	50	
Teucrium teucriiflorum	0.1	50	
Themeda triandra	0.1	70	
Triodia pungens	7	40	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-18
Described by	PL/CI	Date	08-Apr-19
Type	Relevé	25 x 100 m	
Central Coordinate	50K 689012 mE	7435934 mN	
Habitat	Minor/moderate drainage.		
Soil	Reddish brown sandy clay loam.		
Rock Type	Ironstone.		

Vegetation *Corymbia hamersleyana* low open woodland and *Eucalyptus gamophylla* scattered low mallees over *Petalostylis labicheoides* scattered tall shrubs over *Acacia monticola*, *Androcalva luteiflora*, (*Gastrolobium grandiflorum*, *Dodonaea lanceolata* var. *lanceolata*) shrubland over *Triodia pungens* very open hummock grassland and *Themeda triandra* very open tussock grasses.

Veg Condition Excellent.

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Acacia adoxa var. *adoxa*	0.1	40	
Acacia bivenosa (wispy/weeping form)	0.1	110	
Acacia cowleana	0.1	140	
Acacia maitlandii	0.1	180	
Acacia monticola	6	170	
Androcalva luteiflora	4	140	
Aristida contorta	0.1	20	
Aristida holathera var. *holathera*	0.1	60	
Capparis lasiantha	0.1	50	
Corchorus lasiocarpus subsp. *parvus*	0.1	50	
Corymbia hamersleyana	6	700	
Dodonaea lanceolata var. *lanceolata*	0.5	150	
Duperreya commixta	0.1	140	
Enneapogon robustissimus	0.1	60	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus gamophylla	1	400	
Eulalia aurea	0.1	70	
Eulalia aurea	0.1	70	WAREL18-01
Gastrolobium grandiflorum	1	190	
Goodenia stobbsiana	0.1	40	
Gossypium robinsonii	0.1	100	
Indigofera monophylla	0.1	40	
Panicum effusum	0.1	30	
Paraneurachne muelleri	0.1	40	
Petalostylis labicheoides	0.1	210	
Pterocaulon sphacelatum	0.1	50	
Rhagodia eremaea	0.1	50	
Santalum lanceolatum	0.1	190	
Seringia *elliptica*	0.1	50	
Sida cardiophylla	0.1	60	
Themeda triandra	6	90	
Triodia pungens	8	50	
Triodia vanleeuwenii	0.1	25	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-19
Described by	PL/CI	Date	10-Apr-19
Type	Relevé	15 x 100 m	
Central Coordinate	50K 693931 mE	7442763 mN	
Habitat	Minor-moderate drainage.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone.		

Vegetation *Eucalyptus xerothermica* low open woodland over *E. trivalva* low open mallee woodland over *Acacia bivenosa* (wispy weeping form) scattered tall shrubs over *Androcalva luteiflora* open shrubland over *Abutilon cunninghamii* scattered low shrubs over *Themeda triandra* open tussock grassland and *Triodia longiceps*, *T. pungens* very open hummock grassland.

Veg Condition Very Good: signs of cattle (1 x scat).

Fire Age Burnt 3-5 years ago.

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	1	90	
Acacia bivenosa (wispy/weeping form)	1	400	
Acacia dictyophleba	0.1	70	
Acacia sibirica	0.1	190	
Androcalva luteiflora	2	120	
Aristida holathera var. *holathera*	0.1	40	
Boerhavia coccinea	0.1	30	
Corchorus lasiocarpus subsp. *parvus*	0.1	60	
Crotalaria medicaginea var. *neglecta*	0.1	40	
Cymbopogon ambiguus	0.1	70	
Cymbopogon ambiguus	0.1	90	
Cymbopogon obtectus	0.1	70	
Duperreya commixta	0.1	90	
Enneapogon caerulescens	0.1	40	
Enneapogon robustissimus	0.1	80	
Eragrostis desertorum	0.1	40	WAREL19-02
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus trivalva	2	250	
Eucalyptus xerothermica	4	600	
Eulalia aurea	0.1	50	
Euphorbia biconvexa	0.1	40	WAREL19-05
Gossypium australe	0.1	30	
Gossypium robinsonii	0.1	90	
Hibiscus sturtii var. *platychlamys*	0.1	50	
Indigofera monophylla	0.1	40	
Jasminum didymum subsp. *lineare*	0.1	110	
Marsdenia australis	0.1	40	WAREL19-04
Melhania oblongifolia	0.1	40	
Paraneurachne muelleri	0.1	40	
Paspalidium rarum	0.1	40	WAREL19-03
Polymeria ambigua	1	25	
Pterocaulon sphacelatum	0.1	25	
Rhynchosia minima	0.1	25	
Santalum lanceolatum	0.1	105	
Scaevola amblyanthera var. *centralis*	0.1	25	WAREL19-01
Scaevola parvifolia subsp. *pilbarae*	0.1	30	
Senna artemisioides subsp. *oligophylla*	0.1	60	
Senna artemisioides subsp. x *artemisioides*	0.1	60	
Senna pleurocarpa var. *angustifolia*	0.1	40	
Sida fibulifera	0.1	25	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	40	
Themeda triandra	20	90	
Triodia longiceps	1.5	60	WAREL19-06
Triodia pungens	1	50	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-20
Described by	PL/CI	Date	10-Apr-19
Type	Relevé	15 x 110 m	
Central Coordinate	50K 693693 mE	7443037 mN	
Habitat	Moderate drainage.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus xerothermica* low open woodland over *E. trivalva*, *E. socialis* subsp. *eucentrica* low open mallee woodland over *Petalostylis labicheoides* tall open shrubland over *Androcalva luteiflora* scattered shrubs over *Gossypium sturtianum* scattered low shrubs over *Eulalia* sp. Three Rivers Station (*B.*Forsyth AQ789133), *Themeda triandra* tussock grassland and *Polymeria ambigua* scattered herbs.		
Veg Condition	Very Good: presence of weeds (**Malvastrum americanum* N=2) and signs of cattle (tracks).		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon cunninghamii	0.1	60	
Acacia bivenosa (wispy/weeping form)	0.1	210	
Acacia dictyophleba	0.1	160	
Androcalva luteiflora	1.5	190	
Capparis lasiantha	0.1	60	
Chrysocephalum apiculatum subsp. pilbarense	0.1	40	WAREL20-01
Cucumis variabilis	0.1	90	
Cullen pogonocarpum	0.1	25	WAREL20-02
Duperreya commixta	0.1	210	
Eremophila longifolia	0.1	80	
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus socialis subsp. *eucentrica*	2	320	
Eucalyptus trivalva	2	250	
Eucalyptus xerothermica	5	700	
Eulalia sp. (Three Rivers Station, *B.*Forsyth AQ6789133)	20	40	
Euphorbia biconvexa	0.1	40	REL19-05=
Evolvulus alsinoides var. *decumbens*	0.1	25	
Glycine canescens	0.1	60	
Goodenia muelleriana	0.1	25	
Gossypium robinsonii	0.1	70	
Gossypium sturtianum var. *sturtianum*	0.5	90	
Jasminum didymum subsp. *lineare*	0.1	110	
Malvastrum americanum	0.1	40	
Petalostylis labicheoides	2	220	
Polymeria ambigua	0.5	25	
Pterocaulon sphacelatum	0.1	40	
Rhynchosia minima	0.1	40	
Senna artemisioides subsp. x *artemisioides*	0.1	70	
Sida fibulifera	0.1	30	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	70	
Themeda triandra	12	90	
Triodia longiceps	0.1	60	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-21
Described by	BRMTB	Date	11-Apr-19
Type	Relevé	10 x 150 m	
Central Coordinate	50K 693539 mE	7440554 mN	
Habitat	Minor creek (5 m); bed and banks, + floodbank.		
Soil	Reddish brown sandy loam (bed sandier).		
Rock Type	Basalt, chert, ironstone.		
Vegetation	*Eucalyptus xerothermica* low open woodland over *Melaleuca bracteata*, *Acacia dictyophleba* tall open scrub over *Androcalva luteiflora* open shrubland over *Themeda triandra*, (*Cymbopogon ambiguus*, *Eulalia aurea*) tussock grassland and *Triodia longiceps* hummock grassland.		
Veg Condition	Very Good: Presence of weeds (**Bidens bipinnata*).		
Fire Age	Very long unburnt.		

Species	Cover	Height (cm)	Specimen
Abutilon amplum	0.1	60	WAREL21-04
Acacia bivenosa (wispy/weeping form)	0.1	160	
Acacia dictyophleba	18	300	
Acacia inaequilatera	0.1	15	
Acacia pachyacra	0.1	130	WAREL21-14
Androcalva luteiflora	2	180	WAREL21-01
Aristida lazaridis	0.1	90	WAREL21-05
Bidens bipinnata	0.1	10	
Boerhavia coccinea	0.1	15	WAREL21-11
Corchorus lasiocarpus subsp. *parvus*	0.1	20	WAREL21-12
Cymbopogon ambiguus	2	70	
Digitaria brownii	0.1	70	WAREL21-13
Duperreya commixta	0.1	80	
Eucalyptus gamophylla	0.1	250	
Eucalyptus socialis subsp. *eucentrica*	0.1	400	WAREL21-12
Eucalyptus xerothermica	8	400	
Eulalia aurea	1	30	
Glycine canescens	0.1	100	
Goodenia muelleriana	0.1	10	WAREL21-06
Gossypium sturtianum var. *sturtianum*	0.1	110	
Jasminum didymum subsp. *lineare*	0.1	30	
Melaleuca bracteata	18	400	WAREL21-02
Pterocaulon sphacelatum	0.1	40	
Rhynchosia minima	0.1	40	
Santalum lanceolatum	0.1	130	
Senna artemisioides subsp. x *artemisioides*	0.1	170	WAREL21-07
Senna pleurocarpa var. *angustifolia*	0.1	110	WAREL21-10
Themeda triandra	35	60	
Triodia longiceps	35	50	
Triodia pungens	0.1	90	
Triodia wiseana	0.1	30	
Ventilago viminalis	0.1	200	WAREL21-08



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-22
Described by	SCSS	Date	12-Apr-19
Type	Relevé	50 x 50 m	
Central Coordinate	50K 690325 mE	7439987 mN	
Habitat	Claypan.		
Soil	Reddish brown clay, some small patches of cracking clay through broader unit.		
Rock Type	Ironstone; gravel 1-25%.		
Vegetation	*Acacia aptaneura*, *Eucalyptus xerothermica* low open woodland over *Eremophila forrestii* subsp. *forrestii*, (*Eremophila longifolia*) open shrubland over *Themeda triandra* open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon fraseri subsp. *fraseri*	0.1	10	WA26=A
Abutilon fraseri subsp. *fraseri*	0.1	60	WA26=B
Acacia aptaneura	1	400	WAREL22-02
Acacia aptaneura	3	500	WAREL22-01
Acacia bivenosa	0.1	120	
Acacia maitlandii	0.1	60	
Acacia tetragonophylla	0.1	180	
Androcalva luteiflora	0.1	130	
Aristida contorta	0.1	15	
Capparis lasiantha	0.1	50	
Cucumis variabilis	0.1	100	
Cullen leucanthum	0.1	80	WAREL22-03
Cymbopogon ambiguus	0.1	50	
Digitaria brownii	0.1	20	
Dipteracanthus australasicus subsp. *australasicus*	0.1	30	
Duperreya commixta	0.1	100	
Enneapogon caerulescens	0.1	15	
Enneapogon robustissimus	0.1	50	
Enteropogon ramosus	0.1	70	WAREL22-05
Eremophila forrestii subsp. *forrestii*	0.1	120	
Eremophila longifolia	0.1	90	
Eucalyptus xerothermica	1	600	
Evolvulus alsinoides var. *villosicalyx*	0.1	10	
Gossypium australe	0.1	40	
Hakea lorea subsp. *lorea*	0.1	300	
Hibiscus burtonii	0.1	50	
Jasminum didymum subsp. *lineare*	0.1	50	
Paraneurachne muelleri	0.1	30	
Pterocaulon sphacelatum	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	40	
Rhagodia eremaea	0.1	70	
Rhynchosia minima	0.1	15	
Salsola australis	0.1	20	
Santalum lanceolatum	0.1	150	
Sclerolaena cornishiana	0.1	20	
Senna artemisioides subsp. *oligophylla* x subsp. *helmsii*	0.1	50	
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	15	WA26=C
Sida sp. L (*A.M.* Ashby 4202) PN	0.1	20	WAREL22-04
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	50	
Solanum lasiophyllum	0.1	50	
Themeda triandra	12	70	
Triodia wiseana	0.1	30	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-23
Described by	BRMTB	Date	12-Apr-19
Type	Relevé	15 x 150 m	
Central Coordinate	50K 691686 mE	7442720 mN	
Habitat	Minor creek line, broad shallow bed, banks, and floodbanks.		
Soil	Reddish brown sandy loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus xerothermica* low open woodland over *Gossypium robinsonii* tall open shrubland over *Acacia pyrifolia* subsp. *pyrifolia* shrubland over *Themeda triandra* tussock grassland.		
Veg Condition	Very Good: presence of weeds (**Malvastrum americanum*) and signs of cattle (tracks).		
Fire Age	No sign of recent fire.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	180	WAREL23-04
Acacia bivenosa (wispy/weeping form)	0.1	50	
Acacia maitlandii	0.1	40	
Acacia pyrifolia var. *pyrifolia*	15	150	
Achyranthes aspera	0.1	110	WAREL23-03
Androcalva luteiflora	0.1	120	REL21-01=
Capparis lasiantha	0.1	90	
Cleome viscosa	0.1	60	
Corchorus lasiocarpus subsp. *parvus*	0.1	30	
Cymbopogon ambiguus	0.1	70	
Dipteracanthus australasicus subsp. *australasicus*	0.1	30	
Duperreya commixta	0.1	130	
Enneapogon lindleyanus	0.1	40	
Enneapogon robustissimus	0.1	60	WAREL23-02
Eriachne mucronata (typical form)	0.1	40	
Eucalyptus xerothermica	3	650	
Gossypium robinsonii	8	230	
Hakea lorea subsp. *lorea*	0.1	70	
Indigofera monophylla	0.1	30	
Isotropis sp. Arid zone (G. Byrne 2775) PN	0.1	50	WAREL23-01
Jasminum didymum subsp. *lineare*	0.1	50	
Malvastrum americanum	0.1	90	
Paraneurachne muelleri	0.1	30	
Petalostylis labicheoides	0.1	260	
Polycarpaea longiflora	0.1	40	
Pterocaulon sphacelatum	0.1	40	
Ptilotus exaltatus	0.1	20	
Ptilotus obovatus var. *obovatus*	0.1	70	
Santalum lanceolatum	0.1	60	
Senna artemisioides subsp. x *artemisioides*	0.1	50	REL21-07=
Sida fibulifera	0.1	20	WAREL23-05
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	25	
Sida sp. spiciform panicles (*E.* Leyland s.n. 14/8/90)	0.1	60	
Solanum lasiophyllum	0.1	60	
Spermacoce brachystema	0.1	70	WA33-04=
Tephrosia rosea var. Fortescue creeks (*M.*I.H. Brooker 2186)	0.1	35	
Themeda triandra	50	90	
Triodia pungens	0.1	60	
Triodia wiseana	0.1	20	
Ventilago viminalis	0.1	130	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-24
Described by	SCSS	Date	11-Apr-19
Type	Relevé	15 x 125 m	
Central Coordinate	50K 689320 mE	7441329 mN	
Habitat	Drainage on hilltop.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Acacia monticola*, *Gossypium robinsonii*, (*Santalum lanceolatum*, *Dodonaea lanceolata* var. *lanceolata*) open shrubland over *Themeda triandra* tussock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	80	WAREL24-04
Acacia bivenosa	0.1	50	
Acacia maitlandii	0.1	110	
Acacia monticola	2	100	
Acacia pruinocarpa	0.1	80	
Acacia pyrifolia var. *pyrifolia*	0.1	60	
Androcalva luteiflora	1	120	
Capparis lasiantha	0.1	50	
Clerodendrum floribundum var. *angustifolium*	0.1	50	
Corchorus lasiocarpus (subsp. not determined)	0.1	30	
Corymbia hamersleyana	3	400	
Cymbopogon ambiguus	0.1	50	
Dodonaea lanceolata var. *lanceolata*	1	100	
Duperreya commixta	0.1	20	
Enneapogon lindleyanus	0.1	50	
Eremophila jucunda subsp. *pulcherrima*	0.1	30	
Eriachne mucronata	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	5	500	
Euphorbia trigonosperma	0.1	10	WAREL24-01
Glycine canescens	0.1	20	WAREL24-03
Goodenia stobbsiana	0.1	10	
Gossypium robinsonii	2	150	
Hakea chordophylla	0.1	200	
Hibiscus coatesii	0.1	10	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	30	
Indigofera gilesii	0.1	40	WAREL24-05
Jasminum didymum subsp. *lineare*	0.1	60	
Paraneurachne muelleri	0.1	20	
Petalostylis labicheoides	0.1	200	
Santalum lanceolatum	1	120	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	10	
Solanum lasiophyllum	0.1	30	
Solanum sp.	0.1	10	
Tephrosia oxalidea	0.1	10	
Themeda triandra	25	60	
Triodia pungens	5	20	
Triodia wiseana	20	20	



West Angelas Beyond 2020 Beyond 2020 Phase 2		Site	WAREL-25
Described by	SCSS	Date	11-Apr-19
Type	Relevé	15 x 125 m	
Central Coordinate	50K 689693 mE	7441275 mN	
Habitat	Drainage on hilltop range.		
Soil	Reddish brown clay loam.		
Rock Type	Ironstone; cobble 1-25%, pebble 26-50%, gravel 1-25%.		
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia*, (*Corymbia hamersleyana*) low woodland over *Gossypium robinsonii*, *Acacia monticola*, *Petalostylis labicheoides*, *Androcalva luteiflora* open shrubland over *Themeda triandra* open tussock grassland over *Triodia wiseana*, *T. pungens* open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 1-2 years ago.		

Species	Cover	Height (cm)	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN	0.1	80	WAREL24-04
Acacia bivenosa	0.1	50	
Acacia maitlandii	0.1	110	
Acacia monticola	2	100	
Acacia pruinocarpa	0.1	80	
Acacia pyrifolia var. *pyrifolia*	0.1	60	
Androcalva luteiflora	1	120	
Capparis lasiantha	0.1	50	
Clerodendrum floribundum var. *angustifolium*	0.1	50	
Corchorus lasiocarpus (subsp. not determined)	0.1	30	
Corymbia hamersleyana	3	400	
Cymbopogon ambiguus	0.1	50	
Dodonaea lanceolata var. *lanceolata*	1	100	
Duperreya commixta	0.1	20	
Enneapogon lindleyanus	0.1	50	
Eremophila jucunda subsp. *pulcherrima*	0.1	30	
Eriachne mucronata	0.1	30	
Eucalyptus leucophloia subsp. *leucophloia*	5	500	
Euphorbia trigonosperma	0.1	10	WAREL24-01
Glycine canescens	0.1	20	WAREL24-03
Goodenia stobbsiana	0.1	10	
Gossypium robinsonii	2	150	
Hakea chordophylla	0.1	200	
Hibiscus coatesii	0.1	10	
Indigofera fractiflexa subsp. *fractiflexa*	0.1	30	
Indigofera gilesii	0.1	40	WAREL24-05
Jasminum didymum subsp. *lineare*	0.1	60	
Paraneurachne muelleri	0.1	20	
Petalostylis labicheoides	0.1	200	
Santalum lanceolatum	1	120	
Senna artemisioides subsp. *oligophylla*	0.1	50	
Senna glutinosa subsp. *glutinosa*	0.1	40	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1	20	
Sida sp. Shovelanna Hill (*S.* van Leeuwen 3842)	0.1	10	
Solanum lasiophyllum	0.1	30	
Solanum sp.	0.1	10	
Tephrosia oxalidea	0.1	10	
Themeda triandra	25	60	
Triodia pungens	5	20	
Triodia wiseana	20	20	



Appendix 7

Lists of Vascular Flora Species Recorded from the Study Area Based on all Sampling to Date

† * denotes introduced species. ¥ P = Priority

Family	Species †	Status ¥	Western Hill			Deposit F			Deposit H		Deposit J / Mt Ella East		
			Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys
Acanthaceae	*Dicladanthera forrestii*		✓	✓	✓					✓			
	Dipteracanthus australasicus subsp. *australasicus*		✓	✓	✓	✓			✓	✓	✓		
	Harnieria kempeana subsp. *muelleri*		✓	✓	✓			✓					
	Rostellularia adscendens var. *latifolia*	P3									✓	✓	
Aizoaceae	*Trianthema glossostigmum*		✓		✓								
Amaranthaceae	*Achyranthes aspera*		✓					✓	✓	✓	✓		
	Alternanthera denticulata								✓				
	Alternanthera nana		✓	✓					✓		✓		
	Amaranthus cuspidifolius		✓	✓	✓			✓		✓	✓		
	Amaranthus interruptus		✓	✓									
	Amaranthus mitchellii									✓			
	Amaranthus undulatus								✓				
	Gomphrena canescens subsp. *canescens*		✓		✓								
	Gomphrena cunninghamii		✓	✓	✓						✓	✓	
	Gomphrena kanisii		✓	✓							✓		
	Ptilotus aervoides		✓		✓	✓				✓			
	Ptilotus astrolasius		✓	✓		✓	✓	✓	✓	✓	✓	✓	
	Ptilotus auriculifolius		✓		✓					✓	✓		
	Ptilotus axillaris				✓								
	Ptilotus calostachyus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ptilotus clementii		✓	✓	✓			✓	✓	✓	✓	✓	
	Ptilotus exaltatus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ptilotus fusiformis		✓		✓						✓		
	Ptilotus ? fusiformis									✓			
	Ptilotus gaudichaudii				✓						✓		
	Ptilotus gomphrenoides								✓				
	Ptilotus helipteroides		✓	✓	✓	✓		✓		✓	✓		
	Ptilotus obovatus var. *obovatus*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ptilotus polystachyus		✓		✓			✓		✓			✓
	Ptilotus roei		✓	✓	✓								
	Ptilotus rotundifolius		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ptilotus schwartzii var. *schwartzii*		✓	✓	✓			✓					
	Ptilotus xerophilus		✓		✓			✓					
	Ptilotus sp. (dead; inadequate material)								✓				
Apocynaceae	*Cynanchum floribundum*									✓		✓	
	Cynanchum pedunculatum		✓								✓	✓	
	Cynanchum viminale subsp. *australe*		✓		✓			✓	✓	✓			
	Marsdenia australis		✓	✓			✓		✓		✓	✓	
	Vincetoxicum flexuosum								✓				
	Vincetoxicum lineare		✓	✓			✓	✓	✓		✓	✓	
Araliaceae	*Astrotricha hamptonii*		✓	✓	✓			✓	✓	✓	✓		
	Trachymene oleracea subsp. *oleracea*				✓					✓	✓		
	Trachymene pilbarensis									✓			
Asteraceae	**Bidens bipinnata*	Weed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Brachyscome iberidifolia		✓										
	Calocephalus beardii		✓										
	Calocephalus knappii				✓								

Family	Species †	Status ¥	Western Hill			Deposit F			Deposit H		Deposit J / Mt Ella East		
			Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys
Asteraceae (cont.)	*Centipeda minima* subsp. *macrocephala*		✓						✓				
	Chrysocephalum apiculatum subsp. *pilbarense*			✓					✓		✓	✓	✓
	Chrysocephalum gilesii		✓	✓	✓		✓	✓		✓	✓	✓	
	Chrysocephalum pterochaetum		✓	✓				✓			✓	✓	
	**Conyza bonariensis*	Weed						✓					
	**Flaveria trinervia*	Weed	✓	✓	✓								
	Gnephosis arachnoidea		✓										
	**Lactuca serriola*	Weed											✓
	Leiocarpa semicalva subsp. *semicalva*		✓		✓						✓		
	Olearia fluvialis										✓		
	Olearia mucronata	P3			✓								
	Olearia stuartii		✓	✓	✓	✓		✓	✓		✓	✓	
	Olearia xerophila		✓				✓	✓			✓	✓	
	Peripleura arida				✓			✓		✓			
	Peripleura hispidula var. *hispidula*		✓	✓				✓			✓	✓	
	Peripleura hispidula var. *setosa*				✓			✓		✓			
	Peripleura obovata		✓					✓	✓		✓	✓	
	Peripleura virgata		✓	✓		✓	✓		✓		✓	✓	✓
	Peripleura sp. (inadequate material)						✓						
	Pilbara trudgenii	P3	✓	✓							✓	✓	✓
	Pluchea dentex		✓						✓	✓			
	Pluchea dunlopii		✓	✓		✓			✓	✓			
	Pluchea rubelliflora				✓								
	Pterocaulon serrulatum var. *velutinum*								✓		✓		
	Pterocaulon sphacelatum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Pterocaulon sphaeranthoides		✓	✓	✓								
	Pterocaulon sp. (inadequate material)								✓				
	Rhodanthe charsleyae				✓								
	Rhodanthe citrina									✓			
	Rhodanthe floribunda		✓										
	Rhodanthe humboldtiana		✓										
	Rhodanthe margarethae		✓	✓						✓	✓		
	Rhodanthe polakii		✓										
	Senecio hamersleyensis										✓		
	**Sigesbeckia orientalis*	Weed	✓		✓					✓	✓		
	**Sonchus oleraceus*	Weed						✓			✓		
	Streptoglossa bubakii		✓			✓			✓	✓	✓	✓	
	Streptoglossa decurrens		✓	✓					✓	✓	✓		
	Streptoglossa liatroides				✓								
	Taplinia saxatilis		✓										
	Vittadinia dissecta var. *hirta*										✓		
	Vittadinia eremaea				✓					✓			
Bignoniaceae	*Pandorea pandorana*								✓				
Boraginaceae	*Ehretia saligna* var. *saligna*										✓		
	Halgania gustafsenii (var. not determined)									✓			
	Halgania gustafsenii var. *gustafsenii*												✓
	Halgania gustafsenii var. Mid West (G. Perry 370)					✓	✓	✓	✓		✓	✓	
	Heliotropium chrysocarpum		✓	✓					✓	✓			
	Heliotropium cunninghamii		✓	✓	✓				✓		✓	✓	

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Boraginaceae (cont.)	*Heliotropium heteranthum*		✓								✓		
	Heliotropium inexplicitum		✓	✓	✓	✓				✓	✓	✓	✓
	Heliotropium tanythrix				✓								
	Heliotropium tenuifolium		✓	✓									
	Heliotropium sp. (sterile; inadequate material)			✓					✓			✓	
	Trichodesma zeylanicum var. *zeylanicum*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brassicaceae	*Lepidium catapycnon*	P4	✓							✓			
	Lepidium echinatum		✓										
	Lepidium oxytrichum		✓										
	Lepidium pedicellosum		✓	✓	✓				✓	✓	✓	✓	
	Lepidium phlebopetalum		✓	✓						✓			
	Lepidium pholidogynum							✓		✓			✓
	Menkea villosula		✓										
	Stenopetalum anfractum		✓	✓									
Campanulaceae	*Isotoma petraea*									✓			
	Lobelia heterophylla subsp. *pilbarensis*		✓	✓				✓			✓	✓	
	Wahlenbergia gracilenta		✓										
	Wahlenbergia tumidifructa		✓						✓	✓			
Capparaceae	*Capparis lasiantha*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Capparis mitchellii		✓	✓				✓	✓	✓	✓	✓	
	Capparis spinosa subsp. *nummularia*			✓			✓	✓	✓	✓	✓	✓	
Caryophyllaceae	*Polycarpaea corymbosa* var. *corymbosa*		✓	✓	✓					✓	✓		
	Polycarpaea holtzei										✓		
	Polycarpaea longiflora		✓	✓	✓				✓		✓		
Celastraceae	*Maytenus* sp. Mt Windell (S. van Leeuwen 846)							✓	✓	✓	✓	✓	
	Stackhousia intermedia							✓		✓			✓
	Stackhousia sp. swollen gynophore (W.R. Barker 2041)		✓										
	Stackhousia sp. (inadequate material)				✓								
Chenopodiaceae	*Atriplex codonocarpa*		✓	✓									
	Dissocarpus paradoxus									✓			
	Dysphania glomulifera subsp. *eremaea*		✓		✓								
	Dysphania kalpari				✓			✓		✓			✓
	Dysphania melanocarpa forma leucocarpa										✓		
	Dysphania rhadinostachya subsp. *inflata*		✓										
	Dysphania rhadinostachya subsp. *rhadinostachya*		✓		✓			✓		✓	✓		✓
	Dysphania rhadinostachya (sterile; subsp. not determined)		✓								✓		
	Dysphania saxatilis		✓	✓									
	Dysphania sp. (seedlings; inadequate material)								✓				
	Enchylaena tomentosa var. *tomentosa*		✓	✓	✓		✓	✓	✓	✓	✓	✓	
	Maireana georgei		✓	✓		✓	✓	✓	✓	✓			
	Maireana lanosa									✓			
	Maireana melanocoma		✓										
	Maireana planifolia		✓	✓	✓	✓		✓	✓	✓	✓	✓	
	Maireana planifolia x villosa		✓	✓		✓			✓		✓		
	Maireana tomentosa subsp. *tomentosa*		✓										
	Maireana triptera		✓	✓						✓			
	Maireana villosa		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Rhagodia eremaea		✓	✓	✓		✓	✓	✓	✓	✓	✓	
	Rhagodia sp. Hamersley (M. Trudgen 17794)	P3	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

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Chenopodiaceae (cont.)	*Salsola australis*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sclerolaena convexula		✓										
	Sclerolaena cornishiana		✓	✓	✓			✓	✓	✓	✓	✓	
	Sclerolaena densiflora		✓	✓		✓							
	Sclerolaena deserticola				✓								
	Sclerolaena eriacantha		✓	✓	✓								
	Sclerolaena tetragona				✓								
	Sclerolaena sp. (inadequate material)				✓								
Cleomaceae	*Cleome oxalidea*				✓								
	Cleome viscosa		✓	✓	✓			✓	✓	✓	✓	✓	
Convolvulaceae	*Convolvulus clementii*		✓	✓						✓			
	Duperreya commixta		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Evolvulus alsinoides var. *decumbens*								✓	✓			
	Evolvulus alsinoides var. *villosicalyx*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Ipomoea muelleri		✓	✓									
	Ipomoea plebeia			✓					✓				
	Polymeria ambigua								✓	✓			
Cucurbitaceae	*Cucumis variabilis*		✓	✓	✓		✓		✓	✓	✓	✓	✓
Cupressaceae	*Callitris columellaris*		✓	✓					✓		✓	✓	
Cyperaceae	*Bulbostylis barbata*		✓		✓			✓		✓			
	Bulbostylis turbinata				✓								
	Cyperus cunninghamii subsp. *cunninghamii*		✓	✓					✓	✓		✓	
	Cyperus vaginatus								✓				
	Fimbristylis dichotoma		✓	✓	✓	✓		✓	✓	✓	✓	✓	
	Fimbristylis simulans		✓		✓								
	Fimbristylis sp. (dead; inadequate material)								✓				
Elatinaceae	*Bergia pedicellaris*		✓										
	Bergia trimera		✓		✓								
Euphorbiaceae	*Adriana tomentosa* var. *tomentosa*									✓			
	Euphorbia alsiniflora							✓		✓			✓
	Euphorbia australis (var. not determined)				✓					✓			✓
	Euphorbia australis var. *hispidula*		✓		✓	✓		✓			✓		
	Euphorbia australis var. *subtomentosa*		✓	✓	✓	✓					✓		
	Euphorbia biconvexa		✓	✓	✓			✓	✓	✓	✓		
	Euphorbia boophthona		✓	✓	✓	✓				✓	✓		✓
	Euphorbia careyi								✓				
	Euphorbia coghlanii		✓	✓									
	Euphorbia drummondii		✓			✓		✓		✓	✓	✓	✓
	Euphorbia tannensis subsp. *eremophila*		✓	✓	✓			✓			✓		✓
	Euphorbia trigonosperma			✓			✓		✓		✓		
	Euphorbia sp. (*biconvexa/coghlanii/trigonosperma;* sterile)		✓	✓	✓						✓		
	Euphorbia sp. (*boophthona/tannensis*)								✓				
	Euphorbia sp. (inadequate material)					✓						✓	
Fabaceae	*Acacia adoxa* var. *adoxa*					✓	✓	✓			✓	✓	✓
	Acacia adsurgens		✓	✓	✓	✓	✓	✓			✓	✓	✓
	Acacia aff. *adsurgens*							✓					
	Acacia ancistrocarpa		✓	✓	✓			✓	✓				
	Acacia aneura		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	Acacia 'aneura' sens. lat. (juvenile)		✓	✓		✓					✓	✓	

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Fabaceae (cont.)	*Acacia aneura x*				✓								
	Acacia aptaneura		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia aptaneura x aneura							✓					
	Acacia atkinsiana		✓	✓				✓	✓				
	Acacia ayersiana		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Acacia ayersiana (narrow phyllode variant)		✓	✓		✓	✓		✓				
	Acacia ayersiana x incurvaneura				✓								
	Acacia ayersiana x				✓								
	Acacia bivenosa		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia bivenosa (wispy/weeping form)					✓	✓		✓				
	Acacia bromilowiana	P4						✓			✓	✓	✓
	Acacia catenulata subsp. *occidentalis*		✓	✓	✓	✓	✓	✓	✓		✓	✓	
	Acacia ? catenulata subsp. *occidentalis*									✓			
	Acacia citrinoviridis		✓	✓	✓			✓					
	Acacia coriacea				✓								
	Acacia cowleana		✓	✓		✓	✓	✓			✓	✓	
	Acacia dictyophleba		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Acacia effusa	P3											✓
	Acacia eriopoda			✓									
	Acacia fuscaneura				✓								
	Acacia hamersleyensis		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia hilliana								✓				
	Acacia inaequilatera				✓	✓	✓		✓	✓			
	Acacia incurvaneura		✓	✓	✓					✓	✓	✓	
	Acacia kempeana					✓	✓	✓	✓			✓	
	Acacia macraneura		✓	✓				✓	✓	✓	✓		
	Acacia maitlandii		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia marramamba		✓	✓	✓						✓	✓	✓
	Acacia monticola		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Acacia mulganeura		✓								✓		
	Acacia pachyacra		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia pruinocarpa		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia pteraneura		✓	✓				✓		✓			
	Acacia pyrifolia var. *pyrifolia*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia rhodophloia		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Acacia sibirica		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia sibirica (linear form)		✓	✓		✓	✓	✓	✓		✓	✓	
	Acacia ? sibirica							✓					
	Acacia steedmanii subsp. *borealis*					✓	✓	✓		✓	✓	✓	✓
	Acacia synchronicia		✓	✓	✓	✓	✓		✓	✓			
	Acacia tenuissima		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Acacia tetragonophylla		✓	✓	✓	✓	✓	✓	✓	✓			
	Acacia trudgeniana		✓	✓	✓								
	Acacia wanyu		✓	✓	✓								
	Acacia sp. (inadequate material; possibly hybrid of *A. cowleana*)			✓								✓	
	Cajanus cinereus								✓				
	Crotalaria medicaginea var. *neglecta*		✓	✓	✓				✓		✓		
	Crotalaria novae-hollandiae subsp. *novae-hollandiae*									✓			
	Cullen leucanthum								✓				

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Fabaceae (cont.)	*Cullen leucochaites*		✓	✓	✓					✓	✓	✓	
	Cullen pogonocarpum		✓		✓				✓		✓		
	Cullen sp. (inadequate material)				✓								
	Gastrolobium grandiflorum		✓	✓		✓	✓	✓			✓	✓	✓
	Glycine canescens		✓	✓			✓	✓	✓		✓	✓	
	Gompholobium oreophilum					✓	✓	✓	✓	✓	✓	✓	✓
	Indigofera colutea		✓	✓									
	Indigofera fractiflexa subsp. *fractiflexa*					✓	✓	✓	✓	✓	✓		
	Indigofera georgei		✓	✓	✓			✓	✓	✓	✓	✓	
	Indigofera gilesii	P3			✓			✓	✓	✓	✓	✓	✓
	Indigofera linnaei			✓									
	Indigofera monophylla		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Indigofera rugosa				✓				✓	✓			
	Isotropis atropurpurea							✓					
	Isotropis parviflora	P2	✓	✓	✓						✓	✓	
	Isotropis sp. Arid zone (G. Byrne 2775)		✓	✓	✓			✓	✓	✓			
	Mirbelia viminalis					✓	✓	✓	✓	✓	✓	✓	
	Petalostylis labicheoides		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Rhynchosia minima		✓	✓		✓		✓	✓	✓	✓	✓	✓
	Senna artemisioides subsp. *filifolia*		✓	✓	✓	✓				✓	✓		
	Senna artemisioides subsp. *helmsii*		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Senna artemisioides subsp. *oligophylla*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Senna artemisioides subsp. *oligophylla* (form with thinly sericeous leaves)			✓					✓			✓	
	Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*		✓	✓		✓	✓	✓	✓		✓	✓	
	Senna artemisioides subsp. *oligophylla x S. ferraria*			✓									
	Senna artemisioides subsp. *oligophylla x S. stricta*											✓	
	Senna artemisioides subsp. *x artemisioides*		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Senna artemisioides subsp. *x artemisioides x S. stricta*											✓	
	Senna artemisioides subsp. *x sturtii*							✓					
	Senna ferraria		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Senna ferraria x S. artemisioides subsp. *oligophylla*										✓		
	Senna ferraria x S. glutinosa subsp. *glutinosa*		✓										
	Senna ferraria x								✓				
	Senna glaucifolia		✓	✓	✓	✓	✓	✓	✓		✓	✓	
	Senna glaucifolia x S. artemisioides subsp. *helmsii*			✓									
	Senna glaucifolia x S. glutinosa subsp. *glutinosa*							✓	✓				
	Senna glaucifolia x											✓	
	Senna glutinosa subsp. *chatelainiana*		✓	✓									
	Senna glutinosa subsp. *glutinosa*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Senna glutinosa subsp. *glutinosa x S. stricta*										✓		
	Senna glutinosa subsp. *glutinosa x* subsp. *x luerssenii*		✓	✓	✓								
	Senna glutinosa subsp. *glutinosa x*								✓				
	Senna glutinosa subsp. *x luerssenii*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Senna glutinosa subsp. *x luerssenii x*			✓								✓	
	Senna glutinosa subsp. *pruinosa*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*										✓	✓	
	Senna glutinosa subsp. *pruinosa x* subsp. *x luerssenii*			✓									
	Senna glutinosa subsp. *pruinosa x*											✓	

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Fabaceae (cont.)	*Senna notabilis*		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Senna pleurocarpa var. *angustifolia*		✓					✓	✓		✓	✓	
	Senna sp. Karijini (M.E. Trudgen 10392)						✓					✓	
	Senna sp. Meekatharra (E. Bailey 1-26)		✓			✓	✓	✓	✓		✓	✓	
	Senna stricta		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Senna stricta x S. glutinosa subsp. *x luerssenii*							✓					
	Senna stricta x		✓	✓									
	Senna venusta		✓						✓		✓		
	Senna sp.				✓					✓			
	Swainsona kingii									✓			
	Swainsona maccullochiana		✓	✓	✓				✓	✓			
	Swainsona sp. (dead; inadequate material)			✓									
	Templetonia egena		✓	✓					✓		✓	✓	
	Tephrosia densa		✓	✓	✓								
	Tephrosia oxalidea		✓	✓					✓		✓	✓	
	Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)		✓	✓	✓				✓		✓	✓	
	Tephrosia supina				✓								
	Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)		✓										
	Tephrosia sp. Newman (A.A. Mitchell PRP 29)				✓								
	Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)			✓					✓				
	**Vachellia farnesiana*	Weed							✓				
	Vigna lanceolata var. *lanceolata*								✓				
	Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)		✓	✓					✓	✓			
Goodeniaceae	*Brunonia australis*												✓
	Brunonia sp. Long hairs (D.E. Symon 2440)		✓		✓	✓		✓			✓	✓	
	Dampiera candicans		✓	✓					✓	✓	✓	✓	
	Goodenia cusackiana		✓		✓						✓	✓	
	Goodenia microptera		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
	Goodenia muelleriana		✓	✓		✓		✓	✓	✓	✓		
	Goodenia nuda	P4				✓							
	Goodenia prostrata		✓		✓								
	Goodenia scaevolina									✓			
	Goodenia stellata		✓	✓	✓			✓	✓		✓		✓
	Goodenia stobbsiana		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Goodenia tenuiloba		✓		✓								
	Goodenia triodiophila		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Scaevola acacioides		✓	✓	✓						✓	✓	✓
	Scaevola amblyanthera var. *centralis*								✓				
	Scaevola browniana subsp. *browniana*							✓		✓			
	Scaevola parvifolia subsp. *pilbarae*		✓			✓	✓	✓	✓	✓	✓	✓	✓
	Scaevola spinescens							✓	✓	✓	✓	✓	
	Scaevola spinescens (broad form)										✓	✓	
	Scaevola sp. Mt Bruce (M.E. Trudgen 1333)					✓	✓		✓		✓	✓	
	Velleia connata		✓		✓								
Gyrostemonaceae	*Codonocarpus cotinifolius*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Haloragaceae	*Haloragis gossei* var. *gossei*		✓		✓					✓			
	Haloragis gossei var. *inflata*									✓			
	Haloragis trigonocarpa				✓								
Hemerocallidaceae	*Tricoryne* sp. Hamersley Range (S. van Leeuwen 915)								✓	✓	✓		

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			Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys
Lamiaceae	*Clerodendrum floribundum* var. *angustifolium*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)								✓	✓	✓	✓	
	Prostanthera albiflora		✓		✓			✓			✓		
	Teucrium disjunctum								✓		✓		
	Teucrium teucriiflorum								✓	✓	✓	✓	
Lauraceae	*Cassytha capillaris*								✓	✓	✓	✓	
	Cassytha filiformis				✓						✓		
Loranthaceae	*Amyema fitzgeraldii*		✓	✓					✓		✓	✓	
	Amyema miquelii								✓		✓		
	Amyema sanguinea var. *pulchra*		✓		✓			✓			✓	✓	
	Diplatia grandibractea								✓				
Lythraceae	*Ammannia baccifera*		✓										
	Ammannia multiflora		✓						✓				
Malvaceae	*Abutilon amplum*		✓	✓					✓	✓			
	Abutilon cryptopetalum		✓						✓	✓			
	Abutilon cunninghamii					✓	✓	✓	✓	✓	✓	✓	
	Abutilon fraseri subsp. *fraseri*		✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Abutilon lepidum		✓	✓	✓	✓		✓		✓	✓		
	Abutilon leucopetalum			✓									✓
	Abutilon macrum				✓						✓	✓	
	Abutilon otocarpum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)		✓	✓									
	Abutilon sp. Dioicum (A.A. Mitchell PRP 1618) PN		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Abutilon sp. Pilbara (W.R. Barker 2025) PN							✓					✓
	Abutilon sp. (sterile; juvenile)		✓		✓					✓			
	Androcalva luteiflora		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Brachychiton acuminatus		✓	✓							✓	✓	
	Brachychiton gregorii										✓		
	Corchorus crozophorifolius		✓	✓	✓						✓	✓	
	Corchorus lasiocarpus subsp. *lasiocarpus*		✓						✓		✓	✓	
	Corchorus lasiocarpus subsp. *parvus*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Corchorus lasiocarpus (subsp. not determined)		✓	✓	✓	✓	✓		✓		✓	✓	
	Corchorus sidoides				✓								
	Corchorus tectus				✓								
	Corchorus tridens			✓					✓				
	Corchorus sp. (juvenile; inadequate material)			✓					✓				
	Gossypium australe		✓	✓		✓			✓	✓			
	Gossypium robinsonii		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Gossypium sturtianum var. *sturtianum*								✓				
	Hibiscus brachychlaenus					✓							
	Hibiscus burtonii		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Hibiscus coatesii		✓	✓	✓	✓	✓	✓	✓		✓	✓	
	Hibiscus sturtii var. *campylochlamys*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hibiscus sturtii var. *grandiflorus*		✓	✓					✓		✓		
	Hibiscus sturtii var. *platychlamys*		✓	✓					✓		✓	✓	
	Hibiscus sturtii var. *truncatus*		✓	✓				✓					
	Hibiscus sturtii var. aff. *truncatus*		✓	✓		✓							
	Hibiscus sturtii (var. not determined)			✓	✓						✓		
	Hibiscus sp. Gardneri (A.L. Payne PRP 1435)		✓	✓	✓			✓		✓			

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Malvaceae (cont.)	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2	✓	✓	✓			✓	✓		✓	✓	
	Hibiscus sp. Mt Robinson (G. Byrne 3537)		✓		✓				✓		✓		
	**Malvastrum americanum*	Weed	✓	✓	✓			✓	✓	✓	✓		
	Melhania oblongifolia		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Seringia elliptica		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Seringia ? elliptica							✓					✓
	Seringia nephrosperma		✓	✓	✓	✓	✓	✓				✓	
	Sida arenicola		✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Sida ? arsiniata									✓			
	Sida cardiophylla		✓	✓	✓	✓	✓	✓			✓	✓	
	Sida echinocarpa		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Sida ectogama		✓	✓		✓	✓		✓		✓		
	Sida fibulifera		✓	✓	✓				✓	✓	✓	✓	
	Sida platycalyx		✓	✓									
	Sida rohlenae subsp. rohlenae								✓				
	Sida sp. Barlee Range (S. van Leeuwen 1642)	P3						✓	✓	✓			
	Sida sp. dark green fruits (S. van Leeuwen 2260)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sida sp. Excedentifolia (J.L. Egan 1925)		✓	✓	✓	✓	✓	✓	✓		✓	✓	
	Sida sp. Golden calyces glabrous (H.N. Foote 32)		✓	✓	✓			✓		✓			✓
	Sida sp. Hamersley Range (K. Newbey 10692)	P3											✓
	Sida sp. L (A.M. Ashby 4202)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sida sp. Pilbara (A.A. Mitchell PRP 1543)		✓	✓	✓	✓		✓	✓	✓	✓	✓	
	Sida sp. Shovelanna Hill (S. van Leeuwen 3842)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Sida sp. Supplejack Station (T.S. Henshall 2345)					✓		✓			✓		✓
	Sida trichopoda									✓			
	Sida sp. (juvenile; inadequate material)			✓	✓			✓	✓				
	Triumfetta ? appendiculata				✓								
	Triumfetta chaetocarpa		✓	✓									
	Triumfetta leptacantha		✓						✓	✓	✓		
	Triumfetta maconochieana										✓		
	Waltheria indica		✓	✓	✓								
Marsileaceae	*Marsilea hirsuta*		✓						✓				
Moraceae	*Ficus brachypoda*		✓	✓	✓		✓	✓	✓	✓	✓		✓
Myrtaceae	*Calytrix carinata*				✓			✓			✓		
	Corymbia deserticola subsp. *deserticola*		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
	Corymbia ferriticola		✓	✓	✓			✓	✓		✓	✓	
	Corymbia hamersleyana		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Eucalyptus camaldulensis subsp. *refulgens*								✓				
	Eucalyptus ewartiana										✓		
	Eucalyptus gamophylla		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Eucalyptus kingsmillii		✓					✓	✓		✓	✓	
	Eucalyptus leucophloia subsp. *leucophloia*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Eucalyptus pilbarensis		✓						✓	✓	✓	✓	
	Eucalyptus repullulans					✓	✓		✓		✓	✓	
	Eucalyptus socialis subsp. *eucentrica*		✓						✓	✓	✓	✓	
	Eucalyptus trivalva					✓	✓	✓	✓	✓	✓	✓	
	Eucalyptus ? trivalva							✓					
	Eucalyptus victrix		✓	✓					✓				

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Myrtaceae (cont.)	*Eucalyptus xerothermica*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Melaleuca bracteata								✓				
	Melaleuca eleuterostachya								✓	✓	✓		
	Melaleuca glomerata								✓				
Nyctaginaceae	*Boerhavia coccinea*		✓	✓	✓			✓	✓	✓	✓		
	Boerhavia gardneri								✓				
	Boerhavia repleta			✓	✓				✓				
	Boerhavia sp. (sterile; inadequate material)		✓	✓									
	Commicarpus australis		✓										
Oleaceae	*Jasminum didymum* subsp. *lineare*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	P2	✓	✓	✓						✓		✓
Phrymaceae	*Peplidium muelleri*		✓	✓									
Phyllanthaceae	*Notoleptopus decaisnei*			✓	✓								
	Phyllanthus erwinii									✓			
	Phyllanthus maderaspatensis		✓	✓					✓		✓		
Pittosporaceae	*Pittosporum angustifolium*								✓	✓			
Plantaginaceae	*Stemodia grossa*		✓	✓					✓				
Plumbaginaceae	*Plumbago zeylanica*							✓					
Poaceae	*Acrachne racemosa*		✓							✓			
	Amphipogon caricinus				✓								
	Amphipogon sericeus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Aristida burbidgeae		✓	✓	✓		✓	✓	✓	✓	✓	✓	
	Aristida contorta		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Aristida holathera var. *holathera*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Aristida inaequiglumis			✓	✓		✓	✓					
	Aristida ? inaequiglumis												✓
	Aristida ingrata		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	Aristida ? ingrata		✓										
	Aristida jerichoensis var. *subspinulifera*	P3	✓	✓				✓		✓			✓
	Aristida latifolia		✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Aristida lazaridis	P2						✓	✓	✓	✓	✓	
	Aristida aff. *nitidula*				✓	✓	✓	✓					
	Aristida obscura		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	Aristida pruinosa		✓	✓	✓			✓	✓		✓	✓	
	Aristida sp. (inadequate material)								✓				
	Astrebla pectinata									✓			
	Bothriochloa ewartiana		✓	✓	✓		✓	✓	✓	✓	✓		
	Bothriochloa sp. (sterile)										✓		
	**Cenchrus ciliaris*	Weed	✓	✓	✓			✓	✓				
	Chrysopogon fallax		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Cymbopogon ambiguus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Cymbopogon ? ambiguus												✓
	Cymbopogon obtectus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Cymbopogon ? obtectus								✓				
	Cymbopogon sp. (sterile)		✓						✓		✓	✓	
	Cynodon convergens		✓										
	Cynodon prostratus			✓		✓							
	Dactyloctenium radulans			✓									
	Dichanthium fecundum								✓				

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Poaceae (cont.)	*Dichanthium sericeum* subsp. *humilius*				✓	✓				✓			
	Digitaria ammophila		✓	✓	✓	✓	✓	✓	✓		✓	✓	
	Digitaria brownii		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Digitaria ctenantha		✓	✓							✓		
	Elytrophorus spicatus		✓										
	Enneapogon caerulescens		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Enneapogon lindleyanus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Enneapogon polyphyllus		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Enneapogon robustissimus		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Enneapogon sp. (inadequate material)								✓				
	Enteropogon ramosus								✓		✓		
	Eragrostis cumingii		✓	✓	✓	✓		✓		✓	✓		
	Eragrostis desertorum							✓	✓				
	Eragrostis elongata								✓				
	Eragrostis eriopoda				✓			✓	✓	✓			✓
	Eragrostis exigua					✓							
	Eragrostis pergracilis				✓	✓							
	Eragrostis setifolia		✓	✓		✓	✓		✓		✓	✓	
	Eragrostis tenellula		✓	✓	✓				✓				
	Eragrostis xerophila		✓	✓	✓								
	Eragrostis sp. (inadequate material)								✓		✓		
	Eriachne aristidea		✓								✓		
	Eriachne benthamii		✓		✓								
	Eriachne flaccida		✓	✓								✓	
	Eriachne lanata					✓	✓	✓	✓	✓			
	Eriachne mucronata (arid form)		✓	✓					✓		✓	✓	
	Eriachne mucronata (glabrous form)		✓										
	Eriachne mucronata (typical form)		✓	✓		✓	✓		✓		✓	✓	
	Eriachne mucronata (form not determined)		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Eriachne aff. *mucronata* (short glumes, lemmas not distinctly mucronate)		✓	✓									
	Eriachne obtusa					✓	✓						
	Eriachne pulchella subsp. *dominii*							✓		✓			
	Eriachne pulchella subsp. *pulchella*				✓			✓					✓
	Eriachne pulchella (subsp. not determined)		✓	✓	✓	✓					✓	✓	
	Eriachne tenuiculmis		✓	✓	✓				✓		✓	✓	
	Eulalia aurea		✓	✓		✓	✓	✓	✓	✓	✓	✓	
	Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)		✓						✓				
	Ischaemum albovillosum							✓					
	Iseilema dolichotrichum					✓					✓		
	Iseilema eremaeum							✓		✓			
	Iseilema membranaceum		✓	✓					✓				
	Iseilema vaginiflorum		✓										
	Monachather paradoxus		✓	✓									
	Panicum decompositum			✓	✓				✓				
	Panicum effusum		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	Paraneurachne muelleri		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Paspalidium basicladum				✓					✓			
	Paspalidium clementii		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Poaceae (cont.)	*Paspalidium constrictum*		✓	✓					✓	✓	✓		
	Paspalidium rarum							✓	✓	✓	✓	✓	
	Perotis rara		✓	✓	✓	✓		✓		✓	✓		
	Schizachyrium fragile		✓		✓	✓		✓			✓	✓	✓
	Setaria dielsii		✓	✓									
	Setaria surgens									✓	✓	✓	
	**Setaria verticillata*	Weed	✓	✓	✓			✓	✓		✓		
	Sporobolus australasicus		✓		✓	✓		✓		✓	✓		✓
	Themeda triandra		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Themeda sp. Mt Barricade (M.E. Trudgen 2471)		✓	✓	✓	✓	✓		✓		✓	✓	
	Triodia angusta					✓	✓		✓		✓		
	Triodia basedowii				✓			✓		✓			
	Triodia brizoides		✓						✓	✓			✓
	Triodia epactia				✓								
	Triodia longiceps		✓	✓		✓	✓		✓	✓	✓		
	Triodia melvillei		✓	✓		✓	✓	✓		✓			✓
	Triodia pungens		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Triodia vanleeuwenii		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	Triodia wiseana		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Triodia sp. Mt Ella (M.E. Trudgen 12739)	P3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Tripogonella loliiformis			✓				✓	✓				
	Triraphis mollis		✓							✓	✓		
	Urochloa occidentalis var. *ciliata*		✓										
	Urochloa occidentalis var. *occidentalis*				✓								
	Urochloa piligera								✓				
	Yakirra australiensis var. *australiensis*									✓			✓
Polygalaceae	*Polygala glaucifolia*										✓		
	Polygala isingii									✓			
Polygonaceae	**Rumex vesicarius*	Weed	✓					✓			✓		✓
Portulacaceae	*Calandrinia eremaea*				✓								
	Calandrinia ptychosperma		✓										
	Portulaca filifolia			✓									
	Portulaca oleracea/intraterranea		✓	✓	✓			✓		✓			
Proteaceae	*Grevillea berryana*		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	Grevillea saxicola	P3	✓	✓	✓								
	Grevillea wickhamii subsp. *aprica*							✓					
	Grevillea wickhamii subsp. *hispidula*					✓		✓		✓	✓	✓	
	Grevillea wickhamii (sterile; subsp. not determined)						✓		✓		✓	✓	
	Hakea chordophylla		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Hakea lorea subsp. *lorea*		✓	✓	✓				✓	✓	✓	✓	✓
	Hakea rhombales							✓					
Pteridaceae	*Cheilanthes austrotenuifolia*		✓	✓					✓		✓	✓	
	Cheilanthes brownii		✓	✓			✓	✓	✓		✓	✓	
	Cheilanthes lasiophylla									✓			
	Cheilanthes sieberi subsp. *sieberi*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Paraceterach reynoldsii		✓	✓							✓		
Rhamnaceae	*Cryptandra monticola*								✓	✓	✓	✓	
	Ventilago viminalis							✓	✓	✓	✓	✓	
Rubiaceae	*Oldenlandia crouchiana*		✓	✓	✓	✓			✓		✓	✓	✓

Family	Species †	Status ¥	Western Hill			Deposit F			Deposit H		Deposit J / Mt Ella East		
			Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys
Rubiaceae (cont.)	*Pomax rupestris*										✓		
	Psydrax latifolia		✓	✓	✓			✓	✓	✓	✓	✓	
	Psydrax rigidula				✓	✓							
	Psydrax suaveolens		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Spermacoce brachystema		✓	✓		✓			✓				
Santalaceae	*Anthobolus leptomerioides*		✓	✓	✓	✓	✓	✓	✓		✓		✓
	Exocarpos sparteus				✓			✓		✓			
	Santalum lanceolatum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Santalum spicatum								✓				
Sapindaceae	*Diplopeltis stuartii* var. *stuartii*												✓
	Dodonaea coriacea		✓	✓	✓	✓	✓		✓	✓	✓	✓	
	Dodonaea lanceolata var. *lanceolata*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Dodonaea pachyneura		✓	✓	✓			✓	✓	✓	✓	✓	
	Dodonaea petiolaris		✓	✓							✓		
	Dodonaea viscosa subsp. *mucronata*		✓	✓		✓	✓	✓	✓	✓	✓	✓	
	Dodonaea viscosa subsp. *spatulata*				✓					✓			
Scrophulariaceae	*Eremophila accrescens*		✓	✓									
	Eremophila caespitosa		✓	✓	✓								
	Eremophila clarkei							✓					
	Eremophila cuneifolia		✓	✓	✓				✓				
	Eremophila exilifolia				✓								
	Eremophila forrestii subsp. *forrestii*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Eremophila fraseri subsp. *fraseri*		✓	✓	✓			✓	✓		✓	✓	
	Eremophila galeata		✓			✓	✓	✓					
	Eremophila jucunda subsp. *pulcherrima*		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Eremophila lachnocalyx					✓							
	Eremophila lanceolata									✓			
	Eremophila latrobei subsp. *filiformis*		✓	✓	✓			✓	✓				
	Eremophila latrobei subsp. *glabra*				✓								
	Eremophila latrobei subsp. *latrobei*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Eremophila latrobei (subsp. not determined)		✓	✓		✓	✓				✓	✓	
	Eremophila longifolia		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Eremophila oppositifolia subsp. *angustifolia*		✓	✓									
	Eremophila petrophila subsp. *petrophila*		✓	✓									
	Eremophila phyllopoda subsp. *obliqua*		✓	✓	✓	✓	✓	✓	✓		✓		
	Eremophila platycalyx subsp. *pardalota*		✓	✓		✓	✓	✓	✓	✓		✓	
	Eremophila pusilliflora	P2	✓	✓	✓								
	Eremophila ? tietkensii									✓			
	Eremophila sp. Hamersley Range (K. Walker KW 136)	P3	✓	✓	✓				✓		✓	✓	✓
	Eremophila sp. (inadequate material)								✓				
Solanaceae	**Datura leichhardtii*	Weed			✓								
	Nicotiana benthamiana		✓	✓					✓	✓	✓		
	Nicotiana occidentalis subsp. *obliqua*										✓		
	Nicotiana occidentalis subsp. *occidentalis*		✓										
	Nicotiana occidentalis (sterile; subsp. not determined)				✓					✓			
	Nicotiana simulans		✓							✓			
	Nicotiana sp. (inadequate material)		✓								✓	✓	
	**Physalis* sp. (sterile)	Weed			✓								
	Solanum centrale					✓	✓	✓			✓		

Family	Species †	Status ¥	Western Hill			Deposit F			Deposit H		Deposit J / Mt Ella East		
			Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys	Phase 2, 2019	Historical Surveys	Phase 1, 2018	Phase 2, 2019	Historical Surveys
Solanaceae (cont.)	*Solanum cleistogamum*				✓								
	Solanum ferocissimum		✓	✓					✓			✓	
	Solanum horridum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Solanum kentrocaule	P3	✓	✓	✓						✓	✓	✓
	Solanum lasiophyllum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	**Solanum nigrum*	Weed	✓										
	Solanum phlomoides				✓	✓		✓	✓	✓	✓		
	Solanum piceum		✓	✓	✓								
	Solanum sturtianum				✓					✓			
	Solanum sp. (inadequate material)				✓				✓			✓	
Surianaceae	*Stylobasium spathulatum*								✓		✓		
Thymelaeaceae	*Pimelea microcephala* subsp. *microcephala*										✓		
Urticaceae	*Parietaria cardiostegia*		✓	✓									
Violaceae	*Hybanthus aurantiacus*		✓	✓	✓				✓		✓	✓	
Zygophyllaceae	*Roepera eichleri*		✓	✓						✓			
	Roepera iodocarpa				✓								
	Tribulus astrocarpus			✓	✓								
	Tribulus hirsutus				✓								
	Tribulus macrocarpus				✓								
	Tribulus occidentalis									✓			
	Tribulus platypterus				✓				✓				
	Tribulus suberosus		✓	✓	✓			✓		✓	✓	✓	
	**Tribulus terrestris*	Weed			✓				✓				

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Abutilon amplum										0.1													
Abutilon cryptopetalum																							
Abutilon cunninghamii																							
Abutilon fraseri subsp. *fraseri*		0.1															0.1						
Abutilon lepidum		0.1										0.1					0.1			0.1		0.1	
Abutilon leucopetalum																							
Abutilon macrum																							
Abutilon otocarpum						0.1																	
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																							
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)														0.1						0.1			
Abutilon sp.									0.1														
Acacia adoxa var. *adoxa*																							
Acacia adsurgens															0.1								
Acacia ancistrocarpa								0.1															
Acacia aneura	2	1			1												8						
Acacia 'aneura' sens. lat. (juvenile)								0.1	0.1							0.1						0.1	
Acacia aptaneura	2	25	0.5	0.1	10		0.1										12		0.1				
Acacia atkinsiana																0.1							
Acacia ayersiana		0.1			0.5																		
Acacia ayersiana (narrow phyllode variant)																							
Acacia bivenosa		0.1		0.1	0.1			0.1	0.1	0.1		0.5	0.1	0.1	0.5	0.5		0.1	0.1	0.1	0.1	0.1	0.1
Acacia bivenosa (wispy/weeping form)																							
Acacia catenulata subsp. *occidentalis*		1		40	15																		
Acacia citrinoviridis							20		7	7													
Acacia cowleana													0.1										
Acacia dictyophleba																							
Acacia eriopoda																							
Acacia hamersleyensis																							
Acacia hilliana																							
Acacia inaequilatera																							
Acacia incurvaneura		1				4																	
Acacia kempeana																							
Acacia macraneura		2			10																		
Acacia maitlandii								0.1											0.1		0.1		0.1
Acacia marramamba												0.1							0.1	0.1	0.1		
Acacia monticola																							
Acacia mulganeura																							
Acacia pachyacra																		1			0.5		
Acacia pruinocarpa	6	10	0.1	10	5	0.1	0.5	0.5					0.5	0.1	0.1			0.1	0.1		0.1		0.1
Acacia pteraneura	0.1					1.5	0.1																
Acacia pyrifolia var. *pyrifolia*							0.1		0.1	1												0.1	
Acacia rhodophloia		1			0.1										0.1			0.1					0.1
Acacia sibirica																				0.1	0.1		
Acacia sibirica (linear form)																				0.1			
Acacia steedmanii subsp. *borealis*																							
Acacia synchronicia											0.1					0.1							
Acacia tenuissima								0.1					0.1		0.1			0.1					0.1
Acacia tetragonophylla		1		0.1	2							0.1		0.1			0.1						0.1
Acacia trudgeniana								0.5															
Acacia wanyu																							
Acacia sp.																							
Achyranthes aspera																							
Acrachne racemosa																							
Alternanthera denticulata																							
Alternanthera nana							0.1			0.1													
Amaranthus cuspidifolius							0.1		0.1	0.1													
Amaranthus interruptus																							
Amaranthus undulatus																							
Ammannia baccifera							0.1																
Ammannia multiflora																							
Amphipogon sericeus								0.1				0.1	1		3	0.1		0.1			0.1		0.1

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Amyema fitzgeraldii																							
Amyema miquelii																							
Amyema sanguinea var. *pulchra*																							
Androcalva luteiflora																							
Anthobolus leptomerioides		0.1		0.1	0.1													0.1				0.1	
Aristida burbidgeae																							
Aristida contorta	0.1	0.1		0.1	0.1	0.5	0.1	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1	0.1
Aristida holathera var. *holathera*													0.1										0.1
Aristida inaequiglumis																							
Aristida ingrata							0.1										0.1	0.1			0.1		
Aristida ? ingrata																							
Aristida jerichoensis var. *subspinulifera*																	0.1						
Aristida latifolia												0.1											
Aristida lazaridis																							
Aristida aff. *nitidula*																							
Aristida obscura																	0.1						
Aristida pruinosa																							
Aristida sp.																							
Astrotricha hamptonii																							
Atriplex codonocarpa											0.1												
Bergia trimera										0.1													
Bidens bipinnata		0.1		0.1	0.1		0.1			0.1													
Boerhavia coccinea									0.1	0.1				0.1						0.1			
Boerhavia gardneri																							
Boerhavia repleta																							
Boerhavia sp.		0.1					0.1																
Bothriochloa ewartiana							1			0.1													
Bothriochloa sp.																							
Brachychiton acuminatus																							
Brachyscome iberidifolia				0.1		0.1																	
Brunonia sp. Long hairs (D.E. Symon 2440)																							
Bulbostylis barbata																							
Cajanus cinereus																							
Calandrinia ptychosperma																							
Callitris columellaris																							
Calocephalus beardii										0.1													
Calytrix carinata																							
Capparis lasiantha							0.1							0.1		0.1							
Capparis mitchellii																							
Capparis spinosa subsp. *nummularia*																							
Cassytha capillaris																							
Cenchrus ciliaris							1																
Centipeda minima subsp. *macrocephala*																							
Cheilanthes austrotenuifolia																							
Cheilanthes brownii																	0.1						
Cheilanthes sieberi subsp. *sieberi*	0.1	0.1	0.1	0.1	0.1	0.1																	
Chrysocephalum apiculatum subsp. *pilbarense*																							
Chrysocephalum gilesii		0.1					0.1		0.1	0.1													
Chrysocephalum pterochaetum																							
Chrysopogon fallax																							
Cleome viscosa							0.1		0.1	0.1				0.1			0.1			0.1		0.1	
Clerodendrum floribundum var. *angustifolium*																					0.1		
Codonocarpus cotinifolius			0.1					0.1	0.1				0.1	0.1				0.1	0.1	0.5	0.1	0.1	0.1
Convolvulus clementii																							
Corchorus crozophorifolius							0.1		0.1	8				0.5						0.1		0.1	
Corchorus lasiocarpus (subsp. not determined)																							
Corchorus lasiocarpus subsp. *lasiocarpus*																							
Corchorus lasiocarpus subsp. *parvus*								0.1		0.1					0.1				0.1	0.1	0.5		0.1
Corchorus tridens																							
Corchorus sp.																							
Corymbia deserticola subsp. *deserticola*													1		0.5			1					

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Corymbia ferriticola																							
Corymbia hamersleyana																							
Crotalaria medicaginea var. *neglecta*									0.1											0.1			
Cryptandra monticola																							
Cucumis variabilis								0.1		0.1				0.1	0.1						0.1	0.1	
Cullen leucanthum																							
Cullen leucochaites																						0.1	
Cullen pogonocarpum																							
Cymbopogon ambiguus		0.1					0.1								0.1		0.1		0.1	0.1			0.1
Cymbopogon obtectus															0.1			0.1					
Cymbopogon ? obtectus																							
Cymbopogon sp.					0.1																		
Cynanchum pedunculatum																							
Cynanchum viminale subsp. *australe*																							
Cynodon convergens				0.1																			
Cynodon prostratus																							
Cyperus cunninghamii subsp. *cunninghamii*																							
Cyperus vaginatus																							
Dactyloctenium radulans																							
Dampiera candicans																			0.1				0.1
Dichanthium fecundum																							
Dichanthium sericeum subsp. *humilius*																							
Dicladanthera forrestii							0.1			0.1													
Digitaria ammophila		0.1				0.1											0.1						
Digitaria brownii		0.1			0.1		0.1			0.1								0.1					0.1
Digitaria ctenantha										0.1													
Diplatia grandibractea																							
Dipteracanthus australasicus subsp. *australasicus*							0.1		0.1	0.1													
Dodonaea coriacea																			0.1				0.1
Dodonaea lanceolata var. *lanceolata*										0.1													
Dodonaea pachyneura																							
Dodonaea petiolaris																	0.1						
Dodonaea viscosa subsp. *mucronata*																							0.1
Duperreya commixta	0.1	0.1			0.1	0.1	0.1		0.1	0.1		0.1		0.1				0.1	0.1	0.1	0.1	0.1	
Dysphania melanocarpa forma *leucocarpa*																							
Dysphania rhadinostachya (subsp. not determined)																						0.1	
Dysphania rhadinostachya subsp. *inflata*									0.1	0.1													
Dysphania rhadinostachya subsp. *rhadinostachya*												0.1		0.1			0.1						
Dysphania saxatilis																							
Dysphania sp.																							
Ehretia saligna var. *saligna*																							
Enchylaena tomentosa var. *tomentosa*		0.1			0.1		0.1										0.1						
Enneapogon caerulescens																	0.1			0.1		1	
Enneapogon lindleyanus							1			1				2			0.1			0.5		3	
Enneapogon polyphyllus		0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1		0.1			0.1	0.1	0.1	
Enneapogon robustissimus		0.1							0.5	0.1													
Enneapogon sp.																							
Enteropogon ramosus																							
Eragrostis cumingii																							
Eragrostis desertorum																							
Eragrostis elongata																							
Eragrostis eriopoda																							
Eragrostis exigua																							
Eragrostis pergracilis																							
Eragrostis setifolia			0.1			0.1															0.1		
Eragrostis tenellula							0.1			0.1		0.1											
Eragrostis xerophila	0.1																						
Eragrostis sp.																							
Eremophila accrescens																	0.1						
Eremophila caespitosa	0.1				0.1	0.1															0.1		
Eremophila cuneifolia											0.1						2						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Eremophila forrestii subsp. *forrestii*	0.1	0.1	0.1	0.1	0.1	0.1													0.1			0.1	
Eremophila fraseri subsp. *fraseri*														1.5						2.5		1.5	
Eremophila galeata																							
Eremophila jucunda subsp. *pulcherrima*															0.1		11		0.1		0.1	0.1	0.1
Eremophila latrobei (subsp. not determined)																							
Eremophila latrobei subsp. *filiformis*			0.1			0.1																	
Eremophila latrobei subsp. *latrobei*																			0.1				0.1
Eremophila longifolia					0.1										0.1								
Eremophila oppositifolia subsp. *angustifolia*																	1.5						
Eremophila petrophila subsp. *petrophila*																							
Eremophila phyllopoda subsp. *obliqua*					0.1			0.1				0.1					5					0.1	
Eremophila platycalyx subsp. *pardalota*												0.1											
Eremophila pusilliflora																							
Eremophila sp. Hamersley Range (K. Walker KW 136)																							
Eremophila sp.																							
Eriachne aristidea														0.1						0.1			
Eriachne flaccida																							
Eriachne lanata																							
Eriachne mucronata											0.1		0.1						0.1				
Eriachne mucronata (arid form) (MET 12 736)																							
Eriachne mucronata (typical form)							0.1										0.1						0.1
Eriachne aff. *mucronata*																							
Eriachne obtusa																							
Eriachne pulchella						0.1	0.1			0.1									0.1		0.1		
Eriachne tenuiculmis							0.5			1													
Eucalyptus camaldulensis subsp. *refulgens*																							
Eucalyptus gamophylla																							
Eucalyptus kingsmillii																							
Eucalyptus leucophloia subsp. *leucophloia*								0.5			0.5	2		2	1	2			8	0.5		0.1	2.5
Eucalyptus pilbarensis																							
Eucalyptus repullulans																							
Eucalyptus socialis subsp. *eucentrica*																							
Eucalyptus trivalva																							
Eucalyptus victrix							15			1													
Eucalyptus xerothermica																							
Eulalia aurea										0.1													
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																							
Euphorbia australis var. *hispidula*												0.1											
Euphorbia australis var. *subtomentosa*									0.1					0.1						0.1		0.1	
Euphorbia biconvexa																							
Euphorbia boophthona																	0.1						
Euphorbia careyi																							
Euphorbia coghlanii																				0.1		0.1	
Euphorbia drummondii				0.1		0.1																	
Euphorbia tannensis subsp. *eremophila*							0.1		0.1					0.1						0.1		0.1	
Euphorbia trigonosperma																							
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																							
Euphorbia sp. (*boophthona/tannensis*)																							
Euphorbia sp.																							
Evolvulus alsinoides var. decumbens																							
Evolvulus alsinoides var. villosicalyx		0.1			0.1	0.1	0.1		0.1	0.1	0.1			0.1			0.1			0.1		0.1	
Ficus brachypoda																							
Fimbristylis dichotoma																		0.1			0.1		
Fimbristylis simulans																					0.1		
Fimbristylis sp.																							
Flaveria trinervia																							
Gastrolobium grandiflorum																							
Glycine canescens																							
Gnephosis arachnoidea																							
Gompholobium oreophilum																							
Gomphrena cunninghamii							0.1			0.1											0.1		

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Gomphrena kanisii					0.1	0.1	0.1	0.1	0.1					0.1							0.1	0.1	
Goodenia cusackiana																							
Goodenia microptera													0.1		0.1	0.1					0.1	0.1	0.1
Goodenia muelleriana							0.1	0.1	0.1		0.1									0.1			
Goodenia prostrata		0.1				0.1																	
Goodenia stellata																							
Goodenia stobbsiana								0.1							0.1	0.1		0.1	0.1		0.1		0.1
Goodenia tenuiloba						0.1																	
Goodenia triodiophila								0.1							0.1			0.1	0.1				0.1
Gossypium australe										0.1													
Gossypium robinsonii																							
Gossypium sturtianum var. *sturtianum*																							
Grevillea berryana	0.1		0.1	0.1																		0.1	
Grevillea saxicola																							
Grevillea wickhamii																							
Grevillea wickhamii subsp. *hispidula*																							
Hakea chordophylla																					0.1		0.1
Hakea lorea subsp. *lorea*							0.1																
Halgania gustafsenii var. Mid West (G. Perry 370)																							
Harnieria kempeana subsp. *muelleri*																							
Heliotropium chrysocarpum																							
Heliotropium cunninghamii							0.1			0.1													
Heliotropium heteranthum						0.1		0.1															
Heliotropium inexplicitum																		0.1	0.1		0.1		
Heliotropium sp.																							
Heliotropium tenuifolium																		0.1					
Hibiscus brachychlaenus																							
Hibiscus burtonii	0.1		0.1		0.1	0.1											0.1		0.1				
Hibiscus coatesii																						0.1	0.1
Hibiscus sturtii var. *campylochlamys*								0.1							0.1			0.1			0.1		0.1
Hibiscus sturtii var. *grandiflorus*														0.1						0.1			
Hibiscus sturtii var. *platychlamys*																							
Hibiscus sturtii var. *truncatus*																	0.1						
Hibiscus sturtii var. aff. *truncatus*																							
Hibiscus sturtii var. not determined																							
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																						0.1	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																							
Hibiscus sp. Mt Robinson (G. Byrne 3537)																							
Hybanthus aurantiacus							0.1		0.1	0.1													
Indigofera colutea																							
Indigofera fractiflexa subsp. *fractiflexa*																							
Indigofera georgei							0.1		4	1													
Indigofera gilesii																							
Indigofera linnaei																							
Indigofera monophylla								0.1					0.1	1	0.1			0.1	0.1	0.1	1	2	
Indigofera rugosa																							
Ipomoea muelleri																							
Ipomoea plebeia																							
Iseilema dolichotrichum																							
Iseilema membranaceum																	0.1						
Iseilema vaginiflorum																				0.1			
Isotropis parviflora																		0.1					
Isotropis sp. Arid zone (G. Byrne 2775)							0.1			0.1													
Jasminum didymum subsp. *lineare*														0.1									
Leiocarpa semicalva subsp. *semicalva*																							
Lepidium echinatum																							
Lepidium oxytrichum										0.1													
Lepidium pedicellosum												0.1					1.5						
Lepidium phlebopetalum		0.1					0.1																
Lobelia heterophylla subsp. *pilbarensis*																							
Maireana georgei						0.1					0.1	0.1				0.1	1						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Maireana melanocoma											0.1												
Maireana planifolia					0.1							0.1					0.1						
Maireana planifolia x *villosa*		0.1		0.1	0.1																		
Maireana tomentosa subsp. *tomentosa*																							
Maireana triptera																							
Maireana villosa		0.1		0.1	0.1	0.5	0.1										0.1						
Malvastrum americanum							0.1		0.1	0.1													
Marsdenia australis																							
Marsilea hirsuta							0.1																
Maytenus sp. Mt Windell (S. van Leeuwen 846)																							
Melaleuca bracteata																							
Melaleuca eleuterostachya																							
Melaleuca glomerata																							
Melhania oblongifolia							0.1		0.1					0.1						0.1		0.1	
Mirbelia viminalis																							
Monachather paradoxus						0.1																	
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																							
Nicotiana benthamiana																							
Nicotiana occidentalis subsp. *obliqua*																							
Nicotiana occidentalis subsp. *occidentalis*																						0.1	
Nicotiana simulans									0.1	0.1													
Nicotiana sp.																							
Notoleptopus decaisnei																							
Oldenlandia crouchiana														0.1						0.1			
Olearia fluvialis																							
Olearia stuartii																							
Olearia xerophila																							
Oxalis sp. Pilbara (M.E. Trudgen 12725)																							
Pandorea pandorana																							
Panicum decompositum																							
Panicum effusum						0.1											0.1	0.1					
Paraceterach reynoldsii																							
Paraneurachne muelleri		0.1					0.1	0.1	0.1	0.1		0.1				0.1	0.1	0.1	0.5	0.1		0.1	0.1
Parietaria cardiostegia																							
Paspalidium clementii										0.1		0.1					0.1			0.1		0.1	
Paspalidium constrictum							0.1																
Paspalidium rarum																							
Peplidium muelleri																							
Peripleura hispidula var. *hispidula*																							
Peripleura obovata																							
Peripleura virgata																	0.1						0.1
Peripleura sp.																							
Perotis rara		0.1		2		0.1																	
Petalostylis labicheoides									0.1	1													
Phyllanthus maderaspatensis							0.1		0.1	0.1													
Pilbara trudgenii																							
Pimelea microcephala subsp. *microcephala*																							
Pittosporum angustifolium																							
Pluchea dentex							0.1																
Pluchea dunlopii																							
Polycarpaea corymbosa var. *corymbosa*		0.1		0.1	0.1																0.1		
Polycarpaea holtzei																							
Polycarpaea longiflora					0.1		0.1		0.1	0.1	0.1												
Polygala glaucifolia																							
Polymeria ambigua																							
Portulaca filifolia																							
Portulaca oleracea/intraterranea																						0.1	
Prostanthera albiflora																							
Psydrax latifolia		0.1		0.1								0.1											
Psydrax rigidula																							
Psydrax suaveolens																	0.1						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Pterocaulon serrulatum var. *velutinum*																							
Pterocaulon sphacelatum					0.1		0.1		0.1	0.1				0.1			0.1					0.1	
Pterocaulon sphaeranthoides																	0.1						
Pterocaulon sp.																							
Ptilotus aervoides																							
Ptilotus astrolasius																0.1		0.1					
Ptilotus auriculifolius														0.1						0.1		0.1	
Ptilotus calostachyus								0.1				0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1		0.1
Ptilotus clementii														0.1					0.1	0.1		0.1	0.1
Ptilotus exaltatus		0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1
Ptilotus fusiformis																	0.1						
Ptilotus gomphrenoides																							
Ptilotus helipteroides		0.1			0.1	0.1	0.1		0.1														
Ptilotus obovatus var. obovatus	0.1	5		0.1	0.1	0.1	3		0.5	1				0.1	0.1	0.1	1		0.1	0.1	0.1	0.1	0.1
Ptilotus polystachyus						0.1	0.1		0.1														
Ptilotus roei						0.1																	
Ptilotus rotundifolius								0.1					0.1					0.1	0.5		0.1		0.1
Ptilotus schwartzii var. *schwartzii*		0.1		0.1	0.1	0.1															0.1		
Ptilotus xerophilus																							
Ptilotus sp.																							
Rhagodia eremaea				0.1	0.1		0.1										0.1					0.1	
Rhagodia sp. Hamersley (M. Trudgen 17794)		0.1		0.1	0.1												0.1						
Rhodanthe humboldtiana									0.1														
Rhodanthe margarethae																							
Rhodanthe polakii																							
Rhynchosia minima										0.1				0.1						0.1			
Roepera eichleri							0.1		0.1														
Rostellularia adscendens var. *latifolia*																							
Rumex vesicarius										0.1													
Salsola australis					0.1		0.1		0.1	0.1	0.1	0.1		0.1		0.1	0.1			0.1		0.1	
Santalum lanceolatum		2					0.1								0.1					0.1		0.1	
Santalum spicatum																							
Scaevola acacioides																	1					0.1	0.1
Scaevola amblyanthera var. *centralis*																							
Scaevola parvifolia subsp. *pilbarae*																							
Scaevola spinescens																							
Scaevola spinescens (broad form)																							
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)																							
Schizachyrium fragile													0.1				0.1				0.1		
Sclerolaena convexula							0.1																
Sclerolaena cornishiana		0.1			0.1																		
Sclerolaena densiflora											2												
Sclerolaena eriacantha											1	0.1				0.1	0.1						
Senecio hamersleyensis																							
Senna artemisioides subsp. *filifolia*							0.1																
Senna artemisioides subsp. *helmsii*		0.1		0.1	0.5	0.1	0.1									0.1	0.1			0.1	0.1	0.1	0.1
Senna artemisioides subsp. *oligophylla*														0.1	0.1					0.1	0.1	0.1	
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																							
Senna artemisioides subsp. *oligophylla x S. ferraria*																							
Senna artemisioides subsp. *oligophylla x S. stricta*																							
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*											0.1		0.1	0.1					0.1				
Senna artemisioides subsp. x *artemisioides*									0.1														
Senna artemisioides subsp. x *artemisioides x S. stricta*																							
Senna ferraria																							0.1
Senna ferraria x																							
Senna ferraria x S. artemisioides subsp. *oligophylla*																							
Senna ferraria x S. glutinosa subsp. *glutinosa*																							
Senna glaucifolia					0.1								0.1	0.1			0.1		0.1				
Senna glaucifolia x S. artemisioides subsp. *helmsii*																							
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Senna glaucifolia x																							
Senna glutinosa subsp. *chatelainiana*																							
Senna glutinosa subsp. *glutinosa*					0.1			0.1			0.1		0.1	0.1	0.1	0.1		0.1	0.5	0.1	0.5	0.1	0.1
Senna glutinosa subsp. *glutinosa x*																							
Senna glutinosa subsp. *x luerssenii*					0.1						0.1	0.1			0.1	0.1	4	0.1	0.1		0.1		0.1
Senna glutinosa subsp. *x luerssenii x*																							
Senna glutinosa subsp. *glutinosa x S. stricta*																							
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																							
Senna glutinosa subsp. *pruinosa*								0.1										0.1	0.5		0.1		
Senna glutinosa subsp. *pruinosa x*																							
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																							
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																							
Senna notabilis									0.1					0.1	0.1						0.1	0.1	
Senna pleurocarpa var. *angustifolia*																							
Senna sp. Karijini (M.E. Trudgen 10392)																							
Senna sp. Meekatharra (E. Bailey 1-26)																							
Senna stricta											0.1	0.1		0.1			4		0.1		0.1		
Senna stricta x																						0.1	
Senna venusta																							
Seringia elliptica																			0.1				
Seringia nephrosperma								0.1															0.1
Setaria dielsii							0.1			0.1													
Setaria surgens																							
Setaria verticillata							0.1		0.1	0.1													
Sida arenicola								0.1					0.1		0.1				0.1		0.1		
Sida cardiophylla								0.1				0.1	0.1		0.1						0.1		
Sida echinocarpa											0.5	0.1			0.1		0.1		0.1	0.1			0.1
Sida ectogama		3		0.1	0.1				0.1								0.1						
Sida fibulifera					0.1				0.1														
Sida platycalyx																							
Sida sp. Barlee Range (S. van Leeuwen 1642)																							
Sida sp. dark green fruits (S. van Leeuwen 2260)					0.1												0.1						
Sida sp. Excedentifolia (J.L. Egan 1925)								0.1										0.1			0.1		
Sida sp. Golden calyces glabrous (H.N. Foote 32)	0.1																0.1						0.1
Sida sp. L (A.M. Ashby 4202)		0.1			0.1	0.1	0.1										0.1						
Sida sp. Pilbara (A.A. Mitchell PRP 1543)																			0.1		0.1		
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																							
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)							0.1	0.1	0.1	0.1	0.1	0.5		0.1	0.1	0.1				0.1		0.1	
Sida sp. Supplejack Station (T.S. Henshall 2345)																							
Sida sp.																							
Sigesbeckia orientalis																							
Solanum centrale																							
Solanum ferocissimum																							
Solanum horridum											0.1	0.1		0.1			0.1			0.1	0.1	0.1	0.1
Solanum kentrocaule																							0.1
Solanum lasiophyllum	0.1		0.1	0.1	0.1	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Solanum nigrum																							
Solanum phlomoides																							
Solanum piceum		0.1		0.1	0.1	0.1			0.1								0.1						
Solanum sp.																							
Sonchus oleraceus																							
Spermacoce brachystema				0.1																			
Sporobolus australasicus									0.1							0.1				0.1		0.1	
Stemodia grossa																							
Stenopetalum anfractum		0.1		0.1		0.1																	
Streptoglossa bubakii																							
Streptoglossa decurrens								0.1															
Stylobasium spathulatum																							
Swainsona maccullochiana									0.1											0.1			
Swainsona sp.																							
Templetonia egena											0.25												

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG01	WNG02	WNG03	WNG04	WNG05	WNG06	WNG07	WNG08	WNG09	WNG10	WNG11	WNG12	WNG13	WNG14	WNG15	WNG16	WNG17	WNG18	WNG19	WNG20	WNG21	WNG22	WNG23
Tephrosia densa																				0.1			
Tephrosia oxalidea																							
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)							0.1		0.1	4													
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																							
Teucrium disjunctum																							
Teucrium teucriiflorum																							
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																							3
Themeda triandra					0.1		2		0.5	5											0.1		
Trachymene oleracea subsp. *oleracea*																							
Tribulus suberosus	0.1	0.1			0.5	0.1		0.1				0.1		0.1			0.1		0.1	0.1	0.1	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*							0.1		0.1	0.1				0.1									
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																							
Triodia angusta																							
Triodia brizoides																							
Triodia longiceps							0.1		0.1	0.1	35			0.1		35							
Triodia melvillei																							
Triodia pungens	50	4	40	1	0.5	0.1	9	4	12	1		50	0.5	15	0.5	0.1	7	0.5	5	15	0.1	15	18
Triodia vanleeuwenii								45					35		33		0.1	11	30		35		
Triodia wiseana					1						5		0.1	1		0.1				10		0.1	
Triodia sp. Mt Ella (M.E. Trudgen 12739)																							1.5
Tripogonella loliiformis																							
Triraphis mollis										0.1													
Triumfetta chaetocarpa										0.1													
Triumfetta leptacantha																							
Urochloa occidentalis var. *ciliata*							0.1																
Urochloa piligera																							
Vachellia farnesiana																							
Ventilago viminalis																							
Vigna lanceolata var. *lanceolata*																							
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																							
Vincetoxicum flexuosum																							
Vincetoxicum lineare						0.1											0.1		0.1				
Vittadinia dissecta var. *hirta*																							
Wahlenbergia gracilenta						0.1																	
Wahlenbergia tumidifructa									0.1	0.1													
Waltheria indica							0.1		0.1	0.1													

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Abutilon amplum																							
Abutilon cryptopetalum																							
Abutilon cunninghamii																							
Abutilon fraseri subsp. *fraseri*	0.1																						
Abutilon lepidum	0.1		0.1	0.1			0.1															0.1	
Abutilon leucopetalum																							
Abutilon macrum																							
Abutilon otocarpum								0.1				0.1		0.1			0.1					0.1	0.1
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)						0.1																	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																							
Abutilon sp.																							
Acacia adoxa var. *adoxa*																							
Acacia adsurgens				0.1			0.1		0.1		0.1											0.1	
Acacia ancistrocarpa									0.5														
Acacia aneura									0.1														
Acacia 'aneura' sens. lat. (juvenile)	0.1				0.1		0.1	0.1							0.1								
Acacia aptaneura		0.1	0.1	0.1		1		0.1	1.5	8				0.1		0.1				0.1	5	12	2
Acacia atkinsiana					0.1																		
Acacia ayersiana										3												4	
Acacia ayersiana (narrow phyllode variant)							0.1													0.1	1	5	5
Acacia bivenosa	1.5	0.1	1	0.5	0.1		0.1		0.5		0.1	0.1	0.1		3	0.1	0.1	0.1	0.5	0.1		0.1	
Acacia bivenosa (wispy/weeping form)																							
Acacia catenulata subsp. *occidentalis*																					15	18	5
Acacia citrinoviridis																							
Acacia cowleana																	0.1		0.1				
Acacia dictyophleba											0.1		0.1										
Acacia eriopoda																							
Acacia hamersleyensis					0.1		0.1																
Acacia hilliana																							
Acacia inaequilatera																							
Acacia incurvaneura																					5		
Acacia kempeana																							
Acacia macraneura																							10
Acacia maitlandii		0.1		0.1	0.1																		
Acacia marramamba			0.1	0.1	0.5		0.1						0.1										
Acacia monticola												1											
Acacia mulganeura																							
Acacia pachyacra		0.1															0.1		0.1				
Acacia pruinocarpa	0.1	0.1	0.5	0.1	0.1			0.1	1	0.1	0.1	0.1	0.1	0.1		0.1	0.5	0.1		1	1	2	0.1
Acacia pteraneura																							
Acacia pyrifolia var. *pyrifolia*																							
Acacia rhodophloia					0.1		0.1		0.1	0.1													
Acacia sibirica																							
Acacia sibirica (linear form)									0.1														
Acacia steedmanii subsp. *borealis*																							
Acacia synchronicia															0.1								
Acacia tenuissima											0.1								0.1				
Acacia tetragonophylla			0.1				0.1		0.1	0.1					0.1	0.1			0.1		0.1		
Acacia trudgeniana																							
Acacia wanyu				0.1												4	1	1.5		3			
Acacia sp.																							
Achyranthes aspera																							
Acrachne racemosa																							
Alternanthera denticulata																							
Alternanthera nana																							
Amaranthus cuspidifolius																							
Amaranthus interruptus																							
Amaranthus undulatus																							
Ammannia baccifera																							
Ammannia multiflora																							
Amphipogon sericeus		0.1	0.1	0.1	0.1						0.1		0.1		0.1				0.1	0.1			

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Amyema fitzgeraldii																							
Amyema miquelii																							
Amyema sanguinea var. *pulchra*																							
Androcalva luteiflora												2											
Anthobolus leptomerioides												0.1										0.1	
Aristida burbidgeae																							
Aristida contorta	0.1	0.1	0.1			32		0.1	0.1	0.1		0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aristida holathera var. *holathera*								0.1	0.1		0.1	0.1					0.1	0.1	0.1				
Aristida inaequiglumis																							
Aristida ingrata									0.1										0.1		0.1	0.1	0.1
Aristida ? ingrata																							
Aristida jerichoensis var. *subspinulifera*																							
Aristida latifolia																							
Aristida lazaridis																							
Aristida aff. *nitidula*																							
Aristida obscura																						0.1	
Aristida pruinosa						0.1						0.1											
Aristida sp.																							
Astrotricha hamptonii																							
Atriplex codonocarpa																							
Bergia trimera																							
Bidens bipinnata																					0.1	1	0.1
Boerhavia coccinea																							
Boerhavia gardneri																							
Boerhavia repleta																							
Boerhavia sp.						0.1																	
Bothriochloa ewartiana																							
Bothriochloa sp.																							
Brachychiton acuminatus																							
Brachyscome iberidifolia																							0.1
Brunonia sp. Long hairs (D.E. Symon 2440)																							
Bulbostylis barbata							0.1																
Cajanus cinereus																							
Calandrinia ptychosperma																							
Callitris columellaris																							
Calocephalus beardii																							
Calytrix carinata																							
Capparis lasiantha			0.1	0.1	0.1																		
Capparis mitchellii																							
Capparis spinosa subsp. *nummularia*																							
Cassytha capillaris																							
Cenchrus ciliaris						0.1																	
Centipeda minima subsp. *macrocephala*																							
Cheilanthes austrotenuifolia																							
Cheilanthes brownii																							
Cheilanthes sieberi subsp. *sieberi*																					0.1	3	0.1
Chrysocephalum apiculatum subsp. *pilbarense*																							
Chrysocephalum gilesii								0.1						0.1									
Chrysocephalum pterochaetum													0.1										
Chrysopogon fallax						0.1		0.1						1	0.1								
Cleome viscosa						0.1		0.1						1									0.1
Clerodendrum floribundum var. *angustifolium*																							
Codonocarpus cotinifolius			0.1		0.1		0.1		0.1		0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1			
Convolvulus clementii																							
Corchorus crozophorifolius																						0.1	
Corchorus lasiocarpus (subsp. not determined)									0.1														
Corchorus lasiocarpus subsp. *lasiocarpus*																							
Corchorus lasiocarpus subsp. *parvus*		0.1			0.5		0.1					1					1	0.1	0.1	0.5			
Corchorus tridens																							
Corchorus sp.																							
Corymbia deserticola subsp. *deserticola*		0.5																					

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Corymbia ferriticola																							
Corymbia hamersleyana												0.5											
Crotalaria medicaginea var. *neglecta*																							
Cryptandra monticola																							
Cucumis variabilis						0.1								0.1					0.1			0.1	
Cullen leucanthum																							
Cullen leucochaites																							
Cullen pogonocarpum																							
Cymbopogon ambiguus		0.1	0.1						0.1		0.1		0.1							0.1			0.1
Cymbopogon obtectus	0.1					0.1		0.1	0.1		0.1						0.1		0.1			0.1	
Cymbopogon ? obtectus																							
Cymbopogon sp.															0.1								
Cynanchum pedunculatum																							
Cynanchum viminale subsp. *australe*																							
Cynodon convergens																							
Cynodon prostratus																							
Cyperus cunninghamii subsp. *cunninghamii*																							
Cyperus vaginatus																							
Dactyloctenium radulans																							
Dampiera candicans		0.1					0.1				0.1												
Dichanthium fecundum																							
Dichanthium sericeum subsp. *humilius*																							
Dicladanthera forrestii																							
Digitaria ammophila								0.1						0.1							0.1	0.1	0.1
Digitaria brownii	0.1				0.1	0.5		2				0.1		0.1	0.1					0.1	0.1	0.1	0.1
Digitaria ctenantha																							
Diplatia grandibractea																							
Dipteracanthus australasicus subsp. *australasicus*														0.5									
Dodonaea coriacea		0.1					0.1																
Dodonaea lanceolata var. *lanceolata*																							
Dodonaea pachyneura					0.1								0.1										
Dodonaea petiolaris							0.1																
Dodonaea viscosa subsp. *mucronata*																							
Duperreya commixta	0.1			0.1	0.1	0.1	0.1	0.1	0.1			0.1			0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1
Dysphania melanocarpa forma *leucocarpa*																							
Dysphania rhadinostachya (subsp. not determined)																							
Dysphania rhadinostachya subsp. *inflata*																							
Dysphania rhadinostachya subsp. *rhadinostachya*																							
Dysphania saxatilis																							
Dysphania sp.																							
Ehretia saligna var. *saligna*																							
Enchylaena tomentosa var. *tomentosa*	0.1								0.1													0.1	
Enneapogon caerulescens						0.1	0.1					0.1								0.1			
Enneapogon lindleyanus	0.1					0.1	0.1							0.1		0.1						0.1	
Enneapogon polyphyllus	0.1		0.1	0.1		0.1	0.1		0.1			0.1		0.1	0.1	0.1		0.1	0.1	0.1	2	0.1	
Enneapogon robustissimus																					0.1		3
Enneapogon sp.																							
Enteropogon ramosus																							
Eragrostis cumingii								0.1		0.1													
Eragrostis desertorum																							
Eragrostis elongata																							
Eragrostis eriopoda																							
Eragrostis exigua																							
Eragrostis pergracilis																							
Eragrostis setifolia									0.5	0.1													
Eragrostis tenellula																							
Eragrostis xerophila						0.1															0.1		
Eragrostis sp.																							
Eremophila accrescens																							
Eremophila caespitosa									0.1	5													
Eremophila cuneifolia																		0.1					

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Eremophila forrestii subsp. *forrestii*						0.1			0.1	0.1		0.1									3	4	
Eremophila fraseri subsp. *fraseri*																	0.1				0.1		
Eremophila galeata																							
Eremophila jucunda subsp. *pulcherrima*		0.1	0.1	0.1	0.1		0.1						0.1		0.1								
Eremophila latrobei (subsp. not determined)					0.1		0.1								0.1								
Eremophila latrobei subsp. *filiformis*																							0.1
Eremophila latrobei subsp. *latrobei*																							
Eremophila longifolia						0.1					0.1	0.1						0.1					
Eremophila oppositifolia subsp. *angustifolia*																							
Eremophila petrophila subsp. *petrophila*																							
Eremophila phyllopoda subsp. *obliqua*	0.1	0.1	0.1				0.1									0.1				0.1		0.1	
Eremophila platycalyx subsp. *pardalota*	0.1																						
Eremophila pusilliflora						0.1																	
Eremophila sp. Hamersley Range (K. Walker KW 136)																							
Eremophila sp.																							
Eriachne aristidea																							
Eriachne flaccida								0.1															
Eriachne lanata																							
Eriachne mucronata	0.1	0.1		0.1	0.1		0.1					0.5	4		0.1						0.1		
Eriachne mucronata (arid form) (MET 12 736)											0.5												
Eriachne mucronata (typical form)																							
Eriachne aff. *mucronata*																							
Eriachne obtusa																							
Eriachne pulchella									0.1								0.1		0.1				0.1
Eriachne tenuiculmis																							
Eucalyptus camaldulensis subsp. *refulgens*																							
Eucalyptus gamophylla		0.1																					
Eucalyptus kingsmillii																							
Eucalyptus leucophloia subsp. *leucophloia*	4	3	2	1	1.5		3				5		3		0.5	0.1			3		0.1		
Eucalyptus pilbarensis																							
Eucalyptus repullulans																							
Eucalyptus socialis subsp. *eucentrica*																							
Eucalyptus trivalva																							
Eucalyptus victrix																							
Eucalyptus xerothermica												1											
Eulalia aurea													0.1										
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																							
Euphorbia australis var. *hispidula*																							
Euphorbia australis var. *subtomentosa*						0.1																	
Euphorbia biconvexa												0.1											
Euphorbia boophthona						0.1																	
Euphorbia careyi																							
Euphorbia coghlanii																							
Euphorbia drummondii															0.1								
Euphorbia tannensis subsp. *eremophila*																							
Euphorbia trigonosperma																							
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																							
Euphorbia sp. (*boophthona/tannensis*)																							
Euphorbia sp.																							
Evolvulus alsinoides var. decumbens																							
Evolvulus alsinoides var. villosicalyx			0.1			0.1	0.1	0.1				0.1		0.1			0.1				0.1	0.1	0.1
Ficus brachypoda																							
Fimbristylis dichotoma																							
Fimbristylis simulans																							
Fimbristylis sp.																							
Flaveria trinervia																							
Gastrolobium grandiflorum																							
Glycine canescens						0.1																	
Gnephosis arachnoidea						0.1																	
Gompholobium oreophilum																							
Gomphrena cunninghamii																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Gomphrena kanisii																0.1			0.1				0.1
Goodenia cusackiana																							
Goodenia microptera			0.1		0.1	0.1	0.1								0.1								
Goodenia muelleriana				0.1		0.1	0.1												0.1				
Goodenia prostrata																							
Goodenia stellata														0.1									
Goodenia stobbsiana		0.1	0.1	0.1	0.1		0.1				0.1		0.1		0.1							0.1	
Goodenia tenuiloba																							
Goodenia triodiophila		0.1			0.1			0.1	0.1		0.1		0.1										
Gossypium australe							0.1																
Gossypium robinsonii					0.1				0.1			0.1			0.1		0.1						
Gossypium sturtianum var. *sturtianum*																							
Grevillea berryana							0.1														0.1		
Grevillea saxicola																							
Grevillea wickhamii																							
Grevillea wickhamii subsp. *hispidula*																							
Hakea chordophylla		0.1			0.1			0.1			1		0.1										
Hakea lorea subsp. *lorea*														0.1									
Halgania gustafsenii var. Mid West (G. Perry 370)																							
Harnieria kempeana subsp. *muelleri*									0.1														
Heliotropium chrysocarpum					0.1																		
Heliotropium cunninghamii																							
Heliotropium heteranthum																							
Heliotropium inexplicitum		0.1		0.1	0.1		0.1		0.1		0.1				0.1	0.1	0.1	0.1		0.1			
Heliotropium sp.																							
Heliotropium tenuifolium																							
Hibiscus brachychlaenus																							
Hibiscus burtonii		0.1				0.1															0.1	0.1	0.1
Hibiscus coatesii	0.1	0.1	0.1				0.1		0.1		0.1	0.1	0.1		0.1			0.1				0.1	
Hibiscus sturtii var. *campylochlamys*		0.1		0.1	0.1		0.1									0.1		0.1	0.1				
Hibiscus sturtii var. *grandiflorus*	0.1		0.1									0.1										0.1	
Hibiscus sturtii var. *platychlamys*									0.1													0.1	
Hibiscus sturtii var. *truncatus*																							
Hibiscus sturtii var. aff. *truncatus*																0.1					0.1		
Hibiscus sturtii var. not determined																							
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)					0.1																	0.1	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																							
Hibiscus sp. Mt Robinson (G. Byrne 3537)																							
Hybanthus aurantiacus																							
Indigofera colutea						0.1																	
Indigofera fractiflexa subsp. *fractiflexa*																							
Indigofera georgei								1				0.1		0.1			0.5						
Indigofera gilesii																							
Indigofera linnaei																							
Indigofera monophylla	0.1	0.1	0.1	0.1	0.1		0.1		0.1			0.1				0.1	0.1	0.1		3			
Indigofera rugosa																							
Ipomoea muelleri								0.1															
Ipomoea plebeia																							
Iseilema dolichotrichum																							
Iseilema membranaceum																							
Iseilema vaginiflorum																							
Isotropis parviflora																							
Isotropis sp. Arid zone (G. Byrne 2775)								0.1				0.1		1									
Jasminum didymum subsp. *lineare*												0.1											
Leiocarpa semicalva subsp. *semicalva*																							
Lepidium echinatum																							0.1
Lepidium oxytrichum																							
Lepidium pedicellosum	0.1			0.1																			
Lepidium phlebopetalum						0.1																	
Lobelia heterophylla subsp. *pilbarensis*																							
Maireana georgei	0.1			0.1															0.1				

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Maireana melanocoma																							
Maireana planifolia						0.1			0.1					0.1									
Maireana planifolia x *villosa*										0.1												0.1	
Maireana tomentosa subsp. *tomentosa*																							
Maireana triptera																			0.1				
Maireana villosa							0.1		0.1	0.1											0.1	0.5	3
Malvastrum americanum																							
Marsdenia australis								0.1															
Marsilea hirsuta																							
Maytenus sp. Mt Windell (S. van Leeuwen 846)																							
Melaleuca bracteata																							
Melaleuca eleuterostachya																							
Melaleuca glomerata																							
Melhania oblongifolia																							
Mirbelia viminalis																							
Monachather paradoxus																							
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																							
Nicotiana benthamiana																							
Nicotiana occidentalis subsp. *obliqua*																							
Nicotiana occidentalis subsp. *occidentalis*																							
Nicotiana simulans																							
Nicotiana sp.																						0.1	
Notoleptopus decaisnei																							
Oldenlandia crouchiana																							
Olearia fluvialis																							
Olearia stuartii																							
Olearia xerophila																							
Oxalis sp. Pilbara (M.E. Trudgen 12725)																							
Pandorea pandorana																							
Panicum decompositum																							
Panicum effusum																			0.1				
Paraceterach reynoldsii																							
Paraneurachne muelleri		0.5				0.1		0.1	0.1		0.1	3				0.1	0.1	0.1		0.1			
Parietaria cardiostegia																							
Paspalidium clementii	0.1		0.1				0.1								0.1								
Paspalidium constrictum																							
Paspalidium rarum																							
Peplidium muelleri								0.1															
Peripleura hispidula var. *hispidula*																							
Peripleura obovata																							
Peripleura virgata											0.1		0.1										
Peripleura sp.																							
Perotis rara																					0.1	0.1	0.1
Petalostylis labicheoides												70											
Phyllanthus maderaspatensis																							
Pilbara trudgenii																							
Pimelea microcephala subsp. *microcephala*																							
Pittosporum angustifolium																							
Pluchea dentex																							
Pluchea dunlopii								0.1						0.1									
Polycarpaea corymbosa var. *corymbosa*						0.1															0.1	0.1	0.1
Polycarpaea holtzei																							
Polycarpaea longiflora							0.1																
Polygala glaucifolia																							
Polymeria ambigua																							
Portulaca filifolia																							
Portulaca oleracea/intraterranea																							
Prostanthera albiflora																							
Psydrax latifolia																							
Psydrax rigidula																							
Psydrax suaveolens							0.1		0.1	0.1										0.1	0.1	0.1	0.1

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Pterocaulon serrulatum var. *velutinum*																							
Pterocaulon sphacelatum						0.1		0.1						0.1					0.1			0.1	0.1
Pterocaulon sphaeranthoides																							
Pterocaulon sp.																							
Ptilotus aervoides						0.1																	
Ptilotus astrolasius									0.1							0.1							
Ptilotus auriculifolius																							
Ptilotus calostachyus	0.1	0.1		0.1	0.1		0.1		0.1		0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1			
Ptilotus clementii	0.1			0.1	0.1		0.1					0.1					0.1		0.1	0.1			
Ptilotus exaltatus	0.1			0.1	0.1	0.5	0.1	0.1	0.1			0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1
Ptilotus fusiformis																							
Ptilotus gomphrenoides																							
Ptilotus helipteroides						0.1	0.1					0.1										0.1	
Ptilotus obovatus var. obovatus	0.1		0.1	0.1		0.5	0.1		0.1	0.1		0.5							0.1	0.1		0.1	0.5
Ptilotus polystachyus										0.1		0.1									0.1	0.1	0.1
Ptilotus roei									0.1														
Ptilotus rotundifolius	0.1	0.1			0.1		0.1		0.1				0.1			0.5	1	0.1		0.1			
Ptilotus schwartzii var. *schwartzii*										0.1													
Ptilotus xerophilus								0.1															
Ptilotus sp.																							
Rhagodia eremaea																							
Rhagodia sp. Hamersley (M. Trudgen 17794)							0.1					0.1									0.1	0.5	0.1
Rhodanthe humboldtiana																							
Rhodanthe margarethae																							
Rhodanthe polakii																							
Rhynchosia minima									0.1														
Roepera eichleri						0.1																	
Rostellularia adscendens var. *latifolia*																							
Rumex vesicarius																							
Salsola australis						0.1	0.1	0.1				0.1		0.1		0.1	0.1	0.1	0.1			0.1	0.1
Santalum lanceolatum	0.1																						
Santalum spicatum																							
Scaevola acacioides	0.1		0.1													0.1		0.1	0.1	0.1	0.1		
Scaevola amblyanthera var. *centralis*																							
Scaevola parvifolia subsp. *pilbarae*																							
Scaevola spinescens																							
Scaevola spinescens (broad form)																							
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)																							
Schizachyrium fragile		0.1							0.1						0.1		0.1	0.1					
Sclerolaena convexula																							
Sclerolaena cornishiana						0.1																	0.1
Sclerolaena densiflora																			0.1				
Sclerolaena eriacantha																			0.1				
Senecio hamersleyensis																							
Senna artemisioides subsp. *filifolia*																							
Senna artemisioides subsp. *helmsii*	0.1	0.1			0.1				0.1	0.1		0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1
Senna artemisioides subsp. *oligophylla*		0.1	0.1	0.1									0.1										
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																							
Senna artemisioides subsp. *oligophylla x S. ferraria*																							
Senna artemisioides subsp. *oligophylla x S. stricta*																							
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*						0.1	0.1										0.1						
Senna artemisioides subsp. x *artemisioides*																							
Senna artemisioides subsp. x *artemisioides x S. stricta*																							
Senna ferraria					0.1						0.1		0.1		0.1								
Senna ferraria x																							
Senna ferraria x S. artemisioides subsp. *oligophylla*																							
Senna ferraria x S. glutinosa subsp. *glutinosa*															0.1								
Senna glaucifolia		0.1																			0.1	0.1	0.1
Senna glaucifolia x S. artemisioides subsp. *helmsii*																							
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Senna glaucifolia x																							
Senna glutinosa subsp. *chatelainiana*						0.1																	
Senna glutinosa subsp. *glutinosa*	0.1	0.5	0.1	0.5	0.1		0.1		0.1		0.1		0.1		0.1		0.1	0.1	0.1				
Senna glutinosa subsp. *glutinosa x*																							
Senna glutinosa subsp. *x luerssenii*	0.1		0.1	0.1	0.1	0.1	0.1		0.1			0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.5	0.1	0.1	
Senna glutinosa subsp. *x luerssenii x*																							
Senna glutinosa subsp. *glutinosa x S. stricta*																							
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																	0.1						
Senna glutinosa subsp. *pruinosa*	0.1	0.5	0.1	1	0.1											0.1	0.1	2		0.5	0.1		
Senna glutinosa subsp. *pruinosa x*																							
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																							
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																							
Senna notabilis						0.1					0.1				0.1			0.1	0.1			0.1	
Senna pleurocarpa var. *angustifolia*																							
Senna sp. Karijini (M.E. Trudgen 10392)																							
Senna sp. Meekatharra (E. Bailey 1-26)																							
Senna stricta	0.1			0.1			0.1		0.1							0.1	0.1	0.5	0.1	0.1		1	
Senna stricta x																							
Senna venusta																							
Seringia elliptica		0.1			0.1		0.1					0.1											
Seringia nephrosperma																	0.1						
Setaria dielsii												0.1											
Setaria surgens																							
Setaria verticillata																							
Sida arenicola					0.1								0.1										
Sida cardiophylla				0.1													0.1						
Sida echinocarpa		0.1		0.1			0.1		0.1		0.1				0.1		0.1	0.1	0.1	0.1		0.1	
Sida ectogama																					0.1	0.1	1
Sida fibulifera						0.1		0.1				0.1		0.1				0.1				0.1	
Sida platycalyx																							0.1
Sida sp. Barlee Range (S. van Leeuwen 1642)																							
Sida sp. dark green fruits (S. van Leeuwen 2260)																		0.1		0.1		0.1	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1		0.1		0.1		0.1				0.1		0.1		0.1				0.1				
Sida sp. Golden calyces glabrous (H.N. Foote 32)																					0.1		
Sida sp. L (A.M. Ashby 4202)																					0.1		0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1		0.1		0.5		0.1				0.1		0.1		0.1	0.1		0.1	0.1	0.1			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)											0.1		0.1										
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1		0.1		0.1	0.1						1	0.1				0.1	0.1	0.1			0.1	
Sida sp. Supplejack Station (T.S. Henshall 2345)																							
Sida sp.																							
Sigesbeckia orientalis																							
Solanum centrale																							
Solanum ferocissimum																							
Solanum horridum	0.1	0.1	0.1	0.1	0.1		0.1		0.1			0.1			0.1	0.1		0.1	0.1	0.1		0.1	
Solanum kentrocaule																							
Solanum lasiophyllum	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1
Solanum nigrum																							
Solanum phlomoides																							
Solanum piceum						0.1															0.1		
Solanum sp.																							
Sonchus oleraceus																							
Spermacoce brachystema																							
Sporobolus australasicus							0.1																
Stemodia grossa								0.1												0.1			
Stenopetalum anfractum						0.1																	0.1
Streptoglossa bubakii																							
Streptoglossa decurrens																			0.1				
Stylobasium spathulatum																							
Swainsona maccullochiana						0.1																	
Swainsona sp.																							
Templetonia egena																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG24	WNG25	WNG26	WNG27	WNG28	WNG29	WNG30	WNG31	WNG32	WNG33	WNG34	WNG35	WNG36	WNG37	WNG38	WNG39	WNG40	WNG41	WNG42	WNG43	WNG44	WNG45	WNG46
Tephrosia densa																							
Tephrosia oxalidea	0.1												0.1										
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)												4											
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																							
Teucrium disjunctum																							
Teucrium teucriiflorum																							
Themeda sp. Mt Barricade (M.E. Trudgen 2471)					0.1		0.1																
Themeda triandra						0.5		25				1	0.1	75								0.1	
Trachymene oleracea subsp. *oleracea*																							
Tribulus suberosus	0.1						0.1		0.1				0.1				0.1	0.1					
Trichodesma zeylanicum var. *zeylanicum*													0.1		0.1								
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																							
Triodia angusta																							
Triodia brizoides																							
Triodia longiceps																			15				
Triodia melvillei																					0.5		1
Triodia pungens	45	3	50	40	25	0.1	25	20	3	3	11	1	12	0.5	35	1	12	2	1	0.1	3	7	2
Triodia vanleeuwenii		35		2	3		1		6							35		35		31			
Triodia wiseana																							
Triodia sp. Mt Ella (M.E. Trudgen 12739)											14		3										
Tripogonella loliiformis																							
Triraphis mollis																							
Triumfetta chaetocarpa																							
Triumfetta leptacantha																							
Urochloa occidentalis var. *ciliata*																							
Urochloa piligera																							
Vachellia farnesiana																							
Ventilago viminalis																							
Vigna lanceolata var. *lanceolata*																							
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)														0.1									
Vincetoxicum flexuosum																							
Vincetoxicum lineare					0.1												0.1						
Vittadinia dissecta var. *hirta*																							
Wahlenbergia gracilenta																							
Wahlenbergia tumidifructa																							
Waltheria indica																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Abutilon amplum																							
Abutilon cryptopetalum																							
Abutilon cunninghamii		0.1										0.1						0.1	0.1				
Abutilon fraseri subsp. *fraseri*																							
Abutilon lepidum			0.1																			0.1	
Abutilon leucopetalum																							
Abutilon macrum																							
Abutilon otocarpum															0.1								
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																							
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																							
Abutilon sp.																							
Acacia adoxa var. *adoxa*					0.1	0.1					0.1			0.1				0.1		0.1			
Acacia adsurgens		0.1				0.1	0.1								0.1	0.1		0.1				0.1	
Acacia ancistrocarpa																							
Acacia aneura	10			3			7								0.1								
Acacia 'aneura' sens. lat. (juvenile)								0.1										0.1					
Acacia aptaneura	3		0.1	1			2		0.1		0.1				0.1								
Acacia atkinsiana																							
Acacia ayersiana	0.1			0.1											1								
Acacia ayersiana (narrow phyllode variant)	8			0.1																			
Acacia bivenosa						0.1	0.1		0.1		0.1	4	0.1		0.1	0.1		3	0.5	0.1	0.1	0.1	
Acacia bivenosa (wispy/weeping form)		1	0.1																				
Acacia catenulata subsp. *occidentalis*	2			2.5																			
Acacia citrinoviridis																							
Acacia cowleana								0.1						0.1	2								0.1
Acacia dictyophleba		0.1	0.1		0.1			0.1	0.1							0.1							
Acacia eriopoda																							
Acacia hamersleyensis					0.1	0.1														0.1			
Acacia hilliana																							
Acacia inaequilatera		0.1			0.1									0.1									
Acacia incurvaneura																							
Acacia kempeana						0.1				0.1	0.1			0.1									
Acacia macraneura																							
Acacia maitlandii			0.1		0.5	1	1	0.1			0.1		0.1	1.5				0.1		1	0.1	0.1	0.1
Acacia marramamba																	0.1						
Acacia monticola																							
Acacia mulganeura																							
Acacia pachyacra								0.1		0.1					0.1	0.1				0.1	0.1	2.5	
Acacia pruinocarpa	1		0.1	2.5			2	1		0.5	2			0.1	0.1							0.1	
Acacia pteraneura																							
Acacia pyrifolia var. *pyrifolia*					0.1						0.1					0.1				0.1	0.1		4
Acacia rhodophloia										0.1													
Acacia sibirica		0.1	0.1												0.1								
Acacia sibirica (linear form)										0.1	0.1			0.1	1.5								
Acacia steedmanii subsp. *borealis*															0.5								
Acacia synchronicia		0.1																					
Acacia tenuissima		0.1	0.1		0.1	0.1		0.1	0.1			0.1					0.1		0.1				
Acacia tetragonophylla	0.1		0.1	0.1		0.1																	
Acacia trudgeniana																							
Acacia wanyu																							
Acacia sp.																							
Achyranthes aspera																							
Acrachne racemosa																							
Alternanthera denticulata																							
Alternanthera nana																							
Amaranthus cuspidifolius																							
Amaranthus interruptus																							
Amaranthus undulatus																							
Ammannia baccifera																							
Ammannia multiflora																							
Amphipogon sericeus					0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1			0.5	0.1	0.1	0.1	0.1	0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Amyema fitzgeraldii																							
Amyema miquelii																							
Amyema sanguinea var. *pulchra*																							
Androcalva luteiflora								0.1			0.1	0.1											0.1
Anthobolus leptomerioides	1			3			0.1		0.1	0.1	0.1			0.1									
Aristida burbidgeae																							
Aristida contorta	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				0.1	0.1		0.1				0.1	0.1
Aristida holathera var. *holathera*								0.1		0.1			0.1			0.1	0.1			0.1	0.1		
Aristida inaequiglumis																							
Aristida ingrata				0.1			0.1		0.1						0.1	0.1							
Aristida ? ingrata																							
Aristida jerichoensis var. *subspinulifera*																							
Aristida latifolia								0.1															
Aristida lazaridis																0.1							
Aristida aff. *nitidula*			0.1																				
Aristida obscura				0.1			0.1		0.1														
Aristida pruinosa																							
Aristida sp.																							
Astrotricha hamptonii																							
Atriplex codonocarpa																							
Bergia trimera																							
Bidens bipinnata															0.1								
Boerhavia coccinea																							
Boerhavia gardneri																							
Boerhavia repleta																							
Boerhavia sp.																							
Bothriochloa ewartiana																							
Bothriochloa sp.																							
Brachychiton acuminatus																							
Brachyscome iberidifolia																							
Brunonia sp. Long hairs (D.E. Symon 2440)								0.1															
Bulbostylis barbata																							
Cajanus cinereus																							
Calandrinia ptychosperma																							
Callitris columellaris																							
Calocephalus beardii																							
Calytrix carinata																				0.1			
Capparis lasiantha			0.1						0.1			0.1			0.1			0.1	0.1				0.1
Capparis mitchellii																					0.1		
Capparis spinosa subsp. *nummularia*																							
Cassytha capillaris																							
Cenchrus ciliaris																							
Centipeda minima subsp. *macrocephala*																							
Cheilanthes austrotenuifolia																							
Cheilanthes brownii																							
Cheilanthes sieberi subsp. *sieberi*	0.1			0.1			0.1																
Chrysocephalum apiculatum subsp. *pilbarense*																							
Chrysocephalum gilesii																							0.1
Chrysocephalum pterochaetum																							
Chrysopogon fallax				0.1																			0.1
Cleome viscosa																						0.1	
Clerodendrum floribundum var. *angustifolium*																							
Codonocarpus cotinifolius	0.1					0.1	0.1	0.1		0.1	0.1	0.1					0.1						
Convolvulus clementii																							
Corchorus crozophorifolius												0.1										0.1	
Corchorus lasiocarpus (subsp. not determined)						0.1		0.1						0.1		0.1							
Corchorus lasiocarpus subsp. *lasiocarpus*																							
Corchorus lasiocarpus subsp. *parvus*					0.1						0.1	0.1						0.1	0.1	1	0.1		0.1
Corchorus tridens																							
Corchorus sp.																							
Corymbia deserticola subsp. *deserticola*								1															

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Corymbia ferriticola																					0.1		
Corymbia hamersleyana					1															2			18
Crotalaria medicaginea var. *neglecta*																							
Cryptandra monticola																							
Cucumis variabilis																							
Cullen leucanthum																							
Cullen leucochaites												0.1											
Cullen pogonocarpum																							
Cymbopogon ambiguus						0.1		0.1	0.1	0.1			0.1	0.1		0.1	0.5				0.1	0.1	
Cymbopogon obtectus			0.1				0.1		0.1						0.1								
Cymbopogon ? obtectus																							
Cymbopogon sp.																		0.1					
Cynanchum pedunculatum																						0.1	
Cynanchum viminale subsp. *australe*																							
Cynodon convergens																							
Cynodon prostratus		0.1																					
Cyperus cunninghamii subsp. *cunninghamii*																							
Cyperus vaginatus																							
Dactyloctenium radulans																							
Dampiera candicans																	2						
Dichanthium fecundum																							
Dichanthium sericeum subsp. *humilius*			0.1																				
Dicladanthera forrestii																							
Digitaria ammophila	0.1			0.1			0.1			0.1						0.1							
Digitaria brownii									0.1						0.1	0.1							0.1
Digitaria ctenantha																							
Diplatia grandibractea																							
Dipteracanthus australasicus subsp. *australasicus*																							
Dodonaea coriacea								0.1									2			0.1		0.1	
Dodonaea lanceolata var. *lanceolata*																			0.1				0.1
Dodonaea pachyneura																	0.1						
Dodonaea petiolaris																							
Dodonaea viscosa subsp. *mucronata*																							
Duperreya commixta		0.1	0.1	0.1			0.1		0.1			0.1			0.1	0.1		0.1	0.1				0.1
Dysphania melanocarpa forma *leucocarpa*																							
Dysphania rhadinostachya (subsp. not determined)																							
Dysphania rhadinostachya subsp. *inflata*																							
Dysphania rhadinostachya subsp. *rhadinostachya*																							
Dysphania saxatilis																							
Dysphania sp.																							
Ehretia saligna var. *saligna*																							
Enchylaena tomentosa var. *tomentosa*																							
Enneapogon caerulescens			0.1								0.1											0.1	
Enneapogon lindleyanus									0.1			0.1						0.1				0.1	0.1
Enneapogon polyphyllus	0.1	0.1		0.1				0.1	0.1						0.1	0.1		0.1					0.1
Enneapogon robustissimus															0.1	0.1							
Enneapogon sp.																							
Enteropogon ramosus																							
Eragrostis cumingii				0.1																			
Eragrostis desertorum																							
Eragrostis elongata																							
Eragrostis eriopoda																							
Eragrostis exigua																							
Eragrostis pergracilis				0.1																			
Eragrostis setifolia	0.1			0.1	0.1		0.1			0.1	0.1					0.1							
Eragrostis tenellula																							
Eragrostis xerophila																							
Eragrostis sp.																							
Eremophila accrescens																							
Eremophila caespitosa																							
Eremophila cuneifolia																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Eremophila forrestii subsp. *forrestii*	6			5			5	0.1	0.1	0.1					1								
Eremophila fraseri subsp. *fraseri*													0.1										
Eremophila galeata	0.1		0.1	0.5			0.1																
Eremophila jucunda subsp. *pulcherrima*																							
Eremophila latrobei (subsp. not determined)				0.1																		0.1	
Eremophila latrobei subsp. *filiformis*																							
Eremophila latrobei subsp. *latrobei*					0.1						0.1			0.1									
Eremophila longifolia									0.1						2								0.1
Eremophila oppositifolia subsp. *angustifolia*																							
Eremophila petrophila subsp. *petrophila*																							
Eremophila phyllopoda subsp. *obliqua*			0.1				0.1			0.1													
Eremophila platycalyx subsp. *pardalota*			0.1								0.1												
Eremophila pusilliflora																							
Eremophila sp. Hamersley Range (K. Walker KW 136)																							
Eremophila sp.																							
Eriachne aristidea																							
Eriachne flaccida																							
Eriachne lanata					0.1																		
Eriachne mucronata													0.1		0.1	0.1					0.1		0.1
Eriachne mucronata (arid form) (MET 12 736)																							
Eriachne mucronata (typical form)			0.1														0.1			0.1		0.1	
Eriachne aff. *mucronata*																							
Eriachne obtusa				0.1																			
Eriachne pulchella	0.1		0.1		0.1	0.1					0.1				0.1								
Eriachne tenuiculmis																							
Eucalyptus camaldulensis subsp. *refulgens*																							
Eucalyptus gamophylla										0.1	0.1				4	6			5		0.5		
Eucalyptus kingsmillii																							
Eucalyptus leucophloia subsp. *leucophloia*		0.1		0.1	2.5	15					2		3	2			3			4	9	1.5	
Eucalyptus pilbarensis																							
Eucalyptus repullulans		4	1															6					
Eucalyptus socialis subsp. *eucentrica*												6							4				
Eucalyptus trivalva		1	2	0.5					40			6						2	7				
Eucalyptus victrix																							
Eucalyptus xerothermica												0.1											0.1
Eulalia aurea									0.1	0.1													0.1
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																							
Euphorbia australis var. *hispidula*																						0.1	
Euphorbia australis var. *subtomentosa*			0.1																				
Euphorbia biconvexa																							
Euphorbia boophthona																							
Euphorbia careyi																							
Euphorbia coghlanii																							
Euphorbia drummondii																							
Euphorbia tannensis subsp. *eremophila*																0.1							
Euphorbia trigonosperma																							
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																							
Euphorbia sp. (*boophthona/tannensis*)																							
Euphorbia sp.											0.1												
Evolvulus alsinoides var. decumbens																							
Evolvulus alsinoides var. villosicalyx					0.1			0.1	0.1						0.1	0.1					0.1	0.1	
Ficus brachypoda																							
Fimbristylis dichotoma											0.1			0.1								0.1	
Fimbristylis simulans																							
Fimbristylis sp.																							
Flaveria trinervia																							
Gastrolobium grandiflorum																							
Glycine canescens																							
Gnephosis arachnoidea																							
Gompholobium oreophilum					1	0.5		0.1			0.1			0.1									
Gomphrena cunninghamii																						0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Gomphrena kanisii												0.1	0.1										
Goodenia cusackiana																					1.5		
Goodenia microptera						0.1		0.1			0.1			0.1						0.1	0.1		0.1
Goodenia muelleriana											0.1			0.1				0.1				0.1	
Goodenia prostrata																							
Goodenia stellata																							0.1
Goodenia stobbsiana					0.1	0.1		0.1		0.1	0.1			0.1			1	0.1		2	0.5	0.1	
Goodenia tenuiloba																							
Goodenia triodiophila					0.1	0.1				0.1	0.1			0.1			0.1			0.1	0.1		
Gossypium australe									0.1														
Gossypium robinsonii												0.1			0.1	0.1		0.1					0.1
Gossypium sturtianum var. *sturtianum*																							
Grevillea berryana	0.1			0.1						0.1													
Grevillea saxicola																							
Grevillea wickhamii																							
Grevillea wickhamii subsp. *hispidula*																							
Hakea chordophylla					0.1	0.1		0.1		0.1	0.1		0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1	
Hakea lorea subsp. *lorea*																							
Halgania gustafsenii var. Mid West (G. Perry 370)					3	2		0.5			3			0.1									
Harnieria kempeana subsp. *muelleri*																							
Heliotropium chrysocarpum																							
Heliotropium cunninghamii																							0.1
Heliotropium heteranthum																							
Heliotropium inexplicitum						0.1						0.1	0.1	0.1			0.1	0.1			0.1	0.1	
Heliotropium sp.																							
Heliotropium tenuifolium																							
Hibiscus brachychlaenus																							
Hibiscus burtonii	0.1			0.1			0.1	0.1								0.1							
Hibiscus coatesii					0.1	0.1		0.1			0.1		0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1	
Hibiscus sturtii var. *campylochlamys*					0.1	0.1		0.1			0.1	0.1	0.1	0.1				0.1	0.1			0.1	
Hibiscus sturtii var. *grandiflorus*															0.1								
Hibiscus sturtii var. *platychlamys*															0.1								
Hibiscus sturtii var. *truncatus*																							
Hibiscus sturtii var. aff. *truncatus*	0.1																						
Hibiscus sturtii var. not determined																							
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																							
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																							
Hibiscus sp. Mt Robinson (G. Byrne 3537)																							
Hybanthus aurantiacus																0.1							
Indigofera colutea																							
Indigofera fractiflexa subsp. *fractiflexa*																							
Indigofera georgei																							5
Indigofera gilesii																							
Indigofera linnaei																							
Indigofera monophylla					0.1	0.1		0.1	0.1		0.1	0.5		0.1		0.1		0.1	2				
Indigofera rugosa																							
Ipomoea muelleri																							
Ipomoea plebeia																							
Iseilema dolichotrichum			0.1																			0.1	
Iseilema membranaceum																							
Iseilema vaginiflorum																							
Isotropis parviflora																							
Isotropis sp. Arid zone (G. Byrne 2775)																							
Jasminum didymum subsp. *lineare*						0.1		0.1	0.1						0.1	0.1	0.1	0.1		0.1			0.1
Leiocarpa semicalva subsp. *semicalva*																							0.1
Lepidium echinatum																							
Lepidium oxytrichum																							
Lepidium pedicellosum												0.1											
Lepidium phlebopetalum																							
Lobelia heterophylla subsp. *pilbarensis*																							
Maireana georgei		0.1	4						0.1	0.1													

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Maireana melanocoma																							
Maireana planifolia			0.1							0.1					0.1								
Maireana planifolia x *villosa*									0.1														
Maireana tomentosa subsp. *tomentosa*																							
Maireana triptera																							
Maireana villosa	0.1			0.1																			
Malvastrum americanum																							
Marsdenia australis												0.1											
Marsilea hirsuta																							
Maytenus sp. Mt Windell (S. van Leeuwen 846)																							
Melaleuca bracteata																							
Melaleuca eleuterostachya																							
Melaleuca glomerata																							
Melhania oblongifolia																0.1							
Mirbelia viminalis						0.1														0.1			
Monachather paradoxus																							
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																							
Nicotiana benthamiana																							
Nicotiana occidentalis subsp. *obliqua*																							
Nicotiana occidentalis subsp. *occidentalis*																							
Nicotiana simulans																							
Nicotiana sp.																							
Notoleptopus decaisnei																							
Oldenlandia crouchiana											0.1			0.1									
Olearia fluvialis																							
Olearia stuartii				0.1												0.1							0.1
Olearia xerophila																							
Oxalis sp. Pilbara (M.E. Trudgen 12725)																							
Pandorea pandorana																							
Panicum decompositum																							
Panicum effusum	0.1						0.1																
Paraceterach reynoldsii																							
Paraneurachne muelleri					0.1	0.1	0.1	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Parietaria cardiostegia																							
Paspalidium clementii																							
Paspalidium constrictum																							
Paspalidium rarum																							
Peplidium muelleri																							
Peripleura hispidula var. *hispidula*																							0.1
Peripleura obovata																0.1							
Peripleura virgata											0.1										0.1		
Peripleura sp.																							
Perotis rara				0.1																			
Petalostylis labicheoides					0.1															0.1			2
Phyllanthus maderaspatensis												0.1											
Pilbara trudgenii																							
Pimelea microcephala subsp. *microcephala*																							
Pittosporum angustifolium																							
Pluchea dentex																							
Pluchea dunlopii																							
Polycarpaea corymbosa var. *corymbosa*																							
Polycarpaea holtzei																							
Polycarpaea longiflora																							
Polygala glaucifolia																							
Polymeria ambigua																							
Portulaca filifolia																							
Portulaca oleracea/intraterranea																							
Prostanthera albiflora																							
Psydrax latifolia																							
Psydrax rigidula							0.1																
Psydrax suaveolens	0.1			0.1			0.1		0.1													0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Pterocaulon serrulatum var. *velutinum*																							
Pterocaulon sphacelatum												0.1										0.1	0.1
Pterocaulon sphaeranthoides																							
Pterocaulon sp.																							
Ptilotus aervoides		0.1																					
Ptilotus astrolasius									0.1	0.1		0.5						0.1	0.1				0.1
Ptilotus auriculifolius																						0.1	
Ptilotus calostachyus						0.1		0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	3	0.1	0.1	0.1	
Ptilotus clementii												0.1	0.1					0.1	0.1			0.1	
Ptilotus exaltatus	0.1	0.1	0.1			0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1		0.1	0.1	0.1	
Ptilotus fusiformis																							
Ptilotus gomphrenoides																							
Ptilotus helipteroides		0.1							0.1														
Ptilotus obovatus var. obovatus	0.1	0.1		0.1				0.1	0.1	0.1	0.1	0.1	0.1		0.5	0.1		0.1	0.1			0.1	
Ptilotus polystachyus																							
Ptilotus roei																							
Ptilotus rotundifolius					0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.5		0.1	0.1	
Ptilotus schwartzii var. *schwartzii*																							
Ptilotus xerophilus																							
Ptilotus sp.																							
Rhagodia eremaea																							
Rhagodia sp. Hamersley (M. Trudgen 17794)																							
Rhodanthe humboldtiana																							
Rhodanthe margarethae																							
Rhodanthe polakii																							
Rhynchosia minima												0.1										0.1	
Roepera eichleri																							
Rostellularia adscendens var. *latifolia*												0.1											
Rumex vesicarius																							
Salsola australis		0.1	0.1						0.1			0.1	0.1		0.1	0.1						0.1	
Santalum lanceolatum	0.1		0.1	0.1			0.1												0.1				0.1
Santalum spicatum																							
Scaevola acacioides																0.1							
Scaevola amblyanthera var. *centralis*																							
Scaevola parvifolia subsp. *pilbarae*															0.1	0.1			1				0.1
Scaevola spinescens																			0.1				0.5
Scaevola spinescens (broad form)																							
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)					0.1						0.1									0.1			
Schizachyrium fragile				0.1			0.1			0.1	0.1					0.1	0.1					0.1	
Sclerolaena convexula																							
Sclerolaena cornishiana																							
Sclerolaena densiflora		0.1																					
Sclerolaena eriacantha																							
Senecio hamersleyensis																							
Senna artemisioides subsp. *filifolia*															0.1								
Senna artemisioides subsp. *helmsii*									0.1	0.1	0.1				1	0.1		0.1					
Senna artemisioides subsp. *oligophylla*		0.1			0.1							0.1			0.5	0.1							
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																							
Senna artemisioides subsp. *oligophylla x S. ferraria*																							
Senna artemisioides subsp. *oligophylla x S. stricta*																							
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*		0.1	0.1						0.1					0.1	1		0.1		0.1		0.1	0.1	
Senna artemisioides subsp. x *artemisioides*																							
Senna artemisioides subsp. x *artemisioides x S. stricta*																							
Senna ferraria					0.1			0.1													0.1	0.1	
Senna ferraria x																							
Senna ferraria x S. artemisioides subsp. *oligophylla*																		0.1					
Senna ferraria x S. glutinosa subsp. *glutinosa*																							
Senna glaucifolia	0.1			0.1		0.1	0.1	0.1		0.1	0.1				0.1		0.1				0.1		
Senna glaucifolia x S. artemisioides subsp. *helmsii*																							
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Senna glaucifolia x																							
Senna glutinosa subsp. *chatelainiana*																							
Senna glutinosa subsp. *glutinosa*					0.1	0.1			0.1	0.1	0.1	0.1	0.5	0.1			0.5	0.1		0.1	1	0.1	
Senna glutinosa subsp. *glutinosa x*																							
Senna glutinosa subsp. *x luerssenii*		0.1	0.1						0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1	0.1	
Senna glutinosa subsp. *x luerssenii x*																							
Senna glutinosa subsp. *glutinosa x S. stricta*																							
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																							
Senna glutinosa subsp. *pruinosa*					0.1	0.1					0.1		0.1	0.1			0.1					0.1	
Senna glutinosa subsp. *pruinosa x*																							
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																							
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																							
Senna notabilis					0.1	0.1		0.1			0.1		0.1	0.1			0.1						
Senna pleurocarpa var. *angustifolia*																0.1							
Senna sp. Karijini (M.E. Trudgen 10392)																							
Senna sp. Meekatharra (E. Bailey 1-26)									0.1														
Senna stricta		0.1					0.1																
Senna stricta x																							
Senna venusta																							
Seringia elliptica				0.1	1	0.1	0.1		0.1						0.1					1			0.1
Seringia nephrosperma								0.1		0.1													
Setaria dielsii																							
Setaria surgens																							
Setaria verticillata																							
Sida arenicola								0.1			0.1			0.1									
Sida cardiophylla								1.5		0.1						0.1							
Sida echinocarpa			0.1		0.1	0.1		0.1			0.1					0.1		0.1				0.1	
Sida ectogama	0.1																						
Sida fibulifera													0.1										
Sida platycalyx																							
Sida sp. Barlee Range (S. van Leeuwen 1642)																							
Sida sp. dark green fruits (S. van Leeuwen 2260)			0.1	0.1																			
Sida sp. Excedentifolia (J.L. Egan 1925)					0.1	0.1					0.1			0.1			0.1	0.1				0.1	
Sida sp. Golden calyces glabrous (H.N. Foote 32)																							
Sida sp. L (A.M. Ashby 4202)				0.1				0.1														0.1	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)					0.1						0.1		0.1				0.1	0.1		0.1	0.1		
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)					0.1												0.1			0.1	0.1		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)			0.1						0.1			0.1		0.1				0.1	0.1				0.1
Sida sp. Supplejack Station (T.S. Henshall 2345)										0.1					0.1								
Sida sp.																							
Sigesbeckia orientalis																							
Solanum centrale				0.1		0.1				0.1						0.1	0.1			0.1			
Solanum ferocissimum																							
Solanum horridum					0.1						0.1											0.1	
Solanum kentrocaule																							
Solanum lasiophyllum	0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1			0.1		0.1		
Solanum nigrum																							
Solanum phlomoides																							
Solanum piceum																							
Solanum sp.																							
Sonchus oleraceus																							
Spermacoce brachystema	0.1																						
Sporobolus australasicus	0.1	0.1	0.1						0.1														
Stemodia grossa																							
Stenopetalum anfractum																							
Streptoglossa bubakii		0.1																0.1					
Streptoglossa decurrens																							
Stylobasium spathulatum																							
Swainsona maccullochiana																							
Swainsona sp.																							
Templetonia egena																		0.1					

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG47	WNG48	WNG49	WNG50	WNG51	WNG52	WNG53	WNG54	WNG55	WNG56	WNG57	WNG58	WNG59	WNG60	WNG61	WNG62	WNG63	WNG64	WNG65	WNG66	WNG67	WNG68	WNG69
Tephrosia densa																							
Tephrosia oxalidea																				0.1			
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)																							4
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																							
Teucrium disjunctum																							
Teucrium teucriiflorum																							
Themeda sp. Mt Barricade (M.E. Trudgen 2471)						0.1																	
Themeda triandra			0.1	0.1					0.1			1			1								80
Trachymene oleracea subsp. *oleracea*																							
Tribulus suberosus													0.1									0.1	
Trichodesma zeylanicum var. *zeylanicum*					0.1							0.1		0.1									0.1
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																							
Triodia angusta		0.1																					
Triodia brizoides																							
Triodia longiceps		0.1	2						1														
Triodia melvillei	8			3			9	2															
Triodia pungens					1	3		1	1	0.1	25	3	40	0.1	28	25	5	13	3	10	15	0.5	1.5
Triodia vanleeuwenii					10	4	0.1	8		35	0.1			5		10							
Triodia wiseana		15	11	0.1	2	0.1		2	4			12		0.1			30	10	12	3		15	
Triodia sp. Mt Ella (M.E. Trudgen 12739)																	0.1						
Tripogonella loliiformis																							
Triraphis mollis																							
Triumfetta chaetocarpa																							
Triumfetta leptacantha																							
Urochloa occidentalis var. *ciliata*																							
Urochloa piligera																							
Vachellia farnesiana																							
Ventilago viminalis												0.1											0.5
Vigna lanceolata var. *lanceolata*																							
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																							
Vincetoxicum flexuosum																							
Vincetoxicum lineare																			0.1				
Vittadinia dissecta var. *hirta*																							
Wahlenbergia gracilenta																							
Wahlenbergia tumidifructa																							
Waltheria indica																							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Abutilon amplum																						
Abutilon cryptopetalum																						
Abutilon cunninghamii																		0.1				
Abutilon fraseri subsp. *fraseri*																						
Abutilon lepidum																						
Abutilon leucopetalum																						
Abutilon macrum	0.1																					
Abutilon otocarpum									0.1								0.1					0.1
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																						
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)													0.1									
Abutilon sp.																						
Acacia adoxa var. *adoxa*	0.1		0.1		0.1			1			0.1	2			0.1							
Acacia adsurgens	0.1			0.1			0.1					0.1			0.1		0.1					
Acacia ancistrocarpa																						
Acacia aneura									35								0.1					
Acacia 'aneura' sens. lat. (juvenile)						0.1				0.1												0.1
Acacia aptaneura		1					1		5									0.1				0.1
Acacia atkinsiana																						
Acacia ayersiana																					0.1	
Acacia ayersiana (narrow phyllode variant)																						
Acacia bivenosa	0.1			3	0.1	0.1	0.1			0.1	0.1		6	0.1	0.1	0.1	0.1	0.1		0.1		0.1
Acacia bivenosa (wispy/weeping form)																						
Acacia catenulata subsp. *occidentalis*		40																			20	
Acacia citrinoviridis																					10	3
Acacia cowleana	0.1				0.1	0.1	0.1				0.1	0.1	0.1		0.1				0.1	0.1		
Acacia dictyophleba					0.1																	
Acacia eriopoda																						
Acacia hamersleyensis		0.1	0.1																			
Acacia hilliana																						
Acacia inaequilatera																						
Acacia incurvaneura		0.1																			1	
Acacia kempeana																						
Acacia macraneura	0.1																					
Acacia maitlandii	0.1		6		0.5	0.1		3					0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	
Acacia marramamba								0.1													0.1	
Acacia monticola	3																			0.1		0.1
Acacia mulganeura																						
Acacia pachyacra																	0.1					
Acacia pruinocarpa	0.1	0.1			0.1	0.1		0.1	1						0.1	0.1	0.1				5	
Acacia pteraneura																						
Acacia pyrifolia var. *pyrifolia*	0.1		0.1		0.1		0.1	1				0.1	0.1			0.1			0.1	0.5		0.1
Acacia rhodophloia																					1	
Acacia sibirica															0.1							
Acacia sibirica (linear form)																						
Acacia steedmanii subsp. *borealis*	0.1				0.1			0.1			0.1		0.1		0.1					0.1		
Acacia synchronicia																						
Acacia tenuissima	0.1			0.1	0.1		2.5			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1				
Acacia tetragonophylla																					0.1	
Acacia trudgeniana																						
Acacia wanyu																						
Acacia sp.																						
Achyranthes aspera																						
Acrachne racemosa																						
Alternanthera denticulata																						
Alternanthera nana																	0.1					
Amaranthus cuspidifolius		0.1																				0.1
Amaranthus interruptus																						
Amaranthus undulatus																						
Ammannia baccifera																						
Ammannia multiflora																						
Amphipogon sericeus			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1		0.1	2	0.1		0.1				

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Amyema fitzgeraldii																						
Amyema miquelii																						
Amyema sanguinea var. *pulchra*												0.1			0.1							
Androcalva luteiflora	0.1		0.1		0.1						0.1		1							1		5
Anthobolus leptomerioides																					0.1	
Aristida burbidgeae																						
Aristida contorta					0.1	0.1			1				0.1		0.1		1	0.1				
Aristida holathera var. *holathera*					0.1	0.1		0.1			0.1			0.1					0.1			
Aristida inaequiglumis																						
Aristida ingrata																	0.1					
Aristida ? ingrata																						
Aristida jerichoensis var. *subspinulifera*																						
Aristida latifolia					0.1		0.1															
Aristida lazaridis																						
Aristida aff. *nitidula*																						
Aristida obscura									0.1													
Aristida pruinosa						0.1																
Aristida sp.																						
Astrotricha hamptonii																						
Atriplex codonocarpa																						
Bergia trimera																						
Bidens bipinnata		0.1							3				0.1									0.1
Boerhavia coccinea																	0.1					
Boerhavia gardneri																						
Boerhavia repleta																						
Boerhavia sp.																						
Bothriochloa ewartiana																						
Bothriochloa sp.																						
Brachychiton acuminatus																						
Brachyscome iberidifolia																						
Brunonia sp. Long hairs (D.E. Symon 2440)							0.1	0.1			0.1											
Bulbostylis barbata																						
Cajanus cinereus																						
Calandrinia ptychosperma																						
Callitris columellaris																						
Calocephalus beardii																						
Calytrix carinata																						
Capparis lasiantha	0.1	0.1	0.1			0.1			0.1				0.1					0.1		0.1		
Capparis mitchellii										0.1												
Capparis spinosa subsp. *nummularia*																						
Cassytha capillaris																0.1						
Cenchrus ciliaris																						
Centipeda minima subsp. *macrocephala*																						
Cheilanthes austrotenuifolia		0.1																				
Cheilanthes brownii		0.1								0.1												
Cheilanthes sieberi subsp. *sieberi*									1								0.1					
Chrysocephalum apiculatum subsp. *pilbarense*																	0.1					
Chrysocephalum gilesii																	0.1			0.1		
Chrysocephalum pterochaetum	0.1		0.1				0.1	0.1						0.1								
Chrysopogon fallax									0.1								0.1					
Cleome viscosa		0.1															0.1					
Clerodendrum floribundum var. *angustifolium*			0.1					0.1														
Codonocarpus cotinifolius					0.1								0.1		0.1		0.1		0.1			
Convolvulus clementii																						
Corchorus crozophorifolius													0.1									0.1
Corchorus lasiocarpus (subsp. not determined)																						
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1		0.5		0.1						0.1		0.1		0.1							
Corchorus lasiocarpus subsp. *parvus*						0.1		1				0.1		0.1		0.1	0.1		0.1	1		4
Corchorus tridens																						
Corchorus sp.																						
Corymbia deserticola subsp. *deserticola*											1	3			1						0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Corymbia ferriticola																						
Corymbia hamersleyana	8		2		2	0.5		3			2		0.1	0.5		1			1	9		1
Crotalaria medicaginea var. *neglecta*													0.1							0.1		
Cryptandra monticola																						
Cucumis variabilis									0.1				0.1				0.1					0.1
Cullen leucanthum																						
Cullen leucochaites																						
Cullen pogonocarpum																						
Cymbopogon ambiguus			0.1	0.1	0.1	0.1	0.1	0.1		0.5	0.1	0.1		0.1	0.1	0.1			0.1	0.5		0.1
Cymbopogon obtectus												0.1					0.1		0.1			
Cymbopogon ? obtectus																						
Cymbopogon sp.																		0.1				
Cynanchum pedunculatum														0.1								
Cynanchum viminale subsp. *australe*																						
Cynodon convergens																						
Cynodon prostratus																						
Cyperus cunninghamii subsp. *cunninghamii*																						
Cyperus vaginatus																						
Dactyloctenium radulans																						
Dampiera candicans			0.1		0.1										0.1							
Dichanthium fecundum																						
Dichanthium sericeum subsp. *humilius*																						
Dicladanthera forrestii																						0.1
Digitaria ammophila		0.1					0.1										2					
Digitaria brownii	0.1				0.1				0.1									0.1		1		0.1
Digitaria ctenantha									0.1													
Diplatia grandibractea																						
Dipteracanthus australasicus subsp. *australasicus*													0.1									0.1
Dodonaea coriacea					0.1										0.1				0.1			
Dodonaea lanceolata var. *lanceolata*	0.1				0.1	0.1	0.1	0.1				0.1	0.1	0.1		0.1				0.1		
Dodonaea pachyneura																						
Dodonaea petiolaris																						
Dodonaea viscosa subsp. *mucronata*																						0.1
Duperreya commixta	0.1	0.1			0.1	0.1	0.1	0.1				0.1	0.1		0.1		0.1			0.1		0.1
Dysphania melanocarpa forma *leucocarpa*																						
Dysphania rhadinostachya (subsp. not determined)						0.1																
Dysphania rhadinostachya subsp. *inflata*																						
Dysphania rhadinostachya subsp. *rhadinostachya*								0.1					0.1									0.1
Dysphania saxatilis																						
Dysphania sp.																						
Ehretia saligna var. *saligna*													0.1									
Enchylaena tomentosa var. *tomentosa*		0.1																				
Enneapogon caerulescens					0.1			0.1			0.1											
Enneapogon lindleyanus		0.1			0.1				0.1			0.1	0.1	0.1				0.1		1		0.1
Enneapogon polyphyllus		0.1				0.1	0.1	0.1	0.1		0.1						0.1					
Enneapogon robustissimus													0.1							0.1		0.1
Enneapogon sp.																						
Enteropogon ramosus																						
Eragrostis cumingii																	0.1					
Eragrostis desertorum																						
Eragrostis elongata																						
Eragrostis eriopoda																						
Eragrostis exigua																						
Eragrostis pergracilis																						
Eragrostis setifolia	0.1														0.1			0.1				
Eragrostis tenellula																						0.1
Eragrostis xerophila																						
Eragrostis sp.																						
Eremophila accrescens																						
Eremophila caespitosa																						
Eremophila cuneifolia																						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Eremophila forrestii subsp. *forrestii*									3													
Eremophila fraseri subsp. *fraseri*									0.1													
Eremophila galeata																						
Eremophila jucunda subsp. *pulcherrima*			0.1					0.1														
Eremophila latrobei (subsp. not determined)			0.1																			
Eremophila latrobei subsp. *filiformis*																						
Eremophila latrobei subsp. *latrobei*		0.1				0.1																
Eremophila longifolia									0.1						0.1					0.1		
Eremophila oppositifolia subsp. *angustifolia*																						
Eremophila petrophila subsp. *petrophila*																						
Eremophila phyllopoda subsp. *obliqua*																					0.1	
Eremophila platycalyx subsp. *pardalota*																						
Eremophila pusilliflora																						
Eremophila sp. Hamersley Range (K. Walker KW 136)																						
Eremophila sp.																						
Eriachne aristidea								0.1														
Eriachne flaccida																						
Eriachne lanata																						
Eriachne mucronata	0.5		0.1	0.1	0.1	0.1				4	0.1					5			0.1	2		4
Eriachne mucronata (arid form) (MET 12 736)												0.1										
Eriachne mucronata (typical form)		0.1												0.1				0.1				
Eriachne aff. *mucronata*																						
Eriachne obtusa																						
Eriachne pulchella			0.1		0.1	0.1	0.1	0.1														0.1
Eriachne tenuiculmis	0.1																					0.1
Eucalyptus camaldulensis subsp. *refulgens*																						
Eucalyptus gamophylla	1						5		0.5		0.1	3	0.1		0.5				0.5			
Eucalyptus kingsmillii														2		2			5			
Eucalyptus leucophloia subsp. *leucophloia*		8	1	1.5	1	11	0.1	0.5	0.5	5				0.1		2		22	0.1			0.5
Eucalyptus pilbarensis														2								
Eucalyptus repullulans																5						
Eucalyptus socialis subsp. *eucentrica*																						
Eucalyptus trivalva														5								
Eucalyptus victrix																						
Eucalyptus xerothermica									1				4				1.5			0.1		
Eulalia aurea	0.1				0.1	0.1	0.1		0.1		0.1		0.1					0.1		0.1		
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																						
Euphorbia australis var. *hispidula*	0.1							0.1	0.1													
Euphorbia australis var. *subtomentosa*	0.1																					
Euphorbia biconvexa	0.1																					
Euphorbia boophthona			0.1					0.1														
Euphorbia careyi																						
Euphorbia coghlanii																						
Euphorbia drummondii									0.1													
Euphorbia tannensis subsp. *eremophila*																						
Euphorbia trigonosperma	0.1																					
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)													0.1				0.1			0.1		0.1
Euphorbia sp. (*boophthona/tannensis*)																						
Euphorbia sp.																						
Evolvulus alsinoides var. decumbens																						
Evolvulus alsinoides var. villosicalyx	0.1	0.1				0.1			0.1								0.1			0.1		0.1
Ficus brachypoda																						
Fimbristylis dichotoma				0.1	0.1		0.1		0.1		0.1	0.1			0.1							
Fimbristylis simulans																						
Fimbristylis sp.																						
Flaveria trinervia																						
Gastrolobium grandiflorum	0.1							0.1														
Glycine canescens	0.1																				0.1	
Gnephosis arachnoidea																						
Gompholobium oreophilum	0.1		1				0.1				1.5	3			0.5							
Gomphrena cunninghamii													0.1									0.1

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Gomphrena kanisii																						
Goodenia cusackiana	0.1												0.1									
Goodenia microptera	0.1						0.1			0.1					0.1			0.1		0.1		
Goodenia muelleriana													0.1					0.1		0.1		
Goodenia prostrata																						
Goodenia stellata																						
Goodenia stobbsiana	0.1		0.1	0.1	0.1	0.5	0.1	0.1			0.1	0.1		2	0.1	0.1		0.1	0.5			
Goodenia tenuiloba																						
Goodenia triodiophila	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1		0.1	0.1	0.1			0.1			
Gossypium australe																						
Gossypium robinsonii	0.1							0.1					0.1		0.1		0.1			1		5
Gossypium sturtianum var. *sturtianum*																						
Grevillea berryana		1																				
Grevillea saxicola																						
Grevillea wickhamii																				1		
Grevillea wickhamii subsp. *hispidula*	0.1																					
Hakea chordophylla	0.1		0.1	0.1	0.1	0.1	0.1			0.1	0.5	1	0.1		0.5	0.1		0.1	0.1	0.1		
Hakea lorea subsp. *lorea*					0.1				1				0.1	0.1			0.1				0.1	
Halgania gustafsenii var. Mid West (G. Perry 370)	0.1		4		5		0.1	3							1							
Harnieria kempeana subsp. *muelleri*																						
Heliotropium chrysocarpum																						
Heliotropium cunninghamii	0.1																			0.1		
Heliotropium heteranthum															0.1							
Heliotropium inexplicitum	0.1		0.1		0.1	0.1					0.1				0.1			0.1				
Heliotropium sp.																						
Heliotropium tenuifolium																						
Hibiscus brachychlaenus																						
Hibiscus burtonii						0.1			0.1								0.1				0.1	
Hibiscus coatesii	0.1		0.1	0.1	0.1	0.1		0.1		0.1		0.1			0.1	0.1		0.1	0.1			
Hibiscus sturtii var. *campylochlamys*	0.1		0.1		0.1			0.1			0.1	0.1			0.1			0.1				
Hibiscus sturtii var. *grandiflorus*																						
Hibiscus sturtii var. *platychlamys*																	0.1			0.1		
Hibiscus sturtii var. *truncatus*																						
Hibiscus sturtii var. aff. *truncatus*																						
Hibiscus sturtii var. not determined																						
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																						
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																						
Hibiscus sp. Mt Robinson (G. Byrne 3537)																						
Hybanthus aurantiacus			0.1					0.1														0.1
Indigofera colutea																						
Indigofera fractiflexa subsp. *fractiflexa*		0.1																				
Indigofera georgei													0.1								0.1	0.1
Indigofera gilesii		0.1																				
Indigofera linnaei																						
Indigofera monophylla	0.1		0.1				0.1	0.1			0.1	0.1	0.1		0.1			0.5		0.1		
Indigofera rugosa																						
Ipomoea muelleri																						
Ipomoea plebeia																						
Iseilema dolichotrichum																						
Iseilema membranaceum																						
Iseilema vaginiflorum																						
Isotropis parviflora											0.1											
Isotropis sp. Arid zone (G. Byrne 2775)																						0.1
Jasminum didymum subsp. *lineare*	0.1		0.1		0.1		0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1		
Leiocarpa semicalva subsp. *semicalva*													0.1						0.1			
Lepidium echinatum																						
Lepidium oxytrichum																						
Lepidium pedicellosum													0.1									
Lepidium phlebopetalum																						
Lobelia heterophylla subsp. *pilbarensis*		0.1																				
Maireana georgei																						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Maireana melanocoma																						
Maireana planifolia																					0.1	
Maireana planifolia x *villosa*																						
Maireana tomentosa subsp. *tomentosa*																						
Maireana triptera																						
Maireana villosa						0.1			0.1													
Malvastrum americanum													0.1									
Marsdenia australis	0.1												0.1			0.1						
Marsilea hirsuta																						
Maytenus sp. Mt Windell (S. van Leeuwen 846)														0.1								
Melaleuca bracteata																						
Melaleuca eleuterostachya																						
Melaleuca glomerata																						
Melhania oblongifolia																						0.1
Mirbelia viminalis			0.1		4																	
Monachather paradoxus																						
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)														0.1								
Nicotiana benthamiana																						
Nicotiana occidentalis subsp. *obliqua*																						
Nicotiana occidentalis subsp. *occidentalis*																						
Nicotiana simulans																						
Nicotiana sp.									0.1													
Notoleptopus decaisnei																						
Oldenlandia crouchiana								0.1														
Olearia fluvialis													0.1									
Olearia stuartii	0.1	0.1			0.1									0.1		0.1				0.1		
Olearia xerophila																						
Oxalis sp. Pilbara (M.E. Trudgen 12725)																						
Pandorea pandorana																						
Panicum decompositum																						
Panicum effusum								0.1	0.1			0.1							0.1			
Paraceterach reynoldsii																						
Paraneurachne muelleri	3		0.1	0.1	0.1	0.1	0.1	0.1		0.1			0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1
Parietaria cardiostegia																						
Paspalidium clementii		0.1	0.1			0.1		0.1														
Paspalidium constrictum																						
Paspalidium rarum																	0.1					
Peplidium muelleri																						
Peripleura hispidula var. *hispidula*									0.1				0.1				0.1					
Peripleura obovata	0.1									0.1				0.1						0.1		
Peripleura virgata		0.1			0.1	0.1	0.1	0.1			0.1			0.1					0.1			
Peripleura sp.																						
Perotis rara									3													
Petalostylis labicheoides	0.1												3							6		0.1
Phyllanthus maderaspatensis													0.1									0.1
Pilbara trudgenii																						
Pimelea microcephala subsp. *microcephala*																						
Pittosporum angustifolium																						
Pluchea dentex																						0.1
Pluchea dunlopii																						
Polycarpaea corymbosa var. *corymbosa*	0.1							0.1			0.1											
Polycarpaea holtzei											0.1											
Polycarpaea longiflora																						0.1
Polygala glaucifolia				0.1															0.1			
Polymeria ambigua																						
Portulaca filifolia																						
Portulaca oleracea/intraterranea																						
Prostanthera albiflora																						
Psydrax latifolia									0.1						0.1							
Psydrax rigidula																						
Psydrax suaveolens									0.1								0.1				0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Pterocaulon serrulatum var. *velutinum*																						
Pterocaulon sphacelatum	0.1							0.1					0.1	0.1			0.1		0.1	0.1		0.1
Pterocaulon sphaeranthoides																						
Pterocaulon sp.																						
Ptilotus aervoides																						
Ptilotus astrolasius	0.1		0.1					0.1			0.1		0.1		0.1	0.1				0.1		
Ptilotus auriculifolius																						
Ptilotus calostachyus	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1		0.1	0.1			
Ptilotus clementii			0.1		0.1													0.1				
Ptilotus exaltatus	0.1			0.1		0.1		0.1	0.1	0.1			0.1	0.1		0.1	0.1	0.1	0.1	0.1		0.1
Ptilotus fusiformis								0.1														
Ptilotus gomphrenoides																						
Ptilotus helipteroides									0.1													
Ptilotus obovatus var. obovatus	0.1	0.1		0.1	0.1		0.1		0.1	0.1							0.1	0.1		0.1	0.1	0.1
Ptilotus polystachyus																						
Ptilotus roei																						
Ptilotus rotundifolius				0.1					0.1	0.1	0.1				0.1							
Ptilotus schwartzii var. *schwartzii*																						
Ptilotus xerophilus																						
Ptilotus sp.																						
Rhagodia eremaea		0.1							0.1				0.1									0.1
Rhagodia sp. Hamersley (M. Trudgen 17794)		0.1																				
Rhodanthe humboldtiana																						
Rhodanthe margarethae		0.1																				
Rhodanthe polakii																						
Rhynchosia minima													0.1							0.1		
Roepera eichleri																						
Rostellularia adscendens var. *latifolia*																						
Rumex vesicarius																						
Salsola australis																	0.1					0.1
Santalum lanceolatum	0.1	0.1	0.1						0.1				0.1		0.1							
Santalum spicatum																						
Scaevola acacioides												0.1										
Scaevola amblyanthera var. *centralis*																						
Scaevola parvifolia subsp. *pilbarae*	0.1														0.1					0.1		
Scaevola spinescens				0.1						0.1										0.1		
Scaevola spinescens (broad form)	0.1								0.1													
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1				0.1	0.1								0.1		3			0.1			
Schizachyrium fragile			0.1	0.1	0.1	0.1	0.1	0.1			0.1	0.1			0.1				0.1			
Sclerolaena convexula																						
Sclerolaena cornishiana																	0.1					
Sclerolaena densiflora																						
Sclerolaena eriacantha																						
Senecio hamersleyensis																						
Senna artemisioides subsp. *filifolia*													0.1									
Senna artemisioides subsp. *helmsii*	0.1		0.1				0.1		0.1		0.1				0.1					0.1		0.1
Senna artemisioides subsp. *oligophylla*	0.1				0.1						0.1		0.1		0.1							
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																						
Senna artemisioides subsp. *oligophylla x S. ferraria*																						
Senna artemisioides subsp. *oligophylla x S. stricta*																						
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*										0.1	0.1											
Senna artemisioides subsp. x *artemisioides*																						
Senna artemisioides subsp. x *artemisioides x S. stricta*																						
Senna ferraria			0.1		0.1	0.1		0.1		0.1	0.1			0.1	0.1							
Senna ferraria x																						
Senna ferraria x S. artemisioides subsp. *oligophylla*																						
Senna ferraria x S. glutinosa subsp. *glutinosa*																						
Senna glaucifolia							0.1															
Senna glaucifolia x S. artemisioides subsp. *helmsii*																						
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Senna glaucifolia x																						
Senna glutinosa subsp. *chatelainiana*																						
Senna glutinosa subsp. *glutinosa*	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1			0.1		0.1		0.1	0.1			0.1
Senna glutinosa subsp. *glutinosa x*																						
Senna glutinosa subsp. *x luerssenii*		0.1	0.1		0.1			0.1										0.1			0.1	
Senna glutinosa subsp. *x luerssenii x*																						
Senna glutinosa subsp. *glutinosa x S. stricta*																						
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																						
Senna glutinosa subsp. *pruinosa*						0.1		0.1										0.1				
Senna glutinosa subsp. *pruinosa x*																						
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																						
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*												0.1										
Senna notabilis														0.1	0.1				0.1			
Senna pleurocarpa var. *angustifolia*																	1					
Senna sp. Karijini (M.E. Trudgen 10392)																						
Senna sp. Meekatharra (E. Bailey 1-26)																						
Senna stricta	0.1																			0.1	0.1	
Senna stricta x																						
Senna venusta																						
Seringia elliptica	0.1				0.1	2.5	0.1	2							0.1	0.5	0.1					
Seringia nephrosperma																						
Setaria dielsii																						
Setaria surgens	0.1																			0.1		
Setaria verticillata																						
Sida arenicola	0.1														0.1			0.1				
Sida cardiophylla															0.1		0.1					
Sida echinocarpa	0.1		0.1	0.1							0.1							0.1		0.1		
Sida ectogama																						
Sida fibulifera																						
Sida platycalyx																						
Sida sp. Barlee Range (S. van Leeuwen 1642)																						
Sida sp. dark green fruits (S. van Leeuwen 2260)									0.1													
Sida sp. Excedentifolia (J.L. Egan 1925)			0.1		0.1	0.1		0.1				0.1		0.1		0.1		0.1	0.1			
Sida sp. Golden calyces glabrous (H.N. Foote 32)																						
Sida sp. L (A.M. Ashby 4202)									0.1				0.1				0.1				0.1	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1	0.1	1		0.1				0.1		0.1	0.1				0.1			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)					0.1					0.1				0.1		0.1		0.1				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1				0.1			0.1			0.1	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1	1
Sida sp. Supplejack Station (T.S. Henshall 2345)																						
Sida sp.																						
Sigesbeckia orientalis													0.1									
Solanum centrale				0.1											0.1							
Solanum ferocissimum																						
Solanum horridum								0.1											0.1			
Solanum kentrocaule								0.1					0.1	0.1		0.1						
Solanum lasiophyllum		0.1	0.1			0.1	0.1			0.1	0.1						0.1	0.1				
Solanum nigrum																						
Solanum phlomoides																						
Solanum piceum																					0.1	0.1
Solanum sp.																						
Sonchus oleraceus																						
Spermacoce brachystema																						
Sporobolus australasicus								0.1	0.1				0.1									
Stemodia grossa																						
Stenopetalum anfractum																						
Streptoglossa bubakii																		0.1				
Streptoglossa decurrens																						
Stylobasium spathulatum													0.1									
Swainsona maccullochiana																						
Swainsona sp.																						
Templetonia egena																		1				

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG70	WNG71	WNG72	WNG73	WNG74	WNG75	WNG76	WNG77	WNG78	WNG79	WNG80	WNG81	WNG82	WNG83	WNG84	WNG85	WNG86	WNG87	WNG88	WNG89	WNG-REL01	WNG-REL02
Tephrosia densa																						
Tephrosia oxalidea					0.1													0.1				
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)													0.1							20	0.1	8
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																						
Teucrium disjunctum																						
Teucrium teucriiflorum		0.1							0.1													
Themeda sp. Mt Barricade (M.E. Trudgen 2471)			0.1		0.1									0.1								
Themeda triandra	5	0.1		0.1			0.1	0.1	0.1	0.1	0.5		70		0.1		25	0.1		35	0.1	8
Trachymene oleracea subsp. *oleracea*	0.1										0.1											
Tribulus suberosus					0.1																	
Trichodesma zeylanicum var. *zeylanicum*													0.1							0.1		
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																						
Triodia angusta																						
Triodia brizoides																						
Triodia longiceps													3									
Triodia melvillei																						
Triodia pungens	18	13	8		2	20	2	8	3	35	0.1		1		6	0.1	7	9		8	15	3
Triodia vanleeuwenii							43				15	11			9							
Triodia wiseana			8	20	6			2				0.5		7		20			20			
Triodia sp. Mt Ella (M.E. Trudgen 12739)					0.1			0.5						5		1			5			
Tripogonella loliiformis																						
Triraphis mollis													0.1									
Triumfetta chaetocarpa																						
Triumfetta leptacantha																						
Urochloa occidentalis var. *ciliata*																						
Urochloa piligera																						
Vachellia farnesiana																						
Ventilago viminalis													0.1							0.1		
Vigna lanceolata var. *lanceolata*																						
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																						
Vincetoxicum flexuosum																						
Vincetoxicum lineare					0.1			0.1							0.1			0.1				
Vittadinia dissecta var. *hirta*																	0.1					
Wahlenbergia gracilenta																						
Wahlenbergia tumidifructa																						
Waltheria indica																						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Abutilon amplum																
Abutilon cryptopetalum								0.1								
Abutilon cunninghamii																
Abutilon fraseri subsp. *fraseri*															0.1	
Abutilon lepidum			0.1	0.1	0.1											
Abutilon leucopetalum																
Abutilon macrum																
Abutilon otocarpum				0.1											0.1	
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)		0.1								0.1				0.1		
Abutilon sp.																
Acacia adoxa var. *adoxa*											0.1					
Acacia adsurgens							0.1		0.1							
Acacia ancistrocarpa							0.1									
Acacia aneura	2							0.1					20			
Acacia 'aneura' sens. lat. (juvenile)						5										
Acacia aptaneura	1	2	21		20			5	0.1	0.1		20	15		0.1	
Acacia atkinsiana																
Acacia ayersiana		0.1											0.1			
Acacia ayersiana (narrow phyllode variant)																
Acacia bivenosa	0.1		0.1			0.1	0.1	0.1		0.1	0.1			0.1		0.1
Acacia bivenosa (wispy/weeping form)																
Acacia catenulata subsp. *occidentalis*	20															
Acacia citrinoviridis	0.1															
Acacia cowleana							5		0.1							
Acacia dictyophleba	0.1								0.1							
Acacia eriopoda																
Acacia hamersleyensis															0.1	
Acacia hilliana																
Acacia inaequilatera																
Acacia incurvaneura								30						0.1		
Acacia kempeana																
Acacia macraneura	10												10	2		
Acacia maitlandii							0.1				0.1				0.1	4
Acacia marramamba								0.1								0.1
Acacia monticola				2			40		18		0.5				3	
Acacia mulganeura																
Acacia pachyacra	0.1															
Acacia pruinocarpa	1	0.1	3	0.5		0.1		2	0.1		0.1		5		0.1	
Acacia pteraneura																
Acacia pyrifolia var. *pyrifolia*				2							0.1					
Acacia rhodophloia																
Acacia sibirica																
Acacia sibirica (linear form)															0.1	
Acacia steedmanii subsp. *borealis*																
Acacia synchronicia																
Acacia tenuissima				0.1			0.1									0.1
Acacia tetragonophylla	0.1		0.1		0.5					0.1				0.1		
Acacia trudgeniana																
Acacia wanyu																
Acacia sp.																
Achyranthes aspera																
Acrachne racemosa					0.1											
Alternanthera denticulata																
Alternanthera nana						0.1							0.1			
Amaranthus cuspidifolius														0.1		
Amaranthus interruptus												0.1				
Amaranthus undulatus																
Ammannia baccifera																
Ammannia multiflora																
Amphipogon sericeus																

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Amyema fitzgeraldii		0.1						0.1				0.1		0.1		
Amyema miquelii																
Amyema sanguinea var. *pulchra*																
Androcalva luteiflora									2		3				4	
Anthobolus leptomerioides	0.1							0.1								
Aristida burbidgeae		9						0.1				0.1		5		
Aristida contorta						0.1			0.1		0.1		0.1		0.1	0.1
Aristida holathera var. *holathera*							0.1		0.1						0.1	0.1
Aristida inaequiglumis																
Aristida ingrata			0.1													
Aristida ? ingrata									0.1							
Aristida jerichoensis var. *subspinulifera*			0.1													
Aristida latifolia																
Aristida lazaridis																
Aristida aff. *nitidula*																
Aristida obscura													0.1			
Aristida pruinosa				0.1									0.1			
Aristida sp.																
Astrotricha hamptonii		0.1						0.1		0.1		0.1		0.1		
Atriplex codonocarpa																
Bergia trimera																
Bidens bipinnata	0.1	0.1	0.1	0.1	0.1			0.1		0.1		0.1	0.1	0.1		
Boerhavia coccinea																
Boerhavia gardneri																
Boerhavia repleta																
Boerhavia sp.																
Bothriochloa ewartiana																
Bothriochloa sp.																
Brachychiton acuminatus								0.1						0.1		
Brachyscome iberidifolia													0.1			
Brunonia sp. Long hairs (D.E. Symon 2440)																
Bulbostylis barbata																
Cajanus cinereus																
Calandrinia ptychosperma													0.1			
Callitris columellaris		12								3		1		15		
Calocephalus beardii																
Calytrix carinata																
Capparis lasiantha		0.1			0.1					0.1	0.1	0.1		0.1	0.1	
Capparis mitchellii		1										0.1		3		
Capparis spinosa subsp. *nummularia*																
Cassytha capillaris																
Cenchrus ciliaris																
Centipeda minima subsp. *macrocephala*																
Cheilanthes austrotenuifolia		0.1						0.1		0.1		0.1		0.1		
Cheilanthes brownii		0.1	0.1					0.1		0.1		0.1		0.1		
Cheilanthes sieberi subsp. *sieberi*			0.1										3			
Chrysocephalum apiculatum subsp. *pilbarense*																
Chrysocephalum gilesii				0.1		0.1							0.1			
Chrysocephalum pterochaetum																
Chrysopogon fallax													1			
Cleome viscosa				0.1						0.1						
Clerodendrum floribundum var. *angustifolium*											0.1					
Codonocarpus cotinifolius						0.1	0.1		0.1			0.1				0.1
Convolvulus clementii																
Corchorus crozophorifolius				0.1												
Corchorus lasiocarpus (subsp. not determined)																
Corchorus lasiocarpus subsp. *lasiocarpus*																0.1
Corchorus lasiocarpus subsp. *parvus*	1		0.1	0.1			0.1		0.1		0.1					
Corchorus tridens																
Corchorus sp.																
Corymbia deserticola subsp. *deserticola*				0.1			0.5		0.1							

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Corymbia ferriticola		6						1		0.5		0.1		5		
Corymbia hamersleyana						1.5			1.5		6				0.1	
Crotalaria medicaginea var. *neglecta*																
Cryptandra monticola																
Cucumis variabilis		0.1		0.1	0.1	0.1		0.1		0.1			0.1	0.1		
Cullen leucanthum																
Cullen leucochaites																
Cullen pogonocarpum						0.1										
Cymbopogon ambiguus		0.1	0.1				0.1	0.1		0.1	0.1	0.1		0.1		
Cymbopogon obtectus		0.1														
Cymbopogon ? obtectus																
Cymbopogon sp.	0.1								0.1							
Cynanchum pedunculatum		0.1														
Cynanchum viminale subsp. *australe*																
Cynodon convergens																
Cynodon prostratus																
Cyperus cunninghamii subsp. *cunninghamii*										0.1		0.1				
Cyperus vaginatus																
Dactyloctenium radulans																
Dampiera candicans																0.1
Dichanthium fecundum																
Dichanthium sericeum subsp. *humilius*																
Dicladanthera forrestii																
Digitaria ammophila		0.1	0.1				0.1						0.1			
Digitaria brownii	0.1	0.1		0.1		0.1			0.1			0.1	0.1			
Digitaria ctenantha						0.1										
Diplatia grandibractea																
Dipteracanthus australasicus subsp. *australasicus*					0.5	0.1										
Dodonaea coriacea																
Dodonaea lanceolata var. *lanceolata*							0.1				0.1				0.1	
Dodonaea pachyneura								3								
Dodonaea petiolaris								0.1		0.1				0.1		
Dodonaea viscosa subsp. *mucronata*		0.1									0.1			0.1		
Duperreya commixta	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Dysphania melanocarpa forma *leucocarpa*																
Dysphania rhadinostachya (subsp. not determined)																
Dysphania rhadinostachya subsp. *inflata*																
Dysphania rhadinostachya subsp. *rhadinostachya*		0.1	0.1	0.1		0.1						0.1				
Dysphania saxatilis										0.1		0.1		0.1		
Dysphania sp.																
Ehretia saligna var. *saligna*																
Enchylaena tomentosa var. *tomentosa*	0.1	0.1	0.1					0.1						0.1		
Enneapogon caerulescens															0.1	
Enneapogon lindleyanus	0.1		0.1	0.1	0.5			0.1		0.1				0.1		
Enneapogon polyphyllus		0.1	0.1	0.1	0.1	0.1							0.1		0.1	
Enneapogon robustissimus		0.1		0.1						0.1			0.1			
Enneapogon sp.																
Enteropogon ramosus																
Eragrostis cumingii													3			
Eragrostis desertorum																
Eragrostis elongata																
Eragrostis eriopoda																
Eragrostis exigua																
Eragrostis pergracilis																
Eragrostis setifolia																
Eragrostis tenellula																
Eragrostis xerophila																
Eragrostis sp.																
Eremophila accrescens																
Eremophila caespitosa																
Eremophila cuneifolia																

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Eremophila forrestii subsp. *forrestii*	0.1				0.1								1			
Eremophila fraseri subsp. *fraseri*																
Eremophila galeata																
Eremophila jucunda subsp. *pulcherrima*			0.1		20											
Eremophila latrobei (subsp. not determined)																
Eremophila latrobei subsp. *filiformis*																
Eremophila latrobei subsp. *latrobei*								0.1		0.1		0.1				
Eremophila longifolia	0.1					0.1									0.1	
Eremophila oppositifolia subsp. *angustifolia*																
Eremophila petrophila subsp. *petrophila*		0.1								0.1		0.1				
Eremophila phyllopoda subsp. *obliqua*			5													
Eremophila platycalyx subsp. *pardalota*																
Eremophila pusilliflora																
Eremophila sp. Hamersley Range (K. Walker KW 136)		0.1						0.5		0.5		0.5		0.1		
Eremophila sp.																
Eriachne aristidea																
Eriachne flaccida																
Eriachne lanata																
Eriachne mucronata					0.1			0.1	0.1			0.1	0.1	0.1	0.1	
Eriachne mucronata (arid form) (MET 12 736)		0.1														
Eriachne mucronata (typical form)				1							0.5					
Eriachne aff. *mucronata*										5		8				
Eriachne obtusa																
Eriachne pulchella											0.1					
Eriachne tenuiculmis																
Eucalyptus camaldulensis subsp. *refulgens*																
Eucalyptus gamophylla	0.5						0.5		0.1							
Eucalyptus kingsmillii																
Eucalyptus leucophloia subsp. *leucophloia*	0.5			1		0.1		1				0.1		0.1		1
Eucalyptus pilbarensis																
Eucalyptus repullulans																
Eucalyptus socialis subsp. *eucentrica*																
Eucalyptus trivalva															1	
Eucalyptus victrix																
Eucalyptus xerothermica															0.5	
Eulalia aurea																
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																
Euphorbia australis var. *hispidula*			0.1												0.1	
Euphorbia australis var. *subtomentosa*																
Euphorbia biconvexa																
Euphorbia boophthona															0.1	
Euphorbia careyi																
Euphorbia coghlanii																
Euphorbia drummondii																
Euphorbia tannensis subsp. *eremophila*																
Euphorbia trigonosperma																
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)				0.1		0.1										
Euphorbia sp. (*boophthona/tannensis*)																
Euphorbia sp.																
Evolvulus alsinoides var. decumbens																
Evolvulus alsinoides var. villosicalyx		0.1	0.1	0.1		0.1				0.1	0.1		0.1		0.1	
Ficus brachypoda		0.1								1				3		
Fimbristylis dichotoma																
Fimbristylis simulans																
Fimbristylis sp.																
Flaveria trinervia																
Gastrolobium grandiflorum							0.5								0.1	
Glycine canescens							0.1	0.1								
Gnephosis arachnoidea																
Gompholobium oreophilum											0.1					
Gomphrena cunninghamii			0.1	0.1				0.1								

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Gomphrena kanisii						0.1										
Goodenia cusackiana																
Goodenia microptera						0.1			0.1							0.1
Goodenia muelleriana			0.1													
Goodenia prostrata													0.1			
Goodenia stellata						0.1										
Goodenia stobbsiana							0.1				0.1					0.1
Goodenia tenuiloba																
Goodenia triodiophila																0.1
Gossypium australe				0.1		0.1										
Gossypium robinsonii				1					0.1		0.1				0.1	
Gossypium sturtianum var. *sturtianum*																
Grevillea berryana			1													
Grevillea saxicola										10		3		1		
Grevillea wickhamii																
Grevillea wickhamii subsp. *hispidula*											0.1					
Hakea chordophylla																0.1
Hakea lorea subsp. *lorea*														0.1		
Halgania gustafsenii var. Mid West (G. Perry 370)																
Harnieria kempeana subsp. *muelleri*								20								
Heliotropium chrysocarpum																
Heliotropium cunninghamii																
Heliotropium heteranthum																
Heliotropium inexplicitum																0.1
Heliotropium sp.																
Heliotropium tenuifolium																
Hibiscus brachychlaenus																
Hibiscus burtonii	0.1				0.1		0.1		0.1					0.1		
Hibiscus coatesii	0.1						0.1		0.1		0.1					
Hibiscus sturtii var. *campylochlamys*	0.1						0.1		0.1		0.1				0.1	0.1
Hibiscus sturtii var. *grandiflorus*	0.1					0.1										
Hibiscus sturtii var. *platychlamys*						0.1										
Hibiscus sturtii var. *truncatus*																
Hibiscus sturtii var. aff. *truncatus*			0.1													
Hibiscus sturtii var. not determined																
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)			0.1													
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)								0.5								
Hibiscus sp. Mt Robinson (G. Byrne 3537)																
Hybanthus aurantiacus																
Indigofera colutea																
Indigofera fractiflexa subsp. *fractiflexa*											0.1					
Indigofera georgei						0.1										
Indigofera gilesii																
Indigofera linnaei																
Indigofera monophylla	0.1			0.1	20				0.1		0.1				0.1	0.1
Indigofera rugosa																
Ipomoea muelleri																
Ipomoea plebeia																
Iseilema dolichotrichum																
Iseilema membranaceum												0.1				
Iseilema vaginiflorum																
Isotropis parviflora																
Isotropis sp. Arid zone (G. Byrne 2775)						0.1			0.1							
Jasminum didymum subsp. *lineare*				0.1					0.1		0.1				0.1	
Leiocarpa semicalva subsp. *semicalva*				0.1												
Lepidium echinatum																
Lepidium oxytrichum								0.1		0.1				0.1		
Lepidium pedicellosum																
Lepidium phlebopetalum																
Lobelia heterophylla subsp. *pilbarensis*								0.1		0.1		0.1		0.1		
Maireana georgei			0.1													

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Maireana melanocoma			0.1													
Maireana planifolia		0.1	0.1		0.1											
Maireana planifolia x *villosa*										0.1			0.1			
Maireana tomentosa subsp. *tomentosa*			0.1													
Maireana triptera			0.1													
Maireana villosa	0.1		0.1			0.1		0.1					0.1			
Malvastrum americanum						0.1										
Marsdenia australis								0.1		0.1		0.1		0.1		
Marsilea hirsuta																
Maytenus sp. Mt Windell (S. van Leeuwen 846)																
Melaleuca bracteata																
Melaleuca eleuterostachya																
Melaleuca glomerata																
Melhania oblongifolia											0.1					
Mirbelia viminalis																
Monachather paradoxus																
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																
Nicotiana benthamiana												0.1		0.1		
Nicotiana occidentalis subsp. *obliqua*																
Nicotiana occidentalis subsp. *occidentalis*																
Nicotiana simulans																
Nicotiana sp.																
Notoleptopus decaisnei																
Oldenlandia crouchiana																
Olearia fluvialis																
Olearia stuartii		0.1								1		5		0.1		
Olearia xerophila																
Oxalis sp. Pilbara (M.E. Trudgen 12725)		0.1										0.1		0.1		
Pandorea pandorana																
Panicum decompositum																
Panicum effusum				0.1		0.1										
Paraceterach reynoldsii		0.1												0.1		
Paraneurachne muelleri	1			0.1		0.1	1.5	0.1	1						0.1	0.1
Parietaria cardiostegia		0.1										0.1		0.1		
Paspalidium clementii		0.1				0.1		0.1		0.1				0.1	0.1	
Paspalidium constrictum																
Paspalidium rarum																
Peplidium muelleri																
Peripleura hispidula var. *hispidula*		0.1		0.1		0.1				0.1		0.1		0.1		
Peripleura obovata																
Peripleura virgata			0.1							0.1		0.1				
Peripleura sp.																
Perotis rara			0.1										0.1			
Petalostylis labicheoides				7		25	40		55		3					
Phyllanthus maderaspatensis						0.1										
Pilbara trudgenii		0.1								0.1		0.5		0.1		
Pimelea microcephala subsp. *microcephala*																
Pittosporum angustifolium																
Pluchea dentex																
Pluchea dunlopii											0.1					
Polycarpaea corymbosa var. *corymbosa*			0.1										0.1			
Polycarpaea holtzei																
Polycarpaea longiflora				0.1												
Polygala glaucifolia																
Polymeria ambigua																
Portulaca filifolia																
Portulaca oleracea/intraterranea																
Prostanthera albiflora																
Psydrax latifolia		0.1								0.1		0.1	0.1	0.1		
Psydrax rigidula																
Psydrax suaveolens			0.1		0.1											

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Pterocaulon serrulatum var. *velutinum*																
Pterocaulon sphacelatum		0.1				0.1		0.1		0.1	0.1	0.1		0.1	0.1	
Pterocaulon sphaeranthoides																
Pterocaulon sp.																
Ptilotus aervoides																
Ptilotus astrolasius																
Ptilotus auriculifolius																
Ptilotus calostachyus	0.1										0.1					0.1
Ptilotus clementii																0.1
Ptilotus exaltatus			0.1	0.1		0.1			0.1		0.1		0.1		0.1	
Ptilotus fusiformis																
Ptilotus gomphrenoides																
Ptilotus helipteroides																
Ptilotus obovatus var. obovatus	0.1	0.1	0.1	0.1	5	0.1		9		15		15	0.1	9		0.1
Ptilotus polystachyus						0.1							0.1			
Ptilotus roei																
Ptilotus rotundifolius																0.1
Ptilotus schwartzii var. *schwartzii*			0.1													
Ptilotus xerophilus																
Ptilotus sp.																
Rhagodia eremaea	0.1		0.1		1	0.1		0.1		0.1				0.1		
Rhagodia sp. Hamersley (M. Trudgen 17794)		0.1						0.1					0.1	0.1		
Rhodanthe humboldtiana																
Rhodanthe margarethae										0.1		0.1		0.1		
Rhodanthe polakii								0.1								
Rhynchosia minima				0.1												
Roepera eichleri																
Rostellularia adscendens var. *latifolia*																
Rumex vesicarius																
Salsola australis					0.1	0.1		0.1		0.1			0.1	0.1		
Santalum lanceolatum	0.1			0.1			0.1		1		0.1			0.1	0.1	
Santalum spicatum																
Scaevola acacioides																
Scaevola amblyanthera var. *centralis*																
Scaevola parvifolia subsp. *pilbarae*							0.1								0.1	
Scaevola spinescens																
Scaevola spinescens (broad form)																
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)											0.1					
Schizachyrium fragile			0.1													
Sclerolaena convexula																
Sclerolaena cornishiana																
Sclerolaena densiflora																
Sclerolaena eriacantha																
Senecio hamersleyensis																
Senna artemisioides subsp. *filifolia*						0.1									0.1	
Senna artemisioides subsp. *helmsii*			0.1		0.1	0.1										
Senna artemisioides subsp. *oligophylla*					0.1		0.1									
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																
Senna artemisioides subsp. *oligophylla x S. ferraria*																
Senna artemisioides subsp. *oligophylla x S. stricta*																
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1															
Senna artemisioides subsp. x *artemisioides*																
Senna artemisioides subsp. x *artemisioides x S. stricta*																
Senna ferraria		0.1						0.1		0.1		0.1				
Senna ferraria x																
Senna ferraria x S. artemisioides subsp. *oligophylla*																
Senna ferraria x S. glutinosa subsp. *glutinosa*																
Senna glaucifolia							0.1								0.1	
Senna glaucifolia x S. artemisioides subsp. *helmsii*																
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Senna glaucifolia x																
Senna glutinosa subsp. *chatelainiana*																
Senna glutinosa subsp. *glutinosa*	0.1				0.1			0.1			0.1	0.1		0.1	0.1	0.5
Senna glutinosa subsp. *glutinosa x*																
Senna glutinosa subsp. *x luerssenii*	0.1		0.1													0.1
Senna glutinosa subsp. *x luerssenii x*																
Senna glutinosa subsp. *glutinosa x S. stricta*																
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																
Senna glutinosa subsp. *pruinosa*																1
Senna glutinosa subsp. *pruinosa x*																
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																
Senna notabilis	0.1			0.1		0.1										0.1
Senna pleurocarpa var. *angustifolia*																
Senna sp. Karijini (M.E. Trudgen 10392)																
Senna sp. Meekatharra (E. Bailey 1-26)																
Senna stricta	0.1		0.1													0.1
Senna stricta x																
Senna venusta																
Seringia elliptica	0.1					0.1	1		0.5						0.1	1
Seringia nephrosperma				0.1												
Setaria dielsii		0.1												0.1		
Setaria surgens																
Setaria verticillata																
Sida arenicola							0.1		0.1							
Sida cardiophylla	0.1						0.1		0.1							
Sida echinocarpa			0.1						0.1							
Sida ectogama													6			
Sida fibulifera																
Sida platycalyx																
Sida sp. Barlee Range (S. van Leeuwen 1642)																
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1													
Sida sp. Excedentifolia (J.L. Egan 1925)																0.1
Sida sp. Golden calyces glabrous (H.N. Foote 32)			0.1													
Sida sp. L (A.M. Ashby 4202)						0.1		0.1							0.1	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)											0.1					0.1
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)		0.1						0.1		0.1		0.1		0.1		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.5			0.1		0.1	0.1		0.1		0.1				0.1	
Sida sp. Supplejack Station (T.S. Henshall 2345)																
Sida sp.																
Sigesbeckia orientalis		0.1								0.1		0.1		0.1		
Solanum centrale																
Solanum ferocissimum		0.1										0.1				
Solanum horridum	0.1		0.1		0.1					0.1		0.1		0.1	0.1	
Solanum kentrocaule																
Solanum lasiophyllum	0.1		0.1		0.1			0.1	0.1			0.1				0.1
Solanum nigrum										0.1		0.1		0.1		
Solanum phlomoides											0.1					
Solanum piceum					0.1	0.1										
Solanum sp.																
Sonchus oleraceus																
Spermacoce brachystema																
Sporobolus australasicus				0.1		0.1										
Stemodia grossa																
Stenopetalum anfractum													0.1			
Streptoglossa bubakii																
Streptoglossa decurrens			0.1													
Stylobasium spathulatum																
Swainsona maccullochiana																
Swainsona sp.																
Templetonia egena																

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1
Species	WNG-REL03	WNG-REL04	WNG-REL05	WNG-REL06	WNG-REL07	WNG-REL08	WNG-REL09	WNG-REL10	WNG-REL11	WNG-REL12	WNG-REL13	WNG-REL14	WNG-REL15	WNG-REL16	WNG-REL17	WNG-REL18
Tephrosia densa																
Tephrosia oxalidea																
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)				9					0.5							
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																
Teucrium disjunctum																
Teucrium teucriiflorum																
Themeda sp. Mt Barricade (M.E. Trudgen 2471)		0.1														
Themeda triandra	0.1			3		12	1	0.1	3		7		0.1	0.1	5	
Trachymene oleracea subsp. *oleracea*																
Tribulus suberosus								0.1								0.1
Trichodesma zeylanicum var. *zeylanicum*		0.1		0.1		0.1			0.1		0.1	0.1				
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																
Triodia angusta																
Triodia brizoides																
Triodia longiceps						0.1										
Triodia melvillei																
Triodia pungens	5	12	15	9	0.5	3	1	8	0.5	0.1	3	0.5	3	0.1	12	3
Triodia vanleeuwenii																12
Triodia wiseana											0.1				0.1	
Triodia sp. Mt Ella (M.E. Trudgen 12739)											0.1					
Tripogonella loliiformis																
Triraphis mollis						0.1										
Triumfetta chaetocarpa																
Triumfetta leptacantha																
Urochloa occidentalis var. *ciliata*																
Urochloa piligera																
Vachellia farnesiana																
Ventilago viminalis																
Vigna lanceolata var. *lanceolata*																
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																
Vincetoxicum flexuosum																
Vincetoxicum lineare										0.1						
Vittadinia dissecta var. *hirta*																
Wahlenbergia gracilenta																
Wahlenbergia tumidifructa																
Waltheria indica																

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Abutilon amplum																			
Abutilon cryptopetalum																			
Abutilon cunninghamii			0.1																0.5
Abutilon fraseri subsp. *fraseri*	0.1					0.1													
Abutilon lepidum					0.1														
Abutilon leucopetalum																			
Abutilon macrum																			
Abutilon otocarpum					0.1		0.1												
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																			
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)					0.1	0.1	0.1					0.1							
Abutilon sp.																			
Acacia adoxa var. *adoxa*																			
Acacia adsurgens			0.1																
Acacia ancistrocarpa																		1	
Acacia aneura				1															
Acacia 'aneura' sens. lat. (juvenile)	0.1		0.1					1		0.1									
Acacia aptaneura				2	20	0.1	2		1			6	20						
Acacia atkinsiana														0.1					
Acacia ayersiana				15								3							
Acacia ayersiana (narrow phyllode variant)																			
Acacia bivenosa		0.1		0.5	0.1					0.5	12						0.1		
Acacia bivenosa (wispy/weeping form)																		0.1	0.1
Acacia catenulata subsp. *occidentalis*	0.1				25	25			31			3							
Acacia citrinoviridis																			
Acacia cowleana			15																
Acacia dictyophleba																			
Acacia eriopoda																			
Acacia hamersleyensis	0.1							0.1	0.1										
Acacia hilliana														3	0.5	0.5			
Acacia inaequilatera																	3		
Acacia incurvaneura						4													
Acacia kempeana																			
Acacia macraneura																			
Acacia maitlandii	0.5		0.1							0.1	0.1			0.1	1	0.1		0.1	
Acacia marramamba																			
Acacia monticola	35	3	0.1												11	0.1			
Acacia mulganeura					0.1														
Acacia pachyacra																			
Acacia pruinocarpa	0.1			0.1	5	3			2			4							
Acacia pteraneura																			
Acacia pyrifolia var. *pyrifolia*	0.1	0.1								0.5	2			0.1					
Acacia rhodophloia																			
Acacia sibirica																			
Acacia sibirica (linear form)				0.1															
Acacia steedmanii subsp. *borealis*			0.1																
Acacia synchronicia																			0.1
Acacia tenuissima			0.1				0.1								0.1		0.1	0.1	
Acacia tetragonophylla	0.1																		0.1
Acacia trudgeniana																			
Acacia wanyu																			
Acacia sp.																			
Achyranthes aspera						0.1													
Acrachne racemosa																			
Alternanthera denticulata																			
Alternanthera nana										0.1									
Amaranthus cuspidifolius																			
Amaranthus interruptus																			
Amaranthus undulatus																			
Ammannia baccifera																			
Ammannia multiflora																			
Amphipogon sericeus																0.1		0.1	

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Amyema fitzgeraldii								0.1											
Amyema miquelii																			
Amyema sanguinea var. *pulchra*																			
Androcalva luteiflora	3	1	0.1							0.1	0.5								
Anthobolus leptomerioides			0.1								0.1								
Aristida burbidgeae					5	2	1					3							
Aristida contorta				0.1													0.1		0.1
Aristida holathera var. *holathera*			9																0.1
Aristida inaequiglumis																			
Aristida ingrata				0.1					0.1										
Aristida ? ingrata																			
Aristida jerichoensis var. *subspinulifera*																			
Aristida latifolia																			
Aristida lazaridis																			
Aristida aff. *nitidula*																			
Aristida obscura									0.1										
Aristida pruinosa																			
Aristida sp.																			
Astrotricha hamptonii					0.1		0.1		0.1			0.1							
Atriplex codonocarpa																			
Bergia trimera																			
Bidens bipinnata	0.1				0.1	0.1	0.1	0.1	0.1			0.1							
Boerhavia coccinea																			
Boerhavia gardneri																			
Boerhavia repleta																			
Boerhavia sp.																			
Bothriochloa ewartiana										0.1									
Bothriochloa sp.						0.1													
Brachychiton acuminatus								0.1											
Brachyscome iberidifolia																			
Brunonia sp. Long hairs (D.E. Symon 2440)																			
Bulbostylis barbata																			
Cajanus cinereus																			
Calandrinia ptychosperma																			
Callitris columellaris							8	25				3							
Calocephalus beardii																			
Calytrix carinata																			
Capparis lasiantha						0.1			0.1	0.1				0.1					0.1
Capparis mitchellii					0.1	0.1	0.1	0.1				0.1							
Capparis spinosa subsp. *nummularia*							0.1	0.1											
Cassytha capillaris																			0.1
Cenchrus ciliaris																			
Centipeda minima subsp. *macrocephala*																			
Cheilanthes austrotenuifolia						0.1	0.1	0.1	0.1										
Cheilanthes brownii					0.1	0.1	0.1	0.1	0.1			0.1							
Cheilanthes sieberi subsp. *sieberi*																			
Chrysocephalum apiculatum subsp. *pilbarense*																			
Chrysocephalum gilesii																			
Chrysocephalum pterochaetum																			
Chrysopogon fallax																			
Cleome viscosa					0.1	0.1	0.1					0.1							
Clerodendrum floribundum var. *angustifolium*		0.1				0.1	0.1	0.1											
Codonocarpus cotinifolius			0.1													0.1			
Convolvulus clementii																			
Corchorus crozophorifolius					0.1	0.1	0.1				0.1	1							
Corchorus lasiocarpus (subsp. not determined)			0.1							0.1									
Corchorus lasiocarpus subsp. *lasiocarpus*																	0.1		0.1
Corchorus lasiocarpus subsp. *parvus*	0.1										0.1					0.1		0.1	0.1
Corchorus tridens																			
Corchorus sp.																			
Corymbia deserticola subsp. *deserticola*				1															

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Corymbia ferriticola					0.1	0.1	3	2				0.5							
Corymbia hamersleyana	5	12	3							1				1	1			0.1	
Crotalaria medicaginea var. *neglecta*																			
Cryptandra monticola																			
Cucumis variabilis					0.1	0.1		0.1			0.1	0.1							
Cullen leucanthum																			
Cullen leucochaites											0.1								
Cullen pogonocarpum										0.1									
Cymbopogon ambiguus	0.1	0.1	0.1	0.1	0.5	0.5	1	0.1	0.1		0.1	3					0.1		
Cymbopogon obtectus															0.1				0.1
Cymbopogon ? obtectus																			
Cymbopogon sp.																0.1			
Cynanchum pedunculatum					0.1							0.1							
Cynanchum viminale subsp. *australe*																			
Cynodon convergens																			
Cynodon prostratus																			
Cyperus cunninghamii subsp. *cunninghamii*																			
Cyperus vaginatus																			
Dactyloctenium radulans																			
Dampiera candicans																0.1		0.1	
Dichanthium fecundum																			
Dichanthium sericeum subsp. *humilius*																			
Dicladanthera forrestii																			
Digitaria ammophila					0.1	0.1	0.1	0.1					0.1						
Digitaria brownii		0.1		0.1		0.1		0.1											
Digitaria ctenantha										0.1									
Diplatia grandibractea																			
Dipteracanthus australasicus subsp. *australasicus*	0.1									0.1	0.1								
Dodonaea coriacea															0.1	0.1		0.1	
Dodonaea lanceolata var. *lanceolata*	9	0.1	0.1								0.1								
Dodonaea pachyneura					0.5	0.5		0.1				1							
Dodonaea petiolaris					0.1								0.5						
Dodonaea viscosa subsp. *mucronata*							0.1	0.1	0.1		0.1	0.1							
Duperreya commixta	0.1	0.1	0.1		0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1					0.1
Dysphania melanocarpa forma *leucocarpa*												0.1							
Dysphania rhadinostachya (subsp. not determined)																			
Dysphania rhadinostachya subsp. *inflata*																			
Dysphania rhadinostachya subsp. *rhadinostachya*					0.1		0.1												
Dysphania saxatilis																			
Dysphania sp.																			
Ehretia saligna var. *saligna*										0.1									
Enchylaena tomentosa var. *tomentosa*					0.1	0.1	0.1	0.1				0.1							
Enneapogon caerulescens													0.1						0.1
Enneapogon lindleyanus					0.1	0.1	1	0.1		0.1	0.1	0.1	0.1						
Enneapogon polyphyllus				0.1	0.1				0.1			0.1							
Enneapogon robustissimus								0.1		0.1									
Enneapogon sp.																			
Enteropogon ramosus										0.1									
Eragrostis cumingii																			
Eragrostis desertorum																			
Eragrostis elongata																			
Eragrostis eriopoda																			
Eragrostis exigua		0.1																	
Eragrostis pergracilis																			
Eragrostis setifolia																			
Eragrostis tenellula																			
Eragrostis xerophila																			
Eragrostis sp.											0.1								
Eremophila accrescens																			
Eremophila caespitosa																			
Eremophila cuneifolia													1.5						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Eremophila forrestii subsp. *forrestii*				0.1															
Eremophila fraseri subsp. *fraseri*																			
Eremophila galeata																			
Eremophila jucunda subsp. *pulcherrima*									0.1				20						
Eremophila latrobei (subsp. not determined)																			
Eremophila latrobei subsp. *filiformis*																			
Eremophila latrobei subsp. *latrobei*						0.1			0.1				0.5	0.1		0.1			
Eremophila longifolia				0.1															
Eremophila oppositifolia subsp. *angustifolia*																			
Eremophila petrophila subsp. *petrophila*																			
Eremophila phyllopoda subsp. *obliqua*													1						
Eremophila platycalyx subsp. *pardalota*																			
Eremophila pusilliflora																			
Eremophila sp. Hamersley Range (K. Walker KW 136)					1.5			0.1				2							
Eremophila sp.																			
Eriachne aristidea																			
Eriachne flaccida																			
Eriachne lanata														0.5	0.5	0.1			
Eriachne mucronata	0.1	0.1	0.1		1.5	0.1					3								
Eriachne mucronata (arid form) (MET 12 736)																			
Eriachne mucronata (typical form)							0.5	2	0.1	0.1		2		0.1		0.1	0.1	0.1	
Eriachne aff. *mucronata*																			
Eriachne obtusa																			
Eriachne pulchella																			
Eriachne tenuiculmis																			
Eucalyptus camaldulensis subsp. *refulgens*																			
Eucalyptus gamophylla	0.1		5	0.1							0.1								
Eucalyptus kingsmillii																			
Eucalyptus leucophloia subsp. *leucophloia*	0.1	0.1			0.1	2		0.1	4		0.1	0.1	0.1	3	2	3		1	
Eucalyptus pilbarensis																			
Eucalyptus repullulans																			
Eucalyptus socialis subsp. *eucentrica*																			5
Eucalyptus trivalva																			
Eucalyptus victrix																			
Eucalyptus xerothermica										4	12								
Eulalia aurea			0.1		0.1						0.1			0.1					0.1
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																			
Euphorbia australis var. *hispidula*																			
Euphorbia australis var. *subtomentosa*																			
Euphorbia biconvexa																			
Euphorbia boophthona																			
Euphorbia careyi																			
Euphorbia coghlanii																			
Euphorbia drummondii	0.1	0.1				0.1													
Euphorbia tannensis subsp. *eremophila*																			
Euphorbia trigonosperma					0.1														
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)								0.1	0.1										
Euphorbia sp. (*boophthona/tannensis*)																			
Euphorbia sp.																			
Evolvulus alsinoides var. decumbens																			
Evolvulus alsinoides var. villosicalyx			0.1	0.1		0.1			0.1		0.1		0.1						
Ficus brachypoda					0.1		0.1												
Fimbristylis dichotoma																			
Fimbristylis simulans																			
Fimbristylis sp.																			
Flaveria trinervia																			
Gastrolobium grandiflorum	0.1	0.1	1.5																
Glycine canescens						0.1													
Gnephosis arachnoidea																			
Gompholobium oreophilum			0.1											0.1	0.1	0.1			
Gomphrena cunninghamii					0.5	0.1		0.1				0.1	0.1						

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Gomphrena kanisii																			
Goodenia cusackiana																			
Goodenia microptera			0.1															0.1	0.1
Goodenia muelleriana											0.1							0.1	
Goodenia prostrata																			
Goodenia stellata																			
Goodenia stobbsiana			0.1													0.1			
Goodenia tenuiloba																			
Goodenia triodiophila														0.1	0.1	0.1		0.1	
Gossypium australe																	0.1	0.1	
Gossypium robinsonii	0.1	5	0.1							0.5	0.5								0.1
Gossypium sturtianum var. *sturtianum*																			
Grevillea berryana									0.5										
Grevillea saxicola													5						
Grevillea wickhamii																			
Grevillea wickhamii subsp. *hispidula*		2																	
Hakea chordophylla									0.1	0.5	0.1			1	0.5	1		0.1	
Hakea lorea subsp. *lorea*																	0.1		
Halgania gustafsenii var. Mid West (G. Perry 370)																			
Harnieria kempeana subsp. *muelleri*																			
Heliotropium chrysocarpum																			
Heliotropium cunninghamii										0.1									
Heliotropium heteranthum																			
Heliotropium inexplicitum			0.1																
Heliotropium sp.																		0.1	
Heliotropium tenuifolium																			
Hibiscus brachychlaenus			0.1																
Hibiscus burtonii				0.1	0.1			0.1	0.1				0.1						
Hibiscus coatesii			0.1				0.1			0.1		0.1						0.1	0.1
Hibiscus sturtii var. *campylochlamys*			0.1							0.1						0.1		0.1	0.1
Hibiscus sturtii var. *grandiflorus*																			
Hibiscus sturtii var. *platychlamys*																			
Hibiscus sturtii var. *truncatus*																			
Hibiscus sturtii var. aff. *truncatus*																			
Hibiscus sturtii var. not determined					0.1														
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																			
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)						0.1	0.1	0.1				0.1							
Hibiscus sp. Mt Robinson (G. Byrne 3537)					0.1														
Hybanthus aurantiacus																			
Indigofera colutea																			
Indigofera fractiflexa subsp. *fractiflexa*						0.1	0.1		0.1										
Indigofera georgei										0.1	0.1								
Indigofera gilesii																			
Indigofera linnaei																			
Indigofera monophylla		0.1	0.1					0.1			0.1					0.1		0.1	
Indigofera rugosa																	0.1		
Ipomoea muelleri																			
Ipomoea plebeia																			
Iseilema dolichotrichum																			
Iseilema membranaceum																			
Iseilema vaginiflorum																			
Isotropis parviflora																			
Isotropis sp. Arid zone (G. Byrne 2775)																			
Jasminum didymum subsp. *lineare*	0.1	0.1	0.1			0.1	0.1	0.1		0.1	0.1								
Leiocarpa semicalva subsp. *semicalva*										0.1	0.1								
Lepidium echinatum																			
Lepidium oxytrichum																			
Lepidium pedicellosum																			
Lepidium phlebopetalum																			
Lobelia heterophylla subsp. *pilbarensis*							0.1		0.1										
Maireana georgei																			

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Maireana melanocoma																			
Maireana planifolia					0.1														
Maireana planifolia x *villosa*												0.1							
Maireana tomentosa subsp. *tomentosa*																			
Maireana triptera																			
Maireana villosa								0.1					0.1						
Malvastrum americanum										0.1									
Marsdenia australis																			
Marsilea hirsuta																			
Maytenus sp. Mt Windell (S. van Leeuwen 846)							0.1												
Melaleuca bracteata																			
Melaleuca eleuterostachya																			
Melaleuca glomerata																			
Melhania oblongifolia	0.1									0.1									
Mirbelia viminalis																0.5			
Monachather paradoxus																			
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																			
Nicotiana benthamiana						0.1													
Nicotiana occidentalis subsp. *obliqua*							0.1												
Nicotiana occidentalis subsp. *occidentalis*																			
Nicotiana simulans																			
Nicotiana sp.																			
Notoleptopus decaisnei																			
Oldenlandia crouchiana																			
Olearia fluvialis											0.1								
Olearia stuartii						0.1			0.1			0.1							
Olearia xerophila							0.1	0.1											
Oxalis sp. Pilbara (M.E. Trudgen 12725)						0.1	0.1												
Pandorea pandorana																			
Panicum decompositum																			
Panicum effusum							0.1												
Paraceterach reynoldsii							0.1												
Paraneurachne muelleri			0.1							0.1	0.1		0.1	0.1				0.1	0.1
Parietaria cardiostegia																			
Paspalidium clementii						0.1			0.1										
Paspalidium constrictum							1												
Paspalidium rarum																			
Peplidium muelleri																			
Peripleura hispidula var. *hispidula*					0.1	0.1	0.1	0.1		0.1		0.1							
Peripleura obovata																			
Peripleura virgata																			
Peripleura sp.																			
Perotis rara				0.1															
Petalostylis labicheoides	45	4			0.1	0.1				1	7				1				
Phyllanthus maderaspatensis											0.1								
Pilbara trudgenii																			
Pimelea microcephala subsp. *microcephala*							0.1												
Pittosporum angustifolium																			
Pluchea dentex																			
Pluchea dunlopii																			
Polycarpaea corymbosa var. *corymbosa*																			
Polycarpaea holtzei																			
Polycarpaea longiflora											0.1								
Polygala glaucifolia																			
Polymeria ambigua																			
Portulaca filifolia																			
Portulaca oleracea/intraterranea																			
Prostanthera albiflora							0.1												
Psydrax latifolia							0.1												
Psydrax rigidula																			
Psydrax suaveolens				0.1					0.1				0.1		0.1				

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Pterocaulon serrulatum var. *velutinum*																			
Pterocaulon sphacelatum	0.1	0.1			0.1		0.1			0.1		0.1							
Pterocaulon sphaeranthoides																			
Pterocaulon sp.																			
Ptilotus aervoides																			
Ptilotus astrolasius										0.1	0.1							0.1	0.1
Ptilotus auriculifolius																			
Ptilotus calostachyus														0.1		0.1		0.1	
Ptilotus clementii																			0.1
Ptilotus exaltatus		0.1			0.1		0.1	0.1		0.1	0.1							0.1	0.1
Ptilotus fusiformis						0.1													
Ptilotus gomphrenoides																			
Ptilotus helipteroides																			
Ptilotus obovatus var. obovatus	0.1				2	0.1	0.5	0.1		0.1	1	3			0.1				0.1
Ptilotus polystachyus																			
Ptilotus roei																			
Ptilotus rotundifolius														0.1		0.1		0.1	
Ptilotus schwartzii var. *schwartzii*																			
Ptilotus xerophilus																			
Ptilotus sp.																			
Rhagodia eremaea					0.1	0.1	1	0.1	0.1										
Rhagodia sp. Hamersley (M. Trudgen 17794)					0.1	0.1							0.1						
Rhodanthe humboldtiana																			
Rhodanthe margarethae							0.1	0.1											
Rhodanthe polakii																			
Rhynchosia minima	0.1				0.1	0.1					0.1								
Roepera eichleri																			
Rostellularia adscendens var. *latifolia*											0.1								
Rumex vesicarius																			
Salsola australis						0.1						0.1							
Santalum lanceolatum	2	0.1	0.1			0.1		0.1		0.1	0.1			0.1					
Santalum spicatum																			
Scaevola acacioides													0.1						
Scaevola amblyanthera var. *centralis*																			
Scaevola parvifolia subsp. *pilbarae*			0.1																
Scaevola spinescens																			
Scaevola spinescens (broad form)										0.1									
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)														0.1	0.1	0.1			
Schizachyrium fragile				0.1				0.1	0.1										
Sclerolaena convexula																			
Sclerolaena cornishiana																			
Sclerolaena densiflora																			
Sclerolaena eriacantha																			
Senecio hamersleyensis								0.1											
Senna artemisioides subsp. *filifolia*											0.1								
Senna artemisioides subsp. *helmsii*	0.1									0.1		0.1							
Senna artemisioides subsp. *oligophylla*														0.1		0.1	0.1	0.1	0.5
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																			
Senna artemisioides subsp. *oligophylla x S. ferraria*																			
Senna artemisioides subsp. *oligophylla x S. stricta*																			
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*			0.1								0.1								
Senna artemisioides subsp. x *artemisioides*																			
Senna artemisioides subsp. x *artemisioides x S. stricta*																			
Senna ferraria			0.1											0.1					
Senna ferraria x																			
Senna ferraria x S. artemisioides subsp. *oligophylla*																			
Senna ferraria x S. glutinosa subsp. *glutinosa*																			
Senna glaucifolia				0.1															
Senna glaucifolia x S. artemisioides subsp. *helmsii*																			
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																			

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Senna glaucifolia x																			
Senna glutinosa subsp. *chatelainiana*																			
Senna glutinosa subsp. *glutinosa*		0.1		0.1	0.1	0.1	1		0.1			0.1		0.1	0.1	0.1	0.1	0.1	0.1
Senna glutinosa subsp. *glutinosa x*														0.1					0.1
Senna glutinosa subsp. *x luerssenii*				0.1											0.1				
Senna glutinosa subsp. *x luerssenii x*													0.1						
Senna glutinosa subsp. *glutinosa x S. stricta*												0.1							
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa*									0.1					0.1		0.1	0.1	0.1	
Senna glutinosa subsp. *pruinosa x*																			
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																			
Senna notabilis		0.1	0.1																
Senna pleurocarpa var. *angustifolia*																			
Senna sp. Karijini (M.E. Trudgen 10392)																			
Senna sp. Meekatharra (E. Bailey 1-26)									0.1										
Senna stricta													0.1						
Senna stricta x																			
Senna venusta												0.1							
Seringia elliptica			0.1						0.1					3		0.1			
Seringia nephrosperma																			
Setaria dielsii																			
Setaria surgens																			
Setaria verticillata											0.1								
Sida arenicola			0.1													0.1			
Sida cardiophylla			0.1																
Sida echinocarpa																	0.1		0.1
Sida ectogama					0.1								1						
Sida fibulifera																			0.1
Sida platycalyx																			
Sida sp. Barlee Range (S. van Leeuwen 1642)																			
Sida sp. dark green fruits (S. van Leeuwen 2260)																			
Sida sp. Excedentifolia (J.L. Egan 1925)														0.1					0.1
Sida sp. Golden calyces glabrous (H.N. Foote 32)																			
Sida sp. L (A.M. Ashby 4202)			0.1	0.1		0.1			0.1										
Sida sp. Pilbara (A.A. Mitchell PRP 1543)			0.1													0.1		0.1	0.1
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)					0.1	0.1	0.1	0.1	0.1										
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)			0.1							0.1	0.5								
Sida sp. Supplejack Station (T.S. Henshall 2345)																			
Sida sp.																			
Sigesbeckia orientalis							0.1												
Solanum centrale																			
Solanum ferocissimum																			
Solanum horridum							0.1	0.1								0.1	0.1		0.1
Solanum kentrocaule							0.1					0.1							
Solanum lasiophyllum				0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1	
Solanum nigrum																			
Solanum phlomoides																			0.1
Solanum piceum																			
Solanum sp.																			
Sonchus oleraceus							0.1												
Spermacoce brachystema																			
Sporobolus australasicus		0.1								0.1	0.1								
Stemodia grossa																			
Stenopetalum anfractum																			
Streptoglossa bubakii																			
Streptoglossa decurrens										0.1		0.1							
Stylobasium spathulatum											0.5								
Swainsona maccullochiana																			
Swainsona sp.																			
Templetonia egena									0.1										

Survey Phase	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH1	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG-REL19	WNG-REL20	WNG-REL21	WNG-REL22	WNG-REL23	WNG-REL24	WNG-REL25	WNG-REL26	WNG-REL27	WNG-REL28	WNG-REL29	WNG-REL30	WA01	WA02	WA03	WA04	WA05	WA06	WA07
Tephrosia densa																			
Tephrosia oxalidea																0.1			
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)											0.5								
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																		0.1	
Teucrium disjunctum							0.1												
Teucrium teucriiflorum									0.1										
Themeda sp. Mt Barricade (M.E. Trudgen 2471)						0.1								0.1		0.1	1		
Themeda triandra	4	35	1	0.1	0.1		0.1	0.1	0.1	60	32	0.1						0.1	
Trachymene oleracea subsp. *oleracea*																			
Tribulus suberosus					0.1								0.1						
Trichodesma zeylanicum var. *zeylanicum*		0.1	0.1		0.1		0.1			0.1	0.1	0.1					0.1		
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)											0.1								
Triodia angusta																			3
Triodia brizoides																			
Triodia longiceps											5								
Triodia melvillei																			
Triodia pungens	0.1	1	1	3	1	2	1	0.1	9	1	1	2	0.5		5	0.1			
Triodia vanleeuwenii				0.1									0.1	40	25	15		5	
Triodia wiseana		0.1		0.1										3	15	2	31	6	8
Triodia sp. Mt Ella (M.E. Trudgen 12739)		0.1			0.5	0.1						0.5							
Tripogonella loliiformis																			
Triraphis mollis											0.1								
Triumfetta chaetocarpa																			
Triumfetta leptacantha					0.1														
Urochloa occidentalis var. *ciliata*																			
Urochloa piligera																			
Vachellia farnesiana																			
Ventilago viminalis						0.1					0.1								
Vigna lanceolata var. *lanceolata*																			
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																			
Vincetoxicum flexuosum																			
Vincetoxicum lineare								0.1	0.1				0.1						
Vittadinia dissecta var. *hirta*																			
Wahlenbergia gracilenta																			
Wahlenbergia tumidifructa																			
Waltheria indica																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Abutilon amplum																												
Abutilon cryptopetalum																										0.1		
Abutilon cunninghamii														0.1	0.1					0.1								
Abutilon fraseri subsp. *fraseri*										0.1									0.1			0.1						
Abutilon lepidum																												
Abutilon leucopetalum																												
Abutilon macrum																												
Abutilon otocarpum																												
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																												
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)					0.1																							
Abutilon sp.																												
Acacia adoxa var. *adoxa*																												
Acacia adsurgens													0.1															
Acacia ancistrocarpa																												
Acacia aneura																												
Acacia 'aneura' sens. lat. (juvenile)																												
Acacia aptaneura						0.1				2	0.1		0.1						8	0.1	0.1	15	6			20		
Acacia atkinsiana																												
Acacia ayersiana													0.1															
Acacia ayersiana (narrow phyllode variant)																												
Acacia bivenosa					0.1		0.1				0.1		1			0.1			0.1	0.1		0.1		0.1				
Acacia bivenosa (wispy/weeping form)		0.1							0.1	2		0.1		0.1	0.1			0.1					0.1					
Acacia catenulata subsp. *occidentalis*																0.1												
Acacia citrinoviridis																												
Acacia cowleana													1															
Acacia dictyophleba	0.1					1.5	0.1		0.1	0.1								0.1					0.1	0.1				
Acacia eriopoda																												
Acacia hamersleyensis			0.5								0.3														0.1		0.1	0.1
Acacia hilliana																												
Acacia inaequilatera	2.5																	1.5						0.1				
Acacia incurvaneura																												
Acacia kempeana													0.1		0.1				0.1									
Acacia macraneura																												
Acacia maitlandii	0.1		1.5	4	0.1	0.5	0.1	0.1		0.1	0.1						1				0.1				0.1		0.1	0.1
Acacia marramamba																												
Acacia monticola																											0.1	
Acacia mulganeura																												
Acacia pachyacra					0.1				0.1															0.5				
Acacia pruinocarpa			0.1	0.1	0.1	0.1		0.1		0.5	0.1	0.1				0.1		0.1			0.1	1		0.1			0.1	
Acacia pteraneura																												
Acacia pyrifolia var. *pyrifolia*			0.1	0.1			0.1	0.1		0.1	0.1						0.1				0.1				0.1			0.1
Acacia rhodophloia				0.1																								
Acacia sibirica										0.1	0.1										0.1							
Acacia sibirica (linear form)										1																		
Acacia steedmanii subsp. *borealis*																												
Acacia synchronicia										0.1		0.1		0.1						0.1								
Acacia tenuissima			0.1	0.1		3.5		0.1			0.1		0.1				0.1	0.1		0.1								
Acacia tetragonophylla										0.1									0.1			0.1				0.1		
Acacia trudgeniana																												
Acacia wanyu																												
Acacia sp.																												
Achyranthes aspera																												
Acrachne racemosa																												
Alternanthera denticulata																												
Alternanthera nana																							0.1					
Amaranthus cuspidifolius																												
Amaranthus interruptus																												
Amaranthus undulatus																												
Ammannia baccifera																												
Ammannia multiflora																												
Amphipogon sericeus			0.1				0.1	0.1						0.1		0.1	0.1								0.1			0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Amyema fitzgeraldii																							0.1					
Amyema miquelii											0.1																	
Amyema sanguinea var. *pulchra*																												
Androcalva luteiflora			0.1							0.1												0.5	2					
Anthobolus leptomerioides	0.1									0.1									0.1									
Aristida burbidgeae																												
Aristida contorta	0.1									0.1			0.1	0.1	0.1	0.1		0.1	0.1	0.1		1			0.1	0.1		
Aristida holathera var. *holathera*	0.1									0.1			0.1		0.1	0.1								0.1				0.1
Aristida inaequiglumis																												
Aristida ingrata																						0.1						
Aristida ? ingrata																												
Aristida jerichoensis var. *subspinulifera*																												
Aristida latifolia																						0.1						
Aristida lazaridis																												
Aristida aff. *nitidula*																												
Aristida obscura																												
Aristida pruinosa																												
Aristida sp.										0.1									0.1						0.1	1		0.1
Astrotricha hamptonii																												
Atriplex codonocarpa																												
Bergia trimera																												
Bidens bipinnata																			0.1			0.1	0.1			0.1		
Boerhavia coccinea																			0.1			0.1	0.1					
Boerhavia gardneri																								0.1				
Boerhavia repleta																												
Boerhavia sp.																												
Bothriochloa ewartiana																			5									
Bothriochloa sp.																												
Brachychiton acuminatus																												
Brachyscome iberidifolia																												
Brunonia sp. Long hairs (D.E. Symon 2440)																												
Bulbostylis barbata																												
Cajanus cinereus																												
Calandrinia ptychosperma																												
Callitris columellaris																												
Calocephalus beardii																												
Calytrix carinata																												
Capparis lasiantha				0.1						0.1		0.1				0.1			0.1	0.1	0.1	0.1				0.1		
Capparis mitchellii					0.1																							
Capparis spinosa subsp. *nummularia*					0.1																							
Cassytha capillaris			0.1					0.1			0.1																	0.1
Cenchrus ciliaris																			0.1									
Centipeda minima subsp. *macrocephala*																												
Cheilanthes austrotenuifolia																												
Cheilanthes brownii																												
Cheilanthes sieberi subsp. *sieberi*																						0.1				0.1		
Chrysocephalum apiculatum subsp. *pilbarense*																												
Chrysocephalum gilesii																												
Chrysocephalum pterochaetum																												
Chrysopogon fallax																			0.1			0.1	0.1			0.1		
Cleome viscosa					0.1								0.1						0.1			0.1				0.1		
Clerodendrum floribundum var. *angustifolium*											0.1																	
Codonocarpus cotinifolius			0.1																						0.1		0.1	
Convolvulus clementii																												
Corchorus crozophorifolius																												
Corchorus lasiocarpus (subsp. not determined)																												
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1																			0.1	0.1							
Corchorus lasiocarpus subsp. *parvus*	0.1		0.1	0.1			0.1	0.1								0.1	0.1	0.1				0.1					0.1	
Corchorus tridens																			0.1									
Corchorus sp.																									0.1			
Corymbia deserticola subsp. *deserticola*																												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Corymbia ferriticola																												
Corymbia hamersleyana			1				1	1			0.5						0.1											0.5
Crotalaria medicaginea var. *neglecta*																												
Cryptandra monticola																												
Cucumis variabilis																			0.1			0.1	0.1					
Cullen leucanthum																												
Cullen leucochaites																												
Cullen pogonocarpum																												
Cymbopogon ambiguus	0.1				0.1	0.1		0.1		0.1	0.1	0.1				0.1		0.1	0.1		0.1	0.1		0.1	0.1		0.1	0.1
Cymbopogon obtectus	0.1		0.1																									
Cymbopogon ? obtectus							0.1																					
Cymbopogon sp.													0.1							0.1								
Cynanchum pedunculatum																												
Cynanchum viminale subsp. *australe*																												
Cynodon convergens																												
Cynodon prostratus																												
Cyperus cunninghamii subsp. *cunninghamii*																												
Cyperus vaginatus																												
Dactyloctenium radulans																												
Dampiera candicans							0.1	0.1									0.1								0.1		0.1	
Dichanthium fecundum																												
Dichanthium sericeum subsp. *humilius*																												
Dicladanthera forrestii																												
Digitaria ammophila																						0.1				0.1		
Digitaria brownii										0.1			0.1									0.1		0.1				
Digitaria ctenantha																												
Diplatia grandibractea			0.1																									
Dipteracanthus australasicus subsp. *australasicus*																			2									
Dodonaea coriacea																									0.1		0.1	0.1
Dodonaea lanceolata var. *lanceolata*			0.1				0.1	0.1			0.1	0.1																
Dodonaea pachyneura																												
Dodonaea petiolaris																												
Dodonaea viscosa subsp. *mucronata*																												
Duperreya commixta										0.1	0.1	0.1	0.1			0.1			0.1	0.1		0.1	0.1			0.1	0.1	0.1
Dysphania melanocarpa forma *leucocarpa*																												
Dysphania rhadinostachya (subsp. not determined)																												
Dysphania rhadinostachya subsp. *inflata*																												
Dysphania rhadinostachya subsp. *rhadinostachya*																												
Dysphania saxatilis																												
Dysphania sp.																			0.1									
Ehretia saligna var. *saligna*																												
Enchylaena tomentosa var. *tomentosa*										0.1												0.1				0.1		
Enneapogon caerulescens														0.1	0.1			0.1						0.1				
Enneapogon lindleyanus										0.1				0.1	0.1	0.1			0.1			0.1		0.1		0.1		
Enneapogon polyphyllus									0.1							0.1						0.1						
Enneapogon robustissimus																0.1			0.1			0.1						
Enneapogon sp.																												
Enteropogon ramosus																												
Eragrostis cumingii																												
Eragrostis desertorum																												
Eragrostis elongata																												
Eragrostis eriopoda										0.1																		
Eragrostis exigua																												
Eragrostis pergracilis																												
Eragrostis setifolia																											0.1	
Eragrostis tenellula																												
Eragrostis xerophila																												
Eragrostis sp.																0.1												
Eremophila accrescens																												
Eremophila caespitosa																												
Eremophila cuneifolia										0.1																		

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Eremophila forrestii subsp. *forrestii*																			0.1			2				6		
Eremophila fraseri subsp. *fraseri*	0.1																											
Eremophila galeata																												
Eremophila jucunda subsp. *pulcherrima*																												
Eremophila latrobei (subsp. not determined)																												
Eremophila latrobei subsp. *filiformis*				0.1							0.1																	
Eremophila latrobei subsp. *latrobei*			0.1									0.1									0.1				0.1		0.1	
Eremophila longifolia																			1			0.1	0.1					
Eremophila oppositifolia subsp. *angustifolia*																												
Eremophila petrophila subsp. *petrophila*																												
Eremophila phyllopoda subsp. *obliqua*				0.1																								
Eremophila platycalyx subsp. *pardalota*																												
Eremophila pusilliflora																												
Eremophila sp. Hamersley Range (K. Walker KW 136)																												
Eremophila sp.															0.1													
Eriachne aristidea																												
Eriachne flaccida																												
Eriachne lanata			0.5	0.1	0.1			0.1			0.5														0.1			0.5
Eriachne mucronata							0.1															0.1			0.1			
Eriachne mucronata (arid form) (MET 12 736)																	0.1											0.1
Eriachne mucronata (typical form)			0.1	0.1	0.1			0.1		0.1	0.1	0.1												0.1				
Eriachne aff. *mucronata*																												
Eriachne obtusa																												
Eriachne pulchella																												
Eriachne tenuiculmis																												
Eucalyptus camaldulensis subsp. *refulgens*																												
Eucalyptus gamophylla				0.1							0.1		6				2				1				3			
Eucalyptus kingsmillii			2								0.1																	4
Eucalyptus leucophloia subsp. *leucophloia*			4	1.5	1	1	3	2			5		0.1			6	0.5				3				1		1	0.5
Eucalyptus pilbarensis																												
Eucalyptus repullulans		1.5							1					3						5								
Eucalyptus socialis subsp. *eucentrica*									2					2	1.5													
Eucalyptus trivalva												25								26								
Eucalyptus victrix																												
Eucalyptus xerothermica										3									6			2	8					
Eulalia aurea																			0.1			0.1	0.1					
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																												
Euphorbia australis var. *hispidula*																												
Euphorbia australis var. *subtomentosa*																												
Euphorbia biconvexa																			0.1									
Euphorbia boophthona																												
Euphorbia careyi																		0.1						0.1				
Euphorbia coghlanii																												
Euphorbia drummondii																												
Euphorbia tannensis subsp. *eremophila*																												
Euphorbia trigonosperma																												
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																												
Euphorbia sp. (*boophthona/tannensis*)										0.1																		
Euphorbia sp.																												
Evolvulus alsinoides var. decumbens																												
Evolvulus alsinoides var. villosicalyx	0.1									0.1									0.1			0.1	0.1			0.1		
Ficus brachypoda																												
Fimbristylis dichotoma	0.1																											
Fimbristylis simulans																												
Fimbristylis sp.																						0.1						
Flaveria trinervia																												
Gastrolobium grandiflorum																												
Glycine canescens																												
Gnephosis arachnoidea																												
Gompholobium oreophilum							0.1	0.1									0.1				0.1				0.1			
Gomphrena cunninghamii																												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Gomphrena kanisii																												
Goodenia cusackiana																												
Goodenia microptera	0.1								0.1					0.1														
Goodenia muelleriana	0.1														0.1	0.1		0.1						0.1				
Goodenia prostrata																												
Goodenia stellata																												
Goodenia stobbsiana			0.1	0.1			0.1	0.1									0.1				0.1				0.1		0.1	0.1
Goodenia tenuiloba																												
Goodenia triodiophila							0.1				0.1						0.1											0.1
Gossypium australe									0.1															0.1				
Gossypium robinsonii						0.1																0.1	0.1	0.1				0.1
Gossypium sturtianum var. *sturtianum*																												
Grevillea berryana																												
Grevillea saxicola																												
Grevillea wickhamii								0.1																				
Grevillea wickhamii subsp. *hispidula*																												
Hakea chordophylla	0.1		0.1	0.1		0.1	0.1	0.5			0.1		0.1			0.1	0.1				0.1			0.1	1		1	
Hakea lorea subsp. *lorea*										0.1									0.1									
Halgania gustafsenii var. Mid West (G. Perry 370)			1	0.1							0.1						0.5								2			
Harnieria kempeana subsp. *muelleri*																												
Heliotropium chrysocarpum																		0.1										
Heliotropium cunninghamii															0.1				0.1					0.1				
Heliotropium heteranthum																												
Heliotropium inexplicitum																												
Heliotropium sp.	0.1				0.1									0.1				0.1										
Heliotropium tenuifolium																												
Hibiscus brachychlaenus																												
Hibiscus burtonii										0.1												0.1						
Hibiscus coatesii	0.1		0.1		0.1			0.1	0.1	0.1				0.1	0.1	0.1		0.1			0.1			0.1	0.1			0.1
Hibiscus sturtii var. *campylochlamys*			0.1		0.1		0.1	0.1							0.1	0.1	0.1	0.1		0.1	0.1						0.1	
Hibiscus sturtii var. *grandiflorus*																						0.1			0.1			
Hibiscus sturtii var. *platychlamys*																			0.1			0.1						
Hibiscus sturtii var. *truncatus*																												
Hibiscus sturtii var. aff. *truncatus*																												
Hibiscus sturtii var. not determined																												
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																												
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																												
Hibiscus sp. Mt Robinson (G. Byrne 3537)																												
Hybanthus aurantiacus																												
Indigofera colutea																												
Indigofera fractiflexa subsp. *fractiflexa*																												
Indigofera georgei																												
Indigofera gilesii																												
Indigofera linnaei																												
Indigofera monophylla						0.1							0.1				0.1							0.1	0.1			
Indigofera rugosa	0.1																											
Ipomoea muelleri																												
Ipomoea plebeia																												
Iseilema dolichotrichum																												
Iseilema membranaceum																										0.1		
Iseilema vaginiflorum																												
Isotropis parviflora																												
Isotropis sp. Arid zone (G. Byrne 2775)																							2					
Jasminum didymum subsp. *lineare*			0.1	0.1	0.1	0.1				0.1	0.1	0.1	0.1	0.1		0.1			0.1	0.1		0.1				0.1		0.1
Leiocarpa semicalva subsp. *semicalva*																												
Lepidium echinatum																												
Lepidium oxytrichum																												
Lepidium pedicellosum																				0.1								
Lepidium phlebopetalum																												
Lobelia heterophylla subsp. *pilbarensis*																												
Maireana georgei												0.1				0.1												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Maireana melanocoma																												
Maireana planifolia																			0.1									
Maireana planifolia x *villosa*																						0.1						
Maireana tomentosa subsp. *tomentosa*																												
Maireana triptera																												
Maireana villosa																						0.1						
Malvastrum americanum																			0.1			0.1	0.1			0.1		
Marsdenia australis																	0.1											
Marsilea hirsuta																												
Maytenus sp. Mt Windell (S. van Leeuwen 846)																0.1												
Melaleuca bracteata																												
Melaleuca eleuterostachya		15							3						3													
Melaleuca glomerata																												
Melhania oblongifolia																												
Mirbelia viminalis			2				1										0.1										0.1	0.1
Monachather paradoxus																												
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																												
Nicotiana benthamiana																												
Nicotiana occidentalis subsp. *obliqua*																												
Nicotiana occidentalis subsp. *occidentalis*																												
Nicotiana simulans																												
Nicotiana sp.																												
Notoleptopus decaisnei																												
Oldenlandia crouchiana																										0.1		
Olearia fluvialis																												
Olearia stuartii										0.1																		
Olearia xerophila																												
Oxalis sp. Pilbara (M.E. Trudgen 12725)																												
Pandorea pandorana																												
Panicum decompositum																												
Panicum effusum																			0.1			0.1						
Paraceterach reynoldsii																												
Paraneurachne muelleri	0.1			0.1	0.1			0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1		0.1	2	0.1	0.1			0.1	0.1	0.1		0.1
Parietaria cardiostegia																												
Paspalidium clementii														0.1														
Paspalidium constrictum																			0.1									
Paspalidium rarum																												
Peplidium muelleri																												
Peripleura hispidula var. *hispidula*																												
Peripleura obovata			0.1							0.1										0.1								
Peripleura virgata																0.1												
Peripleura sp.																												
Perotis rara																												
Petalostylis labicheoides			1	0.5				0.1			0.1										0.1							0.1
Phyllanthus maderaspatensis																										0.1		
Pilbara trudgenii																												
Pimelea microcephala subsp. *microcephala*																												
Pittosporum angustifolium																										0.1		
Pluchea dentex																												
Pluchea dunlopii																												
Polycarpaea corymbosa var. *corymbosa*																												
Polycarpaea holtzei																												
Polycarpaea longiflora																								0.1				
Polygala glaucifolia																												
Polymeria ambigua																												
Portulaca filifolia																												
Portulaca oleracea/intraterranea																												
Prostanthera albiflora																												
Psydrax latifolia										0.1	0.1																	
Psydrax rigidula																												
Psydrax suaveolens																												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Pterocaulon serrulatum var. *velutinum*									0.1																			
Pterocaulon sphacelatum					0.1												0.1		0.1									
Pterocaulon sphaeranthoides																												
Pterocaulon sp.															0.1							0.1	0.1					
Ptilotus aervoides																												
Ptilotus astrolasius														0.1	0.1	0.1								0.1			0.1	
Ptilotus auriculifolius																												
Ptilotus calostachyus			0.1		0.1			0.1					0.1	0.1	0.1	0.1									0.1		0.1	0.1
Ptilotus clementii									0.1						0.1													
Ptilotus exaltatus					0.1			0.1	0.1				0.1	0.1	0.1	0.1				0.1		0.1				0.1	0.1	
Ptilotus fusiformis																												
Ptilotus gomphrenoides																										0.1		
Ptilotus helipteroides																												
Ptilotus obovatus var. obovatus					0.1					0.1		0.1	0.1			0.1		0.1	0.1	0.1		0.1	0.1			0.1		0.1
Ptilotus polystachyus																												
Ptilotus roei																												
Ptilotus rotundifolius	0.1			0.1									0.1	0.1		0.1		0.1						0.1				
Ptilotus schwartzii var. *schwartzii*																												
Ptilotus xerophilus																												
Ptilotus sp.																		0.1										
Rhagodia eremaea																			0.1									
Rhagodia sp. Hamersley (M. Trudgen 17794)																						0.1				0.1		
Rhodanthe humboldtiana																												
Rhodanthe margarethae																												
Rhodanthe polakii																												
Rhynchosia minima																						0.1	0.1					
Roepera eichleri																												
Rostellularia adscendens var. *latifolia*																												
Rumex vesicarius																												
Salsola australis					0.1				0.1										0.1									
Santalum lanceolatum																			1				0.1					
Santalum spicatum																												
Scaevola acacioides																												
Scaevola amblyanthera var. *centralis*																												
Scaevola parvifolia subsp. *pilbarae*													0.1	0.1						0.1								
Scaevola spinescens										0.1																		
Scaevola spinescens (broad form)																												
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)			0.1				0.1	0.1			0.1						0.1				0.1				0.1			0.1
Schizachyrium fragile																												
Sclerolaena convexula																												
Sclerolaena cornishiana																												
Sclerolaena densiflora																												
Sclerolaena eriacantha																												
Senecio hamersleyensis																												
Senna artemisioides subsp. *filifolia*																												
Senna artemisioides subsp. *helmsii*													1															
Senna artemisioides subsp. *oligophylla*	0.1	0.1				0.1			0.1			0.1		0.1	0.1	0.1	0.1	0.1						0.1		0.1		0.1
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)													0.1													0.1		
Senna artemisioides subsp. *oligophylla x S. ferraria*																												
Senna artemisioides subsp. *oligophylla x S. stricta*																												
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1				0.1					0.1			0.1						0.1	0.1	0.1	0.1		0.1				
Senna artemisioides subsp. x *artemisioides*													0.1						2				0.1					
Senna artemisioides subsp. x *artemisioides x S. stricta*																												
Senna ferraria			0.1		0.1		0.1	0.1			0.1		0.1				0.1										0.1	0.1
Senna ferraria x					0.1																							
Senna ferraria x S. artemisioides subsp. *oligophylla*																												
Senna ferraria x S. glutinosa subsp. *glutinosa*																												
Senna glaucifolia														0.1							0.1				0.1			
Senna glaucifolia x S. artemisioides subsp. *helmsii*																												
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																					0.1							

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Senna glaucifolia x																												
Senna glutinosa subsp. *chatelainiana*																												
Senna glutinosa subsp. *glutinosa*			0.1	0.1	0.1	0.1	0.1				0.1			0.1		0.1	0.1	0.1		0.1	0.1			0.1	0.1	0.1	0.1	0.1
Senna glutinosa subsp. *glutinosa x*														0.1														0.1
Senna glutinosa subsp. *x luerssenii*	0.1												0.1			0.1				0.1				0.1				
Senna glutinosa subsp. *x luerssenii x*																												
Senna glutinosa subsp. *glutinosa x S. stricta*																												
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																												
Senna glutinosa subsp. *pruinosa*	0.1				0.1	0.1		0.1		0.1			0.1	0.1			0.1				0.1			0.1	0.1			0.1
Senna glutinosa subsp. *pruinosa x*																												
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																												
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																												
Senna notabilis															0.1													
Senna pleurocarpa var. *angustifolia*																												
Senna sp. Karijini (M.E. Trudgen 10392)																												
Senna sp. Meekatharra (E. Bailey 1-26)													0.1															
Senna stricta													0.1															
Senna stricta x																												
Senna venusta																												
Seringia elliptica				0.1			0.1	0.5					0.1				1				0.1				0.1			
Seringia nephrosperma																												
Setaria dielsii																												
Setaria surgens																												
Setaria verticillata																												
Sida arenicola																	0.1				0.1				0.1			
Sida cardiophylla																												
Sida echinocarpa	0.1													0.1		0.1	0.1	0.1				0.1		0.1				
Sida ectogama																												
Sida fibulifera														0.1								0.1	0.1					
Sida platycalyx																												
Sida sp. Barlee Range (S. van Leeuwen 1642)																												
Sida sp. dark green fruits (S. van Leeuwen 2260)											0.1																	
Sida sp. Excedentifolia (J.L. Egan 1925)			0.1	0.1	0.1											0.1					0.1				0.1		0.1	0.1
Sida sp. Golden calyces glabrous (H.N. Foote 32)																												
Sida sp. L (A.M. Ashby 4202)																			0.1			0.1	0.1					
Sida sp. Pilbara (A.A. Mitchell PRP 1543)			0.1	0.1			0.1	0.1				0.1				0.1	0.1										0.1	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)			0.1								0.1																	0.1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1		0.1						0.1	0.1						0.1						0.1	0.1					
Sida sp. Supplejack Station (T.S. Henshall 2345)																												
Sida sp.																										0.1		
Sigesbeckia orientalis																												
Solanum centrale																												
Solanum ferocissimum																							0.1					
Solanum horridum										0.1				0.1		0.1						0.1		0.1		0.1		
Solanum kentrocaule																												
Solanum lasiophyllum				0.1	0.1		0.1	0.1		0.1	0.1		0.1	0.1					0.1	0.1		0.1			0.1	0.1	0.1	
Solanum nigrum																												
Solanum phlomoides			0.1						0.1					0.1	0.1												0.1	0.1
Solanum piceum																												
Solanum sp.																		0.1	0.1									
Sonchus oleraceus																												
Spermacoce brachystema																										0.1		
Sporobolus australasicus																												
Stemodia grossa																												
Stenopetalum anfractum																												
Streptoglossa bubakii									0.1																	0.1		
Streptoglossa decurrens	0.1																											
Stylobasium spathulatum																												
Swainsona maccullochiana	0.1																	0.1										
Swainsona sp.																												
Templetonia egena																												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA08	WA09	WA10	WA11	WA12	WA13	WA14	WA15	WA16	WA17	WA18	WA19	WA20	WA21	WA22	WA23	WA24	WA25	WA26	WA27	WA28	WA29	WA30	WA31	WA32	WA33	WA34	WA35
Tephrosia densa																												
Tephrosia oxalidea																												
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)																												
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																												
Teucrium disjunctum																												
Teucrium teucriiflorum																						0.1				0.1		
Themeda sp. Mt Barricade (M.E. Trudgen 2471)			1		0.1		0.1	0.1			0.1													0.1				0.1
Themeda triandra	0.1					0.1				0.5		0.1				0.1		0.1	15		0.1	6	40			1		
Trachymene oleracea subsp. *oleracea*																												
Tribulus suberosus																												
Trichodesma zeylanicum var. *zeylanicum*					0.1										0.1			0.1						0.1				
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)	0.1																	0.1										
Triodia angusta									10					5	3													
Triodia brizoides					0.1											12								6				
Triodia longiceps												15							0.1	10								
Triodia melvillei																												
Triodia pungens			1	0.1	2			0.1			0.1	0.1	7			0.1	0.5		0.1	5	0.1	1			2	0.1	0.1	0.1
Triodia vanleeuwenii			20				10	10					4				8				0.1				10		25	
Triodia wiseana	11	20	4	35	0.5	55	5	10	2	20	35	25		6	5	3		15	2	20	0.1	2		3		2	0.1	15
Triodia sp. Mt Ella (M.E. Trudgen 12739)																												
Tripogonella loliiformis	0.5																											
Triraphis mollis																												
Triumfetta chaetocarpa																												
Triumfetta leptacantha																												
Urochloa occidentalis var. *ciliata*																												
Urochloa piligera																												
Vachellia farnesiana																												
Ventilago viminalis																												
Vigna lanceolata var. *lanceolata*																										0.1		
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																												
Vincetoxicum flexuosum																												
Vincetoxicum lineare																												
Vittadinia dissecta var. *hirta*																												
Wahlenbergia gracilenta																												
Wahlenbergia tumidifructa																												
Waltheria indica																												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Abutilon amplum										0.1						0.1	0.1		
Abutilon cryptopetalum																			
Abutilon cunninghamii																0.1			
Abutilon fraseri subsp. *fraseri*		0.1				0.1										0.1			
Abutilon lepidum																			
Abutilon leucopetalum																			
Abutilon macrum																			
Abutilon otocarpum		0.1														0.1			
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																			
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)								0.1			0.1				0.1				0.1
Abutilon sp.																			
Acacia adoxa var. *adoxa*																			
Acacia adsurgens			0.1	0.1			0.1												
Acacia ancistrocarpa																			
Acacia aneura			0.1															1	
Acacia 'aneura' sens. lat. (juvenile)																			
Acacia aptaneura		2	0.1	0.1		3	0.1					0.1	1	2	0.1			10	0.1
Acacia atkinsiana																			
Acacia ayersiana		0.1				0.1			20			25							
Acacia ayersiana (narrow phyllode variant)																			
Acacia bivenosa			0.1	0.1	0.1	3		0.1		0.1	0.1								
Acacia bivenosa (wispy/weeping form)																0.5			
Acacia catenulata subsp. *occidentalis*		0.1	0.1			3						8		15				20	
Acacia citrinoviridis					0.5														
Acacia cowleana				25	0.1														
Acacia dictyophleba	0.1	0.1						0.1		0.1						0.1	0.1		
Acacia eriopoda				2.5															
Acacia hamersleyensis	3							1					0.1		0.1				0.1
Acacia hilliana																			
Acacia inaequilatera																			
Acacia incurvaneura																			
Acacia kempeana																			
Acacia macraneura									24										
Acacia maitlandii	0.1	0.1	0.5					0.1		0.1	0.1					0.1			0.1
Acacia marramamba																			
Acacia monticola				40	25		65	15			1								
Acacia mulganeura																			
Acacia pachyacra		0.1															0.1		
Acacia pruinocarpa	1	0.1	0.1		0.1	0.5	0.1	0.1			0.1	1	0.1	0.1				0.1	
Acacia pteraneura																			
Acacia pyrifolia var. *pyrifolia*	0.1				0.1						0.1						1		0.1
Acacia rhodophloia												0.1						0.1	
Acacia sibirica									1										
Acacia sibirica (linear form)																			
Acacia steedmanii subsp. *borealis*			1																
Acacia synchronicia									0.1										
Acacia tenuissima	0.1	0.1	0.1	0.1			0.1												
Acacia tetragonophylla									3										
Acacia trudgeniana																			
Acacia wanyu																			
Acacia sp.					0.1														
Achyranthes aspera								0.1								0.1			
Acrachne racemosa																			
Alternanthera denticulata																	0.1		
Alternanthera nana																0.1	0.1		
Amaranthus cuspidifolius																			
Amaranthus interruptus																			
Amaranthus undulatus													0.1						
Ammannia baccifera																			
Ammannia multiflora																	0.1		
Amphipogon sericeus						0.1													

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Amyema fitzgeraldii									0.1										
Amyema miquelii																			
Amyema sanguinea var. *pulchra*																			
Androcalva luteiflora		1	8		5			0.1		0.1	0.1					1			
Anthobolus leptomerioides									0.1										
Aristida burbidgeae								0.1					1.5		0.5				0.1
Aristida contorta	0.1		0.1		0.1	0.1													
Aristida holathera var. *holathera*				0.1	0.1														
Aristida inaequiglumis			0.1																
Aristida ingrata		0.1																	
Aristida ? ingrata																			
Aristida jerichoensis var. *subspinulifera*																			
Aristida latifolia		0.1																	
Aristida lazaridis																	1		
Aristida aff. *nitidula*																			
Aristida obscura									3									0.1	
Aristida pruinosa									0.1										
Aristida sp.																		0.1	
Astrotricha hamptonii													0.1		0.1				
Atriplex codonocarpa																			
Bergia trimera																			
Bidens bipinnata						0.5			0.1	0.1		0.1				0.1	0.1	0.1	0.1
Boerhavia coccinea								0.1								0.1	0.1		
Boerhavia gardneri																			
Boerhavia repleta																	0.1		
Boerhavia sp.																			
Bothriochloa ewartiana		5																	
Bothriochloa sp.																			
Brachychiton acuminatus																			
Brachyscome iberidifolia																			
Brunonia sp. Long hairs (D.E. Symon 2440)																			
Bulbostylis barbata																			
Cajanus cinereus													0.1						
Calandrinia ptychosperma																			
Callitris columellaris													35		25				
Calocephalus beardii																			
Calytrix carinata																			
Capparis lasiantha					0.1	0.1		0.1	0.1		0.1		0.1	0.1	0.1			0.1	0.1
Capparis mitchellii													1		2.5				
Capparis spinosa subsp. *nummularia*								0.1					0.1						0.1
Cassytha capillaris																			
Cenchrus ciliaris																			
Centipeda minima subsp. *macrocephala*																	0.1		
Cheilanthes austrotenuifolia															0.1		0.1		
Cheilanthes brownii								0.1				0.1	0.1		0.1				0.1
Cheilanthes sieberi subsp. *sieberi*						0.1			0.1			0.1							
Chrysocephalum apiculatum subsp. *pilbarense*																			
Chrysocephalum gilesii		0.1																	
Chrysocephalum pterochaetum																			
Chrysopogon fallax		0.1				0.1			0.1										
Cleome viscosa					0.1											0.1	0.1		
Clerodendrum floribundum var. *angustifolium*								0.1			0.1		0.1						0.1
Codonocarpus cotinifolius				0.1	0.1	0.1	1	0.1											
Convolvulus clementii																			
Corchorus crozophorifolius					0.1	0.1													
Corchorus lasiocarpus (subsp. not determined)																			
Corchorus lasiocarpus subsp. *lasiocarpus*																			
Corchorus lasiocarpus subsp. *parvus*			0.1	0.1	0.1	0.1													
Corchorus tridens																	0.1		
Corchorus sp.																			
Corymbia deserticola subsp. *deserticola*							0.1												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Corymbia ferriticola												2	5		3				
Corymbia hamersleyana			0.1	0.5	0.5		0.1	1			0.1								1
Crotalaria medicaginea var. *neglecta*																	0.1		
Cryptandra monticola																			
Cucumis variabilis						0.1		0.1	0.1								0.1		0.1
Cullen leucanthum																			
Cullen leucochaites																			
Cullen pogonocarpum																			
Cymbopogon ambiguus	0.1	0.1			0.1			3		0.1	0.1		0.1	0.1	0.1	0.1	3	0.1	0.5
Cymbopogon obtectus																			
Cymbopogon ? obtectus																			
Cymbopogon sp.																			
Cynanchum pedunculatum																			
Cynanchum viminale subsp. *australe*														0.1					
Cynodon convergens																			
Cynodon prostratus																			
Cyperus cunninghamii subsp. *cunninghamii*																			
Cyperus vaginatus										3							0.1		
Dactyloctenium radulans																			
Dampiera candicans																			
Dichanthium fecundum																	0.5		
Dichanthium sericeum subsp. *humilius*																			
Dicladanthera forrestii																			
Digitaria ammophila	0.1	0.1	0.1						0.1										0.1
Digitaria brownii	0.1	0.1	0.1	0.1	0.1	0.1									0.1	0.1			
Digitaria ctenantha																			
Diplatia grandibractea	0.1																		
Dipteracanthus australasicus subsp. *australasicus*						0.1							0.1						
Dodonaea coriacea																			
Dodonaea lanceolata var. *lanceolata*			0.1		0.1			0.1			0.1							0.1	
Dodonaea pachyneura								0.1				0.1	0.1	0.1	0.1				
Dodonaea petiolaris																			
Dodonaea viscosa subsp. *mucronata*											0.1		0.1		0.5	0.1			1.5
Duperreya commixta	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1		0.1		0.1	0.1		0.1	0.1
Dysphania melanocarpa forma *leucocarpa*																			
Dysphania rhadinostachya (subsp. not determined)																			
Dysphania rhadinostachya subsp. *inflata*																			
Dysphania rhadinostachya subsp. *rhadinostachya*																			
Dysphania saxatilis																			
Dysphania sp.																			
Ehretia saligna var. *saligna*																			
Enchylaena tomentosa var. *tomentosa*		0.1				0.1													
Enneapogon caerulescens																			
Enneapogon lindleyanus					0.1														
Enneapogon polyphyllus		0.1			0.1														
Enneapogon robustissimus						0.1		0.1		0.1					0.1	0.1	0.1		
Enneapogon sp.																		0.1	
Enteropogon ramosus																	0.5		
Eragrostis cumingii																			
Eragrostis desertorum																			
Eragrostis elongata																	0.1		
Eragrostis eriopoda																			
Eragrostis exigua																			
Eragrostis pergracilis																			
Eragrostis setifolia						0.1			0.1										
Eragrostis tenellula																	0.1		
Eragrostis xerophila																			
Eragrostis sp.																			
Eremophila accrescens																			
Eremophila caespitosa																			
Eremophila cuneifolia																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Eremophila forrestii subsp. *forrestii*		0.1				0.1			6									5	
Eremophila fraseri subsp. *fraseri*																			
Eremophila galeata																			
Eremophila jucunda subsp. *pulcherrima*						0.1									0.1				0.1
Eremophila latrobei (subsp. not determined)																			
Eremophila latrobei subsp. *filiformis*																			
Eremophila latrobei subsp. *latrobei*												0.1		0.1				0.1	
Eremophila longifolia				0.1		0.1		0.1								0.1			
Eremophila oppositifolia subsp. *angustifolia*																			
Eremophila petrophila subsp. *petrophila*																			
Eremophila phyllopoda subsp. *obliqua*																			
Eremophila platycalyx subsp. *pardalota*									2										
Eremophila pusilliflora																			
Eremophila sp. Hamersley Range (K. Walker KW 136)													0.5						
Eremophila sp.																			
Eriachne aristidea																			
Eriachne flaccida																			
Eriachne lanata	0.5							0.1											
Eriachne mucronata																		0.1	
Eriachne mucronata (arid form) (MET 12 736)																			
Eriachne mucronata (typical form)	0.1		0.1		0.1			0.1				15		0.1	0.1				0.5
Eriachne aff. *mucronata*																			
Eriachne obtusa																			
Eriachne pulchella																			
Eriachne tenuiculmis																1	0.1		
Eucalyptus camaldulensis subsp. *refulgens*																	5		
Eucalyptus gamophylla	0.5		0.5	3.5			3												
Eucalyptus kingsmillii	4																		
Eucalyptus leucophloia subsp. *leucophloia*	4				0.5	1	0.1	0.1			3	0.1		3	0.1			1	1
Eucalyptus pilbarensis																			
Eucalyptus repullulans																			
Eucalyptus socialis subsp. *eucentrica*																			
Eucalyptus trivalva		3	32																
Eucalyptus victrix										20							6		
Eucalyptus xerothermica		4														11	1		
Eulalia aurea		0.1														1	2		
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																6	0.1		
Euphorbia australis var. *hispidula*																			
Euphorbia australis var. *subtomentosa*																			
Euphorbia biconvexa																0.1	0.1		
Euphorbia boophthona																			
Euphorbia careyi																			
Euphorbia coghlanii																			
Euphorbia drummondii																			
Euphorbia tannensis subsp. *eremophila*																			
Euphorbia trigonosperma								0.1							0.1				0.1
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)						0.1													
Euphorbia sp. (*boophthona/tannensis*)																			
Euphorbia sp.																			
Evolvulus alsinoides var. decumbens																0.1			
Evolvulus alsinoides var. villosicalyx			0.1		0.1	0.1		0.1											0.1
Ficus brachypoda								0.1					0.1						2
Fimbristylis dichotoma																			
Fimbristylis simulans																			
Fimbristylis sp.																			
Flaveria trinervia																			
Gastrolobium grandiflorum				0.1	0.1		0.1												
Glycine canescens						0.1				0.1						0.1	0.1		0.1
Gnephosis arachnoidea																			
Gompholobium oreophilum																			
Gomphrena cunninghamii																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Gomphrena kanisii																			
Goodenia cusackiana																			
Goodenia microptera																			
Goodenia muelleriana																0.1	0.1		
Goodenia prostrata																			
Goodenia stellata						0.1										0.1			
Goodenia stobbsiana							0.1	0.1											
Goodenia tenuiloba																			
Goodenia triodiophila	0.1																		
Gossypium australe					0.1														
Gossypium robinsonii					0.1	0.1		3			1		0.1			0.1	0.1		2
Gossypium sturtianum var. *sturtianum*										0.1							5		
Grevillea berryana												1	0.1	0.1					
Grevillea saxicola																			
Grevillea wickhamii								0.1											1
Grevillea wickhamii subsp. *hispidula*																			
Hakea chordophylla	0.5	0.1																	0.1
Hakea lorea subsp. *lorea*						0.1													
Halgania gustafsenii var. Mid West (G. Perry 370)																			
Harnieria kempeana subsp. *muelleri*																			
Heliotropium chrysocarpum																			
Heliotropium cunninghamii																			
Heliotropium heteranthum																			
Heliotropium inexplicitum																			
Heliotropium sp.																			
Heliotropium tenuifolium																			
Hibiscus brachychlaenus																			
Hibiscus burtonii		0.1	0.1			0.1	0.1												
Hibiscus coatesii			0.1		0.1	0.1		0.1											
Hibiscus sturtii var. *campylochlamys*			0.1	0.1			0.1												
Hibiscus sturtii var. *grandiflorus*						0.1													
Hibiscus sturtii var. *platychlamys*						0.1													
Hibiscus sturtii var. *truncatus*																			
Hibiscus sturtii var. aff. *truncatus*																			
Hibiscus sturtii var. not determined																			
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																			
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)											0.1		0.1		0.1				
Hibiscus sp. Mt Robinson (G. Byrne 3537)																			
Hybanthus aurantiacus					0.1			0.1											
Indigofera colutea																			
Indigofera fractiflexa subsp. *fractiflexa*											0.1		0.1						0.5
Indigofera georgei																0.1			
Indigofera gilesii											0.1								
Indigofera linnaei																			
Indigofera monophylla			0.1	0.1	0.1	0.1	0.1	0.1											
Indigofera rugosa																			
Ipomoea muelleri																			
Ipomoea plebeia																	0.1		
Iseilema dolichotrichum																			
Iseilema membranaceum																			
Iseilema vaginiflorum																			
Isotropis parviflora																			
Isotropis sp. Arid zone (G. Byrne 2775)																0.1	0.1		
Jasminum didymum subsp. *lineare*	0.1		0.1	0.1					0.1		0.1			0.1	0.1	0.1	0.1		0.1
Leiocarpa semicalva subsp. *semicalva*																			
Lepidium echinatum																			
Lepidium oxytrichum																			
Lepidium pedicellosum																			
Lepidium phlebopetalum																			
Lobelia heterophylla subsp. *pilbarensis*																			
Maireana georgei									0.1										

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Maireana melanocoma																			
Maireana planifolia															0.1				
Maireana planifolia x *villosa*																			
Maireana tomentosa subsp. *tomentosa*																			
Maireana triptera																			
Maireana villosa																			
Malvastrum americanum																0.1			
Marsdenia australis																			0.1
Marsilea hirsuta																	0.1		
Maytenus sp. Mt Windell (S. van Leeuwen 846)																			
Melaleuca bracteata										4									
Melaleuca eleuterostachya																			
Melaleuca glomerata										2									
Melhania oblongifolia																0.1			
Mirbelia viminalis														0.1					
Monachather paradoxus																			
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																			
Nicotiana benthamiana													0.1						
Nicotiana occidentalis subsp. *obliqua*																			
Nicotiana occidentalis subsp. *occidentalis*																			
Nicotiana simulans																			
Nicotiana sp.																			
Notoleptopus decaisnei																			
Oldenlandia crouchiana																			
Olearia fluvialis																			
Olearia stuartii									0.1		0.1				0.1				
Olearia xerophila																			0.1
Oxalis sp. Pilbara (M.E. Trudgen 12725)																			
Pandorea pandorana													0.1		1				
Panicum decompositum																	0.1		
Panicum effusum			0.1																
Paraceterach reynoldsii																			
Paraneurachne muelleri		0.1	0.1	0.1	0.1	0.1	0.1												
Parietaria cardiostegia																			
Paspalidium clementii		0.1													0.1				
Paspalidium constrictum																			
Paspalidium rarum								0.1											
Peplidium muelleri																			
Peripleura hispidula var. *hispidula*																			
Peripleura obovata																			
Peripleura virgata																			
Peripleura sp.		0.1																	
Perotis rara																			
Petalostylis labicheoides	0.1	4		0.1	35			5			1					6	3		
Phyllanthus maderaspatensis					0.1											0.1	0.1		
Pilbara trudgenii																			
Pimelea microcephala subsp. *microcephala*																			
Pittosporum angustifolium															0.1				
Pluchea dentex										0.1									
Pluchea dunlopii																0.1			
Polycarpaea corymbosa var. *corymbosa*																			
Polycarpaea holtzei																			
Polycarpaea longiflora					0.1														
Polygala glaucifolia																			
Polymeria ambigua																0.1	0.1		
Portulaca filifolia																			
Portulaca oleracea/intraterranea																			
Prostanthera albiflora																			
Psydrax latifolia													0.1		0.1				
Psydrax rigidula																			
Psydrax suaveolens		0.1							0.1					0.1				0.1	

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Pterocaulon serrulatum var. *velutinum*																			
Pterocaulon sphacelatum		0.1			0.1	0.1				0.1					0.1	0.1			
Pterocaulon sphaeranthoides																			
Pterocaulon sp.																			
Ptilotus aervoides																			
Ptilotus astrolasius			0.1																
Ptilotus auriculifolius																			
Ptilotus calostachyus	0.1																		
Ptilotus clementii																			
Ptilotus exaltatus		0.1	0.1		0.1	0.1										0.1			
Ptilotus fusiformis																			
Ptilotus gomphrenoides																			
Ptilotus helipteroides																			
Ptilotus obovatus var. obovatus		0.1	0.1	0.1	0.1	2.5					0.1	0.1	0.1	0.1	3			0.1	0.1
Ptilotus polystachyus																			
Ptilotus roei																			
Ptilotus rotundifolius																			
Ptilotus schwartzii var. *schwartzii*																			
Ptilotus xerophilus																			
Ptilotus sp.																			
Rhagodia eremaea						0.1													
Rhagodia sp. Hamersley (M. Trudgen 17794)		0.1											0.1						
Rhodanthe humboldtiana																			
Rhodanthe margarethae																			
Rhodanthe polakii																			
Rhynchosia minima					0.1					0.1						0.1			
Roepera eichleri																			
Rostellularia adscendens var. *latifolia*																			
Rumex vesicarius																			
Salsola australis		0.1				0.1													
Santalum lanceolatum			0.1		0.1				0.1		0.1				0.1	0.1	0.1		0.1
Santalum spicatum													0.1						
Scaevola acacioides																			
Scaevola amblyanthera var. *centralis*																0.1			
Scaevola parvifolia subsp. *pilbarae*		0.1														0.1			
Scaevola spinescens																			
Scaevola spinescens (broad form)																			
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)	0.1																		
Schizachyrium fragile																			
Sclerolaena convexula																			
Sclerolaena cornishiana																			
Sclerolaena densiflora																			
Sclerolaena eriacantha																			
Senecio hamersleyensis																			
Senna artemisioides subsp. *filifolia*																			
Senna artemisioides subsp. *helmsii*			0.1																
Senna artemisioides subsp. *oligophylla*			0.1																
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)						0.1													
Senna artemisioides subsp. *oligophylla x S. ferraria*				0.1															
Senna artemisioides subsp. *oligophylla x S. stricta*																			
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*						0.1												0.1	
Senna artemisioides subsp. x *artemisioides*		0.1	1			0.1										0.1	0.1		
Senna artemisioides subsp. x *artemisioides x S. stricta*																			
Senna ferraria			0.1				0.1	0.1											0.1
Senna ferraria x																			
Senna ferraria x S. artemisioides subsp. *oligophylla*																			
Senna ferraria x S. glutinosa subsp. *glutinosa*																			
Senna glaucifolia			0.1									0.1							
Senna glaucifolia x S. artemisioides subsp. *helmsii*																			
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Senna glaucifolia x																			
Senna glutinosa subsp. *chatelainiana*																			
Senna glutinosa subsp. *glutinosa*	0.1	0.1		0.1	0.1						0.1		0.1	0.1	0.1				0.1
Senna glutinosa subsp. *glutinosa x*																			
Senna glutinosa subsp. *x luerssenii*						0.1			0.1		0.1			0.1				0.1	
Senna glutinosa subsp. *x luerssenii x*																			
Senna glutinosa subsp. *glutinosa x S. stricta*																			
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa*											0.1								
Senna glutinosa subsp. *pruinosa x*																			
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																			
Senna notabilis																	0.1		
Senna pleurocarpa var. *angustifolia*																			
Senna sp. Karijini (M.E. Trudgen 10392)																			
Senna sp. Meekatharra (E. Bailey 1-26)									0.1										
Senna stricta																		1	
Senna stricta x																			
Senna venusta								0.1											
Seringia elliptica	0.1	1		0.1	0.1	0.1	0.1				0.1								
Seringia nephrosperma			0.1			3													
Setaria dielsii																			
Setaria surgens																			
Setaria verticillata					0.1														
Sida arenicola				0.1															
Sida cardiophylla						0.1													
Sida echinocarpa			0.1																
Sida ectogama																			
Sida fibulifera							0.1									0.1	0.1		
Sida platycalyx																			
Sida sp. Barlee Range (S. van Leeuwen 1642)								0.1											
Sida sp. dark green fruits (S. van Leeuwen 2260)		0.1				0.1			0.1									0.1	
Sida sp. Excedentifolia (J.L. Egan 1925)	0.1						0.1												
Sida sp. Golden calyces glabrous (H.N. Foote 32)																			
Sida sp. L (A.M. Ashby 4202)		0.1	0.1	0.1		0.1													
Sida sp. Pilbara (A.A. Mitchell PRP 1543)											0.1					0.1			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)											0.1			0.1	0.1				0.1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)		0.1	0.1		0.1	0.1		0.1		0.1						0.1	0.1		
Sida sp. Supplejack Station (T.S. Henshall 2345)																			
Sida sp.																			
Sigesbeckia orientalis																			
Solanum centrale																			
Solanum ferocissimum																			
Solanum horridum		0.1									0.1	0.1			0.1				0.1
Solanum kentrocaule																			
Solanum lasiophyllum		0.1	0.1		0.1	0.1		0.1	0.1		0.1								
Solanum nigrum																			
Solanum phlomoides																			
Solanum piceum						0.1													
Solanum sp.																			
Sonchus oleraceus																			
Spermacoce brachystema																			
Sporobolus australasicus																			
Stemodia grossa										0.1									
Stenopetalum anfractum																			
Streptoglossa bubakii																			
Streptoglossa decurrens																			
Stylobasium spathulatum													0.1						
Swainsona maccullochiana																			
Swainsona sp.																			
Templetonia egena																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WA37	WAF03R	WAF09R	WAREL-01	WAREL-02	WAREL-03	WAREL-04	WAREL-05	WAREL-06	WAREL-07	WAREL-08	WAREL-09	WAREL-10	WAREL-11	WAREL-12	WAREL-13	WAREL-14	WAREL-15	WAREL-16
Tephrosia densa																			
Tephrosia oxalidea																			
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)					0.5														
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																			
Teucrium disjunctum															0.1				
Teucrium teucriiflorum																		0.1	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)														0.1					
Themeda triandra		2	3	0.1	5	0.5	3	10		35	50		0.1		1	4	3		1
Trachymene oleracea subsp. *oleracea*																			
Tribulus suberosus						0.1													
Trichodesma zeylanicum var. *zeylanicum*																			
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																			
Triodia angusta																			
Triodia brizoides									3										
Triodia longiceps										0.1									
Triodia melvillei																			
Triodia pungens	2	2	8	12	3	4	3	0.1			15		0.1	8	0.1			12	0.1
Triodia vanleeuwenii																		0.1	
Triodia wiseana	18								2			0.1						0.1	
Triodia sp. Mt Ella (M.E. Trudgen 12739)													0.1						0.1
Tripogonella loliiformis																			
Triraphis mollis																			
Triumfetta chaetocarpa																			
Triumfetta leptacantha																			
Urochloa occidentalis var. *ciliata*																			
Urochloa piligera																	0.1		
Vachellia farnesiana										0.1							0.1		
Ventilago viminalis								0.1			0.1			0.1					
Vigna lanceolata var. *lanceolata*																	0.1		
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)										0.1									
Vincetoxicum flexuosum													0.1						
Vincetoxicum lineare				0.1		0.1			0.1										
Vittadinia dissecta var. *hirta*																			
Wahlenbergia gracilenta																			
Wahlenbergia tumidifructa																	0.1		
Waltheria indica																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Abutilon amplum					0.1														0.1
Abutilon cryptopetalum																			
Abutilon cunninghamii			1	0.1															
Abutilon fraseri subsp. *fraseri*						0.1					0.1								0.1
Abutilon lepidum											0.1								
Abutilon leucopetalum																			
Abutilon macrum																			
Abutilon otocarpum	0.1																		
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																			
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)							0.1	0.1											
Abutilon sp.																			
Acacia adoxa var. *adoxa*		0.1																	
Acacia adsurgens																			
Acacia ancistrocarpa																	0.1		
Acacia aneura	0.1									2	1			1					
Acacia 'aneura' sens. lat. (juvenile)																	0.1	0.1	
Acacia aptaneura	45					1				2	25	0.5	0.1	10	0.1	0.1			0.1
Acacia atkinsiana																			
Acacia ayersiana											0.1		0.1	0.5					
Acacia ayersiana (narrow phyllode variant)										0.1		0.1							
Acacia bivenosa						0.1		0.1	0.1		0.1		0.1	0.1		0.1	0.1	0.1	0.1
Acacia bivenosa (wispy/weeping form)		0.1	1	0.1	0.1		0.1												
Acacia catenulata subsp. *occidentalis*	0.1										1		40	15					
Acacia citrinoviridis													0.1			20		7	7
Acacia cowleana		0.1																	
Acacia dictyophleba			0.1	0.1	18														
Acacia eriopoda																			
Acacia hamersleyensis																			
Acacia hilliana																			
Acacia inaequilatera					0.1														
Acacia incurvaneura											1				4				
Acacia kempeana																			
Acacia macraneura											2								
Acacia maitlandii		0.1				0.1	0.1	0.1	0.1								0.1		
Acacia marramamba																			
Acacia monticola		6						2	1										
Acacia mulganeura																			
Acacia pachyacra					0.1														
Acacia pruinocarpa	0.1							0.1		6	10	0.1	10	5	0.1	0.5	0.5		
Acacia pteraneura															1.5				
Acacia pyrifolia var. *pyrifolia*							15	0.1	0.1							0.1		0.1	1
Acacia rhodophloia											1			0.1					
Acacia sibirica			0.1																
Acacia sibirica (linear form)																			
Acacia steedmanii subsp. *borealis*																			
Acacia synchronicia																			
Acacia tenuissima																	0.1		
Acacia tetragonophylla						0.1				0.1	1		0.1	2	0.1				
Acacia trudgeniana																	0.5		
Acacia wanyu																			
Acacia sp.																			
Achyranthes aspera							0.1												
Acrachne racemosa																			
Alternanthera denticulata																			
Alternanthera nana																0.1			
Amaranthus cuspidifolius																			
Amaranthus interruptus																			
Amaranthus undulatus																			
Ammannia baccifera																			
Ammannia multiflora																			
Amphipogon sericeus																	0.1		

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Amyema fitzgeraldii																			
Amyema miquelii																			
Amyema sanguinea var. *pulchra*																			
Androcalva luteiflora		4	2	1.5	2	0.1	0.1	1	1										0.1
Anthobolus leptomerioides											0.1			0.1					
Aristida burbidgeae																			
Aristida contorta	0.1	0.1				0.1				0.1	0.1		0.1	0.1		0.1		0.1	0.1
Aristida holathera var. *holathera*		0.1	0.1															0.1	
Aristida inaequiglumis																			
Aristida ingrata																			
Aristida ? ingrata																			
Aristida jerichoensis var. *subspinulifera*																			
Aristida latifolia																			
Aristida lazaridis					0.1														
Aristida aff. *nitidula*																			
Aristida obscura																			
Aristida pruinosa																			
Aristida sp.																			
Astrotricha hamptonii																			
Atriplex codonocarpa																			
Bergia trimera																			
Bidens bipinnata	0.1				0.1						0.1		0.1	0.1		0.1			0.1
Boerhavia coccinea			0.1		0.1								0.1					0.1	0.1
Boerhavia gardneri																			
Boerhavia repleta																0.1			
Boerhavia sp.																0.1			
Bothriochloa ewartiana																1			0.1
Bothriochloa sp.																			
Brachychiton acuminatus																			
Brachyscome iberidifolia																			
Brunonia sp. Long hairs (D.E. Symon 2440)																			
Bulbostylis barbata																			
Cajanus cinereus																			
Calandrinia ptychosperma																			
Callitris columellaris																			
Calocephalus beardii																			
Calytrix carinata																			
Capparis lasiantha	0.1	0.1		0.1		0.1	0.1	0.1	0.1							0.1			
Capparis mitchellii																			
Capparis spinosa subsp. *nummularia*																			
Cassytha capillaris									0.1										
Cenchrus ciliaris																1			0.1
Centipeda minima subsp. *macrocephala*																			
Cheilanthes austrotenuifolia																			
Cheilanthes brownii																			
Cheilanthes sieberi subsp. *sieberi*	0.1									0.1	0.1	0.1	0.1		0.1	0.1			
Chrysocephalum apiculatum subsp. *pilbarense*				0.1															
Chrysocephalum gilesii																			
Chrysocephalum pterochaetum																			
Chrysopogon fallax	0.1													0.1					
Cleome viscosa							0.1									0.1		0.1	0.1
Clerodendrum floribundum var. *angustifolium*								0.1	0.1										
Codonocarpus cotinifolius																	0.1	0.1	
Convolvulus clementii																			
Corchorus crozophorifolius																0.1		0.1	8
Corchorus lasiocarpus (subsp. not determined)								0.1											
Corchorus lasiocarpus subsp. *lasiocarpus*																			
Corchorus lasiocarpus subsp. *parvus*		0.1	0.1		0.1		0.1		0.1								0.1		0.1
Corchorus tridens																			
Corchorus sp.																		0.1	
Corymbia deserticola subsp. *deserticola*																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Corymbia ferriticola																			
Corymbia hamersleyana		6						3	5										
Crotalaria medicaginea var. *neglecta*			0.1																
Cryptandra monticola																			
Cucumis variabilis				0.1		0.1													
Cullen leucanthum						0.1													
Cullen leucochaites																			
Cullen pogonocarpum				0.1															
Cymbopogon ambiguus			0.1		2	0.1	0.1	0.1	0.1		0.1					0.1			0.1
Cymbopogon obtectus	0.1		0.1																
Cymbopogon ? obtectus																			
Cymbopogon sp.																			
Cynanchum pedunculatum																			
Cynanchum viminale subsp. *australe*																			
Cynodon convergens																			
Cynodon prostratus																			
Cyperus cunninghamii subsp. *cunninghamii*																			
Cyperus vaginatus																			
Dactyloctenium radulans																		0.1	
Dampiera candicans									0.1										
Dichanthium fecundum																			
Dichanthium sericeum subsp. *humilius*																			
Dicladanthera forrestii																0.1			0.1
Digitaria ammophila	0.5											0.1			0.1				
Digitaria brownii					0.1	0.1					0.1					0.1			0.1
Digitaria ctenantha																		0.1	0.1
Diplatia grandibractea																			
Dipteracanthus australasicus subsp. *australasicus*						0.1	0.1									0.1		0.1	0.1
Dodonaea coriacea																			
Dodonaea lanceolata var. *lanceolata*		0.5						1	0.1										0.1
Dodonaea pachyneura																			
Dodonaea petiolaris																			
Dodonaea viscosa subsp. *mucronata*																			
Duperreya commixta	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.1	0.1	0.1		0.1	0.1
Dysphania melanocarpa forma *leucocarpa*																			
Dysphania rhadinostachya (subsp. not determined)																			
Dysphania rhadinostachya subsp. *inflata*																			
Dysphania rhadinostachya subsp. *rhadinostachya*																			
Dysphania saxatilis																			
Dysphania sp.																			
Ehretia saligna var. *saligna*																			
Enchylaena tomentosa var. *tomentosa*											0.1			0.1		0.1			
Enneapogon caerulescens			0.1			0.1											0.1		
Enneapogon lindleyanus	2						0.1	0.1								1			1
Enneapogon polyphyllus	0.1												0.1					0.1	0.1
Enneapogon robustissimus		0.1	0.1			0.1	0.1				0.1							0.5	0.1
Enneapogon sp.																			
Enteropogon ramosus						0.1													
Eragrostis cumingii																			
Eragrostis desertorum			0.1																
Eragrostis elongata																			
Eragrostis eriopoda																			
Eragrostis exigua																			
Eragrostis pergracilis																			
Eragrostis setifolia												0.1			0.1				
Eragrostis tenellula																0.1			
Eragrostis xerophila										0.1									
Eragrostis sp.																			
Eremophila accrescens																			
Eremophila caespitosa										0.1				0.1	0.1				
Eremophila cuneifolia																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Eremophila forrestii subsp. *forrestii*	2					0.1				0.1	0.1	0.1	0.5	0.1	0.1			0.1	
Eremophila fraseri subsp. *fraseri*																			
Eremophila galeata																			
Eremophila jucunda subsp. *pulcherrima*								0.1											
Eremophila latrobei (subsp. not determined)																			
Eremophila latrobei subsp. *filiformis*										0.1		0.1	0.1		0.1				
Eremophila latrobei subsp. *latrobei*																			
Eremophila longifolia				0.1		0.1					0.1			0.1		0.1		0.1	
Eremophila oppositifolia subsp. *angustifolia*																			
Eremophila petrophila subsp. *petrophila*																			
Eremophila phyllopoda subsp. *obliqua*																	0.1		
Eremophila platycalyx subsp. *pardalota*																			
Eremophila pusilliflora																			
Eremophila sp. Hamersley Range (K. Walker KW 136)																			
Eremophila sp.																			
Eriachne aristidea																			
Eriachne flaccida																			
Eriachne lanata																			
Eriachne mucronata								0.1	1										
Eriachne mucronata (arid form) (MET 12 736)																			
Eriachne mucronata (typical form)		0.1	0.1	0.1			0.1									0.1			
Eriachne aff. *mucronata*																			
Eriachne obtusa																			
Eriachne pulchella																0.1			0.1
Eriachne tenuiculmis																0.5			1
Eucalyptus camaldulensis subsp. *refulgens*																			
Eucalyptus gamophylla		1			0.1														
Eucalyptus kingsmillii																			
Eucalyptus leucophloia subsp. *leucophloia*	0.5							5	20								0.5		
Eucalyptus pilbarensis																			
Eucalyptus repullulans																			
Eucalyptus socialis subsp. *eucentrica*				2	0.1														
Eucalyptus trivalva			2	2															
Eucalyptus victrix																15			1
Eucalyptus xerothermica			4	5	8	1	3												
Eulalia aurea		0.1	0.1		1														0.1
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)				20															
Euphorbia australis var. *hispidula*																			
Euphorbia australis var. *subtomentosa*																		0.1	
Euphorbia biconvexa			0.1	0.1														0.1	
Euphorbia boophthona																			
Euphorbia careyi																			
Euphorbia coghlanii																			
Euphorbia drummondii																			
Euphorbia tannensis subsp. *eremophila*																			
Euphorbia trigonosperma								0.1	0.1										
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																			
Euphorbia sp. (*boophthona/tannensis*)																			
Euphorbia sp.																			
Evolvulus alsinoides var. decumbens				0.1															
Evolvulus alsinoides var. villosicalyx	0.1					0.1					0.1			0.1	0.1			0.1	0.1
Ficus brachypoda									0.1										
Fimbristylis dichotoma	0.1																		
Fimbristylis simulans																			
Fimbristylis sp.																			
Flaveria trinervia																			
Gastrolobium grandiflorum		1																	
Glycine canescens				0.1	0.1			0.1											0.1
Gnephosis arachnoidea																			
Gompholobium oreophilum									0.1										
Gomphrena cunninghamii																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Gomphrena kanisii																			
Goodenia cusackiana																			
Goodenia microptera																			
Goodenia muelleriana				0.1	0.1														
Goodenia prostrata																			
Goodenia stellata																			
Goodenia stobbsiana		0.1						0.1	0.1								0.1		
Goodenia tenuiloba																			
Goodenia triodiophila																	0.1		
Gossypium australe			0.1			0.1													
Gossypium robinsonii		0.1	0.1	0.1			8	2	1										
Gossypium sturtianum var. *sturtianum*				0.5	0.1														
Grevillea berryana										0.1		0.1	0.1						
Grevillea saxicola																			
Grevillea wickhamii									0.5										
Grevillea wickhamii subsp. *hispidula*																			
Hakea chordophylla								0.1											
Hakea lorea subsp. *lorea*	0.1					0.1	0.1									0.1			
Halgania gustafsenii var. Mid West (G. Perry 370)									0.1										
Harnieria kempeana subsp. *muelleri*																			
Heliotropium chrysocarpum																			
Heliotropium cunninghamii																		0.1	0.1
Heliotropium heteranthum																			
Heliotropium inexplicitum																			
Heliotropium sp.																			0.1
Heliotropium tenuifolium																			
Hibiscus brachychlaenus																			
Hibiscus burtonii						0.1				0.1		0.1		0.1			0.1		
Hibiscus coatesii								0.1	0.1										
Hibiscus sturtii var. *campylochlamys*									0.1								0.1		
Hibiscus sturtii var. *grandiflorus*																			
Hibiscus sturtii var. *platychlamys*	0.1		0.1																
Hibiscus sturtii var. *truncatus*																			
Hibiscus sturtii var. aff. *truncatus*																			
Hibiscus sturtii var. not determined																			
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																			
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																			
Hibiscus sp. Mt Robinson (G. Byrne 3537)																			
Hybanthus aurantiacus																0.1		0.1	0.1
Indigofera colutea																			
Indigofera fractiflexa subsp. *fractiflexa*								0.1	0.1										
Indigofera georgei																0.1		4	1
Indigofera gilesii								0.1	0.1										
Indigofera linnaei																			
Indigofera monophylla		0.1	0.1				0.1										0.1		
Indigofera rugosa																			
Ipomoea muelleri																			
Ipomoea plebeia																0.1			0.1
Iseilema dolichotrichum																			
Iseilema membranaceum																		0.1	
Iseilema vaginiflorum																			
Isotropis parviflora																			
Isotropis sp. Arid zone (G. Byrne 2775)							0.1									0.1			0.1
Jasminum didymum subsp. *lineare*			0.1	0.1	0.1	0.1	0.1	0.1	0.1										
Leiocarpa semicalva subsp. *semicalva*																			
Lepidium echinatum																			
Lepidium oxytrichum																			
Lepidium pedicellosum																			
Lepidium phlebopetalum											0.1					0.1			
Lobelia heterophylla subsp. *pilbarensis*																			
Maireana georgei																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Maireana melanocoma																			
Maireana planifolia	0.1													0.1					
Maireana planifolia x *villosa*											0.1		0.1	0.1					
Maireana tomentosa subsp. *tomentosa*																			
Maireana triptera																			
Maireana villosa	0.1										0.1		0.1	0.1	0.5	0.1			
Malvastrum americanum				0.1			0.1									0.1			0.1
Marsdenia australis			0.1								0.1								
Marsilea hirsuta																			
Maytenus sp. Mt Windell (S. van Leeuwen 846)																			
Melaleuca bracteata					18														
Melaleuca eleuterostachya																			
Melaleuca glomerata																			
Melhania oblongifolia			0.1															0.1	
Mirbelia viminalis									0.1										
Monachather paradoxus															0.1				
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																			
Nicotiana benthamiana																			
Nicotiana occidentalis subsp. *obliqua*																			
Nicotiana occidentalis subsp. *occidentalis*																			
Nicotiana simulans																			
Nicotiana sp.	0.1																		
Notoleptopus decaisnei																		0.1	
Oldenlandia crouchiana																			
Olearia fluvialis																			
Olearia stuartii																			
Olearia xerophila																			
Oxalis sp. Pilbara (M.E. Trudgen 12725)																			
Pandorea pandorana																			
Panicum decompositum																			0.1
Panicum effusum		0.1													0.1				
Paraceterach reynoldsii																			
Paraneurachne muelleri		0.1	0.1			0.1	0.1	0.1			0.1					0.1	0.1	0.1	0.1
Parietaria cardiostegia																			
Paspalidium clementii																		0.1	0.1
Paspalidium constrictum																0.1			
Paspalidium rarum			0.1																
Peplidium muelleri																			
Peripleura hispidula var. *hispidula*	0.1																		
Peripleura obovata																			
Peripleura virgata																			
Peripleura sp.																			
Perotis rara													2		0.1				
Petalostylis labicheoides		0.1		2			0.1	0.1	1									0.1	1
Phyllanthus maderaspatensis																0.1		0.1	0.1
Pilbara trudgenii																			
Pimelea microcephala subsp. *microcephala*																			
Pittosporum angustifolium																			
Pluchea dentex																			
Pluchea dunlopii																			
Polycarpaea corymbosa var. *corymbosa*																			
Polycarpaea holtzei																			
Polycarpaea longiflora							0.1											0.1	0.1
Polygala glaucifolia																			
Polymeria ambigua			1	0.5															
Portulaca filifolia																			
Portulaca oleracea/intraterranea																		0.1	
Prostanthera albiflora																			
Psydrax latifolia									0.1		0.1		0.1						
Psydrax rigidula																			
Psydrax suaveolens	0.1													0.1					

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Pterocaulon serrulatum var. *velutinum*																			
Pterocaulon sphacelatum		0.1	0.1	0.1	0.1	0.1	0.1						0.1			0.1		0.1	0.1
Pterocaulon sphaeranthoides																			
Pterocaulon sp.																			
Ptilotus aervoides																			
Ptilotus astrolasius																			
Ptilotus auriculifolius																			
Ptilotus calostachyus																	0.1		
Ptilotus clementii																			
Ptilotus exaltatus							0.1				0.1		0.1	0.1	0.1	0.1		0.1	0.1
Ptilotus fusiformis																			
Ptilotus gomphrenoides																			
Ptilotus helipteroides																			
Ptilotus obovatus var. obovatus	0.1					0.1	0.1			0.1	5		0.1	0.1	0.1	3		0.5	1
Ptilotus polystachyus																			
Ptilotus roei																			
Ptilotus rotundifolius																	0.1		
Ptilotus schwartzii var. *schwartzii*											0.1		0.1	0.1	0.1				
Ptilotus xerophilus																			
Ptilotus sp.																			
Rhagodia eremaea	0.1	0.1				0.1								0.1		0.1		0.1	0.1
Rhagodia sp. Hamersley (M. Trudgen 17794)											0.1		0.1	0.1					
Rhodanthe humboldtiana																			
Rhodanthe margarethae																			
Rhodanthe polakii																			
Rhynchosia minima			0.1	0.1	0.1	0.1													
Roepera eichleri																			
Rostellularia adscendens var. *latifolia*																			
Rumex vesicarius																			
Salsola australis						0.1										0.1		0.1	0.1
Santalum lanceolatum		0.1	0.1		0.1	0.1	0.1	1	0.1		2					0.1		0.1	
Santalum spicatum																			
Scaevola acacioides																			
Scaevola amblyanthera var. *centralis*			0.1																
Scaevola parvifolia subsp. *pilbarae*			0.1																
Scaevola spinescens																			
Scaevola spinescens (broad form)																			
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)									0.1										
Schizachyrium fragile																			
Sclerolaena convexula																			
Sclerolaena cornishiana						0.1								0.1	0.1				
Sclerolaena densiflora																			
Sclerolaena eriacantha																			
Senecio hamersleyensis																			
Senna artemisioides subsp. *filifolia*																0.1			
Senna artemisioides subsp. *helmsii*	0.1										0.1		0.1	0.5					
Senna artemisioides subsp. *oligophylla*	0.1		0.1					0.1											
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																			
Senna artemisioides subsp. *oligophylla x S. ferraria*																			
Senna artemisioides subsp. *oligophylla x S. stricta*																			
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*						0.1					0.1		0.1						
Senna artemisioides subsp. x *artemisioides*			0.1	0.1	0.1		0.1											0.1	
Senna artemisioides subsp. x *artemisioides x S. stricta*																			
Senna ferraria									0.1										
Senna ferraria x																			
Senna ferraria x S. artemisioides subsp. *oligophylla*																			
Senna ferraria x S. glutinosa subsp. *glutinosa*																			
Senna glaucifolia	0.1													0.1					
Senna glaucifolia x S. artemisioides subsp. *helmsii*											0.1								
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Senna glaucifolia x																			
Senna glutinosa subsp. *chatelainiana*																			
Senna glutinosa subsp. *glutinosa*								0.1	0.1								0.1		
Senna glutinosa subsp. *glutinosa x*																			
Senna glutinosa subsp. *x luerssenii*														0.1					
Senna glutinosa subsp. *x luerssenii x*																			
Senna glutinosa subsp. *glutinosa x S. stricta*																			
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa*																	0.1		
Senna glutinosa subsp. *pruinosa x*																			
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																			
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																			
Senna notabilis									0.1									0.1	
Senna pleurocarpa var. *angustifolia*			0.1		0.1														
Senna sp. Karijini (M.E. Trudgen 10392)																			
Senna sp. Meekatharra (E. Bailey 1-26)																			
Senna stricta											0.1								
Senna stricta x																			
Senna venusta																			
Seringia elliptica		0.1							0.1										
Seringia nephrosperma																			
Setaria dielsii																			0.1
Setaria surgens																			
Setaria verticillata																			0.1
Sida arenicola																	0.1		
Sida cardiophylla		0.1																	
Sida echinocarpa																			
Sida ectogama											3		0.1	1				0.1	
Sida fibulifera			0.1	0.1			0.1											0.1	
Sida platycalyx																			
Sida sp. Barlee Range (S. van Leeuwen 1642)																			
Sida sp. dark green fruits (S. van Leeuwen 2260)																			
Sida sp. Excedentifolia (J.L. Egan 1925)								0.1									0.1		
Sida sp. Golden calyces glabrous (H.N. Foote 32)										0.1									
Sida sp. L (A.M. Ashby 4202)	0.1					0.1					0.1			0.1	0.1				
Sida sp. Pilbara (A.A. Mitchell PRP 1543)																	0.1		
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)							0.1	0.1	0.1										
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1		0.1	0.1		0.1	0.1		0.1								0.1	0.1	
Sida sp. Supplejack Station (T.S. Henshall 2345)																			
Sida sp.																0.1			
Sigesbeckia orientalis																			
Solanum centrale																			
Solanum ferocissimum																			
Solanum horridum																			
Solanum kentrocaule																			
Solanum lasiophyllum	0.1					0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Solanum nigrum																			
Solanum phlomoides																			
Solanum piceum											0.1		0.1	0.1	0.1			0.1	0.1
Solanum sp.								0.1											
Sonchus oleraceus																			
Spermacoce brachystema							0.1						0.1						
Sporobolus australasicus																			
Stemodia grossa																			
Stenopetalum anfractum																			
Streptoglossa bubakii																			
Streptoglossa decurrens																			
Stylobasium spathulatum																			
Swainsona maccullochiana																			
Swainsona sp.																			
Templetonia egena																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WAREL-17	WAREL-18	WAREL-19	WAREL-20	WAREL-21	WAREL-22	WAREL-23	WAREL-24	WAREL-25	WNG01R	WNG02R	WNG03R	WNG04R	WNG05R	WNG06R	WNG07R	WNG08R	WNG09R	WNG10R
Tephrosia densa																			
Tephrosia oxalidea								0.1											
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)							0.1											0.1	4
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																	0.1		
Teucrium disjunctum																			
Teucrium teucriiflorum	0.1																		
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																			
Themeda triandra	0.1	6	20	12	35	12	50	25	20							2		0.5	5
Trachymene oleracea subsp. *oleracea*																			
Tribulus suberosus										0.1	0.1			0.5	0.1		0.1	0.1	
Trichodesma zeylanicum var. *zeylanicum*																		0.1	0.1
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																			
Triodia angusta																			
Triodia brizoides																			
Triodia longiceps			1.5	0.1	35											0.1		0.1	0.1
Triodia melvillei																			
Triodia pungens	7	8	1		0.1		0.1	5	5	50	4	40	1	0.5	0.1	9	4	12	1
Triodia vanleeuwenii		0.1															45		
Triodia wiseana					0.1	0.1	0.1	20	10					1					
Triodia sp. Mt Ella (M.E. Trudgen 12739)																			
Tripogonella loliiformis																			
Triraphis mollis																			
Triumfetta chaetocarpa																			0.1
Triumfetta leptacantha																			
Urochloa occidentalis var. *ciliata*																			
Urochloa piligera																			
Vachellia farnesiana																			
Ventilago viminalis					0.1		0.1												
Vigna lanceolata var. *lanceolata*																			
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																			
Vincetoxicum flexuosum																			
Vincetoxicum lineare															0.1				
Vittadinia dissecta var. *hirta*																			
Wahlenbergia gracilenta																			
Wahlenbergia tumidifructa																			
Waltheria indica																			0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Abutilon amplum																				
Abutilon cryptopetalum																				
Abutilon cunninghamii																				
Abutilon fraseri subsp. *fraseri*		0.1												0.1						
Abutilon lepidum												0.1		0.1	0.1	0.1				
Abutilon leucopetalum																				
Abutilon macrum																				
Abutilon otocarpum																		0.1	0.1	
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																				
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)				0.1						0.1		0.1								
Abutilon sp.																				
Acacia adoxa var. *adoxa*																				
Acacia adsurgens					0.1				0.1			0.1				0.1				0.1
Acacia ancistrocarpa																				0.5
Acacia aneura							8						0.1							0.1
Acacia 'aneura' sens. lat. (juvenile)						0.1						0.1		0.1			0.1		0.1	
Acacia aptaneura							12		0.1						0.1	0.1		0.1	0.1	1.5
Acacia atkinsiana						0.1											0.1			
Acacia ayersiana																				
Acacia ayersiana (narrow phyllode variant)																				
Acacia bivenosa		0.5	0.1	0.1	0.5	0.5		0.1	0.1	0.1	0.1	0.1	0.1	1.5	1	0.5	0.1			0.5
Acacia bivenosa (wispy/weeping form)																				
Acacia catenulata subsp. *occidentalis*																				
Acacia citrinoviridis																				
Acacia cowleana			0.1					0.1												
Acacia dictyophleba																				
Acacia eriopoda																				
Acacia hamersleyensis																				
Acacia hilliana																				
Acacia inaequilatera																				
Acacia incurvaneura																				
Acacia kempeana																				
Acacia macraneura																				
Acacia maitlandii									0.1		0.1		0.1				0.1			
Acacia marramamba		0.1							0.1	0.1	0.1				0.1	0.1	0.5			
Acacia monticola																				
Acacia mulganeura																				
Acacia pachyacra								1			0.5									
Acacia pruinocarpa			0.5	0.1	0.1			0.1	0.1		0.1		0.1	0.1	0.5	0.1	0.1		0.1	1
Acacia pteraneura																				
Acacia pyrifolia var. *pyrifolia*												0.1								
Acacia rhodophloia					0.1			0.1									0.1			0.1
Acacia sibirica										0.1	0.1									
Acacia sibirica (linear form)										0.1										0.1
Acacia steedmanii subsp. *borealis*																				
Acacia synchronicia	0.1																			
Acacia tenuissima			0.1		0.1			0.1					0.1							
Acacia tetragonophylla		0.1		0.1			0.1			0.1			0.1		0.1			0.1	0.1	0.1
Acacia trudgeniana																				
Acacia wanyu																0.1				
Acacia sp.																				
Achyranthes aspera																				
Acrachne racemosa																				
Alternanthera denticulata																				
Alternanthera nana																			0.1	
Amaranthus cuspidifolius																				
Amaranthus interruptus																				
Amaranthus undulatus																				
Ammannia baccifera																				
Ammannia multiflora																				
Amphipogon sericeus			1		3	0.1		0.1			0.1		0.1		0.1		0.1			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Amyema fitzgeraldii																				
Amyema miquelii																				
Amyema sanguinea var. *pulchra*																				
Androcalva luteiflora																				
Anthobolus leptomerioides								0.1				0.1		0.1						
Aristida burbidgeae																				
Aristida contorta	0.1	0.1	0.1	0.1					0.1	0.1	0.1	0.1				0.1		5	0.1	0.1
Aristida holathera var. *holathera*	0.1									0.1										0.1
Aristida inaequiglumis																			0.1	
Aristida ingrata								0.1			0.1									0.1
Aristida ? ingrata																				
Aristida jerichoensis var. *subspinulifera*							0.1													
Aristida latifolia		0.1																		
Aristida lazaridis																				
Aristida aff. *nitidula*																				
Aristida obscura																				
Aristida pruinosa																		0.1		
Aristida sp.																				
Astrotricha hamptonii																				
Atriplex codonocarpa	0.1																			
Bergia trimera																				
Bidens bipinnata																				
Boerhavia coccinea				0.1						0.1										
Boerhavia gardneri																				
Boerhavia repleta																		0.1		
Boerhavia sp.																		0.1	0.1	
Bothriochloa ewartiana																				
Bothriochloa sp.																				
Brachychiton acuminatus																				
Brachyscome iberidifolia																				
Brunonia sp. Long hairs (D.E. Symon 2440)																				
Bulbostylis barbata																				
Cajanus cinereus																				
Calandrinia ptychosperma																				
Callitris columellaris																				
Calocephalus beardii																				
Calytrix carinata																				
Capparis lasiantha				0.1		0.1						0.1			0.1	0.1	0.1			
Capparis mitchellii																				
Capparis spinosa subsp. *nummularia*																				
Cassytha capillaris																				
Cenchrus ciliaris																		0.1		
Centipeda minima subsp. *macrocephala*																				
Cheilanthes austrotenuifolia																				
Cheilanthes brownii							0.1													
Cheilanthes sieberi subsp. *sieberi*																				
Chrysocephalum apiculatum subsp. *pilbarense*																				
Chrysocephalum gilesii																				
Chrysocephalum pterochaetum																				
Chrysopogon fallax																		0.1	0.1	
Cleome viscosa				0.1						0.1		0.1						0.1	0.1	
Clerodendrum floribundum var. *angustifolium*											0.1									
Codonocarpus cotinifolius			0.1	0.1		0.1		0.1	0.1	0.5	0.1	0.1	0.1		0.1		0.1			0.1
Convolvulus clementii																			0.1	
Corchorus crozophorifolius				0.5						0.1		0.1								
Corchorus lasiocarpus (subsp. not determined)																				0.1
Corchorus lasiocarpus subsp. *lasiocarpus*																				
Corchorus lasiocarpus subsp. *parvus*					0.1				0.1	0.1	0.5		0.1				0.5			
Corchorus tridens																			0.1	
Corchorus sp.																				
Corymbia deserticola subsp. *deserticola*			1		0.5			1												

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Corymbia ferriticola																				
Corymbia hamersleyana																				
Crotalaria medicaginea var. *neglecta*										0.1										
Cryptandra monticola																				
Cucumis variabilis				0.1														0.1	0.1	
Cullen leucanthum																				
Cullen leucochaites												0.1								
Cullen pogonocarpum																				
Cymbopogon ambiguus				0.1	0.1					0.1			0.1		0.1					0.1
Cymbopogon obtectus								0.1						0.1				0.1	0.1	
Cymbopogon ? obtectus																				
Cymbopogon sp.																				
Cynanchum pedunculatum																				
Cynanchum viminale subsp. *australe*																				
Cynodon convergens																				
Cynodon prostratus	0.1																			
Cyperus cunninghamii subsp. *cunninghamii*																				
Cyperus vaginatus																				
Dactyloctenium radulans																				
Dampiera candicans													0.1							
Dichanthium fecundum																				
Dichanthium sericeum subsp. *humilius*																				
Dicladanthera forrestii																				
Digitaria ammophila																			0.1	
Digitaria brownii								0.1				0.1	0.1	0.1				0.5	2	
Digitaria ctenantha																				
Diplatia grandibractea																				
Dipteracanthus australasicus subsp. *australasicus*																				
Dodonaea coriacea									0.1				0.1							
Dodonaea lanceolata var. *lanceolata*																				
Dodonaea pachyneura																	0.1			
Dodonaea petiolaris							0.1													
Dodonaea viscosa subsp. *mucronata*													0.1							
Duperreya commixta		0.1		0.1				0.1	0.1	0.1	0.1	0.1		0.1			0.1	0.1	0.1	0.1
Dysphania melanocarpa forma *leucocarpa*																				
Dysphania rhadinostachya (subsp. not determined)																				
Dysphania rhadinostachya subsp. *inflata*																				
Dysphania rhadinostachya subsp. *rhadinostachya*																				
Dysphania saxatilis																				
Dysphania sp.																				
Ehretia saligna var. *saligna*																				
Enchylaena tomentosa var. *tomentosa*																				0.1
Enneapogon caerulescens				0.1						0.1		1						0.1		
Enneapogon lindleyanus				2			0.1			0.5		3						0.1		
Enneapogon polyphyllus	0.1	0.1								0.1		0.1						0.1	0.1	
Enneapogon robustissimus																		0.1		
Enneapogon sp.																				
Enteropogon ramosus																				
Eragrostis cumingii																				
Eragrostis desertorum																				
Eragrostis elongata																				
Eragrostis eriopoda																				
Eragrostis exigua																				
Eragrostis pergracilis																				
Eragrostis setifolia											0.1									0.5
Eragrostis tenellula																				
Eragrostis xerophila																		0.1		
Eragrostis sp.																				
Eremophila accrescens							0.1													
Eremophila caespitosa											0.1									0.1
Eremophila cuneifolia	0.1						2													

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Eremophila forrestii subsp. *forrestii*									0.1			0.1						0.1		0.1
Eremophila fraseri subsp. *fraseri*										2.5		1.5								
Eremophila galeata																				
Eremophila jucunda subsp. *pulcherrima*					0.1		11		0.1			0.1	0.1		0.1	0.1	0.1			
Eremophila latrobei (subsp. not determined)																	0.1			
Eremophila latrobei subsp. *filiformis*																				
Eremophila latrobei subsp. *latrobei*									0.1				0.1							
Eremophila longifolia					0.1													0.1		0.1
Eremophila oppositifolia subsp. *angustifolia*							1.5													
Eremophila petrophila subsp. *petrophila*																				
Eremophila phyllopoda subsp. *obliqua*		0.1					5					0.1		0.1	0.1					
Eremophila platycalyx subsp. *pardalota*		0.1												0.1						
Eremophila pusilliflora																		0.1		
Eremophila sp. Hamersley Range (K. Walker KW 136)																				
Eremophila sp.																				
Eriachne aristidea																				
Eriachne flaccida																			0.1	
Eriachne lanata																				
Eriachne mucronata	0.1		0.1						0.1					0.1						
Eriachne mucronata (arid form) (MET 12 736)																				
Eriachne mucronata (typical form)									0.1				0.1		0.1	0.1	0.1			
Eriachne aff. *mucronata*																				
Eriachne obtusa																				
Eriachne pulchella																				
Eriachne tenuiculmis																				
Eucalyptus camaldulensis subsp. *refulgens*																				
Eucalyptus gamophylla																				
Eucalyptus kingsmillii																				
Eucalyptus leucophloia subsp. *leucophloia*	0.5	2		2	1	2			8	0.5		0.1	2.5	4	2	1	1.5			
Eucalyptus pilbarensis																				
Eucalyptus repullulans																				
Eucalyptus socialis subsp. *eucentrica*																				
Eucalyptus trivalva																				
Eucalyptus victrix																				
Eucalyptus xerothermica																				
Eulalia aurea																			0.1	
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																				
Euphorbia australis var. *hispidula*																				
Euphorbia australis var. *subtomentosa*										0.1		0.1						0.1		
Euphorbia biconvexa																		0.1	0.1	
Euphorbia boophthona						0.1														
Euphorbia careyi																				
Euphorbia coghlanii										0.1		0.1								
Euphorbia drummondii																				
Euphorbia tannensis subsp. *eremophila*										0.1		0.1								
Euphorbia trigonosperma				0.1																
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																				
Euphorbia sp. (*boophthona/tannensis*)																				
Euphorbia sp.																				
Evolvulus alsinoides var. decumbens																				
Evolvulus alsinoides var. villosicalyx	0.1	0.1		0.1			0.1			0.1		0.1						0.1	0.1	0.1
Ficus brachypoda																				
Fimbristylis dichotoma								0.1			0.1									
Fimbristylis simulans																				
Fimbristylis sp.																				
Flaveria trinervia																				
Gastrolobium grandiflorum																				
Glycine canescens																		0.1		
Gnephosis arachnoidea																				
Gompholobium oreophilum																				
Gomphrena cunninghamii																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Gomphrena kanisii																		0.1		
Goodenia cusackiana																				
Goodenia microptera											0.1				0.1					
Goodenia muelleriana				0.1																
Goodenia prostrata																				
Goodenia stellata																				
Goodenia stobbsiana					0.1			0.1	0.1		0.1			0.1	0.1	0.1	0.1			
Goodenia tenuiloba																				
Goodenia triodiophila								0.1									0.1			
Gossypium australe																				
Gossypium robinsonii																	0.1			0.1
Gossypium sturtianum var. *sturtianum*																				
Grevillea berryana												0.1								
Grevillea saxicola																				
Grevillea wickhamii																				
Grevillea wickhamii subsp. *hispidula*																				
Hakea chordophylla					0.1						0.1		0.1				0.1			
Hakea lorea subsp. *lorea*											0.1									
Halgania gustafsenii var. Mid West (G. Perry 370)																				
Harnieria kempeana subsp. *muelleri*																				0.1
Heliotropium chrysocarpum				0.1								0.1					0.1			
Heliotropium cunninghamii																		0.1		
Heliotropium heteranthum																				
Heliotropium inexplicitum											0.1						0.1			
Heliotropium sp.																				
Heliotropium tenuifolium								0.1												
Hibiscus brachychlaenus																				
Hibiscus burtonii							0.1											0.1		
Hibiscus coatesii				0.1						0.1		0.1	0.1							0.1
Hibiscus sturtii var. *campylochlamys*					0.1			0.1	0.1				0.1			0.1	0.1			
Hibiscus sturtii var. *grandiflorus*				0.1										0.1						
Hibiscus sturtii var. *platychlamys*																				0.1
Hibiscus sturtii var. *truncatus*							0.1													
Hibiscus sturtii var. aff. *truncatus*																				
Hibiscus sturtii var. not determined															0.1					
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)												0.1								
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																				
Hibiscus sp. Mt Robinson (G. Byrne 3537)																				
Hybanthus aurantiacus																				
Indigofera colutea																		0.1		
Indigofera fractiflexa subsp. *fractiflexa*																				
Indigofera georgei																			1	
Indigofera gilesii																				
Indigofera linnaei																		0.1		
Indigofera monophylla				1	0.1			0.1	0.1	0.1	1	2		0.1	0.1	0.1	0.1			0.1
Indigofera rugosa																				
Ipomoea muelleri																			0.1	
Ipomoea plebeia																				
Iseilema dolichotrichum																				
Iseilema membranaceum																				
Iseilema vaginiflorum																				
Isotropis parviflora								0.1												
Isotropis sp. Arid zone (G. Byrne 2775)																			0.1	
Jasminum didymum subsp. *lineare*				0.1								0.1								
Leiocarpa semicalva subsp. *semicalva*																				
Lepidium echinatum																				
Lepidium oxytrichum																				
Lepidium pedicellosum		0.1					1.5							0.1		0.1				
Lepidium phlebopetalum																				
Lobelia heterophylla subsp. *pilbarensis*																				
Maireana georgei	0.1	0.1				0.1	1									0.1				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Maireana melanocoma																				
Maireana planifolia		0.1					0.1											0.1		
Maireana planifolia x *villosa*																				
Maireana tomentosa subsp. *tomentosa*																				
Maireana triptera																				
Maireana villosa							0.1													
Malvastrum americanum																				
Marsdenia australis																			0.1	
Marsilea hirsuta																				
Maytenus sp. Mt Windell (S. van Leeuwen 846)																				
Melaleuca bracteata																				
Melaleuca eleuterostachya																				
Melaleuca glomerata																				
Melhania oblongifolia				0.1						0.1		0.1								
Mirbelia viminalis																				
Monachather paradoxus																				
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																				
Nicotiana benthamiana																				
Nicotiana occidentalis subsp. *obliqua*																				
Nicotiana occidentalis subsp. *occidentalis*																				
Nicotiana simulans																				
Nicotiana sp.																				
Notoleptopus decaisnei				0.1																
Oldenlandia crouchiana										0.1										
Olearia fluvialis																				
Olearia stuartii																				
Olearia xerophila																				
Oxalis sp. Pilbara (M.E. Trudgen 12725)																				
Pandorea pandorana																				
Panicum decompositum																				
Panicum effusum								0.1												
Paraceterach reynoldsii																				
Paraneurachne muelleri		0.1				0.1	0.1		0.5	0.1		0.1	0.1		0.1	0.1		0.1		0.1
Parietaria cardiostegia																				
Paspalidium clementii		0.1		0.1						0.1		0.1								
Paspalidium constrictum																		0.1		
Paspalidium rarum																				
Peplidium muelleri																			0.1	
Peripleura hispidula var. *hispidula*																				
Peripleura obovata																				
Peripleura virgata																				
Peripleura sp.																				
Perotis rara																		0.1	0.1	
Petalostylis labicheoides																				
Phyllanthus maderaspatensis																				
Pilbara trudgenii																				
Pimelea microcephala subsp. *microcephala*																				
Pittosporum angustifolium																				
Pluchea dentex																				
Pluchea dunlopii																			0.1	
Polycarpaea corymbosa var. *corymbosa*																				
Polycarpaea holtzei																				
Polycarpaea longiflora	0.1																			
Polygala glaucifolia																				
Polymeria ambigua																				
Portulaca filifolia																		0.1		
Portulaca oleracea/intraterranea																				
Prostanthera albiflora																				
Psydrax latifolia		0.1																		
Psydrax rigidula																				
Psydrax suaveolens							0.1													0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Pterocaulon serrulatum var. *velutinum*																				
Pterocaulon sphacelatum				0.1										0.1				0.1	0.1	
Pterocaulon sphaeranthoides																		0.1		
Pterocaulon sp.																				
Ptilotus aervoides																				
Ptilotus astrolasius						0.1														0.1
Ptilotus auriculifolius																				
Ptilotus calostachyus		0.1	0.1		0.1	0.1		0.1	0.1		0.1		0.1			0.1	0.1			0.1
Ptilotus clementii				0.1						0.1		0.1								
Ptilotus exaltatus	0.1	0.1		0.1		0.1	0.1			0.1	0.1	0.1					0.1	0.1	0.1	0.1
Ptilotus fusiformis																				
Ptilotus gomphrenoides																				
Ptilotus helipteroides																				
Ptilotus obovatus var. obovatus				0.1	0.1		1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.5		0.1
Ptilotus polystachyus																				
Ptilotus roei																				0.1
Ptilotus rotundifolius								0.1	0.5		0.1		0.1	0.1			0.1			0.1
Ptilotus schwartzii var. *schwartzii*																				
Ptilotus xerophilus																				
Ptilotus sp.																				
Rhagodia eremaea							0.1					0.1		0.1						
Rhagodia sp. Hamersley (M. Trudgen 17794)					0.1		0.1													
Rhodanthe humboldtiana																				
Rhodanthe margarethae																				
Rhodanthe polakii																				
Rhynchosia minima				0.1						0.1										0.1
Roepera eichleri																		0.1		
Rostellularia adscendens var. *latifolia*																				
Rumex vesicarius																				
Salsola australis		0.1		0.1		0.1	0.1			0.1		0.1						0.1	0.1	
Santalum lanceolatum					0.1					0.1		0.1		0.1						
Santalum spicatum																				
Scaevola acacioides							1					0.1	0.1	0.1	0.1	0.1				
Scaevola amblyanthera var. *centralis*																				
Scaevola parvifolia subsp. *pilbarae*																				
Scaevola spinescens																				
Scaevola spinescens (broad form)																				
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)																				
Schizachyrium fragile																				
Sclerolaena convexula																				
Sclerolaena cornishiana																		0.1		
Sclerolaena densiflora	2																			
Sclerolaena eriacantha	1	0.1				0.1	0.1													
Senecio hamersleyensis																				
Senna artemisioides subsp. *filifolia*																				
Senna artemisioides subsp. *helmsii*						0.1	0.1			0.1	0.1	0.1	0.1				0.1			0.1
Senna artemisioides subsp. *oligophylla*				0.1	0.1					0.1		0.1		0.1	0.1	0.1			0.1	
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																				
Senna artemisioides subsp. *oligophylla x S. ferraria*																				
Senna artemisioides subsp. *oligophylla x S. stricta*																				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1		0.1	0.1					0.1									0.1		
Senna artemisioides subsp. x *artemisioides*																				
Senna artemisioides subsp. x *artemisioides x S. stricta*																				
Senna ferraria													0.1				0.1			
Senna ferraria x																				
Senna ferraria x S. artemisioides subsp. *oligophylla*																				
Senna ferraria x S. glutinosa subsp. *glutinosa*																				
Senna glaucifolia	0.1		0.1	0.1			0.1					0.1								
Senna glaucifolia x S. artemisioides subsp. *helmsii*																				
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Senna glaucifolia x																				
Senna glutinosa subsp. *chatelainiana*																		0.1		
Senna glutinosa subsp. *glutinosa*	0.1		0.1	0.1	0.1	0.1		0.1	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.1			0.1
Senna glutinosa subsp. *glutinosa x*																				
Senna glutinosa subsp. *x luerssenii*	0.1	0.1			0.1	0.1	4	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1
Senna glutinosa subsp. *x luerssenii x*																				
Senna glutinosa subsp. *glutinosa x S. stricta*																				
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*								0.1												
Senna glutinosa subsp. *pruinosa*								0.1	0.5		0.1			0.1	0.1	1	0.1			
Senna glutinosa subsp. *pruinosa x*																				
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*		0.1																		
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																				
Senna notabilis																		0.1		
Senna pleurocarpa var. *angustifolia*																				
Senna sp. Karijini (M.E. Trudgen 10392)																				
Senna sp. Meekatharra (E. Bailey 1-26)																				
Senna stricta	0.1	0.1		0.1			4		0.1					0.1		0.1				0.1
Senna stricta x					0.1							0.1								
Senna venusta																				
Seringia elliptica									0.1								0.1			
Seringia nephrosperma																				
Setaria dielsii																				
Setaria surgens																				
Setaria verticillata																				
Sida arenicola			0.1		0.1				0.1		0.1						0.1			
Sida cardiophylla					0.1						0.1									
Sida echinocarpa	0.5	0.1			0.1				0.1	0.1			0.1	0.1		0.1				0.1
Sida ectogama																				
Sida fibulifera																		0.1		
Sida platycalyx																				
Sida sp. Barlee Range (S. van Leeuwen 1642)																				
Sida sp. dark green fruits (S. van Leeuwen 2260)		0.1					0.1													
Sida sp. Excedentifolia (J.L. Egan 1925)								0.1	0.1					0.1	0.1		0.1			
Sida sp. Golden calyces glabrous (H.N. Foote 32)																				
Sida sp. L (A.M. Ashby 4202)																		0.1	0.1	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)			0.1					0.1	0.1		0.1			0.1	0.1	0.1	0.5			
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	0.5		0.1		0.1				0.1		0.1						0.1		
Sida sp. Supplejack Station (T.S. Henshall 2345)																				
Sida sp.																				
Sigesbeckia orientalis																				
Solanum centrale																				
Solanum ferocissimum																				
Solanum horridum	0.1	0.1		0.1			0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.1
Solanum kentrocaule													0.1							
Solanum lasiophyllum	0.1	0.1	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1
Solanum nigrum																				
Solanum phlomoides																				
Solanum piceum																		0.1	0.1	
Solanum sp.																				
Sonchus oleraceus																				
Spermacoce brachystema																				
Sporobolus australasicus																				
Stemodia grossa																			0.1	
Stenopetalum anfractum																		0.1		
Streptoglossa bubakii																				
Streptoglossa decurrens																				
Stylobasium spathulatum																				
Swainsona maccullochiana																		0.1		
Swainsona sp.																		0.1		
Templetonia egena	0.25																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG11R	WNG12R	WNG13R	WNG14R	WNG15R	WNG16R	WNG17R	WNG18R	WNG19R	WNG20R	WNG21R	WNG22R	WNG23R	WNG24R	WNG26R	WNG27R	WNG28R	WNG29R	WNG31R	WNG32R
Tephrosia densa										0.1										
Tephrosia oxalidea															0.1					
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)																				
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																				
Teucrium disjunctum																				
Teucrium teucriiflorum																				
Themeda sp. Mt Barricade (M.E. Trudgen 2471)													3				0.1			
Themeda triandra															0.1			0.5	25	
Trachymene oleracea subsp. *oleracea*																				
Tribulus suberosus				0.1			0.1		0.1		0.1	0.1	0.1	0.1				0.1		0.1
Trichodesma zeylanicum var. *zeylanicum*															0.1		0.1			
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																				
Triodia angusta																				
Triodia brizoides																				
Triodia longiceps	35			0.1		35														
Triodia melvillei																				
Triodia pungens		50	0.5	15	0.5	0.1	7	0.5	5	15	0.1	15	18	45	50	40	25	0.1	20	3
Triodia vanleeuwenii			35		33		0.1	11	30		35					2	3			6
Triodia wiseana	5		0.1	1		0.1				10		0.1								
Triodia sp. Mt Ella (M.E. Trudgen 12739)													1.5							
Tripogonella loliiformis																		0.1		
Triraphis mollis																				
Triumfetta chaetocarpa																				
Triumfetta leptacantha																				
Urochloa occidentalis var. *ciliata*																				
Urochloa piligera																				
Vachellia farnesiana																				
Ventilago viminalis																				
Vigna lanceolata var. *lanceolata*																				
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																				
Vincetoxicum flexuosum																				
Vincetoxicum lineare				0.1													0.1			0.1
Vittadinia dissecta var. *hirta*																				
Wahlenbergia gracilenta																				
Wahlenbergia tumidifructa																				
Waltheria indica																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Abutilon amplum																				
Abutilon cryptopetalum																				
Abutilon cunninghamii															0.1					
Abutilon fraseri subsp. *fraseri*																				
Abutilon lepidum																				
Abutilon leucopetalum																				
Abutilon macrum																				
Abutilon otocarpum					0.1								0.1							
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																				
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																				
Abutilon sp.																				
Acacia adoxa var. *adoxa*																		0.1	0.1	
Acacia adsurgens		0.1					0.1					0.1			0.1				0.1	
Acacia ancistrocarpa																				
Acacia aneura				0.1										10			3			7
Acacia 'aneura' sens. lat. (juvenile)						0.1														
Acacia aptaneura	12				0.1		0.1			0.1	5	12	2	3		0.1	1			2
Acacia atkinsiana																				
Acacia ayersiana	3											4		0.1			0.1			
Acacia ayersiana (narrow phyllode variant)										0.1	1	5	5	8			0.1			
Acacia bivenosa		0.1	0.1	0.1		3	0.1	0.1	0.5	0.1		0.1							0.1	0.1
Acacia bivenosa (wispy/weeping form)															1	0.1				
Acacia catenulata subsp. *occidentalis*	0.5										15	18	5	2			2.5			0.1
Acacia citrinoviridis																				
Acacia cowleana								0.1	0.1											
Acacia dictyophleba		0.1		0.1												0.1				
Acacia eriopoda																				
Acacia hamersleyensis																		0.1	0.1	
Acacia hilliana																				
Acacia inaequilatera															0.1			0.1		
Acacia incurvaneura											5									
Acacia kempeana																			0.1	
Acacia macraneura													10							
Acacia maitlandii																0.1		0.5	1	1
Acacia marramamba				0.1																
Acacia monticola			1															0.1		
Acacia mulganeura																				
Acacia pachyacra								0.1	0.1											
Acacia pruinocarpa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5		1	1	2	0.1	1		0.1	2.5			2
Acacia pteraneura																				
Acacia pyrifolia var. *pyrifolia*																		0.1		
Acacia rhodophloia	0.1	0.1																		
Acacia sibirica															0.1	0.1				
Acacia sibirica (linear form)																				
Acacia steedmanii subsp. *borealis*																				
Acacia synchronicia															0.1					
Acacia tenuissima		0.1													0.1	0.1		0.1	0.1	
Acacia tetragonophylla	0.1						0.1		0.1		0.1					0.1	0.1		0.1	
Acacia trudgeniana																				
Acacia wanyu							4	1		3										
Acacia sp.																				
Achyranthes aspera																				
Acrachne racemosa																				
Alternanthera denticulata																				
Alternanthera nana					0.1															
Amaranthus cuspidifolius																				
Amaranthus interruptus																				
Amaranthus undulatus																				
Ammannia baccifera																				
Ammannia multiflora																				
Amphipogon sericeus		0.1		0.1						0.1								0.1	0.1	

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Amyema fitzgeraldii																				
Amyema miquelii																				
Amyema sanguinea var. *pulchra*																				
Androcalva luteiflora			2																	
Anthobolus leptomerioides			0.1									0.1		1						0.1
Aristida burbidgeae																				
Aristida contorta	0.1		0.1		0.1			0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1		0.1
Aristida holathera var. *holathera*		0.1						0.1				0.1								
Aristida inaequiglumis																				
Aristida ingrata									0.1		0.1	0.1	0.1				0.1			
Aristida ? ingrata																				
Aristida jerichoensis var. *subspinulifera*																				
Aristida latifolia																				
Aristida lazaridis																				
Aristida aff. *nitidula*																0.1				
Aristida obscura												0.1					0.1			0.1
Aristida pruinosa			0.1																	
Aristida sp.																				
Astrotricha hamptonii																				
Atriplex codonocarpa																				
Bergia trimera																				
Bidens bipinnata					0.1						0.1	1								
Boerhavia coccinea											0.1									
Boerhavia gardneri																				
Boerhavia repleta																				
Boerhavia sp.					0.1															
Bothriochloa ewartiana																				
Bothriochloa sp.																				
Brachychiton acuminatus																				
Brachyscome iberidifolia																				
Brunonia sp. Long hairs (D.E. Symon 2440)																				
Bulbostylis barbata																				
Cajanus cinereus																				
Calandrinia ptychosperma																				
Callitris columellaris																				
Calocephalus beardii																				
Calytrix carinata																				
Capparis lasiantha			0.1													0.1				
Capparis mitchellii																				
Capparis spinosa subsp. *nummularia*																				
Cassytha capillaris																				
Cenchrus ciliaris																				
Centipeda minima subsp. *macrocephala*																				
Cheilanthes austrotenuifolia																				
Cheilanthes brownii				0.1																
Cheilanthes sieberi subsp. *sieberi*	0.1				0.1						0.1	3	0.1	0.1			0.1			0.1
Chrysocephalum apiculatum subsp. *pilbarense*																				
Chrysocephalum gilesii					0.1															
Chrysocephalum pterochaetum				0.1																
Chrysopogon fallax					1												0.1			
Cleome viscosa					1															
Clerodendrum floribundum var. *angustifolium*																				
Codonocarpus cotinifolius		0.1		0.1		0.1	0.1	0.1	0.1										0.1	0.1
Convolvulus clementii					0.1															
Corchorus crozophorifolius																				
Corchorus lasiocarpus (subsp. not determined)																			0.1	
Corchorus lasiocarpus subsp. *lasiocarpus*																				
Corchorus lasiocarpus subsp. *parvus*		0.1	1					1	0.1	0.5		0.1						0.1		
Corchorus tridens																				
Corchorus sp.																				
Corymbia deserticola subsp. *deserticola*																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Corymbia ferriticola																				
Corymbia hamersleyana			0.5															1		
Crotalaria medicaginea var. *neglecta*																				
Cryptandra monticola																				
Cucumis variabilis					0.1							0.1								
Cullen leucanthum																				
Cullen leucochaites																				
Cullen pogonocarpum																				
Cymbopogon ambiguus		0.1		0.1						0.1								0.1	0.1	
Cymbopogon obtectus		0.1						0.1	0.1			0.1				0.1				0.1
Cymbopogon ? obtectus																				
Cymbopogon sp.																				
Cynanchum pedunculatum																				
Cynanchum viminale subsp. *australe*																				
Cynodon convergens																				
Cynodon prostratus																				
Cyperus cunninghamii subsp. *cunninghamii*																				
Cyperus vaginatus																				
Dactyloctenium radulans																				
Dampiera candicans		0.1																		
Dichanthium fecundum																				
Dichanthium sericeum subsp. *humilius*																				
Dicladanthera forrestii																				
Digitaria ammophila					0.1						0.1	0.1	0.1	0.1			0.1			0.1
Digitaria brownii			0.1		0.1					0.1	0.1	0.1	0.1							
Digitaria ctenantha																				
Diplatia grandibractea																				
Dipteracanthus australasicus subsp. *australasicus*					0.5															
Dodonaea coriacea																		0.1		
Dodonaea lanceolata var. *lanceolata*																				
Dodonaea pachyneura				0.1																
Dodonaea petiolaris																				
Dodonaea viscosa subsp. *mucronata*																				
Duperreya commixta			0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1		0.1
Dysphania melanocarpa forma *leucocarpa*																				
Dysphania rhadinostachya (subsp. not determined)																				
Dysphania rhadinostachya subsp. *inflata*																				
Dysphania rhadinostachya subsp. *rhadinostachya*																				
Dysphania saxatilis																				
Dysphania sp.																				
Ehretia saligna var. *saligna*																				
Enchylaena tomentosa var. *tomentosa*												0.1								
Enneapogon caerulescens																0.1				
Enneapogon lindleyanus							0.1					0.1								
Enneapogon polyphyllus					0.1				0.1			0.1	0.1							
Enneapogon robustissimus					0.1								3							
Enneapogon sp.																				
Enteropogon ramosus																				
Eragrostis cumingii	0.1																			
Eragrostis desertorum																				
Eragrostis elongata																				
Eragrostis eriopoda																				
Eragrostis exigua																				
Eragrostis pergracilis																				
Eragrostis setifolia	0.1							0.1						0.1			0.1			0.1
Eragrostis tenellula																				
Eragrostis xerophila											0.1									
Eragrostis sp.																				
Eremophila accrescens																				
Eremophila caespitosa	5																			
Eremophila cuneifolia																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Eremophila forrestii subsp. *forrestii*	0.1		0.1								3	4		6			5			5
Eremophila fraseri subsp. *fraseri*								0.1			0.1									
Eremophila galeata														3		0.1	0.5			0.1
Eremophila jucunda subsp. *pulcherrima*				0.1		0.1														
Eremophila latrobei (subsp. not determined)																	0.1			
Eremophila latrobei subsp. *filiformis*													0.1							
Eremophila latrobei subsp. *latrobei*																		0.1		
Eremophila longifolia		0.1	0.1																	0.1
Eremophila oppositifolia subsp. *angustifolia*																				
Eremophila petrophila subsp. *petrophila*																				
Eremophila phyllopoda subsp. *obliqua*							0.1			0.1		0.1				0.1				0.1
Eremophila platycalyx subsp. *pardalota*																0.1				
Eremophila pusilliflora																				
Eremophila sp. Hamersley Range (K. Walker KW 136)																				
Eremophila sp.																				
Eriachne aristidea																				
Eriachne flaccida																				
Eriachne lanata																		0.1		
Eriachne mucronata			0.5	4						0.1	0.1									
Eriachne mucronata (arid form) (MET 12 736)		0.5																		
Eriachne mucronata (typical form)						0.1										0.1		0.1		
Eriachne aff. *mucronata*																				
Eriachne obtusa																	0.1			
Eriachne pulchella																				
Eriachne tenuiculmis																				
Eucalyptus camaldulensis subsp. *refulgens*																				
Eucalyptus gamophylla																				
Eucalyptus kingsmillii																				
Eucalyptus leucophloia subsp. *leucophloia*		5	0.1	3		0.5	0.1		3		0.1				0.1		0.1	2.5	15	
Eucalyptus pilbarensis																				
Eucalyptus repullulans															4	1				
Eucalyptus socialis subsp. *eucentrica*																				
Eucalyptus trivalva															1	2	0.5			
Eucalyptus victrix																				
Eucalyptus xerothermica			1																	
Eulalia aurea				0.1																
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																				
Euphorbia australis var. *hispidula*																				
Euphorbia australis var. *subtomentosa*																				
Euphorbia biconvexa					0.1															
Euphorbia boophthona																				
Euphorbia careyi																				
Euphorbia coghlanii																				
Euphorbia drummondii																				
Euphorbia tannensis subsp. *eremophila*																				
Euphorbia trigonosperma																				
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																				
Euphorbia sp. (*boophthona/tannensis*)																				
Euphorbia sp.																				
Evolvulus alsinoides var. decumbens																				
Evolvulus alsinoides var. villosicalyx					0.1			0.1				0.1						0.1		
Ficus brachypoda																				
Fimbristylis dichotoma					0.1															
Fimbristylis simulans																				
Fimbristylis sp.																				
Flaveria trinervia					0.1															
Gastrolobium grandiflorum																				
Glycine canescens																				
Gnephosis arachnoidea																				
Gompholobium oreophilum																		1	0.5	
Gomphrena cunninghamii																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Gomphrena kanisii																				
Goodenia cusackiana																				
Goodenia microptera																				
Goodenia muelleriana																				
Goodenia prostrata																				
Goodenia stellata					0.1															
Goodenia stobbsiana		0.1		0.1		0.1						0.1						0.1	0.1	
Goodenia tenuiloba																				
Goodenia triodiophila		0.1		0.1														0.1	0.1	
Gossypium australe					0.1															
Gossypium robinsonii			0.1			0.1		0.1												
Gossypium sturtianum var. *sturtianum*																				
Grevillea berryana											0.1			0.1			0.1			
Grevillea saxicola																				
Grevillea wickhamii																				
Grevillea wickhamii subsp. *hispidula*																				
Hakea chordophylla		1		0.1														0.1	0.1	
Hakea lorea subsp. *lorea*					0.1			0.1												
Halgania gustafsenii var. Mid West (G. Perry 370)																		3	2	
Harnieria kempeana subsp. *muelleri*																				
Heliotropium chrysocarpum																				
Heliotropium cunninghamii																				
Heliotropium heteranthum																				
Heliotropium inexplicitum							0.1	0.1												
Heliotropium sp.																				
Heliotropium tenuifolium																				
Hibiscus brachychlaenus																				
Hibiscus burtonii	0.1											0.1	0.1			0.1	0.1			
Hibiscus coatesii		0.1		0.1				0.1		0.1		0.1						0.1		
Hibiscus sturtii var. *campylochlamys*							0.1		0.1									0.1	0.1	
Hibiscus sturtii var. *grandiflorus*			0.1									0.1								
Hibiscus sturtii var. *platychlamys*												0.1								
Hibiscus sturtii var. *truncatus*																				
Hibiscus sturtii var. aff. *truncatus*							0.1				0.1									
Hibiscus sturtii var. not determined																				
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)												0.1								
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																				
Hibiscus sp. Mt Robinson (G. Byrne 3537)																				
Hybanthus aurantiacus																				
Indigofera colutea																				
Indigofera fractiflexa subsp. *fractiflexa*																				
Indigofera georgei			0.1		0.1															
Indigofera gilesii																				
Indigofera linnaei																				
Indigofera monophylla			0.1				0.1	0.1		3								0.1	0.1	
Indigofera rugosa																				
Ipomoea muelleri					0.1															
Ipomoea plebeia					0.1															
Iseilema dolichotrichum																				
Iseilema membranaceum																				
Iseilema vaginiflorum																				
Isotropis parviflora																				
Isotropis sp. Arid zone (G. Byrne 2775)			0.1		1															
Jasminum didymum subsp. *lineare*			0.1																0.1	
Leiocarpa semicalva subsp. *semicalva*																				
Lepidium echinatum																				
Lepidium oxytrichum																				
Lepidium pedicellosum																				
Lepidium phlebopetalum																				
Lobelia heterophylla subsp. *pilbarensis*																				
Maireana georgei									0.1						0.1	4				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Maireana melanocoma																				
Maireana planifolia																				
Maireana planifolia x *villosa*	0.1											0.1								
Maireana tomentosa subsp. *tomentosa*																				
Maireana triptera									0.1											
Maireana villosa	0.1										0.1	0.5	3	0.1			0.1			
Malvastrum americanum																				
Marsdenia australis																				
Marsilea hirsuta																				
Maytenus sp. Mt Windell (S. van Leeuwen 846)																				
Melaleuca bracteata																				
Melaleuca eleuterostachya																				
Melaleuca glomerata																				
Melhania oblongifolia																				
Mirbelia viminalis																			0.1	
Monachather paradoxus																				
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																				
Nicotiana benthamiana																				
Nicotiana occidentalis subsp. *obliqua*																				
Nicotiana occidentalis subsp. *occidentalis*																				
Nicotiana simulans																				
Nicotiana sp.																				
Notoleptopus decaisnei																				
Oldenlandia crouchiana						0.1														
Olearia fluvialis																				
Olearia stuartii																				
Olearia xerophila																				
Oxalis sp. Pilbara (M.E. Trudgen 12725)																				
Pandorea pandorana																				
Panicum decompositum																				
Panicum effusum												0.1								
Paraceterach reynoldsii																				
Paraneurachne muelleri		0.1	3	0.1			0.1	0.1		0.1								0.1	0.1	0.1
Parietaria cardiostegia																				
Paspalidium clementii																				
Paspalidium constrictum																				
Paspalidium rarum																				
Peplidium muelleri																				
Peripleura hispidula var. *hispidula*																				
Peripleura obovata																				
Peripleura virgata				0.1																
Peripleura sp.																				
Perotis rara											0.1									
Petalostylis labicheoides			70															0.1		
Phyllanthus maderaspatensis																				
Pilbara trudgenii																				
Pimelea microcephala subsp. *microcephala*																				
Pittosporum angustifolium																				
Pluchea dentex																				
Pluchea dunlopii																				
Polycarpaea corymbosa var. *corymbosa*												0.1								
Polycarpaea holtzei																				
Polycarpaea longiflora																				
Polygala glaucifolia																				
Polymeria ambigua																				
Portulaca filifolia																				
Portulaca oleracea/intraterranea																				
Prostanthera albiflora																				
Psydrax latifolia																				
Psydrax rigidula																				
Psydrax suaveolens	0.1									0.1	0.1	0.1	0.1	0.1			0.1			0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Pterocaulon serrulatum var. *velutinum*																				
Pterocaulon sphacelatum					0.1							0.1	0.1							
Pterocaulon sphaeranthoides																				
Pterocaulon sp.																				
Ptilotus aervoides																				
Ptilotus astrolasius																				
Ptilotus auriculifolius																				
Ptilotus calostachyus		0.1	0.1	0.1		0.1	0.1	0.1		0.1									0.1	
Ptilotus clementii																				
Ptilotus exaltatus			0.1					0.1	0.1	0.1		0.1	0.1		0.1	0.1				
Ptilotus fusiformis																				
Ptilotus gomphrenoides																				
Ptilotus helipteroides												0.1								
Ptilotus obovatus var. obovatus	0.1		0.5		0.1			0.1	0.1	0.1		0.1	0.5		0.1	0.1	0.1			
Ptilotus polystachyus																				
Ptilotus roei																				
Ptilotus rotundifolius				0.1			0.5	1		0.1								0.1	0.1	
Ptilotus schwartzii var. *schwartzii*	0.1																			
Ptilotus xerophilus																				
Ptilotus sp.																				
Rhagodia eremaea																				
Rhagodia sp. Hamersley (M. Trudgen 17794)			0.1								0.1	0.5	0.1							
Rhodanthe humboldtiana																				
Rhodanthe margarethae																				
Rhodanthe polakii																				
Rhynchosia minima					0.1															
Roepera eichleri																				
Rostellularia adscendens var. *latifolia*																				
Rumex vesicarius																				
Salsola australis			0.1		0.1	0.1	0.1	0.1	0.1			0.1	0.1		0.1	0.1				
Santalum lanceolatum														0.1		0.1	0.1			0.1
Santalum spicatum																				
Scaevola acacioides							0.1		0.1	0.1										
Scaevola amblyanthera var. *centralis*																				
Scaevola parvifolia subsp. *pilbarae*																				
Scaevola spinescens																				
Scaevola spinescens (broad form)																				
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)																		0.1		
Schizachyrium fragile																				
Sclerolaena convexula																				
Sclerolaena cornishiana																				
Sclerolaena densiflora									0.1											
Sclerolaena eriacantha									0.1											
Senecio hamersleyensis																				
Senna artemisioides subsp. *filifolia*																				
Senna artemisioides subsp. *helmsii*			0.1		0.1		0.1	0.1	0.1	0.1		0.5								
Senna artemisioides subsp. *oligophylla*				0.1											0.1			0.1		
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																				
Senna artemisioides subsp. *oligophylla x S. ferraria*																				
Senna artemisioides subsp. *oligophylla x S. stricta*																				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*					0.1			0.1					0.1		0.1	0.1				
Senna artemisioides subsp. x *artemisioides*																				
Senna artemisioides subsp. x *artemisioides x S. stricta*																				
Senna ferraria		0.1		0.1		0.1												0.1		
Senna ferraria x																				
Senna ferraria x S. artemisioides subsp. *oligophylla*																				
Senna ferraria x S. glutinosa subsp. *glutinosa*																				
Senna glaucifolia											0.1		0.1				0.1		0.1	0.1
Senna glaucifolia x S. artemisioides subsp. *helmsii*																				
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Senna glaucifolia x																				
Senna glutinosa subsp. *chatelainiana*																				
Senna glutinosa subsp. *glutinosa*		0.1		0.1		0.1		0.1	0.1						0.1			0.1	0.1	
Senna glutinosa subsp. *glutinosa x*																				
Senna glutinosa subsp. *x luerssenii*			0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	0.1			0.1	0.1			0.1	
Senna glutinosa subsp. *x luerssenii x*																				
Senna glutinosa subsp. *glutinosa x S. stricta*																				
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*								0.1												
Senna glutinosa subsp. *pruinosa*							0.1	0.1		0.5								0.1	0.1	
Senna glutinosa subsp. *pruinosa x*																				
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																				
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																				
Senna notabilis		0.1			0.1	0.1														
Senna pleurocarpa var. *angustifolia*																				
Senna sp. Karijini (M.E. Trudgen 10392)																				0.1
Senna sp. Meekatharra (E. Bailey 1-26)																				
Senna stricta			0.1				0.1	0.1	0.1			1			0.1					0.1
Senna stricta x																				
Senna venusta																				
Seringia elliptica			0.1														0.1	1	0.1	0.1
Seringia nephrosperma																				
Setaria dielsii																				
Setaria surgens																				
Setaria verticillata																				
Sida arenicola																			0.1	
Sida cardiophylla								0.1												
Sida echinocarpa						0.1		0.1	0.1	0.1		0.1				0.1				
Sida ectogama											0.1	0.1	1	0.1						
Sida fibulifera			0.1		0.1															
Sida platycalyx																				
Sida sp. Barlee Range (S. van Leeuwen 1642)																				
Sida sp. dark green fruits (S. van Leeuwen 2260)										0.1		0.1					0.1			
Sida sp. Excedentifolia (J.L. Egan 1925)		0.1		0.1		0.1	0.1											0.1	0.1	
Sida sp. Golden calyces glabrous (H.N. Foote 32)											0.1									
Sida sp. L (A.M. Ashby 4202)					0.1							0.1	0.1				0.1			
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				0.1		0.1	0.1		0.1	0.1										
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)		0.1		0.1														0.1		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)			1	0.1				0.1	0.1							0.1				
Sida sp. Supplejack Station (T.S. Henshall 2345)																				
Sida sp.																				
Sigesbeckia orientalis																				
Solanum centrale																	0.1	0.1	0.1	
Solanum ferocissimum																				
Solanum horridum			0.1			0.1	0.1			0.1		0.1						0.1		
Solanum kentrocaule																				
Solanum lasiophyllum	0.1	0.1	0.1	0.1		0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1			0.1	0.1	0.1	0.1
Solanum nigrum																				
Solanum phlomoides																				
Solanum piceum											0.1									
Solanum sp.																				
Sonchus oleraceus																				
Spermacoce brachystema																				
Sporobolus australasicus																				
Stemodia grossa																				
Stenopetalum anfractum																				
Streptoglossa bubakii																				
Streptoglossa decurrens									0.1											
Stylobasium spathulatum																				
Swainsona maccullochiana																				
Swainsona sp.																				
Templetonia egena																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG33R	WNG34R	WNG35R	WNG36R	WNG37R	WNG38R	WNG39R	WNG40R	WNG42R	WNG43R	WNG44R	WNG45R	WNG46R	WNG47R	WNG48R	WNG49R	WNG50R	WNG51R	WNG52R	WNG53R
Tephrosia densa																				
Tephrosia oxalidea		0.1		0.1																
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)			4																	
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																				
Teucrium disjunctum																				
Teucrium teucriiflorum																				
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																			0.1	
Themeda triandra			1	0.1	75							0.1				0.1				
Trachymene oleracea subsp. *oleracea*																				
Tribulus suberosus				0.1	0.1			0.1				0.1								
Trichodesma zeylanicum var. *zeylanicum*																				
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																				
Triodia angusta															0.1					
Triodia brizoides																				
Triodia longiceps									15						0.1	2				
Triodia melvillei											0.5		1	8			3			9
Triodia pungens	3	11	1	12	0.5	35	1	12	1	0.1	3	7	2					1	3	
Triodia vanleeuwenii							35			31								10	4	0.1
Triodia wiseana															15	11	0.1	2	0.1	
Triodia sp. Mt Ella (M.E. Trudgen 12739)		14		3																
Tripogonella loliiformis																				
Triraphis mollis																				
Triumfetta chaetocarpa																				
Triumfetta leptacantha																				
Urochloa occidentalis var. *ciliata*																				
Urochloa piligera																				
Vachellia farnesiana																				
Ventilago viminalis																				
Vigna lanceolata var. *lanceolata*																				
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)					0.1															
Vincetoxicum flexuosum																				
Vincetoxicum lineare																		0.1		
Vittadinia dissecta var. *hirta*																				
Wahlenbergia gracilenta																				
Wahlenbergia tumidifructa																				
Waltheria indica																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Abutilon amplum																				
Abutilon cryptopetalum																				
Abutilon cunninghamii				0.1					0.1	0.1										
Abutilon fraseri subsp. *fraseri*																				
Abutilon lepidum																				
Abutilon leucopetalum																				
Abutilon macrum													0.1							
Abutilon otocarpum																				
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																				
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)				0.1																
Abutilon sp.																				
Acacia adoxa var. *adoxa*			0.1			0.1			0.1				0.1		0.1		0.1		1	
Acacia adsurgens							0.1	0.1			0.1		0.1			0.1				
Acacia ancistrocarpa																				
Acacia aneura							0.1													35
Acacia 'aneura' sens. lat. (juvenile)									0.1									0.1		
Acacia aptaneura	0.1	0.1	0.1				0.1						0.1	1					0.1	5
Acacia atkinsiana																				
Acacia ayersiana							1													
Acacia ayersiana (narrow phyllode variant)																				
Acacia bivenosa		0.1	0.1	4	0.1		0.1	0.1	3	0.5	0.1	0.1	0.1			3	0.1	0.1	0.1	
Acacia bivenosa (wispy/weeping form)																				
Acacia catenulata subsp. *occidentalis*														40						
Acacia citrinoviridis																				
Acacia cowleana	0.1		0.1			0.1	2					0.1	0.1					0.1		
Acacia dictyophleba	0.1							0.1									0.1			
Acacia eriopoda																				
Acacia hamersleyensis														0.1	0.1					
Acacia hilliana																				
Acacia inaequilatera	0.1					0.1														
Acacia incurvaneura														0.1						
Acacia kempeana						0.1														
Acacia macraneura																				
Acacia maitlandii	0.1	0.1	0.1			1.5			0.1		0.1	0.1	0.1		6		0.5	0.1	3	
Acacia marramamba																			0.1	
Acacia monticola												0.1	3							
Acacia mulganeura																				
Acacia pachyacra	0.1						0.1	0.1			2.5									
Acacia pruinocarpa	1		2			0.1	0.1				0.1		0.1	0.1			0.1	0.1	0.1	1
Acacia pteraneura																				
Acacia pyrifolia var. *pyrifolia*			0.1					0.1	0.1			4	0.1		0.1		0.1		1	
Acacia rhodophloia																				
Acacia sibirica							0.1													
Acacia sibirica (linear form)			0.1			0.1	1.5													
Acacia steedmanii subsp. *borealis*							0.5						0.1				0.1		0.1	
Acacia synchronicia																				
Acacia tenuissima	0.1	0.1		0.1		0.1			0.1	0.1					0.1	0.1		0.1	0.1	
Acacia tetragonophylla						0.1														
Acacia trudgeniana																				
Acacia wanyu																				
Acacia sp.													0.1							
Achyranthes aspera																				
Acrachne racemosa																				
Alternanthera denticulata																				
Alternanthera nana																				
Amaranthus cuspidifolius																				
Amaranthus interruptus																				
Amaranthus undulatus																				
Ammannia baccifera																				
Ammannia multiflora																				
Amphipogon sericeus	0.1		0.1	0.1	0.1	0.1			0.1	0.1	0.1				0.1	0.1	0.1	0.1	0.1	

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Amyema fitzgeraldii																				
Amyema miquelii																				
Amyema sanguinea var. *pulchra*																				
Androcalva luteiflora	0.1		0.1	0.1								0.1	0.1		0.1		0.1			
Anthobolus leptomerioides		0.1	0.1			0.1														
Aristida burbidgeae																				
Aristida contorta	0.1	0.1			0.1		0.1	0.1	0.1		0.1		0.1			0.1		0.1		1
Aristida holathera var. *holathera*	0.1							0.1			0.1							0.1		
Aristida inaequiglumis																				
Aristida ingrata		0.1						0.1												
Aristida ? ingrata																				
Aristida jerichoensis var. *subspinulifera*																				
Aristida latifolia	0.1																			
Aristida lazaridis																				
Aristida aff. *nitidula*																				
Aristida obscura																				0.1
Aristida pruinosa																		0.1		
Aristida sp.																				
Astrotricha hamptonii																				
Atriplex codonocarpa																				
Bergia trimera																				
Bidens bipinnata														0.1						3
Boerhavia coccinea																				
Boerhavia gardneri																				
Boerhavia repleta																				
Boerhavia sp.																				
Bothriochloa ewartiana																				
Bothriochloa sp.																				
Brachychiton acuminatus																				
Brachyscome iberidifolia																				
Brunonia sp. Long hairs (D.E. Symon 2440)																			0.1	
Bulbostylis barbata																				
Cajanus cinereus																				
Calandrinia ptychosperma																				
Callitris columellaris																				
Calocephalus beardii																				
Calytrix carinata																				
Capparis lasiantha		0.1		0.1			0.1		0.1	0.1		0.1	0.1	0.1	0.1			0.1		0.1
Capparis mitchellii																				
Capparis spinosa subsp. *nummularia*																				
Cassytha capillaris																				
Cenchrus ciliaris																				
Centipeda minima subsp. *macrocephala*																				
Cheilanthes austrotenuifolia														0.1						
Cheilanthes brownii														0.1	0.1					
Cheilanthes sieberi subsp. *sieberi*													0.1							1
Chrysocephalum apiculatum subsp. *pilbarense*																				
Chrysocephalum gilesii												0.1								
Chrysocephalum pterochaetum															0.1					
Chrysopogon fallax																				0.1
Cleome viscosa											0.1									
Clerodendrum floribundum var. *angustifolium*													0.1		0.1				0.1	
Codonocarpus cotinifolius	0.1		0.1	0.1											0.1		0.1			
Convolvulus clementii																				
Corchorus crozophorifolius				0.1							0.1									
Corchorus lasiocarpus (subsp. not determined)	0.1					0.1		0.1												
Corchorus lasiocarpus subsp. *lasiocarpus*													0.1				0.1			
Corchorus lasiocarpus subsp. *parvus*			0.1	0.1						0.1		0.1			0.5			0.1	1	
Corchorus tridens																				
Corchorus sp.																				
Corymbia deserticola subsp. *deserticola*	1																			

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Corymbia ferriticola														0.1						
Corymbia hamersleyana												18	8		2		2	0.5	3	
Crotalaria medicaginea var. *neglecta*																				
Cryptandra monticola																				
Cucumis variabilis											0.1			0.1					0.1	0.1
Cullen leucanthum																				
Cullen leucochaites				0.1																
Cullen pogonocarpum																				
Cymbopogon ambiguus				0.1	0.1			0.1			0.1			0.1	0.1	0.1	0.1	0.1	0.1	
Cymbopogon obtectus							0.1			0.1										
Cymbopogon ? obtectus																				
Cymbopogon sp.																				
Cynanchum pedunculatum											0.1									
Cynanchum viminale subsp. *australe*																				
Cynodon convergens																				
Cynodon prostratus																				
Cyperus cunninghamii subsp. *cunninghamii*																				
Cyperus vaginatus																				
Dactyloctenium radulans																				
Dampiera candicans															0.1		0.1			
Dichanthium fecundum																				
Dichanthium sericeum subsp. *humilius*																				
Dicladanthera forrestii																				
Digitaria ammophila											0.1			0.1						0.1
Digitaria brownii		0.1					0.1	0.1				0.1	0.1				0.1			0.1
Digitaria ctenantha																				
Diplatia grandibractea																				
Dipteracanthus australasicus subsp. *australasicus*																				
Dodonaea coriacea											0.1						0.1			
Dodonaea lanceolata var. *lanceolata*				0.1						0.1		0.1	0.1				0.1	0.1	0.1	
Dodonaea pachyneura														0.1						
Dodonaea petiolaris																				
Dodonaea viscosa subsp. *mucronata*																				
Duperreya commixta		0.1		0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.1	0.1	0.1	
Dysphania melanocarpa forma *leucocarpa*																				
Dysphania rhadinostachya (subsp. not determined)																				
Dysphania rhadinostachya subsp. *inflata*																				
Dysphania rhadinostachya subsp. *rhadinostachya*																				
Dysphania saxatilis																				
Dysphania sp.																				
Ehretia saligna var. *saligna*																				
Enchylaena tomentosa var. *tomentosa*																				
Enneapogon caerulescens											0.1							0.1		
Enneapogon lindleyanus		0.1									0.1									0.1
Enneapogon polyphyllus																		0.1		0.1
Enneapogon robustissimus																				
Enneapogon sp.																				
Enteropogon ramosus																				
Eragrostis cumingii																				
Eragrostis desertorum																				
Eragrostis elongata																				
Eragrostis eriopoda																				
Eragrostis exigua																				
Eragrostis pergracilis																				
Eragrostis setifolia								0.1												
Eragrostis tenellula																				
Eragrostis xerophila																				
Eragrostis sp.																				
Eremophila accrescens																				
Eremophila caespitosa																				
Eremophila cuneifolia																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Eremophila forrestii subsp. *forrestii*	0.1	0.1					1													3
Eremophila fraseri subsp. *fraseri*					0.1															0.1
Eremophila galeata																				
Eremophila jucunda subsp. *pulcherrima*															0.1				0.1	
Eremophila latrobei (subsp. not determined)															0.1					
Eremophila latrobei subsp. *filiformis*																				
Eremophila latrobei subsp. *latrobei*			0.1			0.1								0.1				0.1		
Eremophila longifolia		0.1					2					0.1								0.1
Eremophila oppositifolia subsp. *angustifolia*																				
Eremophila petrophila subsp. *petrophila*																				
Eremophila phyllopoda subsp. *obliqua*																				
Eremophila platycalyx subsp. *pardalota*											0.1									
Eremophila pusilliflora																				
Eremophila sp. Hamersley Range (K. Walker KW 136)																				
Eremophila sp.																				
Eriachne aristidea																				
Eriachne flaccida																				
Eriachne lanata																				
Eriachne mucronata					0.1		0.1	0.1					0.5		0.1		0.1	0.1		
Eriachne mucronata (arid form) (MET 12 736)																				
Eriachne mucronata (typical form)											0.1			0.1		0.1				
Eriachne aff. *mucronata*																				
Eriachne obtusa																				
Eriachne pulchella																		0.1	0.1	
Eriachne tenuiculmis													0.1							
Eucalyptus camaldulensis subsp. *refulgens*																				
Eucalyptus gamophylla			0.1				4	6		5			1							0.5
Eucalyptus kingsmillii																				
Eucalyptus leucophloia subsp. *leucophloia*			2		3	2					1.5			8	1	1.5	1	11	0.5	0.5
Eucalyptus pilbarensis																				
Eucalyptus repullulans									6											
Eucalyptus socialis subsp. *eucentrica*				6						4										
Eucalyptus trivalva		40		6					2	7										
Eucalyptus victrix																				
Eucalyptus xerothermica				0.1																1
Eulalia aurea													0.1				0.1	0.1		0.1
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)																				
Euphorbia australis var. *hispidula*																				
Euphorbia australis var. *subtomentosa*																				
Euphorbia biconvexa																				
Euphorbia boophthona																				
Euphorbia careyi																				
Euphorbia coghlanii																				
Euphorbia drummondii																				0.1
Euphorbia tannensis subsp. *eremophila*																				
Euphorbia trigonosperma																				
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)																				
Euphorbia sp. (*boophthona/tannensis*)																				
Euphorbia sp.																				
Evolvulus alsinoides var. decumbens																				
Evolvulus alsinoides var. villosicalyx		0.1											0.1					0.1	0.1	0.1
Ficus brachypoda																				
Fimbristylis dichotoma																0.1				0.1
Fimbristylis simulans																				
Fimbristylis sp.																				
Flaveria trinervia																				
Gastrolobium grandiflorum													0.1						0.1	
Glycine canescens													0.1							
Gnephosis arachnoidea																				
Gompholobium oreophilum	0.1		0.1			0.1							0.1		1					
Gomphrena cunninghamii																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Gomphrena kanisii																				
Goodenia cusackiana													0.1							
Goodenia microptera	0.1																			
Goodenia muelleriana																				
Goodenia prostrata																				
Goodenia stellata																				
Goodenia stobbsiana	0.1		0.1			0.1			0.1				0.1		0.1	0.1	0.1	0.5	0.1	
Goodenia tenuiloba																				
Goodenia triodiophila						0.1										0.1	0.1	0.1	0.1	
Gossypium australe																				
Gossypium robinsonii				0.1			0.1	0.1				0.1	0.1						0.1	
Gossypium sturtianum var. *sturtianum*																				
Grevillea berryana														1						
Grevillea saxicola																				
Grevillea wickhamii																				
Grevillea wickhamii subsp. *hispidula*													0.1							
Hakea chordophylla	0.1		0.1			0.1			0.1	0.1	0.1		0.1		0.1	0.1	0.1	0.1	0.1	
Hakea lorea subsp. *lorea*					0.1						0.1						0.1			1
Halgania gustafsenii var. Mid West (G. Perry 370)	0.5		3			0.1							0.1		4		5		3	
Harnieria kempeana subsp. *muelleri*																				
Heliotropium chrysocarpum																				
Heliotropium cunninghamii													0.1							
Heliotropium heteranthum																				
Heliotropium inexplicitum					0.1				0.1		0.1				0.1		0.1			
Heliotropium sp.										0.1								0.1	0.1	
Heliotropium tenuifolium																				
Hibiscus brachychlaenus																				
Hibiscus burtonii	0.1	0.1	0.1					0.1												0.1
Hibiscus coatesii	0.1		0.1		0.1	0.1					0.1					0.1	0.1	0.1	0.1	
Hibiscus sturtii var. *campylochlamys*	0.1		0.1	0.1		0.1			0.1	0.1	0.1				0.1		0.1	0.1	0.1	
Hibiscus sturtii var. *grandiflorus*																				
Hibiscus sturtii var. *platychlamys*																				
Hibiscus sturtii var. *truncatus*																				
Hibiscus sturtii var. aff. *truncatus*																				
Hibiscus sturtii var. not determined																				
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)																				
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																				
Hibiscus sp. Mt Robinson (G. Byrne 3537)																				
Hybanthus aurantiacus															0.1				0.1	
Indigofera colutea																				
Indigofera fractiflexa subsp. *fractiflexa*																				
Indigofera georgei												5								
Indigofera gilesii														0.1						
Indigofera linnaei																				
Indigofera monophylla	0.1		0.1	0.5		0.1				2		0.1	0.1		0.1				0.1	
Indigofera rugosa																				
Ipomoea muelleri																				
Ipomoea plebeia																				
Iseilema dolichotrichum																				
Iseilema membranaceum																				
Iseilema vaginiflorum																				
Isotropis parviflora																				
Isotropis sp. Arid zone (G. Byrne 2775)																				
Jasminum didymum subsp. *lineare*	0.1	0.1		0.1			0.1	0.1	0.1	0.1		0.1	0.1		0.1		0.1		0.1	0.1
Leiocarpa semicalva subsp. *semicalva*																				
Lepidium echinatum																				
Lepidium oxytrichum																				
Lepidium pedicellosum				0.1																
Lepidium phlebopetalum																				
Lobelia heterophylla subsp. *pilbarensis*														0.1						
Maireana georgei																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Maireana melanocoma																				
Maireana planifolia																				
Maireana planifolia x *villosa*																				
Maireana tomentosa subsp. *tomentosa*																				
Maireana triptera																				
Maireana villosa																		0.1		0.1
Malvastrum americanum																				
Marsdenia australis				0.1																
Marsilea hirsuta																				
Maytenus sp. Mt Windell (S. van Leeuwen 846)																				
Melaleuca bracteata																				
Melaleuca eleuterostachya																				
Melaleuca glomerata																				
Melhania oblongifolia				0.1																
Mirbelia viminalis															0.1		4			
Monachather paradoxus																				
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)																				
Nicotiana benthamiana																				
Nicotiana occidentalis subsp. *obliqua*																				
Nicotiana occidentalis subsp. *occidentalis*																				
Nicotiana simulans																				
Nicotiana sp.																				0.1
Notoleptopus decaisnei																				
Oldenlandia crouchiana																			0.1	
Olearia fluvialis																				
Olearia stuartii								0.1					0.1				0.1			
Olearia xerophila																				
Oxalis sp. Pilbara (M.E. Trudgen 12725)																				
Pandorea pandorana																				
Panicum decompositum																				
Panicum effusum																		0.1		0.1
Paraceterach reynoldsii																				
Paraneurachne muelleri	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	3		0.1	0.1	0.1	0.1	0.1	
Parietaria cardiostegia																				
Paspalidium clementii														0.1						
Paspalidium constrictum																				
Paspalidium rarum																				
Peplidium muelleri																				
Peripleura hispidula var. *hispidula*																				0.1
Peripleura obovata								0.1												
Peripleura virgata			0.1											0.1				0.1		
Peripleura sp.																				
Perotis rara																				
Petalostylis labicheoides												2	0.1							
Phyllanthus maderaspatensis																				
Pilbara trudgenii																				
Pimelea microcephala subsp. *microcephala*																				
Pittosporum angustifolium																				
Pluchea dentex																				
Pluchea dunlopii																				
Polycarpaea corymbosa var. *corymbosa*																				
Polycarpaea holtzei																				
Polycarpaea longiflora																				
Polygala glaucifolia																				
Polymeria ambigua																				
Portulaca filifolia																				
Portulaca oleracea/intraterranea																				
Prostanthera albiflora																				
Psydrax latifolia																				0.1
Psydrax rigidula																				
Psydrax suaveolens	0.1	0.1									0.1			0.1						0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Pterocaulon serrulatum var. *velutinum*																				
Pterocaulon sphacelatum												0.1								
Pterocaulon sphaeranthoides																				
Pterocaulon sp.																				
Ptilotus aervoides																				
Ptilotus astrolasius		0.1		0.5					0.1	0.1			0.1							
Ptilotus auriculifolius																				
Ptilotus calostachyus	0.1		0.1	0.1	0.1	0.1			0.1	3	0.1		0.1		0.1	0.1	0.1	0.1	0.1	
Ptilotus clementii											0.1									
Ptilotus exaltatus				0.1				0.1	0.1		0.1					0.1				
Ptilotus fusiformis																				
Ptilotus gomphrenoides																				
Ptilotus helipteroides																				
Ptilotus obovatus var. obovatus		0.1		0.1	0.1		0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1			0.1
Ptilotus polystachyus																				
Ptilotus roei																				
Ptilotus rotundifolius	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.5	0.1					0.1				0.1
Ptilotus schwartzii var. *schwartzii*																				
Ptilotus xerophilus																				
Ptilotus sp.																				
Rhagodia eremaea														0.1						0.1
Rhagodia sp. Hamersley (M. Trudgen 17794)														0.1						
Rhodanthe humboldtiana																				
Rhodanthe margarethae																				
Rhodanthe polakii																				
Rhynchosia minima												0.1								
Roepera eichleri																				
Rostellularia adscendens var. *latifolia*				0.1																
Rumex vesicarius																				
Salsola australis		0.1		0.1	0.1			0.1			0.1									
Santalum lanceolatum				0.1						0.1		0.1	0.1	0.1	0.1					0.1
Santalum spicatum																				
Scaevola acacioides								0.1								0.1				
Scaevola amblyanthera var. *centralis*																				
Scaevola parvifolia subsp. *pilbarae*							0.1	0.1		1			0.1							
Scaevola spinescens										0.1		0.5								
Scaevola spinescens (broad form)													0.1							0.1
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)			0.1										0.1				0.1	0.1		
Schizachyrium fragile																0.1				
Sclerolaena convexula																				
Sclerolaena cornishiana																				
Sclerolaena densiflora																				
Sclerolaena eriacantha																				
Senecio hamersleyensis																				
Senna artemisioides subsp. *filifolia*																				
Senna artemisioides subsp. *helmsii*		0.1	0.1				1	0.1	0.1				0.1		0.1					
Senna artemisioides subsp. *oligophylla*	0.1			0.1			0.5	0.1					0.1		0.1		0.1			
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)																				
Senna artemisioides subsp. *oligophylla x S. ferraria*																				
Senna artemisioides subsp. *oligophylla x S. stricta*																				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*		0.1	0.1			0.1	1			0.1	0.1	0.1	0.1			0.1				0.1
Senna artemisioides subsp. x *artemisioides*												0.1								
Senna artemisioides subsp. x *artemisioides x S. stricta*													0.1							
Senna ferraria											0.1				0.1		0.1	0.1	0.1	
Senna ferraria x																				
Senna ferraria x S. artemisioides subsp. *oligophylla*																				
Senna ferraria x S. glutinosa subsp. *glutinosa*																				
Senna glaucifolia	0.1		0.1				0.1		0.1											
Senna glaucifolia x S. artemisioides subsp. *helmsii*																				
Senna glaucifolia x S. glutinosa subsp. *glutinosa*																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Senna glaucifolia x																			0.1	
Senna glutinosa subsp. *chatelainiana*																				
Senna glutinosa subsp. *glutinosa*			0.1	0.1	0.5	0.1			0.1		0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Senna glutinosa subsp. *glutinosa x*																				
Senna glutinosa subsp. *x luerssenii*		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.1	0.1				0.1	
Senna glutinosa subsp. *x luerssenii x*																				
Senna glutinosa subsp. *glutinosa x S. stricta*																				
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*																				
Senna glutinosa subsp. *pruinosa*			0.1	0.1	0.1	0.1												0.1	0.1	
Senna glutinosa subsp. *pruinosa x*																				
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*																				
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*																				
Senna notabilis																				
Senna pleurocarpa var. *angustifolia*								0.1												
Senna sp. Karijini (M.E. Trudgen 10392)									0.1											
Senna sp. Meekatharra (E. Bailey 1-26)		0.1																		
Senna stricta																				
Senna stricta x																				
Senna venusta																				
Seringia elliptica		0.1					0.1					0.1	0.1				0.1	2.5	2	
Seringia nephrosperma	0.1																			
Setaria dielsii																				
Setaria surgens																				
Setaria verticillata																				
Sida arenicola	0.1		0.1			0.1														
Sida cardiophylla	1.5		0.1					0.1												
Sida echinocarpa	0.1		0.1																	
Sida ectogama																				
Sida fibulifera					0.1															
Sida platycalyx																				
Sida sp. Barlee Range (S. van Leeuwen 1642)																				
Sida sp. dark green fruits (S. van Leeuwen 2260)		0.1																		0.1
Sida sp. Excedentifolia (J.L. Egan 1925)			0.1		0.1	0.1			0.1		0.1				0.1		0.1	0.1	0.1	
Sida sp. Golden calyces glabrous (H.N. Foote 32)																				
Sida sp. L (A.M. Ashby 4202)	0.1										0.1									0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)					0.1												0.1	1	0.1	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																	0.1			
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)				0.1		0.1				0.1			0.1				0.1			
Sida sp. Supplejack Station (T.S. Henshall 2345)																				
Sida sp.																				
Sigesbeckia orientalis																				
Solanum centrale																				
Solanum ferocissimum																				
Solanum horridum		0.1	0.1								0.1								0.1	0.1
Solanum kentrocaule																			0.1	
Solanum lasiophyllum	0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1					0.1	0.1			0.1	0.1	
Solanum nigrum																				
Solanum phlomoides																				
Solanum piceum																				
Solanum sp.																		0.1		
Sonchus oleraceus																				
Spermacoce brachystema																				
Sporobolus australasicus																				
Stemodia grossa																				
Stenopetalum anfractum																				
Streptoglossa bubakii									0.1								0.1			
Streptoglossa decurrens																				
Stylobasium spathulatum																				
Swainsona maccullochiana																				
Swainsona sp.																				
Templetonia egena									0.1											

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG54R	WNG55R	WNG57R	WNG58R	WNG59R	WNG60R	WNG61R	WNG62R	WNG64R	WNG65R	WNG68R	WNG69R	WNG70R	WNG71R	WNG72R	WNG73R	WNG74R	WNG75R	WNG77R	WNG78R
Tephrosia densa																				
Tephrosia oxalidea															0.1		0.1	0.1	0.1	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)												4								
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																				
Teucrium disjunctum																				
Teucrium teucriiflorum														0.1						0.1
Themeda sp. Mt Barricade (M.E. Trudgen 2471)															0.1		0.1			
Themeda triandra		0.1		1			1					80	5	0.1		0.1			0.1	0.1
Trachymene oleracea subsp. *oleracea*																				
Tribulus suberosus											0.1									
Trichodesma zeylanicum var. *zeylanicum*				0.1		0.1														
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																				
Triodia angusta																				
Triodia brizoides																				
Triodia longiceps		1																		
Triodia melvillei	2																			
Triodia pungens	1	1	25	3	40	0.1	28	25	13	3	0.5	1.5	18	13	8		2	20	8	3
Triodia vanleeuwenii	8		0.1			5		10												
Triodia wiseana	2	4		12		0.1			10	12	15		0.1		8	20	6	0.1	2	
Triodia sp. Mt Ella (M.E. Trudgen 12739)																	0.1		0.5	
Tripogonella loliiformis																				
Triraphis mollis																				
Triumfetta chaetocarpa																				
Triumfetta leptacantha																				
Urochloa occidentalis var. *ciliata*																				
Urochloa piligera																				
Vachellia farnesiana																				
Ventilago viminalis				0.1								0.5								
Vigna lanceolata var. *lanceolata*																				
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																				
Vincetoxicum flexuosum																				
Vincetoxicum lineare										0.1					0.1		0.1		0.1	
Vittadinia dissecta var. *hirta*																				
Wahlenbergia gracilenta																				
Wahlenbergia tumidifructa																				
Waltheria indica																				

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Abutilon amplum														
Abutilon cryptopetalum														
Abutilon cunninghamii								0.1						
Abutilon fraseri subsp. *fraseri*														
Abutilon lepidum														
Abutilon leucopetalum												0.1		
Abutilon macrum														
Abutilon otocarpum														
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)											0.1			
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)													0.1	
Abutilon sp.														
Acacia adoxa var. *adoxa*		0.1	2		0.1					0.1				
Acacia adsurgens			0.1		0.1		0.1							
Acacia ancistrocarpa														
Acacia aneura							0.1				0.1			
Acacia 'aneura' sens. lat. (juvenile)	0.1													
Acacia aptaneura								0.1			5	20		1
Acacia atkinsiana														
Acacia ayersiana														
Acacia ayersiana (narrow phyllode variant)														
Acacia bivenosa	0.1	0.1		0.1	0.1	0.1	0.1	0.1		0.1	0.1		0.1	
Acacia bivenosa (wispy/weeping form)														
Acacia catenulata subsp. *occidentalis*														
Acacia citrinoviridis														
Acacia cowleana		0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1				
Acacia dictyophleba														
Acacia eriopoda														
Acacia hamersleyensis						0.1								0.1
Acacia hilliana														
Acacia inaequilatera														
Acacia incurvaneura											30		0.1	
Acacia kempeana														
Acacia macraneura													2	
Acacia maitlandii		0.1		0.1		0.1	0.1	0.1	0.1	0.1				
Acacia marramamba									0.1		0.1			
Acacia monticola										0.1				
Acacia mulganeura														
Acacia pachyacra							0.1							
Acacia pruinocarpa					0.1	0.1	0.1				2			
Acacia pteraneura														
Acacia pyrifolia var. *pyrifolia*			0.1			0.1			0.1	0.5				
Acacia rhodophloia								0.1						
Acacia sibirica					0.1									
Acacia sibirica (linear form)														
Acacia steedmanii subsp. *borealis*		0.1			0.1	0.1				0.1				
Acacia synchronicia														
Acacia tenuissima	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
Acacia tetragonophylla													0.1	
Acacia trudgeniana														
Acacia wanyu														
Acacia sp.														
Achyranthes aspera														
Acrachne racemosa														
Alternanthera denticulata														
Alternanthera nana														
Amaranthus cuspidifolius													0.1	
Amaranthus interruptus												0.1		
Amaranthus undulatus														
Ammannia baccifera														
Ammannia multiflora														
Amphipogon sericeus	0.1	0.1	0.1	0.1	2	0.1		0.1	0.1					

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Amyema fitzgeraldii											0.1	0.1	0.1	0.1
Amyema miquelii														
Amyema sanguinea var. *pulchra*			0.1											
Androcalva luteiflora		0.1								1				
Anthobolus leptomerioides											0.1			
Aristida burbidgeae											0.1	0.1	5	0.1
Aristida contorta							1	0.1						
Aristida holathera var. *holathera*		0.1		0.1					0.1					
Aristida inaequiglumis														
Aristida ingrata							0.1							
Aristida ? ingrata														
Aristida jerichoensis var. *subspinulifera*														
Aristida latifolia														
Aristida lazaridis														
Aristida aff. *nitidula*														
Aristida obscura														
Aristida pruinosa														
Aristida sp.														
Astrotricha hamptonii											0.1	0.1	0.1	
Atriplex codonocarpa														
Bergia trimera														
Bidens bipinnata											0.1	0.1	0.1	0.1
Boerhavia coccinea														
Boerhavia gardneri														
Boerhavia repleta														
Boerhavia sp.														
Bothriochloa ewartiana														
Bothriochloa sp.														
Brachychiton acuminatus											0.1		0.1	0.1
Brachyscome iberidifolia														
Brunonia sp. Long hairs (D.E. Symon 2440)		0.1												
Bulbostylis barbata														
Cajanus cinereus														
Calandrinia ptychosperma														
Callitris columellaris												1	15	25
Calocephalus beardii														
Calytrix carinata														
Capparis lasiantha								0.1		0.1		0.1	0.1	
Capparis mitchellii	0.1											0.1	3	0.1
Capparis spinosa subsp. *nummularia*													0.1	0.1
Cassytha capillaris						0.1								
Cenchrus ciliaris														
Centipeda minima subsp. *macrocephala*														
Cheilanthes austrotenuifolia											0.1	0.1	0.1	
Cheilanthes brownii	0.1										0.1	0.1	0.1	0.1
Cheilanthes sieberi subsp. *sieberi*														
Chrysocephalum apiculatum subsp. *pilbarense*							0.1							
Chrysocephalum gilesii														
Chrysocephalum pterochaetum				0.1										
Chrysopogon fallax							0.1							
Cleome viscosa							0.1							
Clerodendrum floribundum var. *angustifolium*													0.1	0.1
Codonocarpus cotinifolius				0.1	0.1	0.1	0.1		0.1			0.1		
Convolvulus clementii														
Corchorus crozophorifolius														
Corchorus lasiocarpus (subsp. not determined)														
Corchorus lasiocarpus subsp. *lasiocarpus*		0.1			0.1									
Corchorus lasiocarpus subsp. *parvus*	0.1		0.1	0.1		0.1		0.1	0.1	1				
Corchorus tridens														
Corchorus sp.														
Corymbia deserticola subsp. *deserticola*		1	3		1									

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Corymbia ferriticola											1	0.1	5	2
Corymbia hamersleyana		2		0.5		1			1	9				
Crotalaria medicaginea var. *neglecta*														
Cryptandra monticola						0.1								
Cucumis variabilis							0.1			0.1		0.1		0.1
Cullen leucanthum														
Cullen leucochaites														
Cullen pogonocarpum														
Cymbopogon ambiguus	0.5	0.1	0.1	0.1	0.1	0.1			0.1	0.5	0.1	0.1	0.1	0.1
Cymbopogon obtectus			0.1				0.1		0.1					
Cymbopogon ? obtectus														
Cymbopogon sp.								0.1						
Cynanchum pedunculatum				0.1										
Cynanchum viminale subsp. *australe*														
Cynodon convergens														
Cynodon prostratus														
Cyperus cunninghamii subsp. *cunninghamii*												0.1		
Cyperus vaginatus														
Dactyloctenium radulans														
Dampiera candicans														
Dichanthium fecundum														
Dichanthium sericeum subsp. *humilius*														
Dicladanthera forrestii														
Digitaria ammophila							2				0.1			0.1
Digitaria brownii	0.1									1		0.1		0.1
Digitaria ctenantha														
Diplatia grandibractea														
Dipteracanthus australasicus subsp. *australasicus*														
Dodonaea coriacea					0.1				0.1					
Dodonaea lanceolata var. *lanceolata*			0.1	0.1		0.1				0.1				
Dodonaea pachyneura											3			0.1
Dodonaea petiolaris											0.1		0.1	
Dodonaea viscosa subsp. *mucronata*													0.1	0.1
Duperreya commixta	0.1		0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1
Dysphania melanocarpa forma *leucocarpa*														
Dysphania rhadinostachya (subsp. not determined)														
Dysphania rhadinostachya subsp. *inflata*														
Dysphania rhadinostachya subsp. *rhadinostachya*														
Dysphania saxatilis												0.1		
Dysphania sp.														
Ehretia saligna var. *saligna*														
Enchylaena tomentosa var. *tomentosa*											0.1	0.1		0.1
Enneapogon caerulescens		0.1												
Enneapogon lindleyanus				0.1		0.1			0.1	1	0.1		0.1	0.1
Enneapogon polyphyllus												0.1		
Enneapogon robustissimus														0.1
Enneapogon sp.														
Enteropogon ramosus														
Eragrostis cumingii														
Eragrostis desertorum														
Eragrostis elongata														
Eragrostis eriopoda														
Eragrostis exigua														
Eragrostis pergracilis														
Eragrostis setifolia														
Eragrostis tenellula														
Eragrostis xerophila														
Eragrostis sp.														
Eremophila accrescens														
Eremophila caespitosa														
Eremophila cuneifolia														

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Eremophila forrestii subsp. *forrestii*														
Eremophila fraseri subsp. *fraseri*														
Eremophila galeata														
Eremophila jucunda subsp. *pulcherrima*						0.1								
Eremophila latrobei (subsp. not determined)														
Eremophila latrobei subsp. *filiformis*														
Eremophila latrobei subsp. *latrobei*											0.1	0.1		
Eremophila longifolia					0.1					0.1				
Eremophila oppositifolia subsp. *angustifolia*														
Eremophila petrophila subsp. *petrophila*												0.1		
Eremophila phyllopoda subsp. *obliqua*														
Eremophila platycalyx subsp. *pardalota*														
Eremophila pusilliflora														
Eremophila sp. Hamersley Range (K. Walker KW 136)											0.5	0.5	0.1	1
Eremophila sp.														
Eriachne aristidea														
Eriachne flaccida										0.1				
Eriachne lanata														
Eriachne mucronata		0.1				5			0.1	2	0.1	0.1	0.1	
Eriachne mucronata (arid form) (MET 12 736)			0.1											
Eriachne mucronata (typical form)	4			0.1				0.1						2
Eriachne aff. *mucronata*												8		
Eriachne obtusa														
Eriachne pulchella														
Eriachne tenuiculmis														
Eucalyptus camaldulensis subsp. *refulgens*														
Eucalyptus gamophylla		0.1	3		0.5				0.5					
Eucalyptus kingsmillii				2		2			5					
Eucalyptus leucophloia subsp. *leucophloia*	5			0.1		2		22	0.1		1	0.1	0.1	0.1
Eucalyptus pilbarensis				2										
Eucalyptus repullulans						5								
Eucalyptus socialis subsp. *eucentrica*														
Eucalyptus trivalva				5										
Eucalyptus victrix														
Eucalyptus xerothermica							1.5			0.1				
Eulalia aurea		0.1		0.1				0.1						
Eulalia sp. (Three Rivers Station, B.Forsyth AQ6789133)														
Euphorbia australis var. *hispidula*														
Euphorbia australis var. *subtomentosa*														
Euphorbia biconvexa														
Euphorbia boophthona														
Euphorbia careyi														
Euphorbia coghlanii														
Euphorbia drummondii														0.1
Euphorbia tannensis subsp. *eremophila*														
Euphorbia trigonosperma														
Euphorbia sp. (*biconvexa/coghlanii/trigonosperma*; sterile)														
Euphorbia sp. (*boophthona/tannensis*)														
Euphorbia sp.														
Evolvulus alsinoides var. decumbens														
Evolvulus alsinoides var. villosicalyx							0.1		0.1		0.1			0.1
Ficus brachypoda												0.1	3	
Fimbristylis dichotoma		0.1			0.1									
Fimbristylis simulans														
Fimbristylis sp.														
Flaveria trinervia														
Gastrolobium grandiflorum										0.1				
Glycine canescens										0.1	0.1			
Gnephosis arachnoidea														
Gompholobium oreophilum		1.5	3		0.5									
Gomphrena cunninghamii											0.1			0.1

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Gomphrena kanisii														
Goodenia cusackiana														
Goodenia microptera														
Goodenia muelleriana														
Goodenia prostrata														
Goodenia stellata														
Goodenia stobbsiana		0.1	0.1	0.1		0.1			0.5					
Goodenia tenuiloba														
Goodenia triodiophila	0.1	0.1	0.1	0.1		0.1								
Gossypium australe														
Gossypium robinsonii					0.1					1				
Gossypium sturtianum var. *sturtianum*														
Grevillea berryana														
Grevillea saxicola												3	1	
Grevillea wickhamii										1				
Grevillea wickhamii subsp. *hispidula*														
Hakea chordophylla	0.1	0.5	1		0.5	0.1		0.1	0.1	0.1				
Hakea lorea subsp. *lorea*				0.1		0.1	0.1						0.1	
Halgania gustafsenii var. Mid West (G. Perry 370)					1						20			
Harnieria kempeana subsp. *muelleri*														
Heliotropium chrysocarpum														
Heliotropium cunninghamii										0.1				
Heliotropium heteranthum														
Heliotropium inexplicitum		0.1												
Heliotropium sp.														
Heliotropium tenuifolium														
Hibiscus brachychlaenus														
Hibiscus burtonii														0.1
Hibiscus coatesii	0.1		0.1			0.1			0.1					
Hibiscus sturtii var. *campylochlamys*		0.1	0.1		0.1			0.1						
Hibiscus sturtii var. *grandiflorus*														
Hibiscus sturtii var. *platychlamys*														
Hibiscus sturtii var. *truncatus*														
Hibiscus sturtii var. aff. *truncatus*														
Hibiscus sturtii var. not determined														
Hibiscus sp. Gardneri (A.L. Payne PRP 1435)														
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)											0.5			0.1
Hibiscus sp. Mt Robinson (G. Byrne 3537)														
Hybanthus aurantiacus														
Indigofera colutea														
Indigofera fractiflexa subsp. *fractiflexa*														
Indigofera georgei														
Indigofera gilesii														
Indigofera linnaei														
Indigofera monophylla		0.1	0.1		0.1	0.1		0.5		0.1				0.1
Indigofera rugosa														
Ipomoea muelleri														
Ipomoea plebeia														
Iseilema dolichotrichum														
Iseilema membranaceum														
Iseilema vaginiflorum														
Isotropis parviflora		0.1	0.1											
Isotropis sp. Arid zone (G. Byrne 2775)														
Jasminum didymum subsp. *lineare*		0.1	0.1	0.1	0.1	0.1				0.1				0.1
Leiocarpa semicalva subsp. *semicalva*														
Lepidium echinatum														
Lepidium oxytrichum														
Lepidium pedicellosum														
Lepidium phlebopetalum														
Lobelia heterophylla subsp. *pilbarensis*												0.1		
Maireana georgei														

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Maireana melanocoma														
Maireana planifolia														
Maireana planifolia x *villosa*											0.1			
Maireana tomentosa subsp. *tomentosa*														
Maireana triptera														
Maireana villosa											0.1	0.1		0.1
Malvastrum americanum														
Marsdenia australis						0.1					0.1	0.1	0.1	
Marsilea hirsuta														
Maytenus sp. Mt Windell (S. van Leeuwen 846)				0.1										
Melaleuca bracteata														
Melaleuca eleuterostachya														
Melaleuca glomerata														
Melhania oblongifolia														
Mirbelia viminalis														
Monachather paradoxus														
Newcastelia sp. Hamersley Range (S. van Leeuwen 4264)				0.1										
Nicotiana benthamiana												0.1	0.1	
Nicotiana occidentalis subsp. *obliqua*														
Nicotiana occidentalis subsp. *occidentalis*														
Nicotiana simulans														
Nicotiana sp.														
Notoleptopus decaisnei														
Oldenlandia crouchiana														
Olearia fluvialis														
Olearia stuartii				0.1		0.1				0.1		5	0.1	
Olearia xerophila														0.1
Oxalis sp. Pilbara (M.E. Trudgen 12725)														
Pandorea pandorana														
Panicum decompositum														
Panicum effusum			0.1	0.1										
Paraceterach reynoldsii													0.1	
Paraneurachne muelleri	0.1		0.1	0.1	0.1	0.1		0.1	0.1	0.1		0.1	0.1	
Parietaria cardiostegia												0.1		
Paspalidium clementii											0.1	0.1	0.1	
Paspalidium constrictum														
Paspalidium rarum							0.1							
Peplidium muelleri														
Peripleura hispidula var. *hispidula*							0.1					0.1	0.1	0.1
Peripleura obovata	0.1			0.1						0.1				
Peripleura virgata				0.1		0.1			0.1			0.1		
Peripleura sp.														
Perotis rara														
Petalostylis labicheoides										6				
Phyllanthus maderaspatensis														
Pilbara trudgenii												0.5	0.1	
Pimelea microcephala subsp. *microcephala*														
Pittosporum angustifolium														
Pluchea dentex														
Pluchea dunlopii														
Polycarpaea corymbosa var. *corymbosa*														
Polycarpaea holtzei														
Polycarpaea longiflora														
Polygala glaucifolia														
Polymeria ambigua														
Portulaca filifolia														
Portulaca oleracea/intraterranea														
Prostanthera albiflora														
Psydrax latifolia					0.1							0.1	0.1	
Psydrax rigidula														
Psydrax suaveolens							0.1						0.1	

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Pterocaulon serrulatum var. *velutinum*														
Pterocaulon sphacelatum							0.1			0.1	0.1	0.1	0.1	
Pterocaulon sphaeranthoides														
Pterocaulon sp.														
Ptilotus aervoides														
Ptilotus astrolasius		0.1								0.1				
Ptilotus auriculifolius														
Ptilotus calostachyus	0.1	0.1	0.1	0.1	0.1	0.1			0.1					
Ptilotus clementii														
Ptilotus exaltatus	0.1						0.1	0.1	0.1	0.1				0.1
Ptilotus fusiformis														
Ptilotus gomphrenoides														
Ptilotus helipteroides														
Ptilotus obovatus var. obovatus	0.1		0.1	0.1			0.1	0.1		0.1	9	15	9	0.1
Ptilotus polystachyus														
Ptilotus roei														
Ptilotus rotundifolius	0.1	0.1			0.1									
Ptilotus schwartzii var. *schwartzii*														
Ptilotus xerophilus														
Ptilotus sp.														
Rhagodia eremaea											0.1		0.1	0.1
Rhagodia sp. Hamersley (M. Trudgen 17794)							0.1				0.1	0.1	0.1	
Rhodanthe humboldtiana														
Rhodanthe margarethae											0.1	0.1		
Rhodanthe polakii														
Rhynchosia minima														
Roepera eichleri														
Rostellularia adscendens var. *latifolia*														
Rumex vesicarius														
Salsola australis							0.1				0.1		0.1	
Santalum lanceolatum					0.1					0.1	0.1		0.1	0.1
Santalum spicatum														
Scaevola acacioides	0.1		0.1			0.1								
Scaevola amblyanthera var. *centralis*														
Scaevola parvifolia subsp. *pilbarae*					0.1	0.1				0.1				
Scaevola spinescens										0.1				
Scaevola spinescens (broad form)														
Scaevola sp. Mt Bruce (M.E. Trudgen 1333)				0.1		3			0.1					
Schizachyrium fragile					0.1									
Sclerolaena convexula														
Sclerolaena cornishiana							0.1							
Sclerolaena densiflora														
Sclerolaena eriacantha														
Senecio hamersleyensis														
Senna artemisioides subsp. *filifolia*														
Senna artemisioides subsp. *helmsii*		0.1			0.1					0.1				
Senna artemisioides subsp. *oligophylla*		0.1			0.1									
Senna artemisioides subsp. *oligophylla* (thinly sericeous form MET 15,035)														
Senna artemisioides subsp. *oligophylla x S. ferraria*														
Senna artemisioides subsp. *oligophylla x S. stricta*										0.1				
Senna artemisioides subsp. *oligophylla x* subsp. *helmsii*	0.1	0.1						0.1						
Senna artemisioides subsp. x *artemisioides*														
Senna artemisioides subsp. x *artemisioides x S. stricta*														
Senna ferraria	0.1	0.1		0.1	0.1						0.1	0.1		
Senna ferraria x														
Senna ferraria x S. artemisioides subsp. *oligophylla*														
Senna ferraria x S. glutinosa subsp. *glutinosa*														
Senna glaucifolia						0.1					0.1			
Senna glaucifolia x S. artemisioides subsp. *helmsii*														
Senna glaucifolia x S. glutinosa subsp. *glutinosa*														

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Senna glaucifolia x														
Senna glutinosa subsp. *chatelainiana*														
Senna glutinosa subsp. *glutinosa*	0.1	0.1		0.1		0.1		0.1	0.1		0.1	0.1	0.1	0.1
Senna glutinosa subsp. *glutinosa x*														
Senna glutinosa subsp. *x luerssenii*			0.1			0.1		0.1						
Senna glutinosa subsp. *x luerssenii x*	0.1													
Senna glutinosa subsp. *glutinosa x S. stricta*														
Senna glutinosa subsp. *glutinosa x subsp. x luerssenii*														
Senna glutinosa subsp. *pruinosa*								0.1						
Senna glutinosa subsp. *pruinosa x*			0.1											
Senna glutinosa subsp. *pruinosa x subsp. x luerssenii*														
Senna glutinosa subsp. *pruinosa x S. ? glaucifolia*			0.1											
Senna notabilis									0.1					
Senna pleurocarpa var. *angustifolia*							1							
Senna sp. Karijini (M.E. Trudgen 10392)														
Senna sp. Meekatharra (E. Bailey 1-26)														
Senna stricta														
Senna stricta x														
Senna venusta														
Seringia elliptica					0.1	0.5	0.1							
Seringia nephrosperma				0.1										
Setaria dielsii													0.1	
Setaria surgens										0.1				
Setaria verticillata														
Sida arenicola														
Sida cardiophylla							0.1							
Sida echinocarpa								0.1						
Sida ectogama														
Sida fibulifera														
Sida platycalyx														
Sida sp. Barlee Range (S. van Leeuwen 1642)														
Sida sp. dark green fruits (S. van Leeuwen 2260)														
Sida sp. Excedentifolia (J.L. Egan 1925)			0.1	0.1	0.1	0.1		0.1	0.1					
Sida sp. Golden calyces glabrous (H.N. Foote 32)														
Sida sp. L (A.M. Ashby 4202)							0.1							0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)			0.1			0.1			0.1					
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1			0.1		0.1						0.1		0.1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)		0.1	0.1		0.1		0.1	0.1	0.1	0.1				
Sida sp. Supplejack Station (T.S. Henshall 2345)														
Sida sp.														
Sigesbeckia orientalis														
Solanum centrale														
Solanum ferocissimum							0.1					0.1	0.1	
Solanum horridum				0.1		0.1			0.1	0.1	0.1	0.1	0.1	0.1
Solanum kentrocaule				0.1		0.1								
Solanum lasiophyllum	0.1	0.1				0.1	0.1	0.1		0.1	0.1	0.1		0.1
Solanum nigrum														
Solanum phlomoides														
Solanum piceum														
Solanum sp.														
Sonchus oleraceus														
Spermacoce brachystema														
Sporobolus australasicus														
Stemodia grossa														
Stenopetalum anfractum														
Streptoglossa bubakii								0.1						
Streptoglossa decurrens														
Stylobasium spathulatum														
Swainsona maccullochiana														
Swainsona sp.														
Templetonia egena								1						

Survey Phase	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2	PH2
Species	WNG79R	WNG80R	WNG81R	WNG83R	WNG84R	WNG85R	WNG86R	WNG87R	WNG88R	WNG89R	WNG-REL10R	WNG-REL14R	WNG-REL16R	WNG-REL26R
Tephrosia densa														
Tephrosia oxalidea														
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)										20				
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)														
Teucrium disjunctum														
Teucrium teucriiflorum														
Themeda sp. Mt Barricade (M.E. Trudgen 2471)				0.1										
Themeda triandra	0.1	0.5			0.1	0.1	25	0.1		35	0.1		0.1	0.1
Trachymene oleracea subsp. *oleracea*														
Tribulus suberosus											0.1			
Trichodesma zeylanicum var. *zeylanicum*														
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)														
Triodia angusta														
Triodia brizoides														
Triodia longiceps														
Triodia melvillei														
Triodia pungens	35	0.1			6	0.1	7	9	1	8	8	0.5	0.1	0.1
Triodia vanleeuwenii		15	11		9			0.1						
Triodia wiseana			0.5	7		20			20					
Triodia sp. Mt Ella (M.E. Trudgen 12739)				5		1			5					
Tripogonella loliiformis											0.1			
Triraphis mollis														
Triumfetta chaetocarpa														
Triumfetta leptacantha														
Urochloa occidentalis var. *ciliata*														
Urochloa piligera														
Vachellia farnesiana														
Ventilago viminalis										0.1				
Vigna lanceolata var. *lanceolata*														
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)														
Vincetoxicum flexuosum														
Vincetoxicum lineare					0.1						0.1			0.1
Vittadinia dissecta var. *hirta*														
Wahlenbergia gracilenta														
Wahlenbergia tumidifructa														
Waltheria indica														

Appendix 8

Maps and Descriptions of Vegetation Types

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
Broad Landform: Major Drainage Lines											
D1	EcEvExPlApyGOsTHtCYaEUaARla	*Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* var. *pyrifolia* tall open shrubland over *Gossypium sturtianum* var. *sturtianum* open shrubland over *Themeda triandra*, *Cymbopogon ambiguus*, *Eulalia aurea*, *Aristida lazaridis* open tussock grassland.	Shrubs: *Gossypium robinsonii*, *Isotropis* sp. Arid zone (G. Byrne 2775), *Santalum lanceolatum*, *Senna artemisioides* subsp. x *artemisioides*, *Sida fibulifera.* Sedges: *Cyperus vaginatus.* Herbs: *Ammannia multiflora*, *Boerhavia repleta*, *Centipeda minima* subsp. *macrocephala*, *Cheilanthes austrotenuifolia*, *Corchorus tridens.* Grasses: *Dichanthium fecundum*, *Enneapogon robustissimus*, *Enteropogon ramosus*, *Eragrostis elongata*, *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133).	Very Good	Current Sites: WA-REL14	0.0	0.0	0.0	1.0	1.0	None
D2	EvAcTErTHtTp	*Eucalyptus victrix* low open woodland over *Acacia citrinoviridis* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses to very open hummock grassland.	Shrubs: *Acacia pruinocarpa*, *A. pyrifolia* var. *pyrifolia, Corchorus crozophorifolius, Indigofera georgei, Ptilotus obovatus.* Grasses: *Bothriochloa ewartiana, *Cenchrus ciliaris, Enneapogon lindleyanus, Eriachne tenuiculmis, Triodia longiceps.*	Very Good	Current Sites: WNG07, WNG09, WNG10 Historic Sites (R): WA-R07	40.5	0.0	0.0	0.0	40.5	AaPoTt (part unit equivalent: where mapped over Turee Creek and its smaller tributaries in Deposit C and D; co-dominated by *Eucalyptus victrix*, and dominated by *Acacia citrinoviridis*, *Themeda triandra* and *Triodia pungens*)
D3	ExChPlApyTErTHtTp	*Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses.	Trees: *Eucalyptus gamophylla, Ventilago viminalis.* Shrubs: *Androcalva luteiflora, Dodonaea lanceolata* var. *lanceolata, Gossypium robinsonii, Grevillea wickhamii* subsp. *hispidula, Indigofera georgei, Santalum lanceolatum, Scaevola spinescens, Senna artemisioides* subsp. *oligophylla.* Grasses: *Cymbopogon ambiguus, Digitaria brownii, Paraneurachne muelleri, Triodia wiseana.*	Very Good to Excellent	Current Sites: WNG69, WNG70, WNG82, WNG89, WNG-REL28, WNG-REL29	0.0	35.7	0.0	0.0	35.7	None
Broad Landform: Minor Drainage Lines											
D4	AanAcaApTp	*Acacia 'aneura', A. catenulata subsp. occidentalis, A. pruinocarpa* low woodland over *Triodia pungens* very open hummock grassland.	Trees: *Acacia ayersiana, A. rhodophloia, Corymbia deserticola* subsp. *deserticola.* Shrubs: *Acacia maitlandii*, *A. marramamba*, *Psydrax suaveolens*, *Sida* sp. dark green fruits (S. van Leeuwen 2260), *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186). Grasses: *Aristida ingrata*, *Themeda triandra*, *Triodia vanleeuwenii*, *T. wiseana.*	Very Good to Excellent	Current Sites: WA-REL03, WNG-REL01, WNG-REL03, WNG-REL22	6.5	0.0	0.0	0.0	6.5	None
D5	ChPlAmoTErTHtTp	*Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides, Acacia monticola* tall shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.	Trees: *Acacia citrinoviridis, A. pruinocarpa, Eucalyptus leucophloia* subsp. *leucophloia.* Shrubs: *Acacia bivenosa, Androcalva luteiflora, Corchorus lasiocarpus* subsp. *parvus, Dodonaea viscosa* subsp. *mucronata, Gossypium robinsonii, Ptilotus obovatus.* Grasses: *Enneapogon lindleyanus, E. robustissimus, Eriachne mucronata, Paraneurachne muelleri.*	Very Good to Excellent	Current Sites: WA-REL02, WNG-REL02, WNG-REL06, WNG-REL11, WNG35 Historic Sites (R): WA-R27, WA-R28	16.6	0.0	0.0	0.0	16.6	None
D6	ChCdAanPlTp	*Corymbia hamersleyana* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia 'aneura'*, *Petalostylis labicheoides* tall open shrubland over *Triodia pungens* open hummock grassland.	Trees: *Eucalyptus gamophylla* Shrubs: *Acacia bivenosa*, *Ptilotus obovatus, Rhagodia eremaea*, *Senna artemisioides* subsp. *helmsii* Grasses: *Themeda triandra*, *Triodia longiceps.* Herbs: *Goodenia stellata*, *Peripleura hispidula* var. *hispidula.*	Very Good to Excellent	Current Sites: WA-REL01, WA-REL04, WNG-REL08, WNG-REL09 Historical Sites (R): WA-R02, WA-R14, WA-R21, WRRE	20.7	0.0	0.0	0.0	20.7	None

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
D7	ChAmoTHtTp	*Corymbia hamersleyana* low open woodland over *Acacia monticola* tall shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.	Trees: *Eucalyptus gamophylla.* Shrubs: *Acacia bivenosa*, *A. maitlandii*, *A. pyrifolia* var. *pyrifolia, Androcalva luteiflora*, *Indigofera monophylla, Petalostylis labicheoides*, *Santalum lanceolatum, Senna artemisioides* subsp. *oligophylla.* Grasses: *Eulalia aurea*, *Paraneurachne muelleri*, *Themeda triandra*, *Triodia wiseana.*	Very Good to Excellent	Current Sites: WA-REL18, WNG-REL13, WNG-REL19, WNG-REL20, WNG-REL21 Historical Sites (R): WAF-RPSA, WAF-RPSB	0.0	0.0	17.3	0.0	17.3	EgSggTb (part unit equivalent: minor drainages with *Triodia pungens* as a dominant and both *Senna artemisioides* subsp. *oligophylla* and *Indigofera monophylla* as associated species)
D8	ElChPlGOrAmoTHtTp	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Gossypium robinsonii*, *Acacia monticola* open shrubland over *Themeda triandra* tussock grassland over *Triodia pungens* open hummock grassland.	Shrubs: *Androcalva luteiflora*, *Dodonaea lanceolata* var. *lanceolata*, *Indigofera fractiflexa* subsp. *fractiflexa*, *I. gilesii*, *Grevillea wickhamii*, *Santalum lanceolatum*, *Senna* spp., *Seringia elliptica*, *Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618). Grasses: *Eriachne mucronata*, *Triodia wiseana.*	Excellent	Current Sites: WA-REL08, WA-REL24, WA-REL25 Historical Sites (Q): Q146 Historical Sites (R): WRRG	0.0	0.0	0.0	6.1	6.1	SggTp (part unit equivalent: where mapped across a minor drainage at Deposit H, and dominated by *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia, Petalostylis labicheoides* etc. and *Triodia pungens*)
D9	EtTp	*Eucalyptus trivalva* low mallee woodland over *Triodia pungens* very open hummock grassland.	Trees: *Corymbia hamersleyana*, *Eucalyptus socialis* subsp. *eucentrica*, *E. xerothermica.* Shrubs: *Acacia monticola*, *Androcalva luteiflora*, *Gastrolobium grandiflorum*, *Santalum lanceolatum.* Grasses: *Paraneurachne muelleri*, *Themeda triandra*, *Triodia wiseana.*	Very Good to Excellent	Current Sites: WNG-REL17 Historical Sites (Q): Q123, WAF09	0.0	0.0	31.8	0.0	31.8	None
D10	ExAanANlSsTHt	*Eucalyptus xerothermica*, *Acacia* '*aneura*' low woodland over *Androcalva luteiflora* open shrubland over *Isotropis* sp. Arid zone (G. Byrne 2775) low open shrubland over *Themeda triandra* tussock grassland.	Shrubs: *Eremophila longifolia*, *Gossypium robinsonii*, *Santalum lanceolatum*, *Sida* sp. L (A.M. Ashby 4202). Grasses: *Chrysopogon fallax*, *Eulalia aurea.* Herbs: **Malvastrum americanum, Solanum ferocissimum.*	Very Good	Current Sites: WA30	0.0	0.0	0.0	4.5	4.5	AaTt (part unit equivalent: small section near northern boundary at Deposit H; where middle stratum dominated by *Isotropis* sp. Arid zone (G. Byrne 2775))
D11	ExAanEtPlANlEUsTHtTp	*Eucalyptus xerothermica* and/or *Acacia 'aneura'* low open woodland over *E. trivalva* low open mallee woodland over *Petalostylis labicheoides, Androcalva luteiflora* open shrubland over *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133) and/or *Themeda triandra* very open tussock grassland with *Triodia pungens* very open hummock grassland.	Trees: *Acacia aptaneura, A. ayersiana* Shrubs: *Abutilon cunninghamii*, *A. fraseri* subsp. *fraseri*, *Acacia bivenosa* (wispy weeping form), *A. maitlandii*, *Dodonaea viscosa* subsp. *mucronata*, *Gossypium sturtianum* var. *sturtianum*, *Indigofera georgei*, *Isotropis* sp. Arid zone (G. Byrne 2775), *Pluchea dunlopii*, *Santalum lanceolatum.* Grasses: *Aristida lazaridis*, *Digitaria brownii*, *Enneapogon robustissimus*, *Eriachne tenuiculmis*, *Eulalia aurea*, *Themeda triandra, Triodia longiceps.* Herbs: *Polymeria ambigua.*	Very Good to Excellent	Current Sites: WA-REL13, WA-REL19, WA-REL20, WA-REL23 Historical Sites (Q): Q99, Q138, WAF03, WES22, WES23 Historical Sites (R): WES-H	0.0	0.0	27.4	57.4	84.8	AaTt (part unit equivalent: where mapped across drainages with *Eucalyptus xerothermica* and/or '*Acacia aneura*' and *E. trivalva*)
D12	ExEvMbMgANlTHtTloTp	*Eucalyptus xerothermica* and/or *E. victrix* scattered low trees to low open woodland over *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Androcalva luteiflora* open shrubland over *Themeda triandra* tussock grassland over *Triodia longiceps*, *T. pungens* very open hummock grassland.	Trees: *Eucalyptus socialis* subsp. *eucentrica*, *Ventilago viminalis.* Shrubs: *Abutilon amplum*, *Acacia bivenosa* (wispy/weeping form), *Gossypium sturtianum* var. *sturtianum*, *Santalum lanceolatum*, *Senna artemisioides* subsp. x *artemisioides.* Sedges: *Cyperus vaginatus.* Grasses: *Cymbopogon ambiguus*, *Digitaria brownii*, *Enneapogon robustissimus*, *Eulalia aurea*, *Triodia wiseana.*	Very Good	Current Sites: WA-REL07, WA- REL21	0.0	0.0	0.0	4.7	4.7	None

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
Broad Landform: Gullies and Gorges											
G1	AanApCfDpHARkPToTp	*Acacia 'aneura', A. pruinocarpa, Corymbia ferriticola* low open forest over *Dodonaea pachyneura* tall open shrubland over *Harnieria kempeana* subsp. *muelleri,* (*Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.	Trees: *Brachychiton acuminatus, Eucalyptus leucophloia subsp. leucophloia.* Shrubs: *Dodonaea petiolaris, Eremophila latrobei* subsp. *latrobei, E.* sp. Hamersley Range (K. Walker KW 136), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708), *Sida* sp. Shovelanna Hill (S. van Leeuwen 3842). Grasses: *Aristida burbidgeae*, *Themeda triandra.* Herbs: *Cheilanthes austrotenuifolia*, *C. brownii*, *Lobelia heterophylla* subsp. *pilbarensis.*	Very Good	Current Sites: WNG-REL10 Historical Sites (R): SWH07	4.8	0.0	0.0	0.0	4.8	None
G2	AanCALcCfCAPmPToERImARbTp	*Acacia 'aneura', Callitris columellaris* and/or *Corymbia ferriticola* low woodland *over Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland over *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses.	Trees: *Ficus brachypoda.* Shrubs: *Eremophila* sp. Hamersley Range (K. Walker KW 136), *Grevillea saxicola, Olearia stuartii, Pilbara trudgenii.* Sedges: *Cyperus cunninghamii* subsp. *cunninghamii.* Grasses: *Paspalidium constrictum*, *Themeda* sp. Mt Barricade (M.E. Trudgen 2471). Herbs: **Bidens bipinnata*, *Cheilanthes austrotenuifolia*, *C. brownii.*	Very Good	Current Sites: WA-REL10, WA-REL12, WNG-REL04, WNG-REL12, WNG-REL14, WNG-REL16, WNG-REL25, WNG-REL26, WNG-REL30	7.2	1.7	0.0	3.5	12.4	AaPoTp (part unit equivalent: where mapped across gorge habitats with *Callitris* dominant)
G3	CfAmoTHtTp	*Corymbia ferriticola* low open woodland over *Acacia monticola* tall open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses.	Trees: *Acacia aptaneura, A. catenulata* subsp. *occidentalis, Ficus brachypoda.* Shrubs: *Acacia hamersleyensis, A. maitlandii, Capparis mitchellii, Clerodendrum floribundum* var. *angustifolium, Dodonaea pachyneura, D. viscosa* subsp. *mucronata, Gastrolobium grandiflorum, Gossypium robinsonii, Harnieria kempeana* subsp. *muelleri, Indigofera gilesii, Olearia stuartii, Santalum lanceolatum.* Herbs: *Cheilanthes brownii.* Grasses: *Aristida burbidgeae, Cymbopogon ambiguus, Eriachne mucronata, Triodia* sp. Mt Ella (M.E. Trudgen 12739).	Excellent	Current Sites: (R): WA-REL16 Historical Sites (R): WAF-RCBA, WAF-RCBC	0.0	0.0	2.2	0.0	2.2	None
Broad Landform: Clay Plains and Stony Plains											
P1	AanAayApTvTp	*Acacia 'aneura', A. ayersiana, A. pruinocarpa* low open woodland over *Triodia vanleeuwenii, T. pungens* open hummock grassland.	Trees: *Acacia catenulata* subsp. *occidentalis.* Shrubs: *Acacia bivenosa, A. maitlandii, Anthobolus leptomerioides, Eremophila forrestii* subsp. *forrestii, Hibiscus burtonii, H. coatesii, Maireana villosa, Psydrax suaveolens, Sida* sp. L (A.M. Ashby 4202), *Solanum lasiophyllum.* Herbs: *Cheilanthes sieberi* subsp. *sieberi.* Grasses: *Aristida contorta, A. inaequiglumis, Cymbopogon obtectus, Panicum effusum.*	Very Good to Excellent	Historical Sites (Q): Q107, WAF04, WES09, WES10, WES24 Historical Sites (R): WAF-RCBB, WES-I	0.0	0.0	52.0	0.0	52.0	AaTb (assuming that *Triodia "basedowii"* refers to *T. vanleeuwenii*) AaTp (part unit equivalent: where mapped on stony elevated habitats; e.g. small sections at Deposit F North)
P2	AanAayERfoTm	*Acacia 'aneura', A. ayersiana* low open woodland over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia melvillei* open hummock grassland.	Trees: *Acacia pruinocarpa.* Shrubs: *Acacia maitlandii, Anthobolus leptomerioides, Eremophila galeata, E. phyllopoda* subsp. *obliqua, Senna glaucifolia, S. stricta.* Grasses: *Aristida contorta, A. ingrata, A. obscura, Digitaria ammophila, Triodia wiseana.*	Excellent	Current Sites: WNG53, WNG47, WNG50 Historical Sites (Q): Q121, WAF05, WAF07	0.0	0.0	47.3	0.0	47.3	None

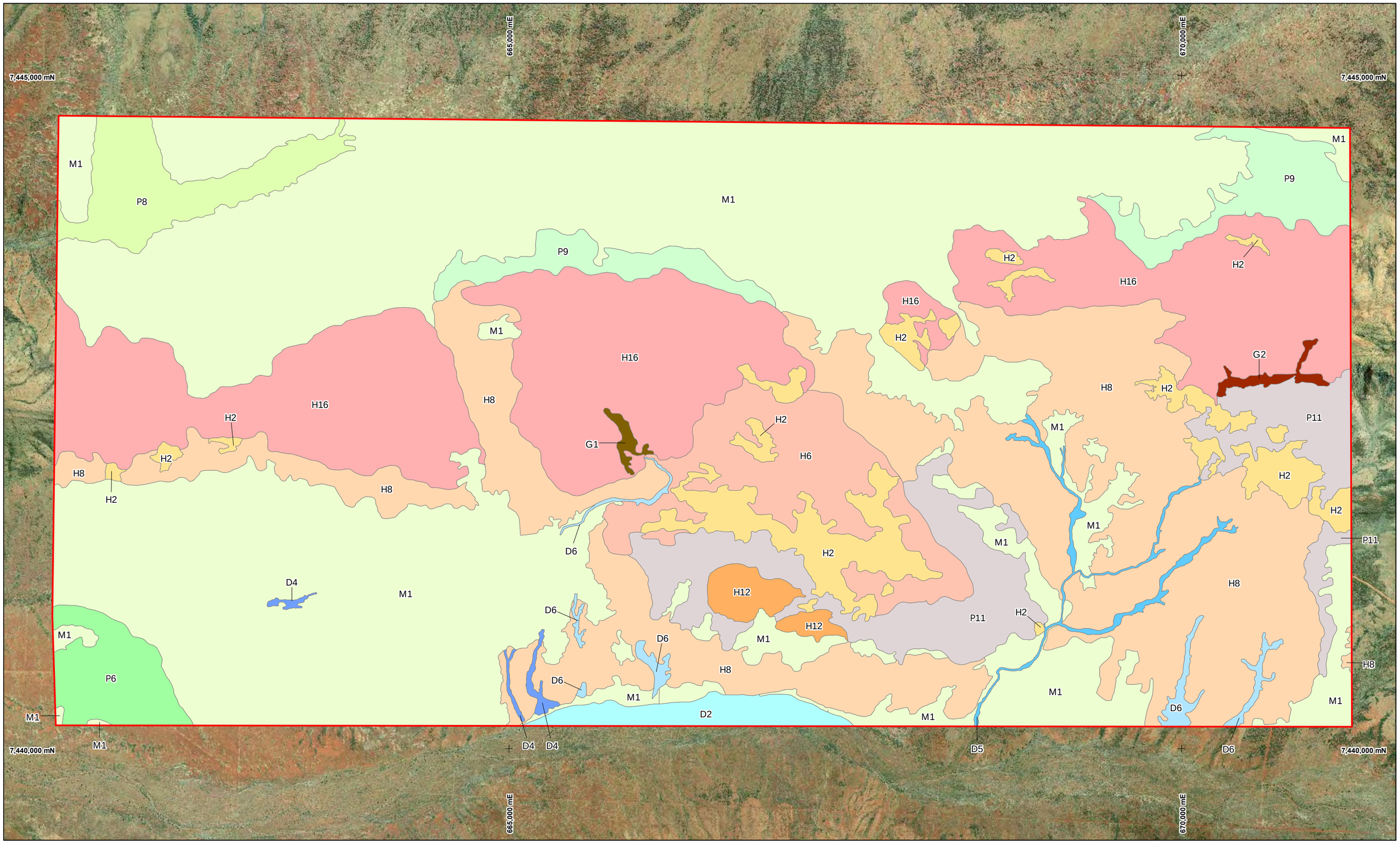
Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
P3	AanAcaApERfoTp	*Acacia 'aneura', A. catenulata* subsp. *occidentalis* and/or *Acacia pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland.	Trees: *Acacia rhodophloia.* Shrubs: *Acacia tetragonophylla, Anthobolus leptomerioides, Ptilotus obovatus* subsp. obovatus, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Eremophila caespitosa, E. fraseri* subsp. *fraseri, E. phyllopoda* subsp. *obliqua*, *Santalum lanceolatum, Sida ectogama.* Grasses: *Digitaria ammophila, Enneapogon robustissimus.* Herbs: *Cheilanthes sieberi* subsp. *sieberi, Chrysocephalum gilesii, Goodenia prostrata, Lepidium phlebopetalum.*	Very Good to Excellent	Current Sites: WNG02, WNG04, WNG05, WNG06, WNG32, WNG33, WNG44, WNG45, WNG46, WNG-REL15 Historical Sites (R): WA-R06, WA-R13, WA-R23, WA-R31, WA-R46, WA-R52, WA-R318	1831.5 (not mapped separately, within M1)	0.0	0.0	0.0	1831.8	AaTspp (part unit equivalent: where mapped on stony floodplain habitats) AaTp
P4	AanApAayTp	*Acacia 'aneura', A. pruinocarpa, A. ayersiana* woodland over *Triodia pungens* open hummock grassland.	Trees: *Corymbia deserticola* subsp. *deserticola.* Shrubs: *Androcalva luteiflora*, *Eremophila fraseri* subsp. *fraseri*, *Maireana planifolia*, *Seringia elliptica, Sida* sp. dark green fruit (S. van Leeuwen 2260), S. sp. L (A.M. Ashby 4202). Herbs: *Ptilotus helipteroides.* Grasses: *Amphipogon sericeus*, *Aristida contorta*, *A. holathera* var. *holathera*, *Cymbopogon obtectus*, *Enneapogon robustissimus*, *Panicum effusum.*	Very Good to Excellent	Historical Sites (Q): Q109, Q115	0.0	0.0	8.9	0.0	8.9	AaTp
P5	AanApERfoTp	*Acacia 'aneura'* and/or *A. pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland.	Trees: *Eucalyptus leucophloia* subsp. *leucophloia, E. gamophylla, E. xerothermica.* Shrubs: *Abutilon fraseri* subsp. *fraseri, Enchylaena tomentosa* var. *tomentosa, Hibiscus burtonii, Psydrax latifolia, P. suaveolens, Sida fibulifera, S.* sp. dark green fruits (S. van Leeuwen 2260), S. sp. L (A.M. Ashby 4202), *Teucrium teucriiflorum.* Grasses: *Aristida ingrata, Chrysopogon fallax, Panicum effusum.* Sedges: *Fimbristylis dichotoma.* Herbs: *Cheilanthes sieberi* subsp. *sieberi.*	Very Good to Excellent	Current Sites: WA29, WA-REL17, WNG78 Historical Sites (Q): Q145, WES02 Historical Sites (R): WES-M	0.0	29.4	0.0	10.3	39.7	AaTspp (part unit equivalent: where mapped on floodplain and low-lying areas with higher clay content and a dense canopy cover of *Acacia* '*aneura*') PsTp
P6	AanApTp	*Acacia 'aneura', A. pruinocarpa* low open woodland over *Triodia pungens* open hummock grassland.	Trees: *Grevillea berryana.* Shrubs: *Eremophila caespitosa, E. latrobei* subsp. *filiformis, Hibiscus burtonii, Sida* sp. Golden calyces glabrous (H.N. Foote 32). Grasses: *Eragrostis setifolia, E. xerophila.* Herbs: *Cheilanthes sieberi* subsp. *sieberi.*	Very Good to Excellent	Current Sites: WNG01, WNG03, WNG33 Historical Sites (R): SWH02, WRRA, WRRB	61.2 (plus part of M1 (1831.5 ha))	0.0	0.0	0.0	1839.2	AaTspp (part unit equivalent: where mapped on floodplain and low-lying areas with open canopy cover of *Acacia* '*aneura*') AaTp (part unit equivalent: where mapped over areas with sparse *Acacia 'aneura'* and dense spinifex (*Triodia pungens*) cover
P7	AanExERfoERloTHtTwTp	*Acacia* '*aneura*', *Eucalyptus xerothermica* scattered low trees to low open woodland over *Eremophila forrestii* subsp. *forrestii* and/or *E. longifolia* very open shrubland over *Themeda triandra* scattered tussock grasses over *Triodia wiseana* and/or *T. pungens* open hummock grassland.	Trees: *Hakea lorea* subsp. *lorea.* Shrubs: *Abutilon fraseri* subsp. *fraseri, A. sibirica* (linear form), *Eremophila cuneifolia, E. forrestii* subsp. *forrestii, Hibiscus burtonii, Psydrax latifolia, Ptilotus obovatus, Santalum lanceolatum, Senna artemisioides* subsp. *x artemisioides.* Grasses: *Bothriochloa ewartiana, Digitaria brownii, Enneapogon robustissimus, Themeda triandra.* Herbs: *Corchorus tridens, Peripleura obovata, Sclerolaena cornishiana.*	Excellent	Current Sites: WA17, WA26, WA-REL22 Historical Sites (Q): Q41, Q130, Q131	0.0	0.0	0.0	124.1	124.1	AaTt (part unit equivalent: where mapped on floodplains with *Eucalyptus xerothermica* and *Acacia* '*aneura*' as dominants).

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
P8	AanTHtARcTp	*Acacia 'aneura'* scattered tall shrubs over *Themeda triandra* scattered tussock grasses to tussock grassland with *Aristida contorta* scattered bunch grasses to bunch grassland over *Triodia pungens* scattered hummock grasses.	*Trees:* *Eucalyptus xerothermica.* *Shrubs:* *Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266), Dipteracanthus australasicus subsp. australasicus, Eremophila pusilliflora, Hibiscus burtonii, Indigofera georgei, Isotropis sp. Arid zone (G. Byrne 2775), Ptilotus obovatus, Senna glutinosa subsp. chatelainiana.* *Herbs:* *Gnephosis arachnoidea, Lepidium phlebopetalum, Roepera eichleri, Stenopetalum anfractum.* *Grasses:* *Chrysopogon fallax, Digitaria brownii.*	Excellent	Current Sites: WNG29, WNG31, WNG37, WNG86 Historical Sites (Q): Q51	88.9	11.2	0.0	0.0	100.1	None
P9	ApAwTvTp	*Acacia pruinocarpa* scattered tall shrubs over *A. wanyu* open shrubland over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.	Shrubs: *Ptilotus calostachyus, P. rotundifolius, Indigofera georgei, I. monophylla, Corchorus lasiocarpus* subsp. *parvus, Senna glutinosa* subsp. *pruinosa, S. glutinosa* subsp. x *luerssenii.* Grasses: *Amphipogon sericeus, Paraneurachne muelleri.*	Excellent	Current Sites: WNG39, WNG40, WNG41, WNG43	117.6	0.0	0.0	0.0	117.6	None
P10	ElAtenAdAmTw	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia tenuissima, A. dictyophleba, A. maitlandii* open shrubland over *Triodia wiseana* hummock grassland.	Trees: *Hakea chordophylla.* Shrubs: *Gossypium robinsonii, Indigofera monophylla, Senna artemisioides subsp. oligophylla, S. ferraria.* Grasses: *Cymbopogon ambiguus, Themeda triandra.*	Excellent	Current Sites: WA13 Historical Sites (Q): Q128	0.0	0.0	0.0	33.0	33.0	ApTssp (part unit equivalent: where mapped across the same polygon at Deposit H; and dominated by a mix of *Acacia* taxa and *Triodia wiseana*, together with overstorey of *Eucalyptus leucophloia* subsp. *leucophloia*)
P11	ElTspp	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia longiceps* and/or *T. wiseana, T. pungens* open hummock grassland.	Shrubs: *Acacia bivenosa, A. synchronicia, Sida echinocarpa, Sida* sp. Pilbara (A.A. Mitchell PRP 1543), *S.* sp. spiciform panicles (E. Leyland s.n. 14/8/90), *Tempetonia egena.* Herbs: *Sclerolaena densiflora, S. eriacantha.*	Excellent	Current Sites: WNG11, WNG12, WNG16, WNG42 Historic Sites: (R): WA-R11, WA-R24	220.5	0.0	0.0	0.0	220.5	None
P12	EgTpTv	*Eucalyptus gamophylla* low open mallee woodland over *Triodia pungens* and/or *T. vanleeuwenii* open hummock grassland.	Shrubs: *Acacia cowleana, Eremophila longifolia, E. forrestii* subsp. *forrestii, A. sibirica* (linear form), *Ptilotus rotundifolius, Senna* spp., *Sida cardiophylla.* Grasses: *Paraneurachne muelleri, Themeda triandra.*	Very Good	Current Sites: WA20, WNG61, WNG62 Historical Sites (Q): Q119, WES01, WES11, WES13	0.0	480.2	0.0	0.0	480.2	EgSggTb (part unit equivalent; where mapped over stony plains/floodplains (e.g. small sections of Deposit J/Mt Ella East and Deposit F North)
P13	ErEsMeTwTa	*Eucalyptus repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Melaleuca eleuterostachya* low open shrubland over *Triodia wiseana, T. angusta* very open hummock grassland.	Shrubs: *Abutilon cunninghamii, Acacia bivenosa, Salsola australis, Senna artemisioides* subsp. *oligophylla, Solanum phlomoides.* Grasses: *Enneapogon polyphyllus, Triodia longiceps.* Herbs: *Ptilotus clementii.*	Excellent	Current Sites: WA09, WA16, WA22 Historical Sites (Q): Q136	0.0	0.0	0.0	41.2	41.2	AmTw (part unit equivalent; where mapped over a small calcareous plain dominated by mallee Eucalypt taxa, *Melaleuca eleuterostachya* and *Triodia angusta*)
P14	EtErEsTspp	*Eucalyptus trivalva, E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Triodia wiseana, (T. angusta, T. pungens, T. longiceps*) open hummock grassland.	Trees: *Eucalyptus leucophloia* subsp. *leucophloia.* Tall Shrubs: *Acacia adsurgens, A. synchronicia, A. tenuissima, Dodonaea lanceolata* var. *lanceolata, Gossypium robinsonii, Maireana georgei, Sida echinocarpa.* Grasses: *Enneapogon caerulescens.*	Excellent	Current Sites: WNG48, WNG49, WNG55, WNG58, WNG64, WNG65, WA07, WA19, WA21, WA27 Historical Sites (Q): AR47, Q153	0.0	346.6	26.5	789.0	1162.1	AmTw (part unit equivalent; where mapped over a small calcareous plain dominated by mallee Eucalypt taxa, *Triodia angusta*, *T. pungens* and *T. longiceps*)
Broad Landform: Stony Hillslopes, Hillcrests and Foothills											
H1	AanAayElERfoERlaTpTw	*Acacia* '*aneura*' and/or *A. ayersiana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low woodland over *Eremophila forrestii* subsp. *forrestii*, *E. latrobei* subsp. *latrobei* scattered shrubs over *Triodia pungens*, *T. wiseana* very open hummock grassland.	Trees: *Acacia catenulata* subsp. *occidentalis, A. rhodophloia, Grevillea berryana.* Shrubs: *Abutilon cryptopetalum, Psydrax suaveolens, Ptilotus obovatus, Senna glaucifolia, Teucrium teucriiflorum.* Grasses: *Chrysopogon fallax, Enneapogon lindleyanus, Eriachne mucronata, Themeda triandra, Triodia vanleeuwenii.* Herbs: *Cheilanthes sieberi* subsp. *sieberi, *Malvastrum americanum, Ptilotus gomphrenoides, Streptoglossa bubakii, Vigna lanceolata* var. *lanceolata.*	Very Good	Current Sites: WA33, WA-REL06, WA-REL09, WA-REL11, WA-REL15 Historical Sites (Q): Q55, Q151	0.0	0.0	0.0	107.2	107.2	AaPoTp AaSaoTp (part unit equivalent; where mapped on stony elevated habitats with clay loam soils (i.e. not including areas of this unit mapped in drainages and on floodplains with higher clay content)

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
H2	AanERsppTp	*Acacia 'aneura'* low woodland over *Eremophila jucunda* subsp. *pulcherrima, E. phyllopoda* subsp. *obliqua*, (*E. cuneifolia, E. oppositifolia* subsp. *angustifolia*) open shrubland over *Triodia pungens* very open hummock grassland.	Shrubs: *Acacia pruinocarpa, Eremophila accrescens, E. forrestii subsp. forrestii, E latrobei subsp. latrobei, Hibiscus burtonii, H. sturtii var. truncatus, Lepidium pedicellosum, Maireana georgei, M. planifolia, M. villosa, Psydrax suaveolens, Ptilotus obovatus, Senna glutinosa subsp. x luerssenii, S. stricta, Sida ectogama.* Grasses: *Digitaria ammophila, Enneapogon lindleyanus, Triodia vanleeuwenii.*	Very Good	Current Sites: WA01, WNG-REL05, WNG-REL07, WNG17 Historic Sites: (R): WA-R03	155.3	0.0	0.0	0.0	155.3	None
H3	AcaElAanTp	*Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *A. 'aneura'*) low open forest over *Triodia pungens* open hummock grassland.	Trees: *Corymbia ferriticola* Shrubs: *Capparis mitchellii, Dodonaea pachyneura, Eremophila* sp. Hamersley Range (K. Walker KW 136), *Indigofera fractiflexa* subsp. *fractiflexa, Ptilotus obovatus.* Grasses: *Aristida burbidgeae, Enneapogon lindleyanus, Triodia* sp. Mt Ella (M.E. Trudgen 12739). Herbs: *Cheilanthes austrotenuifolia*, *Peripleura hispidula* var. *hispidula.*	Very Good	Current Sites: WNG-REL23, WNG-REL24, WNG-REL27, WNG71	0.0	25.2	0.0	0.0	25.2	None
H4	AiTw	*Acacia inaequilatera* scattered tall shrubs over *Triodia wiseana* open hummock grassland.	Trees: *Eucalyptus leucophloia* subsp. *leucophloia, Corymbia hamersleyana.* Shrubs: *Gossypium australe, Indigofera rugosa, Ptilotus rotundifolius, Senna glutinosa* subsp. *glutinosa, S. glutinosa* subsp. *pruinosa, Sida echinocarpa.* Grasses: *Cymbopogon ambiguus, Enneapogon caerulescens, Themeda* sp. Mt Barricade (M.E. Trudgen 2471). Herbs: *Boerhavia gardneri, Euphorbia careyi, Swainsona maccullochiana.*	Excellent	Current Sites: WA05, WA08, WA25 Historical Sites (Q): Q132, Q134, Q144, Q160	0.0	0.0	0.0	965.5	965.5	SggIrTw
H5	ChElAmHAgTpTw	*Corymbia hamersleyana, Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia pungens, T. wiseana* hummock grassland.	Trees: *Hakea chordophylla.* Shrubs: *Dodonaea lanceolata* var. *lanceolata, Gompholobium oreophilum, Mirbelia viminalis, Senna ferraria, Seringia elliptica, Sida* sp. Excedentifolia (J.L. Egan 1925). Grasses: *Themeda* sp. Mt Barricade (M.E. Trudgen 2471), *Triodia* sp. Mt Ella (M.E. Trudgen 12739).	Excellent	Current Sites: WNG72, WNG74, WNG77 Historical Sites (Q): AR49	0.0	196.4	0.0	0.0	196.4	None
H6	ElAbTp	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* open shrubland over *Triodia pungens* open hummock grassland.	Shrubs: *Eremophila jucunda* subsp. *pulcherrima*, *E. phyllopoda* subsp. *obliqua*, *E. platycalyx* subsp. *pardalota*, *Lepidium pedicellosum*, *Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90), *Senna ferraria*, *S. glutinosa* subsp. x *luerssenii.*	Excellent	Current Sites: WNG12, WNG24, WNG26, WNG36, WNG38 Historical Sites (R): WA-R10, WA-R25	153.9	0.0	0.0	0.0	153.9	None
H7	ElAmTvTp	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii* scattered shrubs over *Triodia vanleeuwenii, T. pungens* open hummock grassland.	Trees: *Eucalyptus gamophylla*, *Hakea chordophylla.* Shrubs: *Acacia tenuissima*, Gompholobium oreophilum, *Halgania gustafsenii* var. Mid West (G. Perry 370), *Senna* spp., *Seringia elliptica.* Grasses: *Eriachne lanata*, *Triodia wiseana.*	Excellent	Current Sites: WNG51, WNG52, WNG60 Historical Sites (Q): Q124, Q126, Q127	0.0	0.0	152.2	0.0	152.2	EllAmTssp SggTp ApTssp
H8	ElCdApTvTp	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia pruinocarpa* scattered tall shrubs over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.	Shrubs: *Acacia bivenosa*, *A. cowleana*, *A. pachyacra*, *A. tenuissima*, *A. trudgeniana*, *Hibiscus sturtii* var. *campylochlamys*, *Senna* spp., *Sida arenicola.* Herbs: *Tephrosia* sp. NW Eremaean (S. van Leeuwen et al. PBS 0356). Grasses: *Amphipogon sericeus.*	Excellent	Current Sites: WNG08, WNG13, WNG15, WNG18, WNG30, WNG56 Historical Sites (R): SWH04, WA-R05, WA-R08, WA-R16, WA-R17, WA-R30, WA-R48, WA-R49, WA-R53, WRRC, WRRD, WRRF	821.2	0.0	0.0	0.0	821.2	None

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
H9	ElCdEgTv	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland over *Triodia vanleeuwenii* open hummock grassland.	Trees: *Acacia pruinocarpa*, *Corymbia hamersleyana*, *Hakea chordophylla.* Shrubs: *Acacia adoxa* var. *adoxa, A. cowleana*, *A. dictyophleba*, *Gompholobium oreophilum*, *Halgania gustafsenii* var. Mid West (G. Perry 370), *Sida cardiophylla.* Grasses: *Amphipogon sericeus*, *Themeda triandra.*	Excellent	Current Sites: WNG54, WNG57, WNG76, WNG80, WNG81, WNG84 Historical Sites (Q): AR43, Q122, Q125, WAF06, WAF08	0.0	531.2	192.1	0.0	723.3	ApTspp: (broadly equivalent for the one intersecting polygon at Deposit F North, where mapped across low undulating hills with *Triodia vanleeuwenii* as an associated species) EllAmTspp (part unit equivalent: only where intersecting polygons at Deposit F North, where mapped across low undulating hills and dominated by *Eucalyptus gamophylla)* SggTp (part unit equivalent: only where mapped across low undulating hills at Deposit F North, dominated by *Eucalyptus gamophylla)*
H10	ElEgAmPlTvTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. gamophylla* low open mallee woodland over *Acacia maitlandii*, *Petalostylis labicheoides* open shrubland over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.	Trees: *Corymbia hamersleyana.* Shrubs: *Acacia hamersleyensis, A. hilliana, A. pyrifolia* var. *pyrifolia, A. tenuissima, Hakea chordophylla, Corchorus lasiocarpus* subsp. *parvus, Gompholobium oreophilum, Halgania gustafsenii* var. Mid West (G. Perry 370), *Hibiscus sturtii* var. *campylochlamys, Mirbelia viminalis, Ptilotus rotundifolius, Senna ferraria, S. glutinosa* subsp. *glutinosa, Seringia elliptica, Sida* sp. Excedentifolia (J.L. Egan 1925). Grasses: *Eriachne mucronata, Triodia pungens.*	Excellent	Current Sites: WA02, WA03, WA04, WA11, WA14, WA15, WA24, WA28, WA32, WA34 Historical Sites (Q): Q37, Q40, Q140, Q142, Q147, Q149	0.0	0.0	0.0	1141.5	1141.5	AmTw (part unit equivalent: where mapped on hillcrests at Deposit H, and dominated by *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia maitlandii* and *Triodia wiseana*) ApTssp (part unit equivalent: where mapped on hillcrests) EllAmTssp EllSggTp (part unit equivalent: where mapped on hills at Deposit H - with no *Acacia marramamba*) SggTp (part unit equivalent: where mapped at Deposit F North on high hillcrests/hillslopes with *Eucalyptus gamophylla*)
H11	ElEkAhTvTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. kingsmillii* low open mallee woodland over *Acacia hamersleyensis* scattered tall shrubs over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.	Trees: *Eucalyptus gamophylla.* Shrubs: *Hakea chordophylla, Halgania gustafsenii* var. Mid West (G. Perry 370), *Mirbelia viminalis, Scaevola* sp. Mt Bruce (M.E. Trudgen 1333), *Senna ferraria.* Grasses: *Eriachne lanata, E. mucronata, Triodia pungens.*	Excellent	Current Sites: WA10, WA18, WA35, WA37	0.0	0.0	0.0	76.9	76.9	None
H12	ElERfTpTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eremophila fraseri* subsp. *fraseri* low open shrubland over *Triodia pungens* and/or *T. wiseana* open hummock grassland.	Shrubs: *Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618), *Acacia marramamba*, *Corchorus crozophorifolius*, *C. lasiocarpus* subsp. *parvus*, *Heliotropium chrysocarpum*, *Melhania oblongifolia*, *Indigofera monophylla.* Grasses: *Enneapogon lindleyanus.* Herbs: *Boerhavia coccinea, Ptilotus clementii, Rhynchosia minima.*	Excellent	Current Sites: WNG14, WNG20, WNG22 Historic Sites: (R): WA-R04, WA-R50, WA-R51	27.6	0.0	0.0	0.0	27.6	None
H13	ElEsppTwTsm	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eucalyptus* spp. low open mallee woodland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.	Trees: *Corymbia hamersleyana.* Shrubs: *Corchorus lasiocarpus* subsp. *parvus, Goodenia stobbsiana, Hakea chordophylla, Scaevola* sp. Mt Bruce (M.E. Trudgen 1333), *Seringia elliptica, Sida* sp. Excedentifolia (J.L. Egan 1925). Grasses: *Amphipogon sericeus, Eriachne mucronata.*	Excellent	Current Sites: WNG83, WNG85, WNG88	0.0	98.0	0.0	0.0	98.0	None

Alpha-numeric Code	Vegetation Code	Vegetation Type	Associated Species	Condition Ranking	Sampling Sites	Area in Western Hill (ha)	Area in Deposit J / Mt Ella East (ha)	Area in Deposit F North (ha)	Deposit H (ha)	Total Area (ha)	Equivalent Ecologia (2012) vegetation unit
H14	ElTbrTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia brizoides*, (*T. wiseana*) open hummock grassland.	Tall shrubs: *Acacia pruinocarpa.* Shrubs: *Acacia bivenosa, A. pachyacra, Hibiscus coatesii.* Low shrubs: *Sida* sp. Excedentifolia (J.L. Egan 1925). Grasses: *Eriachne mucronata*, *Themeda* sp. Mt Barricade (M.E. Trudgen 2471).	Excellent	Current Sites: WA12, WA23, WA31 Historical Sites (Q): Q152	0.0	0.0	0.0	80.7	80.7	None
H15	ElTpTw	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* and/or *T. wiseana* open hummock grassland.	Trees: *Hakea chordophylla, E. gamophylla.* Shrubs: *Acacia pachyacra, Dodonaea coriacea, Senna glutinosa* subsp. *glutinosa, S. glutinosa* subsp. x luerssenii, *Ptilotus obovatus.* Grasses: *Amphipogon sericeus.*	Excellent	Current Sites: WNG59, WNG63, WNG66, WNG67, WNG68, WNG73, WNG75, WNG79, WNG87	0.0	706.0	0.0	0.0	706.0	None
H16	ElTvTpTsm	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia vanleeuwenii, T. pungens* and/or *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.	Shrubs: *Acacia bivenosa, A. marramamba, A. pruinocarpa, Corchorus lasiocarpus* subsp. *parvus, Hakea chordophylla, Ptilotus rotundifolius, Senna ferraria, S. glutinosa* subsp. *glutinosa, S. glutinosa* subsp. *pruinosa.* Grasses: *Amphipogon sericeus, Eriachne mucronata, Paraneurachne muelleri, Themeda* sp. Mt Barricade (M.E. Trudgen 2471). Herbs: *Peripleura virgata.*	Excellent	Current Sites: WNG19, WNG21, WNG23, WNG25, WNG27, WNG28, WNG34, WNG36, WNG-REL18 Historical Sites (R): SWH03, SWH05, SWH06, SWH08	748.9	0.0	0.0	0.0	748.9	Tp (part unit equivalent; where mapped on hillcrests and hillslopes)
Mosaics											
M1	AanApTp/AanAcaApERfoTp	Mosaic: as per P6 and P3	Mosaic: as per P6 and P3	Very Good to Excellent		1831.5	0.0	0.0	0.0	1831.5	See individual units above.
M2	AiTw/EtErEsTspp	Mosaic: as per H4 and P14	Mosaic: as per H4 and P14	Excellent	Historical Sites (Q): Q156	0.0	0.0	0.0	258.1	258.1	SggIrTw (for the AiTw component of the mosaic only, part unit equivalent: where mapped on areas of basalt dominated by *Acacia inaequilatera* and *Triodia wiseana*, with *Senna* spp. and *Indigofera rugosa* as associated species)



Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Western Hill study area

N

0 0.5 1
kilometres

West Angelas Beyond 2020
Western Hill
Vegetation Mapping

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:25,000 @ A3

7,445,000 mN
690,000 mE
695,000 mE
7,440,000 mN
H14 D11 D10 H1 H1 D11 H1 H14 D1 H1 H14 H1
H10 H10 H10 H10 D11
P7 P5 P5 P5 H1 H14
H14 P14 P13 P7 H14 H1
M2 P13 D11
G2 H4 H4 P13 P13 H1
H1 H14 P13
D8 P14
P10 H11 H1 H1
H11 H11 H1 H1
H1 H11 P14 H4
H10 H10
G2 H1
P7 H14 H4
H4 P14 D12 P7
P14 H4 D11
P7 H4
P7 H4
D11 P14 P5
7,440,000 mN
690,000 mE
695,000 mE

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit H study area

N

0 750 1,500
metres

West Angelas Beyond 2020
Deposit H
Vegetation Mapping

Biota Environmental Sciences

Author: PL de Kock | Drawn: M Robinson | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:30,000 @ A3

7,435,000 mN
680,000 mE
685,000 mE
7,435,000 mN
P5
Disturbed
P8
P5
P8
P5
G2
P12
H3
G2
H15
H13
P12
H15
H3
H15
G2
H13
H15
H3
H3
H15
H15
D3
H15
P14
H9
7,430,000 mN
H9
H5
H3
H15
H9
H9
P5
D3
D3
7,430,000 mN
675,000 mE
680,000 mE
685,000 mE

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit J/Mt Ella study area

N

0 750 1,500
metres

West Angelas Beyond 2020
Deposit J/Mt Ella
Vegetation Mapping

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:32,500,000 @ A3

688,000 mE
690,000 mE
692,000 mE
7,436,000 mN
7,434,000 mN
G3
P1
D7
D9
H7
H9
P14
P2
D11
P4
Disturbed

Location Map

KARRATHA
Map Area
KALGOORLIE
PERTH

Deposit F North study area

N

0 250 500
metres

West Angelas Beyond 2020
Deposit F North
Vegetation Mapping

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:15,000 @ A3

West Angelas Beyond 2020 Vegetation Mapping Descriptions

D1	EcEvExPlApy-GOsTHtCYaEUaARla	*Eucalyptus camaldulensis* subsp. *refulgens* open woodland over *E. victrix*, (*E. xerothermica*) low open woodland over *Petalostylis labicheoides, Acacia pyrifolia* var. *pyrifolia* tall open shrubland over *Gossypium sturtianum* var. *sturtianum* open shrubland over *Themeda triandra, Cymbopogon ambiguus, Eulalia aurea, Aristida lazaridis* open tussock grassland.
D2	EvAcTErTHtTp	*Eucalyptus victrix* low open woodland over *Acacia citrinoviridis* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) scattered low shrubs over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses to very open hummock grassland.
D3	ExChPlApyTErTHtTp	*Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides, Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses.
D4	AanAcaApTp	*Acacia 'aneura'*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa* low woodland over *Triodia pungens* very open hummock grassland.
D5	ChPlAmoTErTHtTp	*Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Acacia monticola* tall shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.
D6	ChCdAanPlTp	*Corymbia hamersleyana* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia 'aneura'*, *Petalostylis labicheoides* tall open shrubland over *Triodia pungens* open hummock grassland.
D7	ChAmoTHtTp	*Corymbia hamersleyana* low open woodland over *Acacia monticola* tall shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland.
D8	ElChPlGOrAmoTHtTp	*Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, Gossypium robinsonii, *Acacia monticola* open shrubland over *Themeda triandra* tussock grassland over *Triodia pungens* open hummock grassland.
D9	EtTp	*Eucalyptus trivalva* low mallee woodland over *Triodia pungens* very open hummock grassland.
D10	ExAanANlISsTHt	*Eucalyptus xerothermica*, *Acacia 'aneura'* low woodland over *Androcalva luteiflora* open shrubland over *Isotropis* sp. Arid zone (G. Byrne 2775) low open shrubland over *Themeda triandra* tussock grassland.
D11	ExAanEtPlANlEUsTHtTp	*Eucalyptus xerothermica* and/or *Acacia 'aneura'* low open woodland over *E. trivalva* low open mallee woodland over *Petalostylis labicheoides*, *Androcalva luteiflora* open shrubland over *Eulalia* sp. (Three Rivers Station, B.Forsyth AQ6789133) and/or *Themeda triandra* very open tussock grassland with *Triodia pungens* very open hummock grassland.
D12	ExEvMbMgANlTHtTloTp	*Eucalyptus xerothermica* and/or *E. victrix* scattered low trees to low open woodland over *Melaleuca bracteata*, (*M. glomerata*) tall open shrubland over *Androcalva luteiflora* open shrubland over *Themeda triandra* tussock grassland over *Triodia longiceps*, *T. pungens* very open hummock grassland.
G1	AanApCfDpHARkPToTp	*Acacia 'aneura'*, *A. pruinocarpa*, *Corymbia ferriticola* low open forest over *Dodonaea pachyneura* tall open shrubland over *Harnieria kempeana* subsp. *muelleri*, (*Ptilotus obovatus*) low shrubland over *Triodia pungens* very open hummock grassland.
G2	AanCALcCfCAPmPToERI-mARbTp	*Acacia 'aneura'*, *Callitris columellaris* and/or *Corymbia ferriticola* low woodland over *Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland over *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses.
G3	CfAmoTHtTp	*Corymbia ferriticola* low open woodland over *Acacia monticola* tall open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* scattered hummock grasses.

Vegetation Descriptions for
West Angelas
Vegetation Maps

Biota Environmental Sciences

West Angelas Beyond 2020 Vegetation Mapping Descriptions

P1	AanAayApTvTp	*Acacia 'aneura'*, *A. ayersiana, A. pruinocarpa* low open woodland over *Triodia vanleeuwenii*, *T. pungens* open hummock grassland.
P2	AanAayERfoTm	*Acacia 'aneura'*, *A. ayersiana* low open woodland over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia melvillei* open hummock grassland.
P4	AanApAayTp	*Acacia 'aneura'*, *A. pruinocarpa, A. ayersiana* woodland over *Triodia pungens* open hummock grassland.
P5	AanApERfoTp	*Acacia 'aneura'* and/or *A. pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland.
P6	AanApTp	*Acacia 'aneura'*, *A. pruinocarpa* low open woodland over *Triodia pungens* open hummock grassland.
P7	AanExERfoERloTHtTwTp	*Acacia 'aneura'*, *Eucalyptus xerothermica* scattered low trees to low open woodland over *Eremophila forrestii* subsp. *forrestii* and/or *E. longifolia* very open shrubland over *Themeda triandra* scattered tussock grasses over *Triodia wiseana* and/or *T. pungens* open hummock grassland.
P8	AanTHtARcTp	*Acacia 'aneura'* scattered tall shrubs over *Themeda triandra* scattered tussock grasses to tussock grassland with *Aristida contorta* scattered bunch grasses to bunch grassland over *Triodia pungens* scattered hummock grasses.
P9	ApAwTvTp	*Acacia pruinocarpa* scattered tall shrubs over *A. wanyu* open shrubland over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.
P10	ElAtenAdAmTw	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia tenuissima*, *A. dictyophleba, A. maitlandii* open shrubland over *Triodia wiseana* hummock grassland.
P11	ElTspp	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia longiceps* and/or *T. wiseana*, *T. pungens* open hummock grassland.
P12	EgTpTv	*Eucalyptus gamophylla* low open mallee woodland over *Triodia pungens* and/or *T. vanleeuwenii* open hummock grassland.
P13	ErEsMeTwTa	*Eucalyptus repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Melaleuca eleuterostachya* low open shrubland over *Triodia wiseana*, *T. angusta* very open hummock grassland.
P14	EtErEsTspp	*Eucalyptus trivalva*, *E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Triodia wiseana*, (*T. angusta, T. pungens, T. longiceps*) open hummock grassland.

West Angelas Beyond 2020 Vegetation Mapping Descriptions

H1	AanAayElERfoERlaTpTw	*Acacia 'aneura'* and/or *A. ayersiana*, (*Eucalyptus leucophloia* subsp. *leucophloia*) low woodland over *Eremophila forrestii* subsp. *forrestii*, *E. latrobei* subsp. *latrobei* scattered shrubs over *Triodia pungens*, *T. wiseana* very open hummock grassland.
H2	AanERsppTp	*Acacia 'aneura'* low woodland over *Eremophila jucunda* subsp. *pulcherrima*, *E. phyllopoda* subsp. *obliqua*, (*E. cuneifolia, E. oppositifolia* subsp. *angustifolia*) open shrubland over *Triodia pungens* very open hummock grassland.
H3	AcaElAanTp	*Acacia catenulata* subsp. *occidentalis*, (*Eucalyptus leucophloia* subsp. *leucophloia*, *A. 'aneura'*) low open forest over *Triodia pungens* open hummock grassland.
H4	AiTw	*Acacia inaequilatera* scattered tall shrubs over *Triodia wiseana* open hummock grassland.
H5	ChElAmHAgTpTw	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia pungens*, *T. wiseana* hummock grassland.
H6	ElAbTp	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* open shrubland over *Triodia pungens* open hummock grassland.
H7	ElAmTvTp	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia maitlandii* scattered shrubs over *Triodia vanleeuwenii*, *T. pungens* open hummock grassland.
H8	ElCdApTvTp	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Acacia pruinocarpa* scattered tall shrubs over *Triodia vanleeuwenii* and/or *T. pungens* open hummock grassland.
H9	ElCdEgTv	*Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland over *Triodia vanleeuwenii* open hummock grassland.
H10	ElEgAmPlTvTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. gamophylla* low open mallee woodland over *Acacia maitlandii*, *Petalostylis labicheoides* open shrubland over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.
H11	ElEkAhTvTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *E. kingsmillii* low open mallee woodland over *Acacia hamersleyensis* scattered tall shrubs over *Triodia vanleeuwenii*, *T. wiseana* open hummock grassland.
H12	ElERfTpTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Eremophila fraseri* subsp. *fraseri* low open shrubland over *Triodia pungens* and/or *T. wiseana* open hummock grassland.
H13	ElEsppTwTsm	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eucalyptus* spp. low open mallee woodland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.
H14	ElTbrTw	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia brizoides*, (*T. wiseana*) open hummock grassland.
H15	ElTpTw	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* and/or *T. wiseana* open hummock grassland.

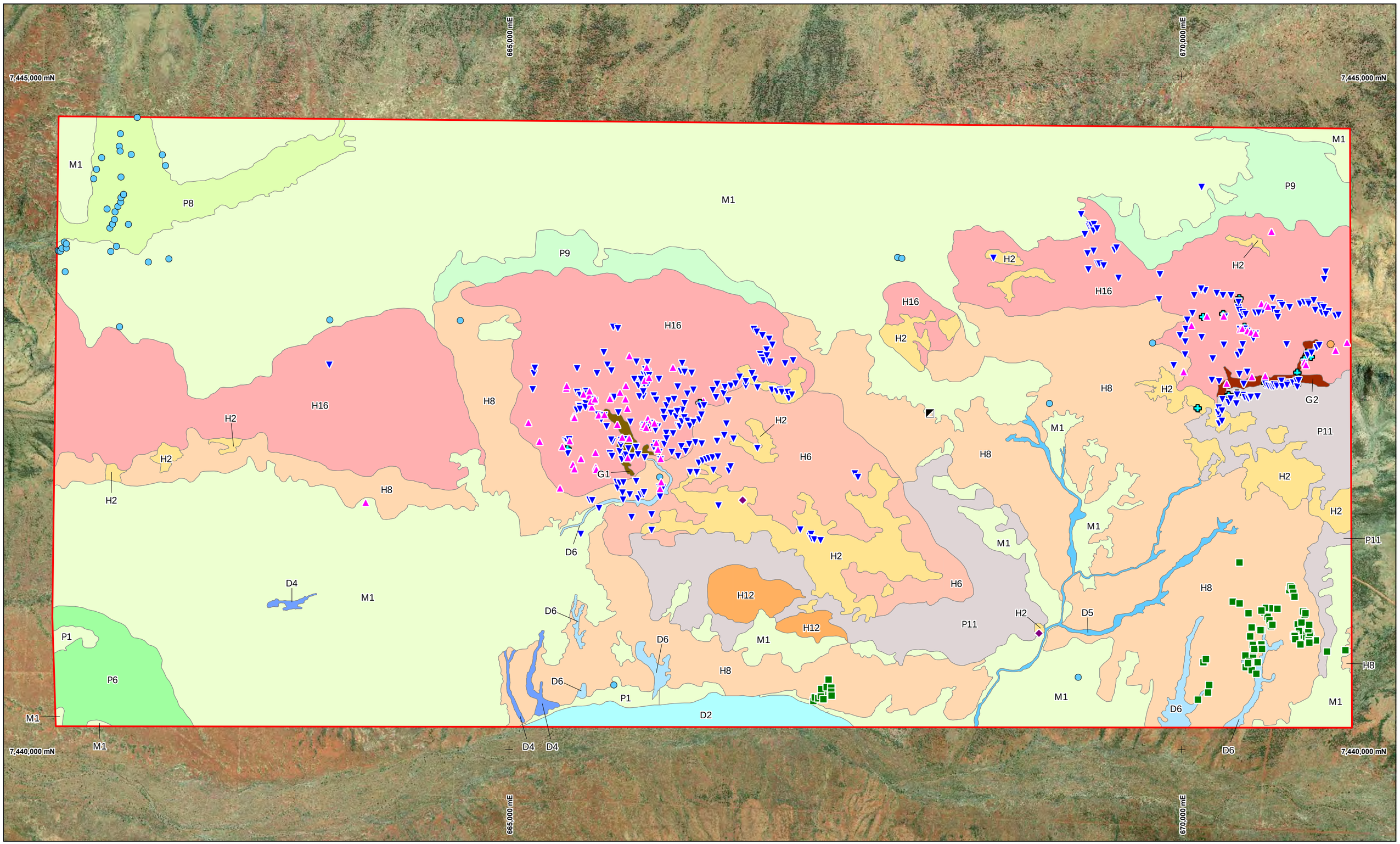
Vegetation Descriptions for
West Angelas
Vegetation Maps

Biota Environmental Sciences

H16	ElTvTpTsm	*Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia vanleeuwenii*, *T. pungens* and/or *T.* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland.
M1	AanApTp/AanAcaApERfoTp	Mosaic: *Acacia 'aneura'*, *A. pruinocarpa* low open woodland over *Triodia pungens* open hummock grassland/*Acacia 'aneura'*, *A. catenulata* subsp. *occidentalis* and/or *Acacia pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland.
M2	AiTw/EtErEsTspp	Mosaic: *Acacia 'aneura'*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa* low woodland over *Triodia pungens* very open hummock grassland/*Eucalyptus trivalva*, *E. repullulans, E. socialis* subsp. *eucentrica* low open mallee woodland over *Triodia wiseana*, (*T. angusta*, *T. pungens*, *T. longiceps*) open hummock grassland.

Appendix 9

Maps and Locations of Flora of Conservation Significance



Location Map



Western Hill study area

Priority Flora Species

- ◆ ***Aristida jerichoensis*** var. ***subspinulifera***
- ▼ ***Eremophila*** sp. Hamersley Range (K. Walker KW 136)
- ✚ ***Oxalis*** sp. Pilbara (M.E. Trudgen 12725)
- ▲ ***Solanum kentrocaule***
- ● ***Eremophila pusilliflora***
- ● ***Lepidium catapycnon***
- ■ ***Isotropis parviflora***
- ◩ ***Oleria mucronata***

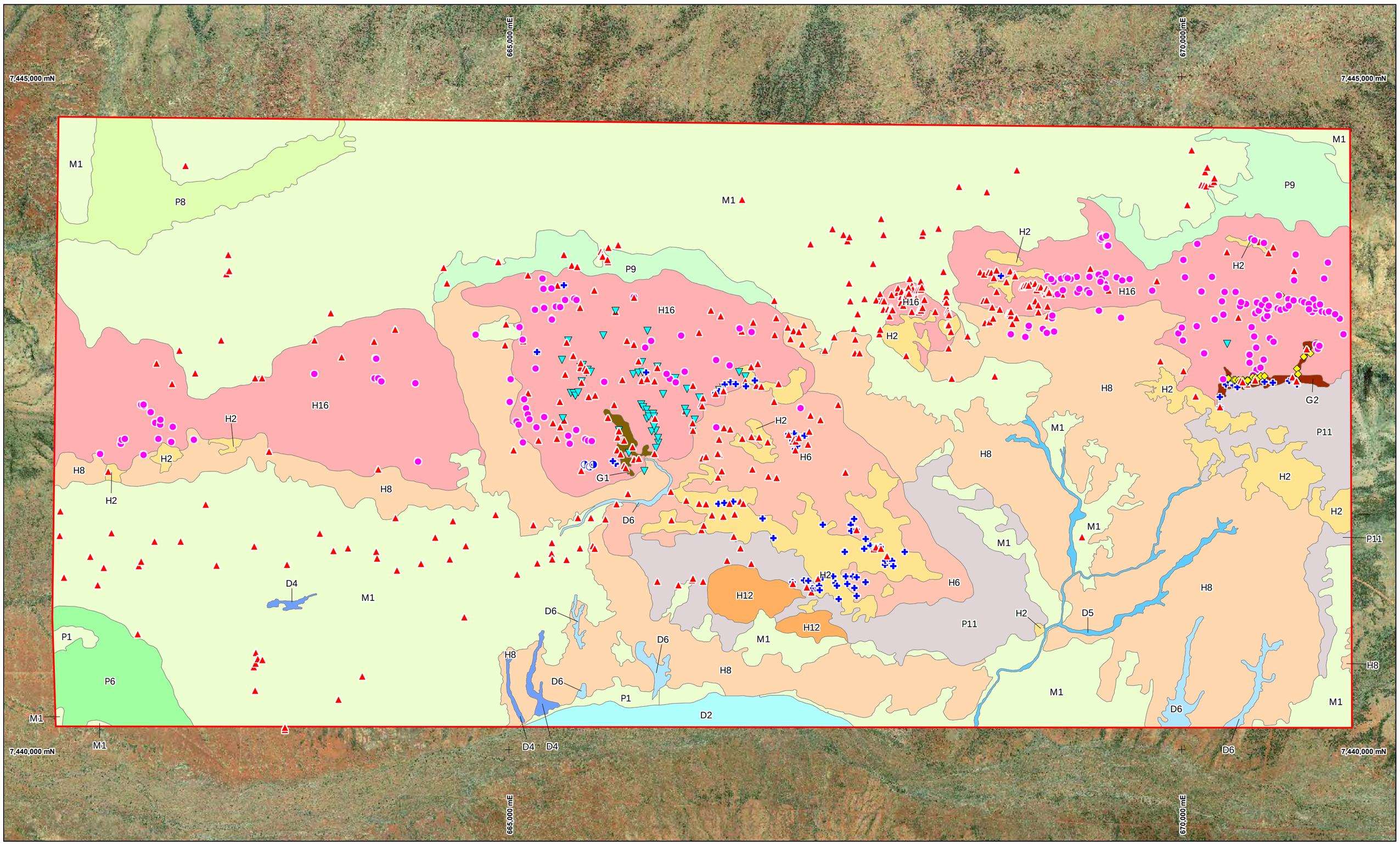
N

0 0.5 1
kilometres

West Angelas Beyond 2020
Western Hill Priority Flora
Map 1 of 2

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Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:25,000 @ A3



Location Map



Western Hill study area

Priority Flora Species

- ***Rhagodia*** sp. Hamersley (M. Trudgen 17794)
- ***Hibiscus*** sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- ***Triodia*** sp. Mt Ella (M.E. Trudgen 12739)
- ***Grevillea saxicola***
- ***Pilbara trudgenii***
- ***Indigofera gilesii***

N

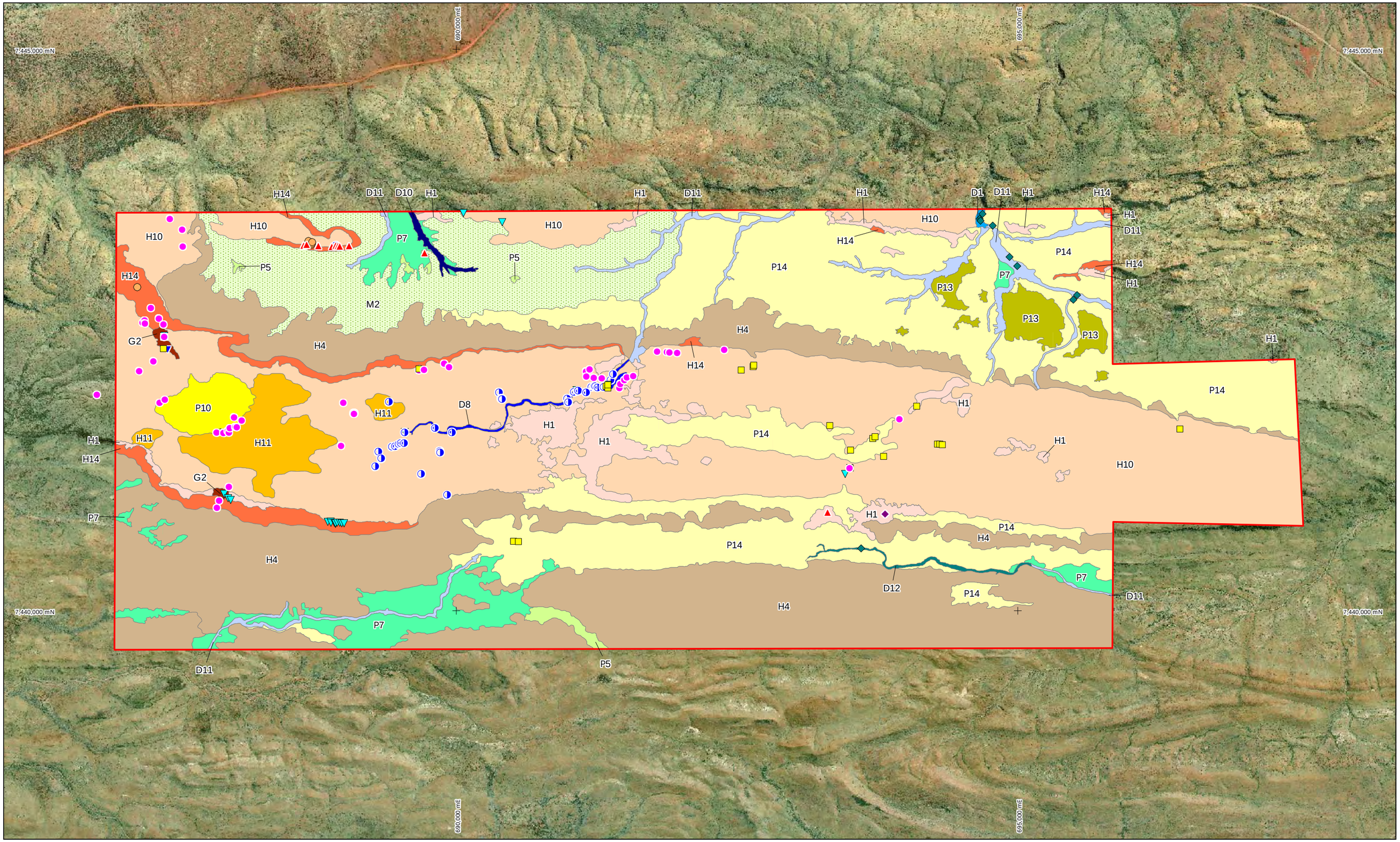
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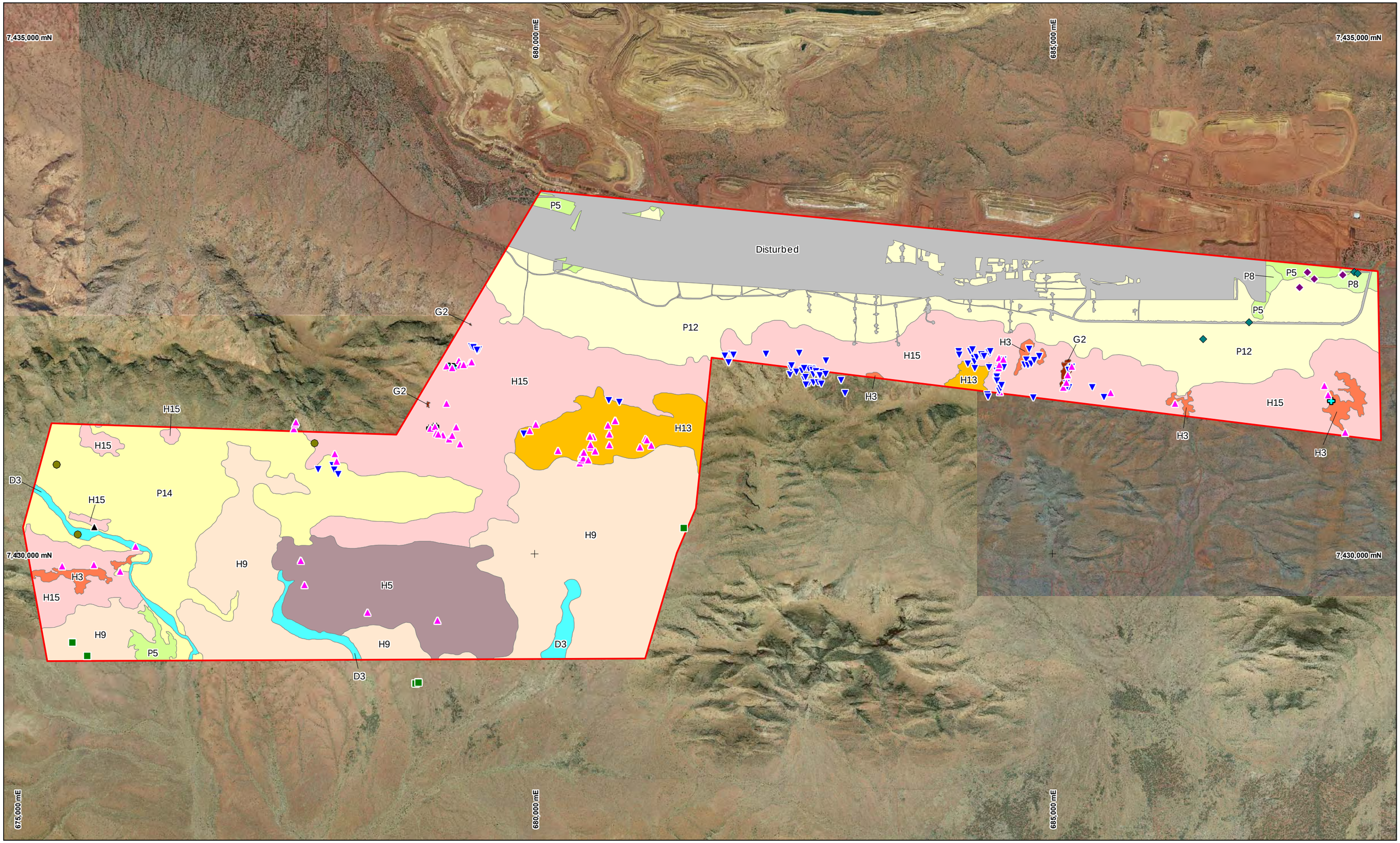
kilometres

West Angelas Beyond 2020
Western Hill Priority Flora
Map 2 of 2

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:25,000 @ A3


690,000 mE
695,000 mE
7,445,000 mN
7,440,000 mN
H14
D11
D10
H1
H10
P7
P5
M2
H4
G2
P10
H11
D8
P14
P13
D1
D12
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H10
H14
D11
P7
P5
H4
P14
H1
H10
H14
D11
P7
P13
H1
H10
H14
D11
P7
P5
H4
P14
H1
H10
H14
D11
P7
P5
H4
P14
H1
H10
H14
D11
P7
P5
H4
P14



Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit J/Mt Ella study area

Priority Flora Species

- ***Rostellularia adscendens*** var. ***latifolia***
- ***Oxalis*** sp. Pilbara (M.E. Trudgen 12725)
- ***Solanum kentrocaule***
- ***Aristida lazaridis***
- ***Isotropis parviflora***
- ***Eremophila*** sp. Hamersley Range (K. Walker KW 136)
- ***Sida*** sp. Hamersley Range (K. Newbey 10692)
- ***Aristida jerichoensis*** var. ***subspinulifera***

N

0 750 1,500
metres

West Angelas Beyond 2020
Deposit J / Mt Ella Priority Flora
Map 1 of 2

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:32,500,000 @ A3

7,435,000 mN
680,000 mE
685,000 mE
7,435,000 mN
P5
Disturbed
P8
P5
P8
P5
G2
P12
H15
H3
G2
P12
G2
H15
H15
H13
H13
H15
H3
H3
H15
H3
D3
P14
H15
H9
7,430,000 mN
H3
H5
H15
H9
H9
P5
D3
D3
7,430,000 mN
675,000 mE
680,000 mE
685,000 mE

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit J/Mt Ella study area

Priority Flora Species

- ▲ ***Rhagodia*** sp. Hamersley (M. Trudgen 17794)
- ▽ ***Hibiscus*** sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- ● ***Triodia*** sp. Mt Ella (M.E. Trudgen 12739)
- ◑ ***Indigofera gilesii***
- ◇ ***Pilbara trudgenii***
- ■ ***Acacia bromilowiana***
- ■ ***Acacia effusa***

N

0 750 1,500
metres

West Angelas Beyond 2020
Deposit J / Mt Ella Priority Flora
Map 2 of 2

Biota Environmental Sciences

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688,000 mE
690,000 mE
692,000 mE
7,436,000 mN
7,434,000 mN
G3
P1
H9
H7
D7
D9
P14
P2
Disturbed
D11
P4

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit F North study area

Priority Flora Species

- ***Triodia*** sp. Mt Ella (M.E. Trudgen 12739)
- ***Goodenia nuda***
- ***Indigofera gilesii***
- ***Acacia bromilowiana***
- ***Aristida lazaridis***
- ***Rhagodia*** sp. Hamersley (M. Trudgen 17794)
- ***Hibiscus*** sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- ***Sida*** sp. Barlee Range (S. van Leeuwen 1642)
- ***Aristida jerichoensis*** var. ***subspinulifera***

N

0 250 500
metres

West Angelas Beyond 2020
Deposit F North Priority Flora

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:15,000 @ A3

NB. Records shaded blue are duplicate records at same location (not included in counts); records shaded orange are from outside the current study area.

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P2	Poaceae	*Aristida lazaridis*	Deposit F North	Opp Coll	691400	7435729		100	Biota (2014a)
P2	Poaceae	*Aristida lazaridis*	Deposit H	WAREL-21	693605	7440554	0.1		Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	WAREL-14	694661	7443489	1	50	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	694670	7443472		10	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	694686	7443534		3	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	694779	7443428		100	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	694928	7443150		20	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Quadrat	694996	7443069		5	Ecologia (2013)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	695496	7442770		30	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit H	Opp Coll	695529	7442809		10	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit J/Mt Ella E	WNG62	686457	7432071		8	Current study (Phase 1, 2018)
P2	Poaceae	*Aristida lazaridis*	Deposit J/Mt Ella E	Opp Coll	686901	7432234		1	Current Study (Phase 2, 2019)
P2	Poaceae	*Aristida lazaridis*	Deposit J/Mt Ella E	Opp Coll	687915	7432718		20	Current study (Phase 1, 2018)
P2	Poaceae	*Aristida lazaridis*	Deposit J/Mt Ella E	Opp Coll	687949	7432705		40	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661651	7443706		10	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661658	7443702		2	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661665	7443702		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661678	7443723		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661695	7443768		10	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661702	7443549		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661710	7443724		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661711	7443757		3	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661914	7444239		6	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661935	7444308		3	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	661972	7444396		8	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662013	7444015		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662034	7443872		6	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662041	7443698		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662054	7443903		29	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662069	7443935		50	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662072	7443994		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662082	7443738		9	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662093	7444033		18	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662105	7444480		5	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662107	7443140		3	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662110	7444444		13	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662112	7444573		9	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662114	7444066		5	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662116	7444100		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662116	7444252		5	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	WNG29	662136	7444122		12	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	WNG29R	662136	7444122	0.1	12	Current Study (Phase 2, 2019)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662171	7443900		1	Current Study (Phase 2, 2019)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662194	7444419		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662238	7444695		4	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662320	7443620		7	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662424	7444416		1	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662447	7444337		1	Current study (Phase 1, 2018)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	662473	7443644		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	663669	7443191		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	Eremophila pusilliflora	Western Hill	Opp Coll	664639	7443187		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	Eremophila pusilliflora	Western Hill	Opp Coll	665780	7440480		10	Biota (2009)
P2	Scrophulariaceae	Eremophila pusilliflora	Western Hill	Releve	666121	7442025		1	Biota (2014c)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	667888	7443655		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	667921	7443649		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	669018	7442571		1	Eco Logical Australia (2014a)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	669232	7440537		1	Biota (2009)
P2	Scrophulariaceae	*Eremophila pusilliflora*	Western Hill	Opp Coll	669783	7443019		1	Eco Logical Australia (2014a)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit F North	Releve	687085	7435857		12	Biota (2014a)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit F North	Opp Coll	687154	7435818		6	Biota (2014a)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	WAREL-10	687401	7442447	0.1	5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	WAREL-12	687933	7441040	0.1	3	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	687968	7441000		10	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	687992	7440986		100	Current Study (Phase 2, 2019)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688856	7440791		10	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688882	7440792		20	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688885	7440784		5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688914	7440784		3	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688924	7440773		20	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688924	7440778		6	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688940	7440782		5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688962	7440782		5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	688980	7440779		3	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	689000	7440779		20	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	WAREL-08	689542	7441590	0.1	4	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	690065	7443541		15	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	690409	7443460		3	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	691072	7441962		2	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	691312	7441989		5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	691350	7442010		4	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit H	Opp Coll	693464	7441216		5	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Outside area	677677	7431207		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	678071	7430973		6	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	678867	7429693		7	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	678899	7429685		20	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	678904	7429685		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	WNG-REL25	678962	7431434		4	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679007	7431452		30	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679102	7431349		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Outside area	679104	7432016		1	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Outside area	679141	7432009		40	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Outside area	679150	7432032		6	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679172	7431372		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Outside area	679191	7432044		40	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679283	7432038		20	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679364	7432065		20	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	WNG-REL26	679379	7432212		40	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	WNG-REL26R	679379	7432212	0.1	40	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679432	7432173		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	679496	7432157		1	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680442	7431091		6	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680451	7431155		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680452	7431121		20	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680687	7431388		10	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680700	7431206		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680702	7431308		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	680714	7431344		3	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	681063	7431260		4	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	682457	7431862		4	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	682465	7431969		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684366	7431615		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684449	7431762		10	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684455	7431791		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684457	7431756		8	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684460	7431825		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684468	7431856		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684480	7431656		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684484	7431913		5	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	684492	7431685		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	WNG-REL30	685133	7431691		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	685150	7431744		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	685158	7431796		20	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	685909	7431439		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	687665	7431539		6	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	687691	7431339		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	WNG-REL24	687695	7431482		2	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	687824	7431177		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Deposit J/Mt Ella E	Opp Coll	687830	7431174		1	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665394	7442897		30	Rio Tinto (2016)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665400	7442462		4	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665440	7443041		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665460	7442651		40	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665482	7442648		30	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665493	7442630		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665515	7442654		1	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665532	7442843		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665541	7442738		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665549	7442858		25	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665576	7442806		200	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665586	7442822		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665608	7442807		30	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665702	7443079		1	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665792	7443260		3	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	WNG-REL10	665818	7442374		23	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	WNG-REL10R	665818	7442374	0.5	23	Current Study (Phase 2, 2019)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665893	7442204		6	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665924	7442790		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665962	7442801		20	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665983	7442567		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665989	7442880		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665993	7442805		20	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	665998	7442545		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666006	7442070		1	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666024	7442525		100	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666026	7442461		30	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666029	7443112		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666037	7442495		25	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666041	7442476		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666061	7442366		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666072	7442497		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666078	7442404		30	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666079	7442475		3	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666092	7442372		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666093	7442242		4	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666104	7442846		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666107	7442316		3	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666111	7442281		3	Current study (Phase 1, 2018)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666146	7442643		20	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666237	7442760		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666310	7442533		50	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666321	7442500		20	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666323	7442681		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666369	7442379		1	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666382	7442452		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666414	7442617		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666563	7442673		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666593	7442692		5	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666712	7442805		20	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	666758	7442773		10	Rio Tinto (2016)
P2	Malvaceae	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	Western Hill	Opp Coll	670338	7443014		15	Current study (Phase 1, 2018)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667264	7440370		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667274	7440399		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667300	7440392		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667320	7440411		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667321	7440462		8	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667335	7440430		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667339	7440387		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667361	7440478		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667377	7440538		15	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667395	7440476		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667396	7440448		10	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	667398	7440420		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670112	7440448	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670152	7440726	2		Biota (2009)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Releve	670172	7440752	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Releve	670186	7440503	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670194	7440561	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670373	7441164	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670424	7441150	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670467	7440753		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670470	7440672		15	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Releve	670488	7441080	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670494	7440711		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670501	7440908		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670513	7440975		25	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670514	7440649		30	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670521	7440846		10	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670525	7440759		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670526	7440798		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670531	7440820		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670547	7440625		10	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670559	7440714		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670578	7440962		10	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670584	7441107		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670585	7440857		25	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670589	7440825		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670591	7440938		30	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670609	7441064	1	1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670622	7441099		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670634	7441036	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670647	7441009		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670658	7440969		3	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670669	7440983	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670670	7441099		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670798	7441216		30	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670806	7441244		5	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670818	7441234		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670827	7441199		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670830	7440885		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670835	7440887	2	40	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670836	7441170		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670841	7440864		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670843	7440893	2	40	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670861	7440952		1	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670870	7440904	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670878	7440826		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670888	7440969		20	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670893	7440887	2	30	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670893	7440879	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670897	7440873	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670899	7441062		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670907	7440864	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670913	7441034		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670916	7441053		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670925	7440848	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670939	7440920		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670943	7440837	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670945	7440955		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670949	7440818		50	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670952	7440836	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670953	7440889		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670960	7440853		100	Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670965	7440832	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670998	7440821	5		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Releve	671082	7440738	2		Biota (2009)
P2	Malvaceae	*Isotropis parviflora*	Western Hill	Opp Coll	671217	7440749	2		Biota (2009)
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	WNG80R	675534	7429166	0.1	33	Current Study (Phase 2, 2019)
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	WNG80	675534	7429166		33	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	Opp Coll	675679	7429037		2	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	Opp Coll	678817	7428992		1	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	Opp Coll	678842	7429003		1	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Deposit J/Mt Ella E	WNG81R	681419	7430402	0.1	2	Current Study (Phase 2, 2019)
P2	Fabaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670427	7441423		5	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Western Hill	Opp Coll	670490	7440677		5	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Western Hill	WNG18	670709	7441085		13	Current study (Phase 1, 2018)
P2	Fabaceae	*Isotropis parviflora*	Western Hill	WNG18R	670709	7441085	0.1	13	Current Study (Phase 2, 2019)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Deposit J/Mt Ella E	WNG-REL25	678962	7431434		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Deposit J/Mt Ella E	Opp Coll	679007	7431452		1	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Deposit J/Mt Ella E	Outside area	679141	7432009		2	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Deposit J/Mt Ella E	Opp Coll	679186	7432005		1	ENV (2012)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Deposit J/Mt Ella E	WNG-REL24	687695	7431482		1	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	665400	7442462		14	Current Study (Phase 2, 2019)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	665532	7442843		2	Rio Tinto (2016)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	665576	7442806		13	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	665998	7442545		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	666414	7442617		5	Rio Tinto (2016)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670102	7442658		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670161	7443218		5	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670310	7443242		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670331	7442757		12	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	WNG-REL14	670398	7442748		3	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670412	7443413		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670418	7443429		4	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670456	7443220		3	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670615	7442776		1	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	WNG-REL16	670855	7442741		75	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670857	7442831		5	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670865	7442791		5	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670910	7442928		10	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	WNG-REL04	670931	7442982		35	Current study (Phase 1, 2018)
P2	Oxalidaceae	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)	Western Hill	Opp Coll	670957	7442945		10	Current study (Phase 1, 2018)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	681369	7432693		1	Biota (2006b)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	682058	7432490		200	Robe (2004)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	682406	7432491		1	Rio Tinto (2005)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Centroid	682648	7432311		10	Rio Tinto (2010b)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Centroid	682663	7432527		5	Rio Tinto (2010b)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	682701	7432361		1	Rio Tinto (2005)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	682744	7432731		1	Rio Tinto (2005)
P3	Fabaceae	*Acacia effusa*	Deposit J/Mt Ella E	Opp Coll	682760	7432404		1	Rio Tinto (2005)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit F North	Opp Coll	691443	7435305		10	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit F North	Opp Coll	691479	7433849		10	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit H	Opp Coll	688666	7443264		1	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit H	Opp Coll	693821	7440864		5	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit J/Mt Ella E	Opp Coll	687390	7432574		5	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit J/Mt Ella E	Opp Coll	687467	7432718		100	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit J/Mt Ella E	Quadrat	687533	7432652		1	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit J/Mt Ella E	Opp Coll	687804	7432698		6	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Deposit J/Mt Ella E	Opp Coll	687809	7432691		100	Ecologia (2013)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Western Hill	WNG17	666738	7441856		1	Current study (Phase 1, 2018)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Western Hill	WNG17R	666738	7441856	0.1	1	Current Study (Phase 2, 2019)
P3	Poaceae	*Aristida jerichoensis* var. *subspinulifera*	Western Hill	WNG-REL05	668941	7440868		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit H	WAREL-10	687401	7442447	0.5	100	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit H	Opp Coll	687431	7442340		15	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	677874	7431068		NR	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	678016	7431110		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	678029	7431071		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	678066	7431025		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	679361	7432215		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	WNG-REL26	679379	7432212		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	WNG-REL26R	679379	7432212	1	10	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	679413	7432184		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	679419	7432160		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	679432	7432173		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	679867	7431365		13	Current study (Phase 1, 2018)

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P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	680697	7431641		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	680798	7431627		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	681828	7432004		8	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	681864	7431940		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	681893	7432017		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	681911	7432013		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682223	7432025		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682449	7431874		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682457	7431933		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682463	7431963		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682510	7431904		100	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682537	7432089		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682566	7431919		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682584	7431945		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682587	7431839		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682598	7431859		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682600	7431792		60	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682614	7431914		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682634	7431909		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Outside area	682635	7431772		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682667	7431908		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682669	7431899		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682679	7431776		50	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682679	7431860		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682703	7431889		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682721	7431786		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682726	7431861		40	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682739	7431855		25	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682753	7431775		8	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682755	7431869		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682792	7431872		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682795	7432000		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	682943	7431813		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Outside area	682980	7431693		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684084	7432053		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684091	7432019		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684172	7431934		8	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684197	7432055		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684217	7432075		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684234	7431995		10	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684235	7431961		8	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684239	7431899		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684257	7432008		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684298	7432022		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684301	7432038		4	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684327	7432023		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684366	7431615		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684370	7431595		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684383	7431999		5	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684385	7431855		10	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684393	7431985		20	Rio Tinto (2015a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684395	7432010		5	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684449	7431762		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684455	7431791		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684457	7431756		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684460	7431825		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684475	7431851		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684480	7431656		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684484	7431913		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684492	7431685		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684499	7431717		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684510	7431934		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684520	7431941		10	Rio Tinto (2015a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684526	7431866		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684730	7431859		15	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	WNG-REL23	684748	7431906		60	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684763	7431858		25	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684774	7432017		50	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684795	7431875		30	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684813	7431550		10	Rio Tinto (2015a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684821	7431911		40	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	684872	7431953		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685129	7431639		50	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	WNG-REL30	685133	7431691		30	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685148	7431631		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685158	7431796		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685160	7431629		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685188	7431826		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685387	7431635		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Deposit J/Mt Ella E	Opp Coll	685500	7431540		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	663667	7442869		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665178	7442687		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665186	7442808		8	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665194	7442849		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665406	7442434		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665410	7442390		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665423	7442386		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665434	7442403		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665476	7442865		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665476	7443043		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665478	7442714		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665493	7442747		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665498	7442846		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665500	7442744		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665501	7442725		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665509	7441779		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665532	7442843		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665540	7442864		3	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665541	7442738		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665543	7442764		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665544	7442877		4	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665549	7442858		4	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665574	7442034		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665586	7442822		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Releve	665593	7442033		2	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665608	7442807		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665624	7443014		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665637	7442676		3	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665645	7441975		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665660	7442647		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665677	7443155		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665680	7442680		3	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665702	7443079		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665706	7442551		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665729	7443037		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665737	7442306		200	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665738	7442466		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665751	7442787		4	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665753	7442287		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665756	7442396		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665758	7443270		12	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665760	7442786		NR	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665766	7442234		200	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665772	7442194		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665788	7442230		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665790	7442675		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665792	7443260		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665808	7442159		200	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665809	7442325		40	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665809	7442468		3	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665811	7442106		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Releve	665814	7442238		5	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL10	665818	7442374		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL10R	665818	7442374	0.5	11	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665825	7442267		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665830	7442475		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665848	7442294		17	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665857	7442305		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665862	7442140		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665872	7442350		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665882	7442585		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665886	7441910		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665898	7442291		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665908	7442248		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665921	7442835		7	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665926	7442108		20	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665930	7442365		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665931	7443012		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665942	7442148		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665946	7442840		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665948	7442296		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665960	7442707		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665962	7442152		17	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665962	7442801		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665963	7442869		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665965	7442891		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665967	7442171		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665977	7442554		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665983	7442567		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665986	7442567		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665986	7442914		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665987	7442746		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665990	7442709		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665993	7442805		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665994	7442289		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665996	7442962		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665997	7442547		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	665998	7442937		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666010	7443018		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666012	7442946		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666019	7442448		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666022	7442810		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666023	7442923		6	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666026	7442461		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666033	7441931		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666034	7441816		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666041	7442476		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666048	7442498		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666061	7442366		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666065	7442720		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666077	7442394		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666077	7442479		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666079	7442475		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666080	7442449		50	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666083	7442208		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666083	7442691		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666099	7442466		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666102	7442331		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666104	7442846		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666106	7442206		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666111	7442281		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666125	7441890		6	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666128	7441962		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666144	7442556		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666151	7442511		20	Rio Tinto (2016)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666155	7442291		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666167	7442608		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666169	7442373		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666172	7442333		40	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666178	7442673		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666199	7442553		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666212	7442223		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666217	7442699		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666220	7442373		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666237	7442529		40	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666245	7442569		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666253	7442729		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666259	7442194		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666259	7442431		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666264	7442456		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666275	7442843		1	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666279	7442492		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666281	7442278		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666285	7442569		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666285	7442903		4	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666297	7442849		3	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666299	7442526		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666300	7442632		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666302	7442842		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666313	7442242		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666321	7442500		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666323	7442681		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666338	7442466		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666341	7442286		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666348	7442078		12	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666356	7442836		2	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666367	7442495		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666368	7442713		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666385	7442311		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666395	7442066		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666396	7442080		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666408	7442514		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666410	7442150		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666414	7442617		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666424	7442552		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666431	7442303		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666441	7442167		50	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666443	7442623		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666465	7442179		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666488	7442186		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666512	7442711		1	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666513	7442193		35	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666518	7442103		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666533	7442393		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666536	7442657		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666547	7442746		1	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666549	7442330		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666553	7442201		3	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666556	7441839		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666594	7442578		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666595	7442678		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666599	7442367		4	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666604	7442722		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666629	7442625		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666634	7442101		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666646	7442134		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666648	7442737		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666657	7442409		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666681	7442755		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666712	7442805		30	Rio Tinto (2016)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666758	7442739		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666758	7442773		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666802	7442834		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666821	7443135		15	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666824	7442782		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666843	7443115		12	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666845	7442273		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666845	7442731		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666869	7442951		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666879	7442929		25	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666881	7442927		12	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666884	7443093		5	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666894	7442910		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666915	7442991		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666916	7442949		25	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666932	7442897		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666936	7443061		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666943	7442905		4	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666950	7442717		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666956	7443029		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	666989	7442709		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667013	7442717		30	Biota (2014c)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667025	7442703		3	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667052	7442895		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667065	7442674		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667068	7442706		30	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667075	7442659		2	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667098	7442687		6	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667112	7442919		8	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667166	7441642		25	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667239	7441598		55	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667247	7441612		20	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667251	7441579		10	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667270	7441576		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667317	7441570		11	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667572	7442067		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	667595	7442041		1	Rio Tinto (2016)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Quadrat	668602	7443661		15	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669255	7443987		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669282	7443838		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669301	7443699		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669308	7443578		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669312	7443903		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669318	7443917		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669331	7443912		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669345	7443723		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669346	7443872		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669347	7443925		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669370	7443892		9	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669376	7443634		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669387	7443633		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669419	7443620		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669499	7443737		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669515	7443755		11	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669531	7443513		7	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669833	7443357		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669837	7443561		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669923	7442986		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	669988	7443089		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670006	7443083		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670027	7443046		1	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670031	7443138		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670041	7443210		1	Eco Logical Australia (2014a)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670080	7443260		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670093	7443393		1	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670140	7443450		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670142	7443458		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670145	7444213		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670147	7443084		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670174	7443432		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670207	7442878		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670211	7443050		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670253	7442639		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670258	7442675		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670259	7442557		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670259	7442600		7	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670261	7442874		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670261	7443413		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670282	7442578		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670282	7442654		9	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670283	7442741		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670306	7443399		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670314	7443035		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670320	7443242		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670329	7442720		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670344	7442750		8	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670365	7443403		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670387	7442715		2	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL14	670398	7442748		9	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL14R	670398	7442748	0.5	9	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670404	7443044		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670411	7443371		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670412	7443413		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670414	7442903		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670416	7443354		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670424	7443070		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670424	7443215		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670433	7443309		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670439	7442741		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670442	7443101		18	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670442	7443341		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670447	7442833		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670454	7442734		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670456	7443220		8	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670464	7443330		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670472	7442925		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670476	7443206		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670480	7442727		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL12	670491	7442744		17	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670498	7442742		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670520	7443151		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670536	7443344		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670537	7443188		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670547	7442746		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670559	7443347		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670595	7443330		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670613	7442762		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670615	7442776		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670639	7442762		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670661	7442754		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670666	7443425		NR	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670668	7443346		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670675	7442756		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670681	7442774		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670700	7442765		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670700	7443316		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670707	7443285		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670723	7443384		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670736	7442793		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670739	7443378		10	Current Study (Phase 2, 2019)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670740	7442764		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670777	7442775		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670777	7443049		300	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670794	7443360		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670797	7442765		50	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670825	7442769		7	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670851	7442783		35	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL16	670855	7442741		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL16R	670855	7442741	0.1	12	Current Study (Phase 2, 2019)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670865	7442791		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670880	7443326		20	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670908	7442920		30	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670909	7443341		3	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	WNG-REL04	670931	7442982		12	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670935	7443344		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670944	7443331		10	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670960	7442997		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670981	7443358		15	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	670992	7443286		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671006	7442996		6	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671024	7443016		9	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671029	7443320		23	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671042	7443270		2	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671055	7443311		60	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671059	7443521		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671069	7443579		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671071	7443264		5	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671095	7443272		1	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671141	7443253		4	Current study (Phase 1, 2018)
P3	Scrophulariaceae	*Eremophila* sp. Hamersley Range (K. Walker KW 136)	Western Hill	Opp Coll	671164	7443260		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	665204	7443002		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	665407	7443472		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	665773	7442151		1	Biota (2014c)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	665790	7442162		1	Biota (2014c)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666022	7442810		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666536	7442657		8	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666556	7441839		7	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666563	7442673		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666601	7441847		6	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666604	7442722		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666648	7442737		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666666	7441857		2	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666681	7442755		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666758	7442739		7	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666824	7442782		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666886	7441734		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	666965	7441591		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667025	7442703		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667051	7441633		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667055	7442654		10	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667068	7442706		4	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667073	7442654		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667074	7442593		3	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667075	7442659		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667088	7442618		2	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667098	7442687		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667135	7441646		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667144	7442698		4	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667166	7441642		8	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667197	7441590		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667221	7441589		15	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667239	7441598		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667247	7441612		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667251	7441579		10	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667288	7441576		10	Rio Tinto (2016)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667291	7441955		10	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667366	7441587		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667383	7441539		3	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667393	7441520		10	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667406	7441422		10	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667454	7441754		4	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667459	7441593		3	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667469	7441538		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667499	7441956		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667504	7441911		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667511	7441594		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667522	7441511		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667524	7441995		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667539	7441453		3	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667540	7441592		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667541	7441920		2	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667593	7441641		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667598	7441780		5	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667610	7441854		1	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667659	7441701		3	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667668	7441778		10	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667702	7441689		11	Rio Tinto (2016)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WA01	667722	7441786	5	10	Current Study (Phase 2, 2019)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667769	7441561		4	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667770	7441590		5	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667805	7441592		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667820	7441593		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667829	7441556		5	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	667915	7441662		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	668638	7443654		1	Eco Logical Australia (2014a)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670282	7442578		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670282	7442654		5	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670310	7443242		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670329	7442720		2	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670344	7442750		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670387	7442715		6	Current Study (Phase 2, 2019)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WNG-REL14	670398	7442748		11	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WNG-REL14R	670398	7442748	3	11	Current Study (Phase 2, 2019)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670415	7442706		8	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670465	7442736		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WNG-REL12	670491	7442744		15	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670613	7442762		1	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670675	7442756		4	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	Opp Coll	670797	7442765		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WNG-REL16	670855	7442741		3	Current study (Phase 1, 2018)
P3	Proteaceae	*Grevillea saxicola*	Western Hill	WNG-REL16R	670855	7442741	1	3	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	687038	7435893		3	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Releve	687085	7435857		38	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	687099	7435999		2	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	687132	7435825		1	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	687235	7435983		5	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	687292	7435736		2	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688239	7436045		1	Rio Tinto (2014)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688287	7436112		1	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688294	7436163		6	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688300	7436125		2	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688301	7436101		1	Rio Tinto (2014)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688334	7436207		1	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688343	7436169		2	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Releve	688370	7436185		2	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688403	7436162		5	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	688404	7436141		15	Biota (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit F North	Opp Coll	689433	7436008		2	Eco Logical and Rio Tinto (2014a)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	688927	7443254		100	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689091	7441757		5	Current Study (Phase 2, 2019)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Fabaceae	*Indigofera gilesii*	Deposit H	WAREL-24	689281	7441286	0.1	12	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689307	7441411		1	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689333	7441352		5	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689402	7441854		6	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689427	7441460		3	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689456	7441465		16	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689489	7441480		5	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689506	7441489		10	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689536	7441489		15	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	WAREL-08	689542	7441590	0.1	2	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	WAREL-25	689688	7441217	0.1	8	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689811	7441625		10	Eco Logical and Rio Tinto (2014b)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689853	7441416		10	Eco Logical and Rio Tinto (2014b)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689859	7441402		5	Eco Logical and Rio Tinto (2014b)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	689919	7441031		1	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Quadrat	689963	7441587		10	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	690382	7441946		12	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	690401	7441890		10	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	690408	7441885		10	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	690987	7441888		2	Eco Logical and Rio Tinto (2014b)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	690998	7441857		1	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691049	7441944		1	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691087	7441954		3	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691158	7441940		2	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691203	7441994		10	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691229	7441997		4	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691240	7441996		1	Ecologia (2013)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691260	7441985		1	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691312	7441989		2	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691375	7442053		6	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit H	Opp Coll	691396	7442105		3	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	WNG71	675739	7429831		1	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	WNG71R	675739	7429831	0.1	1	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	675749	7429868		5	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Releve	677601	7430027		5	Eco Logical Australia (2014b)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678122	7429363		25	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678142	7429339		5	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678189	7429412		22	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678437	7429574		2	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678464	7429457		20	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678475	7429478		7	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678734	7429630		1	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678825	7429657		2	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678841	7429675		7	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678867	7429693		15	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678904	7429685		30	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	678947	7429699		8	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	679014	7429596		5	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	679028	7429595		1	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	679137	7429166		15	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	679141	7429179		18	Current Study (Phase 2, 2019)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	679942	7431371		15	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	685909	7431439		20	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	685912	7431439		10	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	685943	7431458		20	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Deposit J/Mt Ella E	Opp Coll	686184	7431471		1	Current study (Phase 1, 2018)
P3	Fabaceae	*Indigofera gilesii*	Western Hill	Opp Coll	665563	7442109		3	Biota (2014c)
P3	Fabaceae	*Indigofera gilesii*	Western Hill	Opp Coll	665564	7442118		3	Biota (2014c)
P3	Fabaceae	*Indigofera gilesii*	Western Hill	Opp Coll	665602	7442103		5	Biota (2014c)
P3	Fabaceae	*Indigofera gilesii*	Western Hill	Opp Coll	665628	7442116		9	Biota (2014c)
P3	Fabaceae	*Indigofera* sp. Bungaroo Creek (S. van Leeuwen 4301)	Deposit H	Opp Coll	696464	7441451		2	Current Study (Phase 2, 2019)
P3	Asteraceae	*Olearia mucronata*	Western Hill	Opp Coll	668129	7442500		1	Robe (2004)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	678104	7430951		5	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679063	7431658		30	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Outside area	679095	7431899		30	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Outside area	679100	7432015		8	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Outside area	679133	7432030		20	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Outside area	679171	7432023		5	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679186	7432005		20	ENV (2012)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679252	7432032		5	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679283	7432038		30	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679320	7432044		15	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679331	7432048		30	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679343	7432057		6	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679360	7432066		10	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679364	7432065		25	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	679384	7432142		5	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Deposit J/Mt Ella E	Opp Coll	682457	7431863		8	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670331	7442757		14	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670346	7442758		12	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670372	7442721		4	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670387	7442749		13	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL14	670398	7442748		57	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL14R	670398	7442748	0.5	57	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670424	7442746		5	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670439	7442741		3	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670444	7442732		20	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670454	7442734		6	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670455	7442749		1	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670465	7442736		6	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670480	7442727		6	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670484	7442743		25	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL12	670491	7442744		45	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670498	7442742		40	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670498	7442742		4	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670525	7442759		2	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670529	7442770		13	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670551	7442766		5	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670565	7442757		12	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670588	7442775		10	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670615	7442776		3	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670739	7443378		1	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL16	670855	7442741		10	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL16R	670855	7442741	0.1	25	Current Study (Phase 2, 2019)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670857	7442831		70	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670865	7442791		4	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670908	7442920		12	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	WNG-REL04	670931	7442982		7	Current study (Phase 1, 2018)
P3	Asteraceae	*Pilbara trudgenii*	Western Hill	Opp Coll	670957	7442945		100	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit F North	Quadrat	691478	7433848		1	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit F North	WAF03R	692532	7434509	0.1	1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit F North	Opp Coll	692539	7434418		1	Biota (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	WAREL-10	687401	7442447	0.1	1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688643	7443253		1	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688669	7443262		1	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688772	7443255		1	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688894	7443243		4	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688927	7443254		6	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688948	7443252		4	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	688962	7443250		3	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	Opp Coll	689046	7443256		4	Ecologia (2013)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	WA29	689718	7443186	0.1	7	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit H	WA33	693308	7440878	0.1	3	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	WNG71	675739	7429831		7	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	WNG71R	675739	7429831	0.1	7	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Centroid	680130	7429085		1	Rio Tinto (2009b)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	WNG-REL23	684748	7431906		21	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	684821	7431911		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	685102	7431643		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	685188	7431826		1	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Centroid	686656	7431503		1	Rio Tinto (2010c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	687668	7431578		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	WNG-REL24	687695	7431482		12	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	687832	7432743		2	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	687888	7431812		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	WNG86R	687911	7432564	0.1	2	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	687913	7431765		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Deposit J/Mt Ella E	Opp Coll	687915	7432718		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661636	7441756		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661644	7441917		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661668	7441447		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661863	7441603		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661918	7441392		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	661962	7441522		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662000	7442210		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662020	7441778		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662215	7441029		1	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662223	7441537		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662240	7441572		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662342	7441709		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662363	7442997		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662477	7442848		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662532	7443095		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662546	7441643		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL15	662576	7444471		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662648	7442931		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662733	7441913		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662814	7441466		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662842	7443175		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662880	7443671		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662894	7443813		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	662900	7443695		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663087	7440731		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663092	7442900		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663094	7441606		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663097	7440554		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663100	7440761		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG02	663102	7440840		6	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG02R	663102	7440840	0.1	5	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663116	7440795		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663144	7442902		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663151	7440787		2	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG30	663203	7442315		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG04	663317	7440270		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG04R	663317	7440289	0.1	4	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663337	7441475		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663543	7443120		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663587	7441666		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663664	7443326		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663687	7441539		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663715	7440499		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663746	7442999		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663796	7441559		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG05	663892	7440672		5	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG05R	663892	7440672	0.1	5	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	663986	7443117		6	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664005	7441534		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664012	7441485		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Releve	664015	7442186		1	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664143	7441814		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664144	7443208		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664154	7441434		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664337	7441447		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664443	7441644		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664515	7443591		4	Eco Logical Australia (2014a)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664539	7443476		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664552	7441482		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664569	7441801		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664654	7441088		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664671	7441582		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664886	7441852		6	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664920	7443644		5	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664921	7443638		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664967	7443049		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	664974	7443206		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665019	7442334		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665045	7441411		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665100	7443082		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665141	7442677		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665141	7443541		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665165	7441781		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665203	7441441		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665203	7442407		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665204	7443002		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665307	7441529		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665310	7441609		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665311	7441489		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665311	7443257		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665329	7442429		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665359	7442315		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665361	7443463		4	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665379	7442589		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665381	7442403		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665408	7443697		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665410	7442460		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665417	7441485		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665419	7442788		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665431	7443028		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665466	7443615		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665479	7442930		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665507	7443606		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665516	7441724		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665518	7441573		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665529	7443290		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665532	7442843		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665535	7442881		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665539	7442075		2	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665541	7442738		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665563	7442843		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665577	7442829		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665593	7442628		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665610	7441727		10	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665612	7441591		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665627	7441570		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665634	7443427		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665642	7442640		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665683	7443715		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665690	7443690		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665692	7443684		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665694	7443700		4	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665695	7443686		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665719	7441718		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665732	7443660		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665736	7443643		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665737	7443754		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665738	7442466		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665785	7442563		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665792	7443260		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665801	7441831		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665805	7442230		1	Biota (2014c)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665809	7442325		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665810	7443772		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL10	665818	7442374		15	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL10R	665818	7442374	0.1	15	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665831	7442199		3	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665842	7442769		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665846	7442308		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665857	7442115		1	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665857	7442305		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665868	7442098		2	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665875	7443060		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665886	7441910		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665919	7442259		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665927	7442187		1	Biota (2014c)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665928	7443383		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665931	7443012		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665965	7442891		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665967	7442171		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	665987	7442746		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666028	7442760		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666044	7441641		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666082	7442747		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666083	7442208		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666085	7442470		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666104	7442846		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666202	7441617		4	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666204	7441927		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666207	7441716		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666300	7441656		4	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666310	7441668		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666310	7442533		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666317	7441866		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666367	7442433		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666368	7442713		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666369	7442379		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666383	7441647		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666409	7443134		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666412	7441842		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666430	7441649		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666430	7442577		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666436	7442562		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666441	7442167		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666443	7442623		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666447	7441681		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666464	7441842		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666465	7442179		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666498	7443300		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666509	7441760		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666536	7442657		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666553	7442201		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666555	7442028		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666558	7442233		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666563	7442310		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666569	7443260		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666583	7442078		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666593	7441752		6	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666593	7442692		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666595	7442678		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666598	7442405		10	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666620	7441425		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666638	7441848		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666643	7442397		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666669	7441605		6	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666673	7443486		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666676	7441774		10	Rio Tinto (2016)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666683	7444417		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666715	7441869		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666718	7441524		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666734	7442318		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG17	666738	7441856		5	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG17R	666738	7441856	0.1	3	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666753	7443155		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666758	7442739		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666766	7443506		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666799	7441412		7	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666802	7442333		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666809	7442094		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666841	7442709		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666852	7442873		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666859	7442333		15	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666877	7442706		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666916	7442949		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666923	7442297		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666923	7443668		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666927	7442044		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666929	7443394		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666938	7443535		5	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666956	7443029		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	666989	7442034		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667025	7442703		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667026	7443447		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667045	7443366		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667051	7441633		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667055	7442654		4	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667058	7443490		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667065	7442674		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667074	7442593		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667075	7442659		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667098	7442687		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667098	7443482		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667133	7443328		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667145	7443471		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667155	7441608		2	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667170	7442618		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667177	7442735		3	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667185	7442857		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667193	7444088		5	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667203	7441478		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667251	7441579		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667260	7442824		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667303	7443283		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG44	667355	7444203		7	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG44R	667355	7444203	0.1	7	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667370	7443384		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667392	7442936		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667436	7444162		4	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667458	7442349		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667465	7444115		5	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667477	7443803		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667480	7444149		4	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667487	7443675		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667511	7441594		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667515	7443448		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667524	7443268		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667527	7443371		2	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667534	7443616		7	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667541	7441920		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667559	7443270		1	Rio Tinto (2016)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667593	7443691		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667655	7443955		2	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667668	7441778		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667679	7443683		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667686	7441795		3	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667705	7443413		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667710	7443449		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667713	7443626		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667716	7444289		12	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667720	7443651		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WA01	667722	7441786	0.1	18	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667722	7443683		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667731	7444173		10	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667737	7443683		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667744	7443538		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667778	7443539		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667782	7441628		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667789	7443489		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667801	7443549		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667802	7443546		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667803	7443540		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667805	7443652		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667811	7443541		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667850	7443651		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667855	7443683		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667878	7443621		4	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667879	7443554		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667880	7443658		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667888	7443655		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667895	7443535		4	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667903	7443630		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667912	7443628		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667914	7443654		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667932	7443573		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667932	7443692		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667935	7443630		8	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667936	7443049		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667936	7443653		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667945	7443698		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667951	7443694		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667952	7443585		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667959	7443493		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667967	7443646		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667970	7443612		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667974	7443620		1	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667987	7443600		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667989	7443591		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	667990	7443595		1	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668004	7443616		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668008	7443495		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668012	7443495		2	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668016	7443616		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668020	7443523		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668022	7443510		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668026	7443511		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668030	7443682		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668032	7443625		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668037	7443531		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668038	7443641		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668038	7443654		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668041	7444028		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668048	7444053		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668056	7443562		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668136	7443471		7	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668161	7444082		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668211	7443568		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668211	7443682		1	Eco Logical Australia (2014a)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668216	7443549		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668217	7443589		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668220	7443544		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668221	7443626		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668228	7443484		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668229	7443380		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668229	7443492		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668231	7443381		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668232	7443474		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668233	7443386		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668234	7443214		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668236	7443461		5	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668250	7443338		1	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG15R	668273	7442883	0.1	1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG46	668315	7444396		10	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG46R	668315	7444396	0.1	10	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668384	7443243		1	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668484	7443681		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668503	7443505		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668513	7443345		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668513	7443666		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668522	7444357		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668526	7443508		5	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668547	7443684		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668548	7443353		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668566	7443464		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668566	7443681		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668573	7443383		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668585	7443641		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668593	7442899		1	Rio Tinto (2009a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668601	7443574		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668605	7443701		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668624	7443442		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668678	7443617		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668690	7443399		20	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668693	7443394		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668702	7443398		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668706	7443694		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668708	7443381		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668709	7443413		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668718	7443326		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668737	7443675		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668742	7443661		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668745	7444519		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668749	7443371		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668806	7443514		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668816	7443520		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668836	7443530		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668845	7443456		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668852	7443527		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668870	7443534		4	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668896	7443447		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668900	7443542		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668912	7443496		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668917	7443417		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668920	7443366		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668923	7443530		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668924	7443530		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668926	7443530		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668940	7443532		12	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668970	7443494		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668970	7443506		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668974	7443520		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668978	7443485		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668979	7443489		1	Eco Logical Australia (2014a)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668984	7443530		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668988	7443409		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668990	7443336		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668993	7443495		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668994	7443509		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668995	7443501		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	668997	7443514		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669001	7443504		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669020	7443477		3	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669105	7443437		2	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG35	669231	7441773		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG35R	669231	7441773	0.1	1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669300	7443718		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669447	7443495		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669811	7443525		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669824	7443012		1	Eco Logical Australia (2014a)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	669996	7442941		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670043	7444064		1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670073	7444474		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670102	7442658		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670145	7444213		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670166	7444214		5	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670174	7444312		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670181	7444209		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG45	670189	7444352		17	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG45R	670189	7444352	0.5	17	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670218	7444228		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670239	7444247		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670240	7444274		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670282	7442578		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670336	7443710		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL14R	670398	7442748	0.1	1	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670424	7443215		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670439	7442741		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670454	7442734		7	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670484	7442743		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670547	7442746		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670580	7443790		8	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670646	7443704		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670680	7443752		2	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670825	7442769		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	Opp Coll	670835	7443574		1	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL16	670855	7442741		3	Current study (Phase 1, 2018)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL16R	670855	7442741	0.1	5	Current Study (Phase 2, 2019)
P3	Chenopodiaceae	*Rhagodia* sp. Hamersley (M. Trudgen 17794)	Western Hill	WNG-REL04	670931	7442982		1	Current study (Phase 1, 2018)
P3	Acanthaceae	*Rostellularia adscendens* var. *latifolia*	Deposit J/Mt Ella E	WNG58	675382	7430862		1	Current study (Phase 1, 2018)
P3	Acanthaceae	*Rostellularia adscendens* var. *latifolia*	Deposit J/Mt Ella E	WNG58R	675382	7430862	0.1	1	Current Study (Phase 2, 2019)
P3	Acanthaceae	*Rostellularia adscendens* var. *latifolia*	Deposit J/Mt Ella E	WNG-REL29	675588	7430186		NR	Current study (Phase 1, 2018)
P3	Acanthaceae	*Rostellularia adscendens* var. *latifolia*	Deposit J/Mt Ella E	Opp Coll	677874	7431068		3	Current study (Phase 1, 2018)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit F North	Releve	687085	7435857		8	Biota (2014a)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	687393	7442333		10	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	687877	7441590		3	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	687927	7441593		10	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	689669	7442153		2	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	690510	7440618		2	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	690555	7440615		3	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	691335	7441998		3	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	691350	7441983		1	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	691350	7442010		2	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	692537	7442144		1	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	692644	7442173		4	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	692649	7442186		30	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693326	7441647		1	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693504	7441276		5	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693509	7441271		3	Current Study (Phase 2, 2019)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693513	7441431		2	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693709	7441534		10	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693729	7441548		20	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	693806	7441375		1	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Quadrat	694100	7441820		5	Ecologia (2013)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	694286	7441484		10	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	694307	7441482		10	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	Opp Coll	694330	7441479		20	Eco Logical and Rio Tinto (2014b)
P3	Malvaceae	*Sida* sp. Barlee Range (S. van Leeuwen 1642)	Deposit H	WAREL-05	696444	7441618	0.1	100	Current Study (Phase 2, 2019)
P3	Malvaceae	*Sida* sp. Hamersley Range (K. Newbey 10692)	Deposit J/Mt Ella E	WA Herbarium record	675748	7430260		Locally common	WA Herbarium
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Releve	675437	7429883		11	Eco Logical Australia (2014b)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Releve	675745	7429898		2	Eco Logical Australia (2014b)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Releve	675997	7429837		1	Eco Logical Australia (2014b)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG82	676145	7430079		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Outside area	677677	7431207		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Outside area	677688	7431258		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Outside area	677696	7431274		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG77	677741	7429941		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG77R	677741	7429941	0.1	1	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	678071	7430973		11	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	678089	7430902		3	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	678387	7429445		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG-REL25	678962	7431434		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679007	7431452		35	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679017	7431389		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679028	7429595		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679037	7431381		8	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679084	7431364		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679115	7431679		20	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Outside area	679119	7432019		1	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679141	7431336		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Outside area	679141	7432009		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679172	7431372		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679174	7432006		1	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679208	7431455		12	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679239	7432059		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679246	7431292		3	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679252	7432032		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679283	7432038		30	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679343	7432057		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679360	7432066		40	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679924	7431381		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	679988	7431416		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680203	7431163		15	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680413	7431046		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680426	7431112		12	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680430	7431078		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680433	7431102		50	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680435	7431136		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680445	7431101		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680451	7431155		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680491	7431085		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG85R	680508	7431318	0.1	33	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG85	680508	7431318		33	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680513	7431214		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680513	7431236		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680542	7431294		1	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680559	7431178		2	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680687	7431388		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680700	7431206		20	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680702	7431308		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG83R	680756	7431441	0.1	30	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG83	680756	7431441		30	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	680997	7431187		3	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	681049	7431271		10	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	681063	7431260		20	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	681104	7431209		12	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684460	7431825		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684475	7431851		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684477	7431949		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684482	7431885		5	Rio Tinto (2015a)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684487	7431626		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	684520	7431941		2	Rio Tinto (2015a)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	685102	7431643		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	WNG-REL30	685133	7431691		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	685150	7431744		6	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	685188	7431826		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	685566	7431560		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	686184	7431471		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	687631	7431624		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	687665	7431539		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Deposit J/Mt Ella E	Opp Coll	687830	7431174		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	663897	7442088		4	Biota (2014c)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665123	7442577		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665215	7442379		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665341	7442193		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665363	7442472		1	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665394	7442897		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665396	7442917		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665418	7442519		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665440	7442346		4	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665451	7442313		6	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665455	7442666		3	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665458	7442654		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	WNG23	665500	7442390		NR	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	WNG23R	665500	7442390	0.1	5	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665522	7442857		3	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665563	7442843		3	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665565	7442882		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665576	7442806		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665588	7442734		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665606	7442824		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665607	7442785		8	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665608	7442436		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665612	7442321		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665615	7442315		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665637	7442676		3	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665680	7442680		6	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665726	7442768		3	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665785	7442563		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665802	7442816		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665818	7442483		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665842	7442769		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665850	7442838		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665855	7442700		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665867	7442280		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665869	7442480		14	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665875	7443060		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665977	7442554		20	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665986	7442567		30	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665989	7442880		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	665998	7442545		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666004	7442976		2	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666021	7442901		5	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666024	7442525		8	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666026	7442461		15	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666037	7442495		35	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666072	7442497		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666079	7442394		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666085	7442192		1	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666092	7442346		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666093	7442242		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666111	7442281		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666216	7442871		1	Biota (2014c)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	666443	7442623		1	Rio Tinto (2016)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	669996	7442941		8	Current Study (Phase 2, 2019)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670071	7443169		2	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670185	7443238		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670310	7443242		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670315	7442855		25	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670424	7443215		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670437	7443220		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670476	7443206		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670504	7443196		50	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670505	7442884		5	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670537	7443188		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670585	7443380		8	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670614	7442833		30	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670621	7443370		10	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670633	7443360		3	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670658	7443918		3	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670908	7442920		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	670919	7442900		1	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	671145	7442967		4	Current study (Phase 1, 2018)
P3	Solanaceae	*Solanum kentrocaule*	Western Hill	Opp Coll	671229	7443028		1	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Releve	687085	7435857		10	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	WAREL-16	687154	7435630	0.1	1	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	WNG-REL20	687779	7435777		18	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Opp Coll	688156	7435959		2	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Releve	688165	7435972		20	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Opp Coll	688287	7436112		2	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Opp Coll	688288	7436111		8	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Releve	688370	7436185		3	Biota (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Quadrat	691860	7434254		1	Biota (2006b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Quadrat	691966	7434561		1	Biota (2006b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit F North	Quadrat	692072	7434611		1	Biota (2006b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Outside area	686799	7441942		3000	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687177	7442143		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687207	7442576		400	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687226	7442600		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687227	7442573		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687282	7442707		1000	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687305	7442229		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687351	7442620		2000	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687358	7441875		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687393	7442566		4000	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	WAREL-10	687401	7442447	0.1	20	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687403	7441903		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687451	7443498		25	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687559	7443400		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687566	7443252		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687868	7441592		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687870	7440922		40	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687891	7440988		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687927	7441593		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687965	7441611		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687975	7441598		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687977	7441113		40	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	687985	7441638		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688023	7441738		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688031	7441653		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688044	7441651		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688087	7441712		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688976	7441475		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	688995	7441859		10	Current Study (Phase 2, 2019)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	689091	7441765		12	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	689669	7442153		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	689715	7442151		20	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	689893	7442208		20	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	689937	7442181		150	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691158	7442137		30	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691159	7442095		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691188	7442157		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691226	7442081		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691296	7442077		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691454	7441991		20	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691462	7442029		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691497	7442063		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691520	7442090		30	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691575	7442102		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691790	7442323		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691875	7442317		50	Ecologia (2013)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691899	7442318		20	Ecologia (2013)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	691966	7442312		50	Ecologia (2013)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	692389	7442331		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	693504	7441276		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit H	Opp Coll	693949	7441713		1	WA Herbarium
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	675483	7429831		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	675876	7430012		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Releve	676458	7430141		50	Eco Logical Australia (2014b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Releve	676479	7429961		100	Eco Logical Australia (2014b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Outside area	677708	7431274		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG77	677741	7429941		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG77R	677741	7429941	0.5	30	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Releve	677859	7429852		50	Eco Logical Australia (2014b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678056	7429576		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678090	7429425		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678103	7429362		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678122	7429363		35	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678129	7429533		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678131	7429492		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678173	7429477		500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678200	7429456		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678228	7429506		500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678459	7429567		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678551	7429596		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678611	7429567		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678613	7429462		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678704	7429630		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678715	7429537		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678734	7429630		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678761	7429658		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678825	7429657		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678841	7429675		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678867	7429693		15	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678899	7429685		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678904	7429685		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678933	7429690		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678941	7429596		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678943	7429275		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678947	7429699		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678949	7431455		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678959	7429304		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678978	7429716		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	678987	7429600		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679001	7429298		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679020	7431463		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679028	7429595		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679029	7431421		120	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Releve	679035	7430137		5	Eco Logical Australia (2014b)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679046	7429303		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679063	7431658		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679065	7429290		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG74R	679088	7429262	0.1	15	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG74	679088	7429262		15	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679088	7429735		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679092	7429634		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679094	7429198		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679104	7431417		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679117	7429146		500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679128	7431401		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679143	7429742		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679150	7431411		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679155	7429191		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679175	7429753		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679178	7429243		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679199	7431493		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679239	7432059		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679242	7429748		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679246	7431292		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679254	7429618		400	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679264	7429586		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Releve	679269	7429914		10	Eco Logical Australia (2014b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679283	7432038		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679298	7429752		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679341	7432193		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679361	7429741		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679384	7429519		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679431	7429735		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679505	7429718		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679570	7429704		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679708	7429663		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679725	7429418		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679760	7429281		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679823	7431319		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679894	7431368		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679924	7431381		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	679967	7431345		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680051	7431449		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680121	7430617		10	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680203	7431163		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680433	7431102		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680457	7431070		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG85R	680508	7431318	1	85	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG85	680508	7431318		85	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680560	7431286		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680564	7431212		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680571	7431359		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680586	7429942		1	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680605	7431149		50	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680618	7431319		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680622	7430325		10	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680656	7431260		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680666	7431524		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680670	7430086		1	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680671	7431409		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680687	7431388		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680700	7431206		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680714	7431344		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG83R	680756	7431441	5	500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG83	680756	7431441		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680851	7429000		5	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680952	7431269		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680964	7431371		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	680971	7430380		50	Rio Tinto (2009b)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680979	7431424		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	680997	7431187		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681029	7431384		600	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681049	7431271		400	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681086	7431378		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681104	7431209		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	681174	7430585		1	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Outside area	681177	7429349		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681443	7432496		5	Rio Tinto (2005)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	681493	7430326		10	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	681542	7430539		50	Rio Tinto (2009b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681852	7432011		5	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	681978	7431923		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682223	7432025		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682559	7431922		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682584	7431945		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682600	7431792		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682614	7431914		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682634	7431909		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	682650	7432230		5	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	682653	7432181		1	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682668	7432084		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682679	7431776		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682679	7431860		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682703	7431889		5	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682721	7431786		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682753	7431775		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682766	7432059		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682818	7431791		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682824	7431879		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682890	7431859		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682922	7431785		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682943	7431813		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682952	7431791		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	682994	7431819		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG63	683010	7431910		3	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	683084	7431840		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	683106	7432094		10	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	683109	7432336		20	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	683501	7431930		10	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684004	7431665		50	Rio Tinto (2015a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684084	7432053		250	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684116	7431859		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684119	7431765		5000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684172	7431934		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG88R	684182	7431611	5	500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG88	684182	7431611		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684217	7432075		500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684224	7432036		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684254	7431666		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684257	7432008		300	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684296	7432046		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684298	7432022		100	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684327	7432023		5	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684342	7431572		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684342	7431574		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684370	7431595		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684393	7431985		5	Rio Tinto (2015a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684405	7432087		10	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684477	7431949		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684498	7431819		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684500	7431791		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684507	7431911		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684520	7431941		25	Rio Tinto (2015a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684526	7431964		200	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	684534	7431959		500	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	684542	7432026		250	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG-REL23	684748	7431906		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684784	7431981		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684829	7431980		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684880	7431979		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684890	7432016		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	684904	7431981		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG-REL30	685133	7431691		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685143	7431758		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685148	7431631		15	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685158	7431796		4	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685180	7431465		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685188	7431826		120	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685334	7431780		5	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Outside area	685338	7431437		250	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685350	7431932		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685352	7431627		5	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685566	7431560		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685710	7431551		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685822	7431473		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685943	7431458		45	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	685979	7431867		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	686083	7431448		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	686133	7431423		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	686184	7431471		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686202	7431747		1	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686450	7431351		1	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686463	7431366		5	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686582	7431444		20	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686587	7431610		5	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686592	7431458		1	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686604	7431553		100	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686656	7431503		20	Rio Tinto (2010c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686699	7431373		1	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686829	7431590		10	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	686996	7431570		100	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	687016	7431637		10	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687026	7431295		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	687214	7431436		1000	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687251	7431288		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687295	7431228		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687341	7431312		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687355	7431344		600	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687368	7431253		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687485	7431320		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687509	7431320		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Centroid	687542	7431355		25	Rio Tinto (2010b)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687665	7431539		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687670	7431556		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687691	7431339		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	WNG-REL24	687695	7431482		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687726	7431216		700	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687757	7431167		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687776	7431732		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687825	7431889		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687837	7431957		250	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687856	7431213		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687888	7431812		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687913	7431765		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687969	7431222		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687979	7431395		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Deposit J/Mt Ella E	Opp Coll	687987	7431233		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	661940	7442348		25	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662093	7442425		40	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662099	7442454		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662123	7442463		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662243	7442719		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662260	7442347		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662260	7442722		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662265	7442702		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662313	7442666		36	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662348	7442589		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662370	7442471		65	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662384	7442578		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662386	7442615		80	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662467	7442451		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662476	7442565		15	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	662634	7442470		20	Biota (2014c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	663541	7442882		25	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	663989	7442850		50	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	663998	7442991		1	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664001	7442999		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664017	7442852		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664040	7442833		50	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664292	7442817		25	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664309	7442260		50	Biota (2014c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	664746	7443138		100	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665003	7442617		100	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665009	7442788		5	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665054	7442474		5	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665069	7442452		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665072	7443193		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665087	7442400		40	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665095	7443102		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665109	7442643		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665123	7442577		300	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665136	7442533		300	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665148	7442496		10	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665187	7443326		500	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665194	7442875		15	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665201	7442426		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665248	7443524		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665254	7443452		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665255	7443340		500	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665256	7442515		5	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665311	7443257		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665315	7443454		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665342	7443351		200	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665374	7443352		40	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665416	7443369		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665440	7442346		200	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665452	7442288		70	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665484	7443381		15	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG23	665500	7442390	1.50%		Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG23R	665500	7442390	1.5	57	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665500	7443370		10	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665568	7442325		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665587	7442314		40	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665615	7442315		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665708	7442750		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	665928	7443383		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666010	7443018		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666055	7443068		10	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666170	7442822		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666194	7442781		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666237	7442760		10	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666277	7443110		4	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666302	7442842		10	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666535	7442940		30	Biota (2014c)

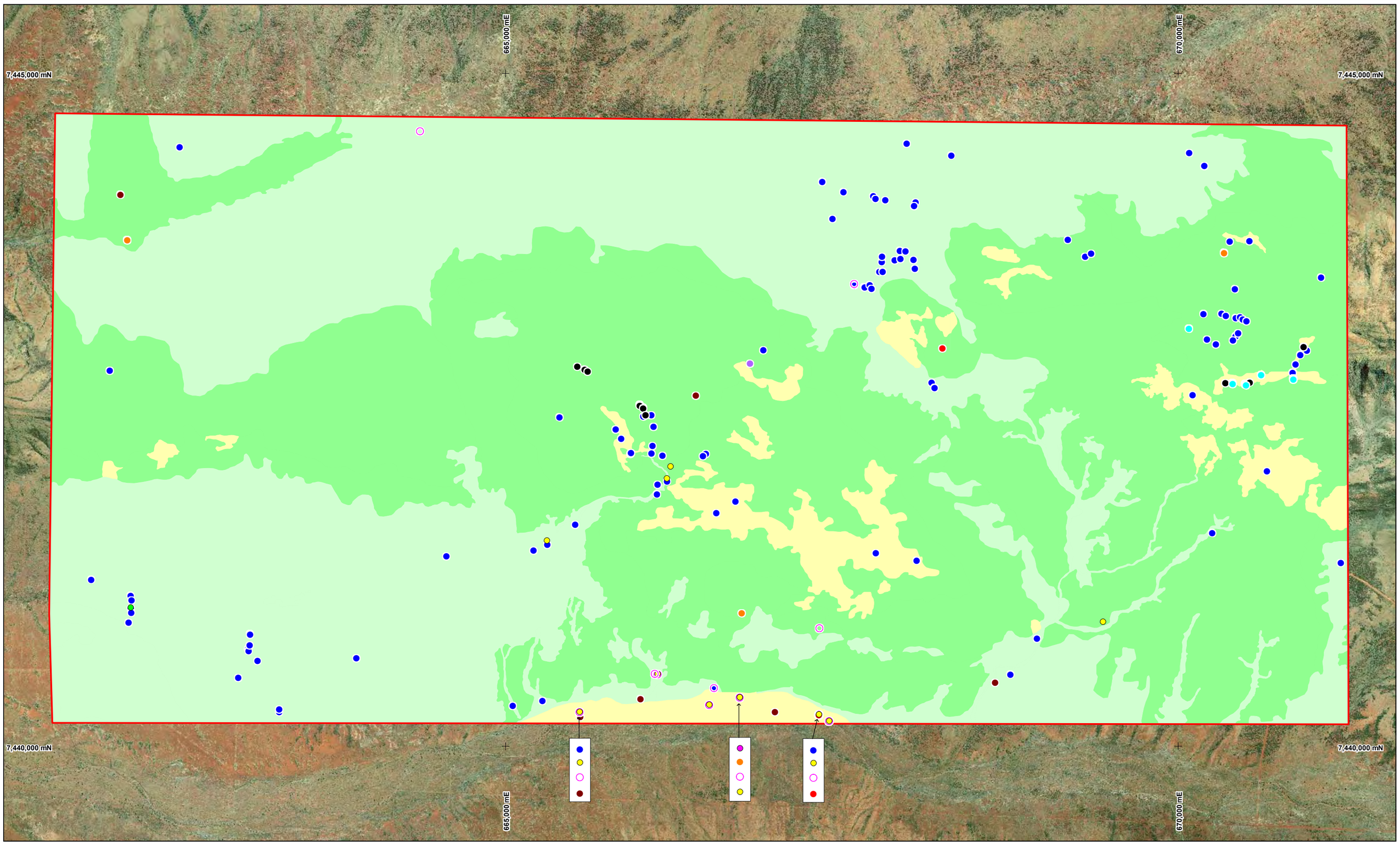
Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666539	7442417		50	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666636	7442900		35	Biota (2014c)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666710	7443179		20	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	666800	7443140		100	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	667112	7442919		30	Rio Tinto (2016)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668705	7443254		350	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668815	7443237		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668817	7443224		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668838	7443305		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668839	7443323		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668951	7443251		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668981	7443667		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668982	7443223		250	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	668999	7443611		500	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669009	7443650		10	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669019	7443331		5	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669022	7443354		40	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669031	7443594		100	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669037	7443224		250	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669073	7443445		10	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669097	7443560		100	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669107	7443503		15	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669118	7443668		50	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669132	7443658		30	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669167	7443560		100	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669215	7443569		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669218	7443459		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669229	7443515		40	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669289	7443504		40	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669302	7443485		50	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669308	7443578		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669372	7443596		5	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669375	7443598		30	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669376	7443634		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669377	7443328		30	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669386	7443892		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669387	7443633		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669392	7443859		7	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669399	7443883		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669400	7443876		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669414	7443697		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669418	7443552		15	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669429	7443525		15	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669430	7443892		4	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669436	7443819		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669444	7443822		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669513	7443560		9	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669540	7443285		5	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669553	7443536		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669608	7443546		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669776	7443461		15	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669972	7443133		40	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	669998	7443175		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670005	7443081		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670013	7443656		20	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670018	7443563		200	Eco Logical Australia (2014a)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670107	7443188		2	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670116	7443778		3000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670140	7443450		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670142	7443458		32	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670162	7442989		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670219	7443567		20	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670242	7443242		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670301	7443339		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670308	7442761		10	Current study (Phase 1, 2018)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670310	7443242		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670319	7443414		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670402	7443414		22	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670433	7443309		70	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670442	7443341		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670478	7443330		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670505	7442884		10	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670506	7442945		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670516	7443819		200	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670520	7443151		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670529	7442809		1	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG36	670538	7443091		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG36R	670538	7443091	3	150	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670539	7443810		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670546	7443266		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670554	7443001		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670555	7442849		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670559	7443347		100	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670572	7443286		80	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670586	7442849		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670595	7443330		300	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670609	7442911		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670609	7443791		400	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670613	7443220		2000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670621	7443370		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670634	7443251		70	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670635	7443304		800	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670635	7443304		15	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670646	7443332		400	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670648	7443289		800	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670657	7443072		1000	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670683	7443047		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670715	7443285		400	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670723	7443384		35	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG34	670737	7443278		1500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG34R	670737	7443278	14	1500	Current Study (Phase 2, 2019)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670774	7443290		150	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670794	7443360		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670795	7443314		71	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670832	7443354		25	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670834	7443510		50	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670846	7443702		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670892	7443349		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670909	7443341		60	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670944	7443331		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670946	7443292		500	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670971	7443259		20	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670981	7443358		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	670992	7443286		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671000	7443309		35	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671001	7443021		6	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671013	7442990		2	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671024	7443016		7	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671029	7443320		12	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671042	7443270		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671059	7443521		6	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671071	7443264		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671086	7443643		8	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671095	7443272		3	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671141	7443253		65	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671177	7443208		40	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	671202	7443103		30	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	WNG-REL13	687172	7435976		2	Current study (Phase 1, 2018)
P3	Poaceae	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)	Western Hill	Opp Coll	687720	7435736		16	Current study (Phase 1, 2018)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687482	7436051		8	Rio Tinto (2014)

Status	Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687495	7436063		3	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687505	7436072		1	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687514	7436083		2	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687860	7435918		5	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687870	7435969		13	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687880	7435953		2	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687881	7435894		10	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit F North	Opp Coll	687911	7436130		6	Rio Tinto (2014)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Releve	675582	7430337		3	Eco Logical Australia (2014b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Releve	675603	7430327		4	Eco Logical Australia (2014b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Releve	675772	7429968		5	Eco Logical Australia (2014b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Opp Coll	675778	7429975		20	Current Study (Phase 2, 2019)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Releve	675803	7429976		5	Eco Logical Australia (2014b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Centroid	676561	7431114		30	Rio Tinto (2009b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Outside area	677745	7431234		1	Current study (Phase 1, 2018)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Releve	677859	7429852		5	Eco Logical Australia (2014b)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Opp Coll	678971	7431470		6	Current study (Phase 1, 2018)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Opp Coll	679080	7431439		6	Current study (Phase 1, 2018)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Opp Coll	685500	7431540		3	Current study (Phase 1, 2018)
P4	Fabaceae	*Acacia bromilowiana*	Deposit J/Mt Ella E	Opp Coll	685512	7431525		10	Current study (Phase 1, 2018)
P4	Goodeniaceae	*Goodenia nuda*	Deposit F North	Opp Coll	690261	7435902		1	Current study (Phase 1, 2018)
P4	Brassicaceae	*Lepidium catapycnon*	Deposit H	Opp Coll	687159	7442881		1	WA Herbarium
P4	Brassicaceae	*Lepidium catapycnon*	Deposit H	Opp Coll	688685	7443292		7	Ecologia (2013)
P4	Brassicaceae	*Lepidium catapycnon*	Deposit H	Opp Coll	688710	7443257		20	Ecologia (2013)
P4	Brassicaceae	*Lepidium catapycnon*	Deposit H	Opp Coll	688715	7443269		1	Ecologia (2013)
P4	Brassicaceae	*Lepidium catapycnon*	Deposit H	Opp Coll	688716	7443281		1	Ecologia (2013)
P4	Brassicaceae	*Lepidium catapycnon*	Western Hill	Opp Coll	671108	7443010		5	Current study (Phase 1, 2018)

Appendix 10

Maps of Vegetation Condition and Locations of Introduced Flora (Weeds)



Location Map



Western Hill study area

Introduced Flora Species

- *Bidens bipinnata
- *Flaveria trinervia
- *Sigesbeckia orientalis
- *Malvastrum americanum
- *Cenchrus ciliaris
- *Datura leichhardtii
- *Setaria verticillata
- *Rumex vesicarius
- *Physalis sp.
- *Solanum nigrum
- *Tribulus terrestris

Vegetation Condition

- Excellent
- Very Good to Excellent
- Very Good

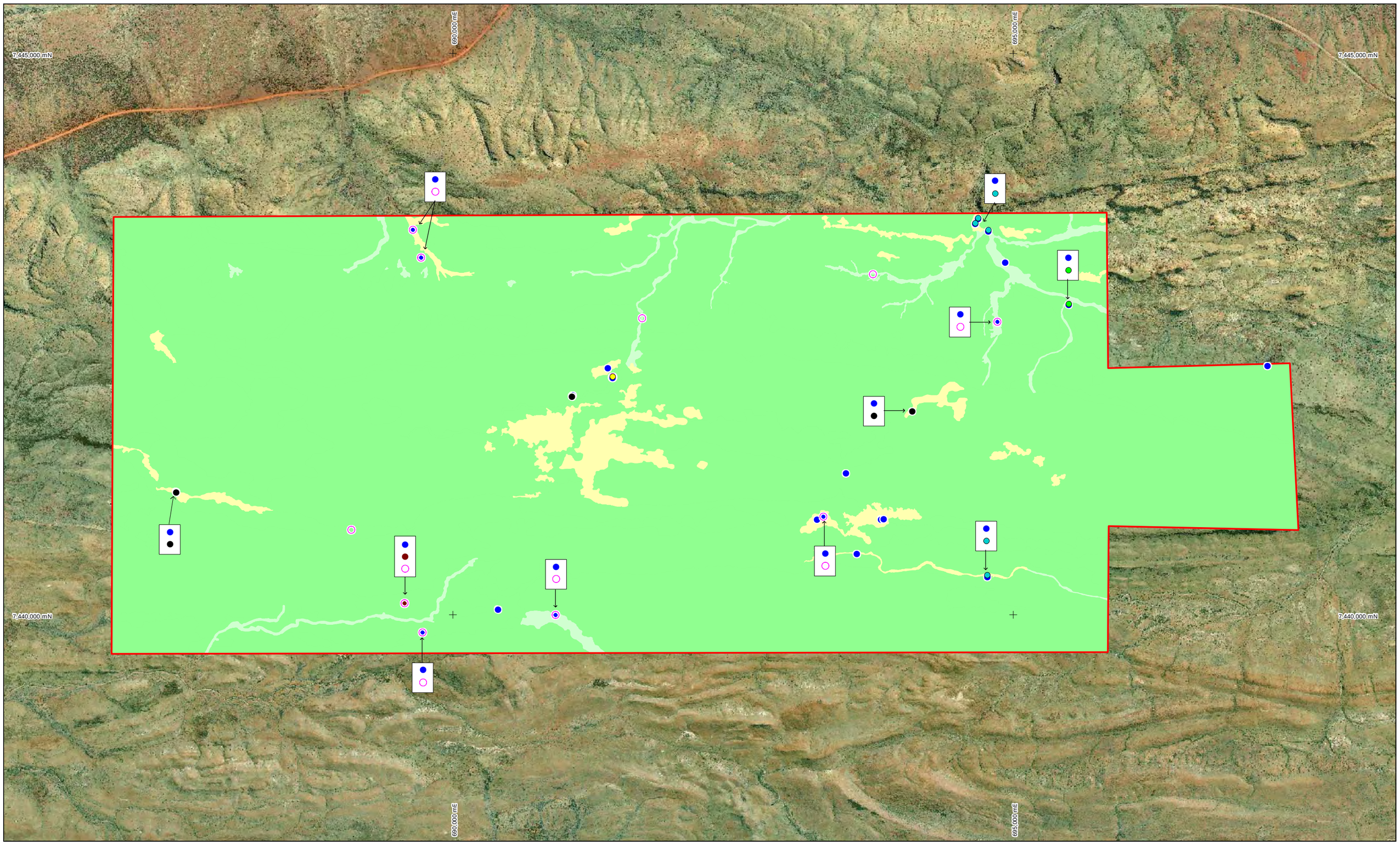
N

0 0.5 1
kilometres

West Angelas Beyond 2020
Western Hill Introduced Flora and Vegetation Condition

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:25,000 @ A3



Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit H study area

Introduced Flora Species

- *Bidens bipinnata
- *Cenchrus ciliaris
- *Malvastrum americanum
- *Setaria verticillata
- *Sigesbeckia orientalis
- *Tribulus terrestris
- *Vachellia farnesiana

Vegetation Condition

- Excellent
- Very Good to Excellent
- Very Good

N

0 750 1,500

metres

West Angelas Beyond 2020 Deposit H Introduced Flora and Vegetation Condition

Biota Environmental Sciences

Author: PL de Kock | Drawn: M Robinson | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:30,000 @ A3

7,435,000 mN

680,000 mE

685,000 mE

7,435,000 mN

7,430,000 mN

7,430,000 mN

675,000 mE

680,000 mE

685,000 mE

Location Map

KARRATHA

Map Area

PERTH

KALGOORLIE

Deposit J/Mt Ella study area

Introduced Flora Species

- **Bidens bipinnata*
- **Sonchus oleraceus*
- **Sigesbeckia orientalis*
- **Malvastrum americanum*
- **Setaria verticillata*
- **Rumex vesicarius*
- **Lactuca serriola*

Vegetation Condition

- Excellent
- Very Good to Excellent
- Very Good
- Disturbed/cleared

N

0 750 1,500

metres

West Angelas Beyond 2020
Deposit J / Mt Ella Introduced Flora and Vegetation Condition

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:32,500 @ A3

688,000 mE
690,000 mE
692,000 mE
7,436,000 mN
7,434,000 mN

Location Map

KARRATHA
Map Area
PERTH
KALGOORLIE

Deposit F North study area

Introduced Flora Species

- *Bidens bipinnata
- *Sonchus oleraceus
- *Conyza bonariensis
- *Malvastrum americanum
- *Setaria verticillata
- *Rumex vesicarius
- *Cenchrus ciliaris

Vegetation Condition

- Excellent
- Very Good to Excellent
- Disturbed/cleared

N

0 250 500
metres

West Angelas Beyond 2020
Deposit F North Introduced Flora and Vegetation Condition

Biota Environmental Sciences

Author: PL de Kock | Drawn: P Sawers | Job No.: 1394 | Date: 08 Aug 2019 | Revised: | Projection: MGA Z50 (GDA94) | Scale: 1:15,000 @ A3

NB. Records shaded blue are duplicate records at same location (not included in counts).

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Asteraceae	*Bidens bipinnata	Deposit F North	WAREL-16	687154	7435630	0.1	50	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit F North	WNG-REL19	689519	7436069		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	691442	7435304		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	691478	7433848		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	691920	7434275	0.1		Biota (2006b)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	692072	7434611	0.1		Biota (2006b)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	692404	7434579		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit F North	Quadrat	692532	7434509		9	Biota (2014a)
Asteraceae	*Bidens bipinnata	Deposit F North	OppColl	692588	7434427		25	Biota (2014a)
Asteraceae	*Bidens bipinnata	Deposit F North	OppColl	692690	7434262		50	Biota (2014a)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	687534	7441102		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	WA26	689571	7440107	0.1	200	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WA30	689646	7443434	0.1	300	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WA29	689718	7443186	0.1	5000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	689733	7439848		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	690405	7440055		1	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	690919	7440001		10	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	691072	7441962		200	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-09	691383	7442208	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	691427	7442121		100	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	693252	7440857		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	WA33	693308	7440878	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	693509	7441271		1000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-21	693605	7440554	0.1	400	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	Quadrat	693821	7440864		5	Ecologia (2013)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-15	693844	7440865	0.1	50	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-14	694661	7443489	0.1	600	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	694686	7443534		20	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-07	694767	7440353	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	694779	7443428		300	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-13	694859	7442615	0.1	300	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	694928	7443150		200	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	OppColl	695496	7442770		100	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit H	WAREL-06	697269	7442225	0.1	20	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL27	675463	7429814		NR	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella E	WNG71R	675739	7429831	0.1	200	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG71	675739	7429831		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG82	676145	7430079		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella E	WAREL-17	676290	7429383	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella E	WNG78R	676311	7429071	3	10,000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG78	676311	7429071		10000	Current study (Phase 1, 2018)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL25	678962	7431434		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	679141	7432009		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella E	WNG-REL26R	679379	7432212	0.1	50	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL26	679379	7432212		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682457	7431933		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682596	7431928		10	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682667	7431908		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682676	7431908		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682703	7431889		1	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	682982	7431708		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	Quadrat	684081	7433027	0.1		Biota (2006b)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684359	7431652		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684366	7431615		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684449	7431762		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684454	7431780		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684457	7431756		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684460	7431825		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	684484	7431913		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL23	684748	7431906		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL30	685133	7431691		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	686307	7431586		60	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG61	687038	7432090		3	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687579	7431707		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687667	7431544		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	WNG-REL24	687695	7431482		8000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687763	7431685		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687775	7431753		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687782	7431711		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687824	7431177		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella E	OppColl	687832	7432743		30	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Deposit J/Mt Ella East	OppColl	687851	7431794		300	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	661921	7441246		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	662057	7442810		60	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG37R	662186	7443784	0.1	30	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	662200	7440928		100	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	Releve	662215	7441129		500	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	662216	7441031		100	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	Releve	662218	7441003		300	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	662220	7441095		1000	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL15	662576	7444471		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	663015	7440514		25	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	663087	7440731		1000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	663090	7440717		100	Current study (Phase 2, 2019)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	663100	7440761		50	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	WNG02	663102	7440840		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG02R	663102	7440840	0.1	5000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	663156	7440646		100	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	WNG04	663317	7440270		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG04R	663317	7440289	0.1	2	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	WNG05	663892	7440672		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG05R	663892	7440672	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	664558	7441438		5	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL03	665051	7440326		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665206	7441482		100	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	WAREL-03	665272	7440367	0.5	3000	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665307	7441529		20	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665400	7442462		50	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665516	7441677		100	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	WNG07	665552	7440256		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG07R	665552	7440256	0.1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL10	665818	7442374		70	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL10R	665818	7442374	0.1	70	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665857	7442305		10	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665927	7442187		40	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665932	7442194		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	665998	7442545		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666024	7442525		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666026	7442461		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666085	7442192		250	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666085	7442470		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666093	7442242		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666101	7442380		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666125	7441890		40	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666128	7441962		15	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666165	7442178		30	Biota (2014c)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666199	7441990		100	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666465	7442179		50	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666488	7442186		30	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666550	7440434		5	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666566	7441755		300	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666707	7441842		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	666916	7442949		20	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	WNG10	667330	7440238		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG10R	667330	7440238	0.1	30	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	WNG44	667355	7444203		350	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG44R	667355	7444203	0.1	350	Current study (Phase 2, 2019)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667432	7443924		40	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667512	7444129		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667591	7443439		50	Rio Tinto (2016)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667664	7443428		NR	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667668	7443425		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667707	7443445		NR	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667719	7443418		NR	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667733	7444095		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667750	7444076		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667754	7441442		40	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667778	7443539		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667798	7443606		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667799	7443646		300	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667802	7443546		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667822	7444068		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667892	7443621		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667931	7443692		100	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667935	7443632		100	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667973	7443690		50	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	667982	7444488		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668032	7443628		100	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668037	7444029		350	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668041	7443570		20	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668048	7444053		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL07	668056	7441389		1	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668166	7442723		NR	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	668188	7442687		NR	Eco Logical Australia (2014a)
Asteraceae	*Bidens bipinnata	Western Hill	WNG46	668315	7444396		300	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL02	668744	7440602		115	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL05	668941	7440868		1	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	669172	7443823		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	669301	7443699		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	669345	7443723		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670071	7443169		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670073	7444474		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670102	7442658		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670185	7443238		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG45	670189	7444352		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG45R	670189	7444352	1	500	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670211	7443050		300	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL06	670251	7441604		10	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670275	7443035		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670320	7443242		100	Current study (Phase 1, 2018)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670336	7443710		30	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670350	7443224		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670379	7443792		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL14	670398	7442748		220	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL14R	670398	7442748	0.1	220	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670404	7443044		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670418	7443429		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670424	7443070		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670424	7443215		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670442	7443101		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670456	7443220		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670476	7443206		200	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL12	670491	7442744		170	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670504	7443196		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670525	7443797		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670657	7442064		5	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670851	7442783		100	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL16	670855	7442741		555	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL16R	670855	7442741	0.1	556	Current study (Phase 2, 2019)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670872	7442847		50	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670908	7442920		500	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	WNG-REL04	670931	7442982		1000	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	670957	7442945		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	671059	7443521		20	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	671207	7441385		5	Current study (Phase 1, 2018)
Asteraceae	*Bidens bipinnata	Western Hill	OppColl	691259	7435915		100	Current study (Phase 1, 2018)
Poaceae	*Cenchrus ciliaris	Deposit F North	OppColl	688490	7436070		13	Biota (2014a)
Poaceae	*Cenchrus ciliaris	Deposit H	WA26	689571	7440107	0.1	NR	Current study (Phase 2, 2019)
Poaceae	*Cenchrus ciliaris	Western Hill	WNG29	662136	7444122		1	Current study (Phase 1, 2018)
Poaceae	*Cenchrus ciliaris	Western Hill	WNG29R	662136	7444122	0.1	1	Current study (Phase 2, 2019)
Poaceae	*Cenchrus ciliaris	Western Hill	WNG07	665552	7440256		100	Current study (Phase 1, 2018)
Poaceae	*Cenchrus ciliaris	Western Hill	WNG07R	665552	7440256	1	100	Current study (Phase 2, 2019)
Poaceae	*Cenchrus ciliaris	Western Hill	OppColl	666004	7440357		40	Current study (Phase 1, 2018)
Poaceae	*Cenchrus ciliaris	Western Hill	OppColl	666414	7442617		1	Rio Tinto (2016)
Poaceae	*Cenchrus ciliaris	Western Hill	OppColl	667003	7440261	1.2		Biota (2019)
Poaceae	*Cenchrus ciliaris	Western Hill	WNG10R	667330	7440238	0.1	3	Current study (Phase 2, 2019)
Poaceae	*Cenchrus ciliaris	Western Hill	OppColl	668630	7440543		10	Current study (Phase 2, 2019)
Asteraceae	*Conyza bonariensis	Deposit F North	Releve	691755	7434376	0.1		Biota (2006b)
Asteraceae	*Flaveria trinervia	Western Hill	WNG37R	662186	7443784	0.1		Current study (Phase 2, 2019)
Asteraceae	*Flaveria trinervia	Western Hill	Releve	666741	7440365		1	Biota (2009)
Asteraceae	*Flaveria trinervia	Western Hill	Releve	666756	7440998		1	Biota (2009)
Asteraceae	*Flaveria trinervia	Western Hill	OppColl	670336	7443710		1	Current study (Phase 1, 2018)
Asteraceae	*Lactuca serriola	Deposit J/Mt Ella East	Quadrat	685801	7432918		NR	Biota (2006b)

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Malvaceae	**Malvastrum americanum*	Deposit F North	Quadrat	692532	7434509		6	Biota (2014a)
Malvaceae	**Malvastrum americanum*	Deposit H	OppColl	689097	7440761		5	Ecologia (2013)
Malvaceae	**Malvastrum americanum*	Deposit H	WA26	689571	7440107	0.1	100	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WA30	689646	7443434	0.1	2	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WA29	689718	7443186	0.1	60	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	Quadrat	689733	7439848		1	Ecologia (2013)
Malvaceae	**Malvastrum americanum*	Deposit H	Quadrat	690919	7440001		5	Ecologia (2013)
Malvaceae	**Malvastrum americanum*	Deposit H	OppColl	691427	7442121		30	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WAREL-23	691691	7442645	0.1	400	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WA33	693308	7440878	0.1	50	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WAREL-20	693750	7443040	0.1	2	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit H	WAREL-13	694859	7442615	0.1	100	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Deposit J/Mt Ella East	WNG82	676145	7430079		10	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Deposit J/Mt Ella East	WNG-REL28	677548	7429404.5		20	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	Releve	666132	7440538		1	Biota (2009)
Malvaceae	**Malvastrum americanum*	Western Hill	OppColl	664365	7444574		4	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG07	665552	7440256		20	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG07R	665552	7440256	0.1	20	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG-REL08	666109	7440543		20	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG09	666514	7440309		28	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	OppColl	666550	7440434		10	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG10	667330	7440238		100	Current study (Phase 1, 2018)
Malvaceae	**Malvastrum americanum*	Western Hill	WNG10R	667330	7440238	0.1	100	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Western Hill	OppColl	667334	7440880		3	Current study (Phase 2, 2019)
Malvaceae	**Malvastrum americanum*	Western Hill	OppColl	667405	7440189	1		Biota (2009)
Malvaceae	**Malvastrum americanum*	Western Hill	Releve	666741	7440365		1	Biota (2009)
Malvaceae	**Malvastrum americanum*	Western Hill	OppColl	667591	7443439		50	Rio Tinto (2016)
Solanaceae	**Datura leichhardtii*	Western Hill	Releve	666741	7440365		1	Biota (2009)
Solanaceae	**Physalis sp.*	Western Hill	OppColl	666817	7442854		20	Biota (2014c)
Polygonaceae	**Rumex vesicarius*	Deposit F North	OppColl	690980	7433560		1	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit F North	OppColl	691129	7433600		1	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680371	7433270		7	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680373	7433280		6	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680390	7433266		10	Astron (2016)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680392	7433310		10	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680404	7433340		9	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680438	7433459		10	Astron (2016)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680445	7433370		10	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680466	7433454		4	Astron (2016)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680480	7433360		10	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680512	7433428		10	Astron (2016)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680544	7433428		40	Astron (2016)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	680548	7433340		10	Astron (2017)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680572	7433425		10	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680608	7433416		7	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680652	7433401		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680705	7433392		19	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680731	7433300		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680752	7433372		5	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680753	7433300		7	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680794	7433290		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680832	7433365		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680844	7433280		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680868	7433270		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680895	7433270		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680930	7433260		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	680964	7433369		5	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681014	7433247		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681128	7433220		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681247	7433242		5	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681295	7433274		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681528	7433231		4	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681578	7433169		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681607	7433222		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681615	7433157		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681641	7433214		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681685	7433304		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681698	7433261		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681712	7433299		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681724	7433198		4	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681742	7433292		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681789	7433192		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681793	7433279		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681846	7433264		5	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681868	7432766		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681869	7433264		3	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681886	7433262		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681920	7433256		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681936	7433257		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	681942	7433220		9	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	682031	7433262		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	682200	7433246		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	682285	7433130		20	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	682434	7433100		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	682516	7433100		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683168	7433090		4	Astron (2017)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683243	7433080		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683371	7432814		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683376	7432990		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683379	7433040		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683410	7433060		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683722	7432980		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683863	7432970		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683879	7432938		2	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	683881	7432940		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684096	7433060		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684099	7433090		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684106	7433108		1	Astron (2016)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684106	7433110		13	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684117	7433010		5	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684119	7432960		5	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684125	7433090		3	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684137	7433040		5	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684145	7433050		5	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684161	7432820		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684183	7432750		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684185	7432890		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684197	7432820		20	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684216	7432750		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684387	7432950		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684403	7432960		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684429	7432950		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684468	7432950		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684473	7432950		20	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684493	7432950		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684500	7432950		10	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684541	7432870		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684546	7432950		8	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684570	7432950		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684590	7432950		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684640	7432950		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684664	7432940		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684684	7432890		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684689	7432940		4	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684709	7432940		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684798	7432850		1	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684833	7432940		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684968	7432910		2	Astron (2017)
Polygonaceae	*Rumex vesicarius	Deposit J/Mt Ella East	OppColl	684974	7432900		1	Astron (2017)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685065	7432950		2	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685124	7432960		3	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685282	7432910		2	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685289	7432850		1	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685301	7432790		3	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685318	7432680		1	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	685318	7432710		2	Astron (2017)
Polygonaceae	**Rumex vesicarius*	Deposit J/Mt Ella East	OppColl	687159	7431907		1	Current study (Phase 1, 2018)
Polygonaceae	**Rumex vesicarius*	Western Hill	WNG10	667330	7440238		10	Current study (Phase 1, 2018)
Polygonaceae	**Rumex vesicarius*	Western Hill	OppColl	668249	7442963		1	Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Deposit F North	Quadrat	692018	7434660	0.1		Biota (2006b)
Poaceae	**Setaria verticillata*	Deposit H	OppColl	691427	7442121		20	Current study (Phase 2, 2019)
Poaceae	**Setaria verticillata*	Deposit J/Mt Ella East	WNG-REL29	675588	7430186	0.1		Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Deposit J/Mt Ella East	OppColl	686307	7431586		30	Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Western Hill	OppColl	665307	7441529		10	Rio Tinto (2016)
Poaceae	**Setaria verticillata*	Western Hill	WNG07	665552	7440256	0.1		Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Western Hill	Releve	666132	7440538		1	Biota (2009)
Poaceae	**Setaria verticillata*	Western Hill	OppColl	666199	7441990		5	Rio Tinto (2016)
Poaceae	**Setaria verticillata*	Western Hill	OppColl	666227	7442079		200	Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Western Hill	WNG09	666514	7440309		15	Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Western Hill	WNG10	667330	7440238		2	Current study (Phase 1, 2018)
Poaceae	**Setaria verticillata*	Western Hill	Releve	666741	7440365		1	Biota (2009)
Poaceae	**Setaria verticillata*	Western Hill	WNG10R	667330	7440238	0.1	2	Current study (Phase 2, 2019)
Poaceae	**Setaria verticillata*	Western Hill	OppColl	667405	7440189	1		Biota (2009)
Poaceae	**Setaria verticillata*	Western Hill	WAREL-02	669440	7440926	0.1	1	Current study (Phase 2, 2019)
Asteraceae	**Sigesbeckia orientalis*	Deposit H	Quadrat	687534	7441102		1	Ecologia (2013)
Asteraceae	**Sigesbeckia orientalis*	Deposit H	OppColl	691064	7441959		1	Ecologia (2013)
Asteraceae	**Sigesbeckia orientalis*	Deposit H	Quadrat	694100	7441820		1	Ecologia (2013)
Asteraceae	**Sigesbeckia orientalis*	Deposit J/Mt Ella East	WNG82	676145	7430079		3	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Deposit J/Mt Ella East	WNG-REL25	678962	7431434		1	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	665532	7442843		10	Rio Tinto (2016)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	665586	7442822		10	Rio Tinto (2016)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	665608	7442807		30	Rio Tinto (2016)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	665998	7442545		20	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	666024	7442525		20	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	666041	7442476		10	Rio Tinto (2016)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	670344	7442750		10	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	WNG-REL14	670398	7442748		16	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	WNG-REL12	670491	7442744		7	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	670525	7442759		10	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	OppColl	670615	7442776		1	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	WNG-REL16	670855	7442741		2	Current study (Phase 1, 2018)
Asteraceae	**Sigesbeckia orientalis*	Western Hill	WNG-REL04	670931	7442982		10	Current study (Phase 1, 2018)

Family	Species	Deposit	Site Type	Easting	Northing	Cover (%)	Number of Individuals	Source
Solanaceae	**Solanum nigrum*	Western Hill	OppColl	670071	7443169		1	Current study (Phase 1, 2018)
Solanaceae	**Solanum nigrum*	Western Hill	WNG-REL14	670398	7442748		9	Current study (Phase 1, 2018)
Solanaceae	**Solanum nigrum*	Western Hill	WNG-REL12	670491	7442744		3	Current study (Phase 1, 2018)
Solanaceae	**Solanum nigrum*	Western Hill	OppColl	670498	7442742		4	Current study (Phase 1, 2018)
Solanaceae	**Solanum nigrum*	Western Hill	OppColl	670615	7442776		7	Current study (Phase 1, 2018)
Solanaceae	**Solanum nigrum*	Western Hill	WNG-REL16	670855	7442741		6	Current study (Phase 1, 2018)
Asteraceae	**Sonchus oleraceus*	Deposit F North	Quadrat	691755	7434376	0.1		Biota (2006b)
Asteraceae	**Sonchus oleraceus*	Deposit J/Mt Ella East	WNG-REL25	678962	7431434		5	Current study (Phase 1, 2018)
Zygophyllaceae	**Tribulus terrestris*	Deposit H	OppColl	695496	7442770		3	Current study (Phase 2, 2019)
Zygophyllaceae	**Tribulus terrestris*	Western Hill	OppColl	662215	7441031		1	Biota (2014c)
Fabaceae	**Vachellia farnesiana*	Deposit H	WAREL-14	694661	7443489	0.1	30	Current study (Phase 2, 2019)
Fabaceae	**Vachellia farnesiana*	Deposit H	OppColl	694686	7443534		3	Current study (Phase 2, 2019)
Fabaceae	**Vachellia farnesiana*	Deposit H	WAREL-07	694767	7440353	0.1	4	Current study (Phase 2, 2019)
Fabaceae	**Vachellia farnesiana*	Deposit H	OppColl	694779	7443428		8	Current study (Phase 2, 2019)

Appendix 11

Selected Inputs and Outputs of the Floristic Analyses

Table 1: List of rationalised species for input to the PRIMER analysis.

Taxon	Status (omitted, or treated as)
Abutilon ? sp. Dioicum (A.A. Mitchell PRP 1618)	Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)
Abutilon aff. fraseri	Abutilon fraseri subsp. fraseri
Abutilon sp.	omitted
All Mulga taxa (A. 'aneura' complex)	Acacia aff. aneura
Acacia ? ayersiana (sterile)	Acacia ayersiana
Acacia ? catenulata subsp. occidentalis	Acacia catenulata subsp. occidentalis
Acacia ? hilliana x hamersleyensis	omitted
Acacia ? kempeana	Acacia kempeana
Acacia ? morrisonii	Acacia pyrifolia
Acacia ? sibirica	Acacia sibirica
Acacia aff. adsurgens	Acacia adsurgens
Acacia aff. adsurgens (2)	Acacia adsurgens
Acacia aff. adsurgens (3)	Acacia adsurgens
Acacia aff. ayersiana (narrow form; MET 15,786)	Acacia ayersiana (narrow phyllode variant)
Acacia aff. ayersiana (YBI08-01)	Acacia ayersiana
Acacia ayersiana x	Acacia ayersiana
Acacia ayersiana x aneura	Acacia ayersiana
Acacia ayersiana x incurvaneura	Acacia ayersiana
Acacia colei	omitted
Acacia eriopoda	omitted
Acacia hamersleyensis (bushy form)	Acacia hamersleyensis
Acacia hamersleyensis (spindly form)	Acacia hamersleyensis
Acacia kempeana (1)	Acacia kempeana
Acacia pyrifolia (slender form)	Acacia pyrifolia
Acacia pyrifolia var. pyrifolia	Acacia pyrifolia
Acacia sibirica (crowded smaller phyllodes)	Acacia sibirica
Acacia sibirica x (? rhodophloia)	Acacia sibirica
Acacia sp.	omitted
Acacia sp. West Angelas (MET 16,163)	omitted
Acacia validinervia	Acacia steedmanii subsp. borealis
Alternanthera denticulata	omitted
Amaranthus aff. interruptus (MET 16,114)	Amaranthus interruptus
Amaranthus mitchellii	omitted
Amaranthus sp.	omitted
Amaranthus sp. (WES26-16)	omitted
Amaranthus undulatus	omitted
Ammannia baccifera	omitted
Ammannia multiflora	omitted
Amphipogon caricinus var. caricinus	Amphipogon sericeus
Amyema fitzgeraldii	omitted
Amyema miquelii	omitted
Amyema sanguinea var. pulchra	omitted
Aristida ? inaequiglumis	Aristida inaequiglumis
Aristida ? ingrata	Aristida ingrata
Aristida sp.	omitted
Astrebla sp.	omitted
Bidens bipinnata	omitted
Boerhavia gardneri	omitted
Boerhavia sp.	omitted
Bonamia pilbarensis	omitted
Bothriochloa sp.	omitted
Brunonia australis	Brunonia sp. Long hairs (D.E. Symon 2440)
Bulbostylis turbinata	omitted
Cajanus cinereus	omitted
Calandrinia cf. lehmannii	omitted
Calandrinia eremaea	omitted
Calandrinia sp.	omitted

Taxon	Status (omitted, or treated as)
Calotis multicaulis	omitted
Cassytha filiformis	omitted
Centipeda minima	Centipeda minima subsp. macrocephala
Centipeda thespidioides	omitted
Cheilanthes sieberi subsp. pseudovellea	omitted
Chrysocephalum apiculatum	Chrysocephalum apiculatum subsp. pilbarense
Clerodendrum floribundum	Clerodendrum floribundum var. angustifolium
Clerodendrum sp.	Clerodendrum floribundum var. angustifolium
Clerodendrum tomentosum var. lanceolatum	Clerodendrum floribundum var. angustifolium
Convolvulus ? remotus	Convolvulus clementii
Convolvulus sp.	Convolvulus clementii
Conyza bonariensis	omitted
Corchorus lasiocarpus (subsp. not determined)	Corchorus lasiocarpus
Corchorus lasiocarpus subsp. lasiocarpus	Corchorus lasiocarpus
Corchorus lasiocarpus subsp. parvus	Corchorus lasiocarpus
Corchorus sp.	omitted
Crotalaria novae-hollandiae subsp. novae-hollandiae	omitted
Cryptandra monticola	omitted
Cucumis myriocarpus	omitted
Cullen graveolens	omitted
Cullen leucanthum	omitted
Cullen sp.	omitted
Cymbopogon ? ambiguus	Cymbopogon ambiguus
Cymbopogon ? obtectus	Cymbopogon obtectus
Cymbopogon sp.	omitted
Cynanchum floribundum	Cynanchum pedunculatum
Dichanthium sericeum	omitted
Dichanthium sericeum subsp. sericeum	omitted
Dichanthium sp.	omitted
Diplatia grandibractea	omitted
Diplopeltis stuartii var. stuartii	omitted
Dysphania glomulifera subsp. eremaea	omitted
Dysphania melanocarpa forma leucocarpa	Dysphania melanocarpa
Dysphania melanocarpa forma melanocarpa	Dysphania melanocarpa
Dysphania rhadinostachya subsp. inflata	Dysphania rhadinostachya
Dysphania rhadinostachya subsp. rhadinostachya	Dysphania rhadinostachya
Dysphania sp.	omitted
Dysphania sphaerosperma	omitted
Enneapogon intermedius	omitted
Enneapogon sp.	omitted
Eragrostis elongata	omitted
Eragrostis exigua	omitted
Eragrostis sp.	omitted
Eremophila ? tietkensii	omitted
Eremophila forrestii	Eremophila forrestii subsp. forrestii
Eremophila jucunda subsp. jucunda	Eremophila jucunda subsp. pulcherrima
Eremophila latrobei subsp. glabra	Eremophila latrobei
Eremophila latrobei subsp. latrobei	Eremophila latrobei
Eremophila phyllopoda	Eremophila phyllopoda subsp. obliqua
Eremophila sp.	omitted
Eremophila tietkensii	Eremophila sp. Hamersley Range (K. Walker KW 136)
Eriachne benthamii	Eriachne flaccida
Eriachne mucronata (arid form) (MET 12 736)	Eriachne mucronata
Eriachne mucronata (typical form)	Eriachne mucronata
Eriachne pulchella subsp. dominii	Eriachne pulchella
Eriachne pulchella subsp. pulchella	Eriachne pulchella
Eriachne sp.	omitted
Eucalyptus ? trivalva	Eucalyptus trivalva
Eucalyptus socialis	Eucalyptus socialis subsp. eucentrica

Taxon	Status (omitted, or treated as)
? Eulalia aurea	Eulalia aurea
Eulalia simonii	omitted
Euphorbia ? drummondii	Euphorbia drummondii
Euphorbia aff. australis var. 1 (MET 12 337)	Euphorbia australis
Euphorbia aff. coghlanii (HD186-18)	omitted
Euphorbia aff. myrtoides (MET 12,679)	omitted
Euphorbia alsiniflora	Euphorbia sp. (biconvexa/coghlanii/trigonosperma; sterile)
Euphorbia australis (mid-green form)	Euphorbia australis
Euphorbia boophthona (large seed form)	Euphorbia boophthona
Euphorbia sp.	omitted
Euphorbia sp. (boophthona/tannensis)	omitted
Euphorbia sp. (site 1089)	omitted
Euphorbia tannensis subsp. eremophila (Hamersley form)	Euphorbia tannensis subsp. eremophila
Evolvulus alsinoides var. decumbens	Evolvulus alsinoides
Evolvulus alsinoides var. villosicalyx	Evolvulus alsinoides
Fimbristylis sp.	omitted
Geastrum cf. fimbriatum	omitted
Gompholobium sp.	omitted
Goodenia lyrata	omitted
Goodenia pascua	omitted
Goodenia sp.	omitted
Gossypium australe (Burrup Peninsula form)	Gossypium australe
Grevillea wickhamii subsp. aprica	Grevillea wickhamii
Grevillea wickhamii subsp. hispidula	Grevillea wickhamii
Grevillea wickhamii subsp. macrodonta	Grevillea wickhamii
Halgania gustafsenii var. gustafsenii	Halgania gustafsenii
Halgania gustafsenii var. Mid West (G. Perry 370)	Halgania gustafsenii
Haloragis gossei var. gossei	Haloragis gossei
Haloragis gossei var. inflata	Haloragis gossei
Heliotropium sp.	omitted
Hibiscus aff. coatesii	Hibiscus coatesii
Hibiscus aff. coatesii (MET 15 012)	Hibiscus coatesii
Hibiscus aff. coatesii (MET 16,542)	Hibiscus coatesii
Hibiscus aff. coatesii (site 1446)	Hibiscus coatesii
Hibiscus aff. coatesii (site 664)	Hibiscus coatesii
Hibiscus aff. coatesii (site 733)	Hibiscus coatesii
Hibiscus aff. coatesii (site 751)	Hibiscus coatesii
Hibiscus sp.	omitted
Hibiscus sp. Mt Robinson (G. Byrne 3537)	omitted
Hibiscus sturtii var. aff. campylochlamys (site 1398)	Hibiscus sturtii
Hibiscus sturtii var. aff. campylochlamys (site 172)	Hibiscus sturtii
Hibiscus sturtii var. aff. grandiflorus	Hibiscus sturtii
Hibiscus sturtii var. aff. truncatus	Hibiscus sturtii
Hibiscus sturtii var. campylochlamys	Hibiscus sturtii
Hibiscus sturtii var. grandiflorus	Hibiscus sturtii
Hibiscus sturtii var. platychlamys	Hibiscus sturtii
Hibiscus sturtii var. truncatus	Hibiscus sturtii
Indigofera brevidens	omitted
Indigofera linifolia	omitted
Indigofera linnaei	omitted
Indigofera monophylla (brown calyx form)	Indigofera monophylla
Indigofera monophylla (grey/green leaflet form)	Indigofera monophylla
Indigofera monophylla (small leaflet form)	Indigofera monophylla
Indigofera sp.	omitted
Iseilema sp.	omitted
Isotoma petraea	omitted
Isotropis atropurpurea	omitted
Isotropis forrestii	Isotropis sp. Arid zone (G. Byrne 2775)

Taxon	Status (omitted, or treated as)
Isotropis sp.	omitted
Josephinia sp. Marandoo (M.E. Trudgen 1554)	omitted
Leiocarpa semicalva	Leiocarpa semicalva subsp. semicalva
Lepidium ? pholidogynum	omitted
Lepidium pholidogynum	omitted
Lepidium sp.	omitted
Lotus cruentus	omitted
Lysiana casuarinae	omitted
Maireana integra	omitted
Maireana lanosa	omitted
Maireana sp.	omitted
Maireana thesioides	omitted
Malvastrum americanum	omitted
Melaleuca glomerata	omitted
Menkea villosula	omitted
Mukia aff. maderaspatana (3) (green scabrid rounded)	Cucumis variabilis
Myriocephalus aff. nudus	omitted
Neptunia dimorphantha	omitted
Nicotiana occidentalis subsp. obliqua	Nicotiana occidentalis
Nicotiana occidentalis subsp. occidentalis	Nicotiana occidentalis
Nicotiana sp.	omitted
Oxalis aff. corniculata (site 654)	Oxalis sp. Pilbara (M.E. Trudgen 12725)
Peripleura sp.	omitted
Pimelea microcephala subsp. microcephala	omitted
Pisolithus sp.	omitted
Pluchea sp.	omitted
Pluchea tetranthera	omitted
Plumbago zeylanica	omitted
Podaxis pistillaris	omitted
Polygala aff. isingii	Polygala glaucifolia
Polygala isingii	Polygala glaucifolia
Portulaca filifolia	omitted
Portulaca oleracea	Portulaca oleracea/intraterranea
Pterocaulon ? sphaeranthoides x sphacelatum	Pterocaulon sp.
Pterocaulon sphacelatum	Pterocaulon sp.
Pterocaulon sphaeranthoides	Pterocaulon sp.
Ptilotus ? fusiformis	Ptilotus fusiformis
Ptilotus obovatus	Ptilotus obovatus var. obovatus
Ptilotus schwartzii	Ptilotus schwartzii var. schwartzii
Ptilotus sp.	omitted
Rhodanthe citrina	omitted
Rhodanthe pollackii	Rhodanthe polakii
Rhodanthe sp.	omitted
Roepera sp.	omitted
Rumex vesicarius	omitted
Scaevola browniana subsp. browniana	Scaevola sp. Mt Bruce (M.E. Trudgen 1333)
Scaevola parvifolia	Scaevola parvifolia subsp. pilbarae
Sclerolaena convexula	omitted
Sclerolaena sp.	omitted
Senna ? ferraria	Senna ferraria
Senna ? symonii	omitted
Senna aff. glaucifolia (site 888)	Senna glaucifolia
Senna artemisioides	Senna artemisioides subsp. x artemisioides
Senna artemisioides subsp. ? oligophylla x S. ferraria	omitted
Senna artemisioides subsp. ? oligophylla x S. glaucifolia (WES14-12)	Senna glaucifolia x S. artemisioides subsp. oligophylla
Senna artemisioides subsp. oligophylla x S. ferraria	omitted
Senna artemisioides subsp. oligophylla x S. stricta	omitted

Taxon	Status (omitted, or treated as)
Senna artemisioides subsp. x artemisioides x S. stricta	omitted
Senna artemisioides subsp. x artemisioides x subsp. helmsii	omitted
Senna artemisioides subsp. x sturtii	omitted
Senna artemisioides subsp. x sturtii x	omitted
Senna artemisioides subsp. x sturtii x S. ? stricta	omitted
Senna ferraria x	omitted
Senna ferraria x S. artemisioides subsp. oligophylla	omitted
Senna glaucifolia x ? (site 626)	Senna glaucifolia x
Senna glaucifolia x S. glutinosa subsp. x luerssenii	omitted
Senna glutinosa subsp. aff. pruinosa (MET 15,687)	omitted
Senna glutinosa subsp. pruinosa x	omitted
Senna glutinosa subsp. pruinosa x subsp. x luerssenii	omitted
Senna hamersleyensis	omitted
Senna pleurocarpa var. pleurocarpa	omitted
Senna sp.	omitted
Senna stricta x S. glutinosa subsp. x luerssenii	omitted
Seringia sp.	omitted
Setaria verticillata	omitted
Sida ? arsiniata	omitted
Sida ? echinocarpa	Sida echinocarpa
Sida aff. cardiophylla (site 1086)	Sida cardiophylla
Sida aff. echinocarpa (site 217)	Sida echinocarpa
Sida aff. fibulifera	Sida fibulifera
Sida aff. fibulifera (grey; MET 15 783)	Sida fibulifera
Sida aff. fibulifera (HD237-9)	Sida fibulifera
Sida aff. fibulifera (oblong; MET 15 220)	Sida fibulifera
Sida aff. fibulifera (site 1394)	Sida fibulifera
Sida aff. fibulifera (site 1421)	Sida fibulifera
Sida aff. fibulifera (site 1529)	Sida fibulifera
Sida arsiniata	omitted
Sida rohlenae	omitted
Sida sp.	omitted
Sida sp. (MET 16,086)	omitted
Sida sp. (site 1447)	omitted
Sida sp. (site 625)	omitted
Sida sp. Pilbara (A.A. Mitchell PRP 1543) (ferruginous form)	Sida sp. Pilbara (A.A. Mitchell PRP 1543)
Sida trichopoda	omitted
Sigesbeckia orientalis	omitted
Solanum aff. sturtianum	omitted
Solanum sp.	omitted
Solanum sturtianum	Solanum piceum
Sonchus oleraceus	omitted
Spartothamnella teucriiflora	Teucrium teucriiflorum
Stackhousia sp.	omitted
Stemodia kingii	omitted
Stenopetalum decipiens	omitted
Stenopetalum sp.	omitted
Streptoglossa aff. bubakii (site 1445)	Streptoglossa bubakii
Streptoglossa sp.	omitted
Streptoglossa tenuiflora	omitted
Swainsona canescens	omitted
Swainsona sp.	omitted
Tephrosia aff. clementii (12) (HD1-32)	omitted
Tephrosia sp.	omitted
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	omitted

Taxon	Status (omitted, or treated as)
Tephrosia sp. Newman (A.A. Mitchell PRP 29)	omitted
Themeda aff. triandra (MET 16,046)	Themeda triandra
Themeda sp.	omitted
Trachymene pilbarensis	omitted
Trianthema glossostigmum	omitted
Tribulus hirsutus	omitted
Tribulus occidentalis	omitted
Tribulus platypterus	omitted
Tribulus terrestris	omitted
Triodia ? basedowii	Triodia basedowii
Triodia ? brizoides	Triodia brizoides
Triodia epactia	Triodia epactia/pungens
Triodia schinzii	omitted
Triodia sp. (indeterminate; pungens/aff. pungens)	Triodia epactia/pungens
Triodia sp. Shovelanna Hill (S. van Leeuwen 3835)	Triodia vanleeuwenii
Triumfetta ? appendiculata	omitted
Tulostoma ? albicans	omitted
Urochloa occidentalis var. ciliata	Urochloa occidentalis
Urochloa occidentalis var. occidentalis	Urochloa occidentalis
Urochloa piligera	omitted
Vachellia farnesiana	omitted
Vincetoxicum flexuosum	omitted
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)	omitted
Wahlenbergia gracilenta	omitted

Table 2: Number of sites in each vegetation type in each floristic group (30% similarity based on cover of perennial species only).
Groups shaded grey did not include any sites from the study area; groups shaded green did not contain any sites from outside the study area.

Floristic Group	Number of Sites in Each Vegetation Type (NA = Not assigned; sites outside the current study area)																																																
	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	G1	G2	G3	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15	H16	M1	P1	P2	P3	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	NA
a																																															1
b																																															1
c																																															9
d																																															1
e																																															4
f																																															1
g																																															1
h																																															2
i				1																																		3	1							3
j																																															1
k		3																																													7
l	1											2																																			2
m															1																																2
n			6		5	2	6	3	1	1	5														1													3							7
o							1		1																																					3
p																	3																														
q																																				1											7
r																																			1		1									3
s																																		5												7
t																															1																
u																																1															
v																1																															
w				1									2	9	2	1		2																													1
x																																															5
y																																															5
z						2																																									1
aa																																															4
ab				2				1			3					2	3														3	11	5		8	4	4						1			53
ac						1										1		2			4		2	1			3			5	9				1					1		1	4			34
ad																																										3				1
ae																						3	12	7	8	1					10		1						5			1		1	31
af																																													2	2	
ag																																													1	8	4
ah																			3	3					2	3		3	3	4									1						15

Table 3: Floristic groups identified from the regional data set using a 30% similarity cut-off based on cover of perennial species.
Groups shaded grey did not include any sites from the study area; groups shaded green did not contain any sites from outside the study area.

Floristic Group (30% similarity)	Number of Sites		Top 3 Indicator Species	Vegetation Types (Sites) from the Study Area
	Inside Study Area	Outside Study Area		
a		1	NA – single site	
b		1	NA – single site	
c		9	*Triodia brizoides, Solanum lasiophyllum, Eucalyptus leucophloia* subsp. *leucophloia*	
d		1	NA – single site	
e		4	*Eragrostis eriopoda, Acacia pruinocarpa, Eremophila forrestii* subsp. *forrestii*	
f		1	NA – single site	
g		1	NA – single site	
h		2	*Aristida latifolia, Sida fibulifera, Acacia* aff. *aneura*	
i	5	3	*Acacia* aff. *aneura, Themeda triandra, Eucalyptus xerothermica*	D4 (WAREL-03) P7 (WA17, WA26, WAREL-22) P8 (WNG29)
j		1	NA – single site	
k	3	7	*Acacia citrinoviridis, Themeda triandra, Eucalyptus victrix*	D2 (WNG07, WNG09, WNG10)
l	3	2	*Themeda triandra, Eucalyptus victrix, Eulalia aurea*	D1 (WAREL-14) D12 (WAREL-07, WAREL-21)
m	1	2	*Themeda triandra, Gossypium robinsonii, Corymbia hamersleyana*	G3 (WAREL-16)
n	33	7	*Themeda triandra, Triodia epactia/pungens, Petalostylis labicheoides*	D3 (WNG-REL28, WNG-REL29, WNG69, WNG70, WNG82, WNG89) D5 (WAREL-02, WNG-REL02, WNG-REL06, WNG-REL11, WNG35) D6 (WNG-REL08, WNG-REL09) D7 (WAREL-18, WNG-REL13, WNG-REL19, WNG-REL20, WAF-RPSA, WAF-RPSB) D8 (WAREL-08, WAREL-24, WAREL-25) D9 (WNG-REL17) D10 (WA30) D11 (WAREL-13, WAREL-19, WAREL-20, WAREL-23, WES-H) P8 (WNG31, WNG37, WNG86) H10 (WAREL-05)
o	2	3	*Triodia epactia/pungens, Eucalyptus gamophylla, Acacia steedmanii* subsp. *borealis*	D7 (WNG-REL21) D9 (WAF09R)
p	3		*Acacia* aff. *aneura, Eremophila jucunda* subsp. *pulcherrima, Triodia epactia/pungens*	H2 (WA01, WNG-REL07, WNG17)

Floristic Group (30% similarity)	Number of Sites		Top 3 Indicator Species	Vegetation Types (Sites) from the Study Area
	Inside Study Area	Outside Study Area		
q	1	7	*Acacia* aff. *aneura, Ptilotus obovatus* var. *obovatus, Acacia catenulata* subsp. *occidentalis*	P5 (WES02)
r	2	3	*Acacia* aff. *aneura, Acacia pruinocarpa, Evolvulus alsinoides*	P3 (WNG06) P6 (WRRA)
s	5	7	*Triodia melvillei, Acacia* aff. *aneura, Acacia pruinocarpa*	P2 (WNG47, WNG50, WNG53, WAF05, WAF07)
t	1		NA – single site	H16 (Q_31)
u	1		NA – single site	M1 (Q_78)
v	1		NA – single site	H1 (WAREL-06)
w	2	1	*Acacia ayersiana, Acacia catenulata* subsp. *occidentalis, Triodia epactia/pungens*	D4 (WNG-REL22) H1 (WAREL-09)
x	15	5	*Acacia* aff. *aneura, Corymbia ferriticola, Triodia epactia/pungens*	G1 (WNG-REL10, SWH07) G2 (WAREL-10, WAREL-12, WNG-REL04, WNG-REL12, WNG-REL14, WNG-REL16, WNG-REL25, WNG-REL26, WNG-REL30) G3 (WAF-RCBA, WAF-RCBC) H3 (WNG-REL23, WNG-REL24)
y		5	*Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Eucalyptus leucophloia* subsp. *leucophloia, Triodia epactia/pungens*	
z	2	1	*Acacia monticola, Triodia epactia/pungens, Eucalyptus gamophylla*	D6 (WAREL-01, WAREL-04)
aa		4	*Triodia epactia/pungens, Eucalyptus gamophylla, Acacia ancistrocarpa*	
ab	47	53	*Triodia epactia/pungens, Acacia* aff. *aneura, Acacia pruinocarpa*	D4 (WNG-REL01, WNG-REL03) D8 (WRRG) D11 (WAF03R, WES22, WES23) P1 (WAF04, WAF-RCBB, WES09, WES10, WES-I) P3 (WNG-REL15, WNG02, WNG04, WNG05, WNG33, WNG44, WNG45, WNG46) P5 (WA29, WAREL-17, WNG78, WES-M) P6 (WNG01, WNG03, SWH02, WRRB) P12 (WES13) M1 (Q_27, Q_28, Q_29, Q_32, Q_34, Q_38, Q_40, Q_57, Q_59, Q_66, Q_70) H1 (WA33, WAREL-15) H2 (WNG-REL05, Q_43, Q_45) H16 (Q_17, Q_23, SWH08)

Floristic Group (30% similarity)	Number of Sites		Top 3 Indicator Species	Vegetation Types (Sites) from the Study Area
	Inside Study Area	Outside Study Area		
ac	35	34	*Triodia epactia/pungens, Eucalyptus leucophloia* subsp. *leucophloia, Acacia bivenosa*	D6 (WRRE) P3 (WNG32) P9 (WNG40) P11 (WNG12) P12 (WA20, WNG61, WNG62, WES01) H1 (WAREL-11) H3 (WNG-REL27, WNG71) H6 (WNG24, WNG26, WNG36, WNG38) H8 (WNG30, WRRF) H9 (WNG57) H12 (WNG14, WNG20, WNG22) H15 (WNG59, WNG67, WNG75, WNG79, WNG87) H16 (WNG23, WNG27, WNG28, WNG34, Q_49, Q_54, Q_56, SWH03, SWH05)
ad	3	1	*Triodia longiceps, Eucalyptus leucophloia* subsp. *leucophloia, Acacia bivenosa*	P11 (WNG11, WNG16, WNG42)
ae	49	31	*Triodia vanleeuwenii, Triodia epactia/pungens, Eucalyptus leucophloia* subsp. *leucophloia*	P1 (WES24) P9 (WNG39, WNG41, WNG43, Q_46, Q_48) P12 (WES11) P14 (WA06) H7 (WNG51, WNG52, WNG60) H8 (WNG08, WNG13, WNG15, WNG18, WNG56, Q_20, Q_53, Q_60, Q_72, SWH04, WRRC, WRRD) H9 (WAF06, WAF08, WNG54, WNG76, WNG80, WNG81, WNG84) H10 (WA02, WA03, WA04, WA14, WA15, WA24, WA32, WA34) H11 (WA10) H16 (WNG-REL18, WNG19, WNG21, WNG25, Q_19, Q_21, Q_35, Q_37, Q_51, SWH06)
af	4		*Triodia wiseana, Triodia angusta, Eucalyptus socialis* subsp. *eucentrica*	P13 (WA16, WA22) P14 (WA07, WA21)
ag	9	4	*Triodia wiseana, Eucalyptus trivalva, Triodia epactia/pungens*	P13 (WA09) P14 (WA19, WA27, WNG48, WNG49, WNG55, WNG58, WNG64, WNG65)
ah	22	15	*Triodia wiseana, Eucalyptus leucophloia* subsp. *leucophloia, Senna glutinosa* subsp. *glutinosa*	P10 (WA13) H4 (WA05, WA08, WA25) H5 (WNG72, WNG74, WNG77) H10 (WA11, WA28) H11 (WA18, WA35, WA37) H13 (WNG83, WNG85, WNG88) H14 (WA12, WA23, WA31) H15 (WNG63, WNG66, WNG68, WNG73)

All sites in regional analysis, group average method using cover of perennial species

Transform: Square root
Resemblance: S17 Bray Curtis similarity

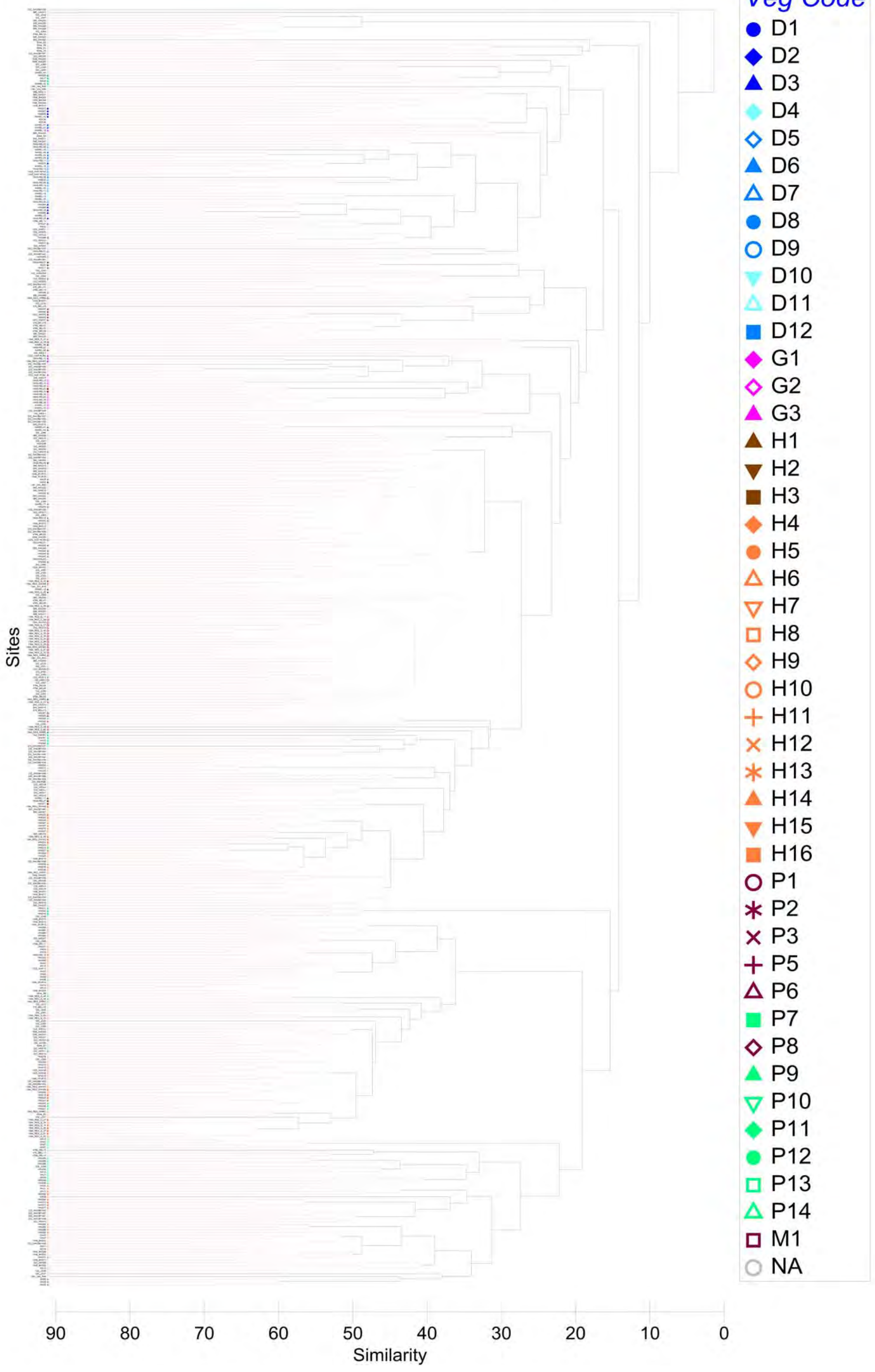


Figure 1: Dendrogram showing similarity between regional sites, based on percent cover data for perennial species only.

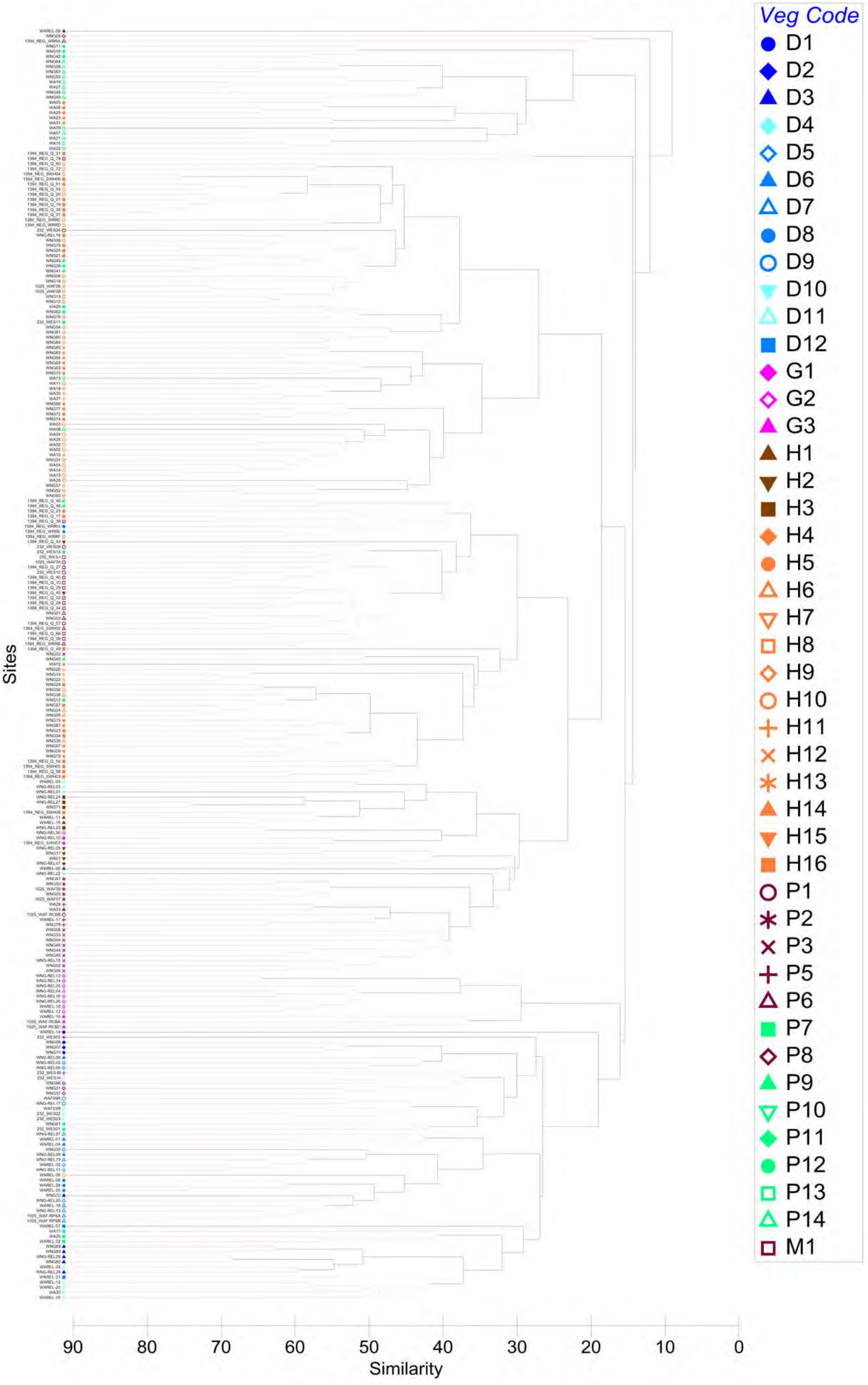


Figure 2: Dendrogram showing similarity between sites in the study area only, based on percent cover data for all species.

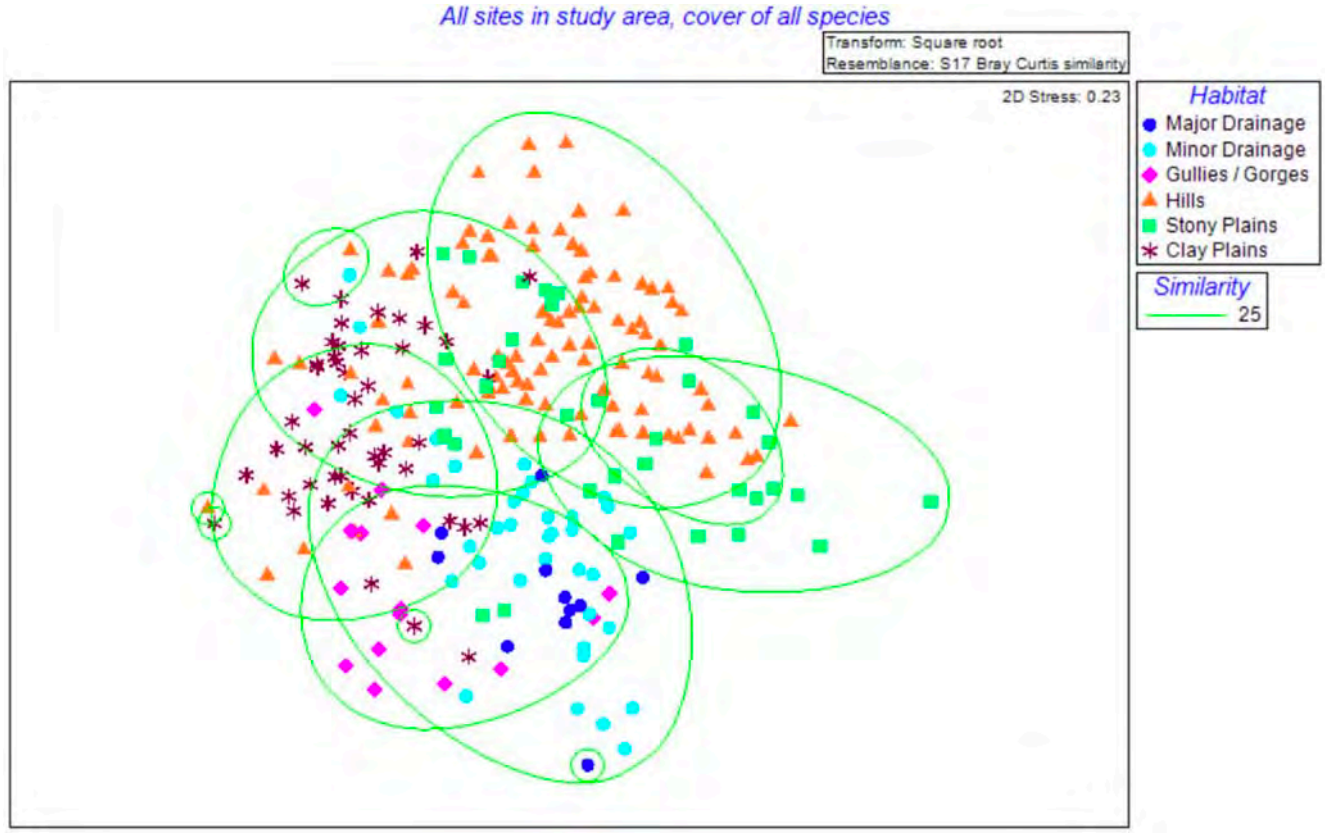


Figure 3: NMDS plot of similarity between sites in the study area only, based on percent cover data for all species (coded by broad habitat).

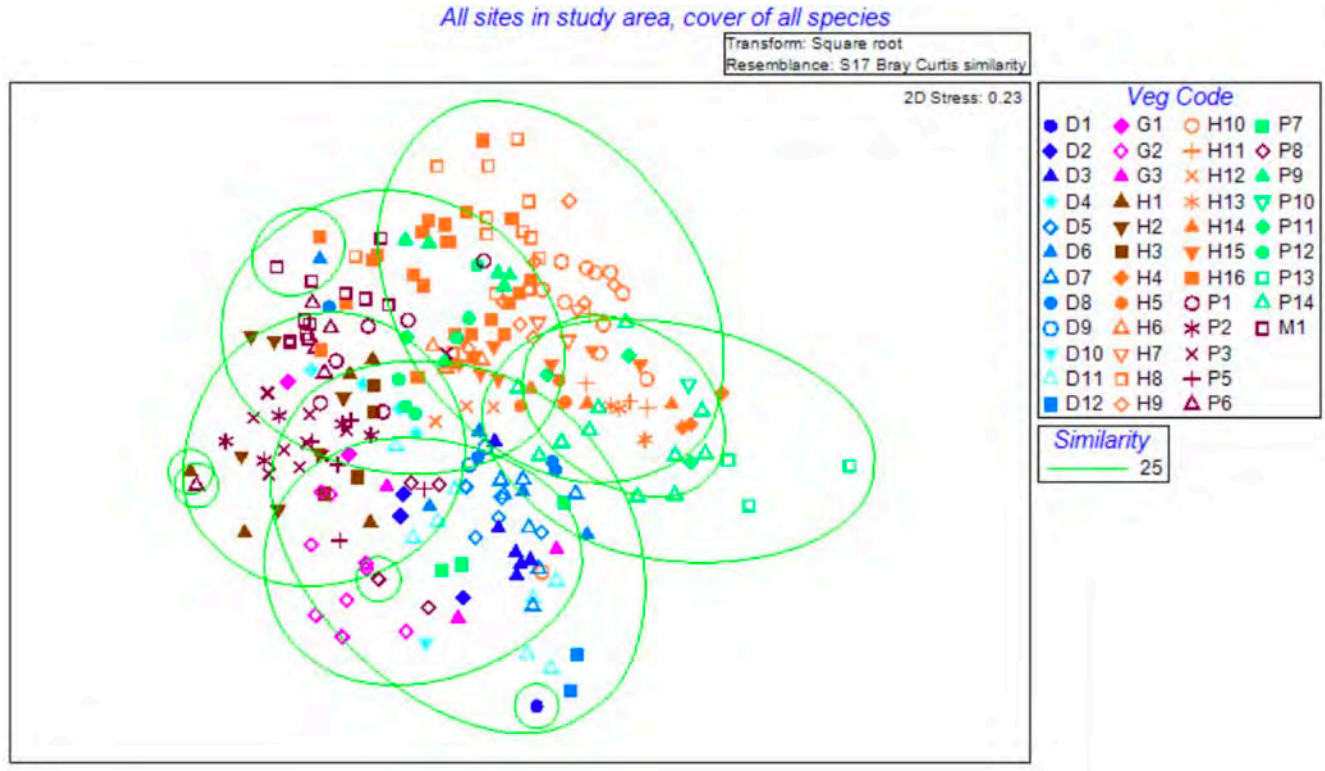


Figure 4: NMDS plot of similarity between sites in the study area only, based on percent cover data for all species (coded by vegetation type).

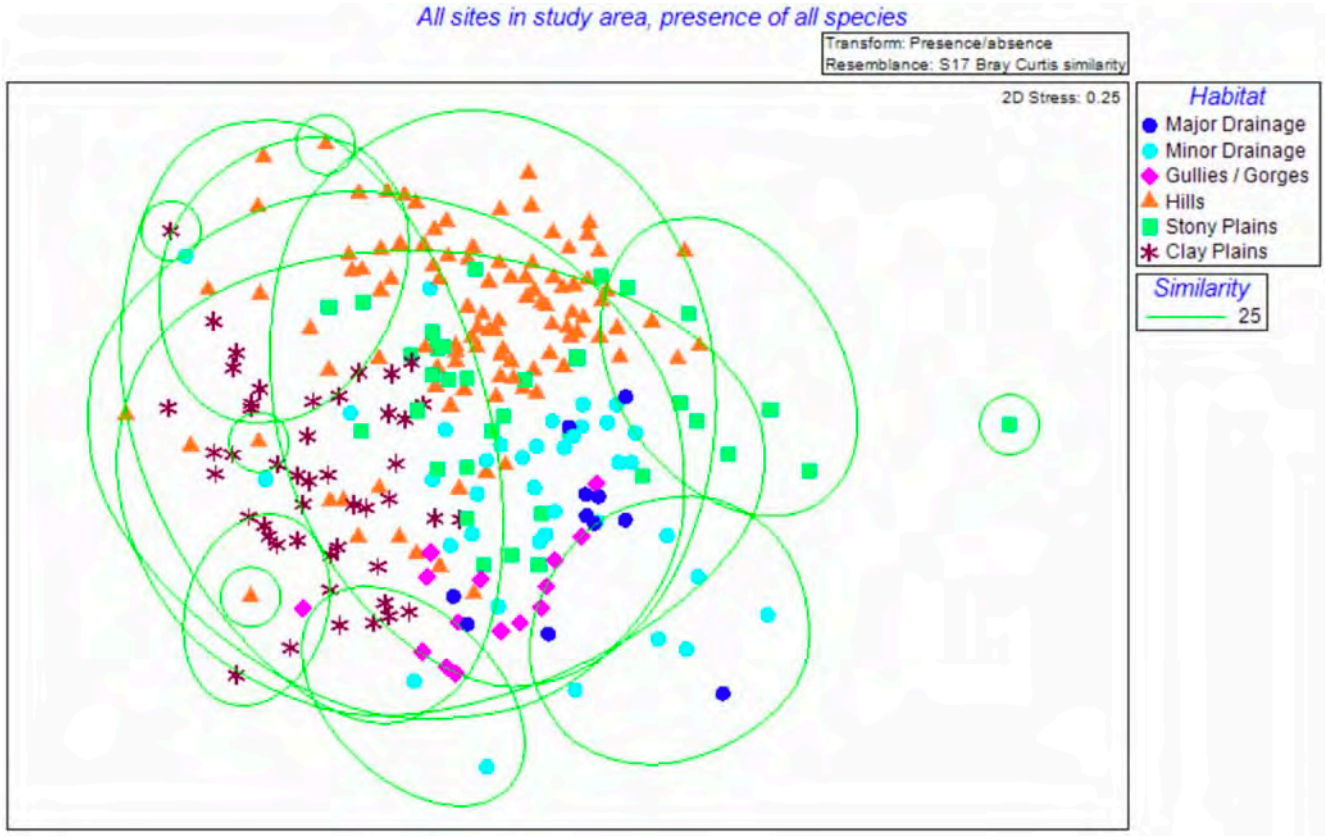


Figure 5: NMDS plot of similarity between sites in the study area only, based on presence data for all species (coded by broad habitat).

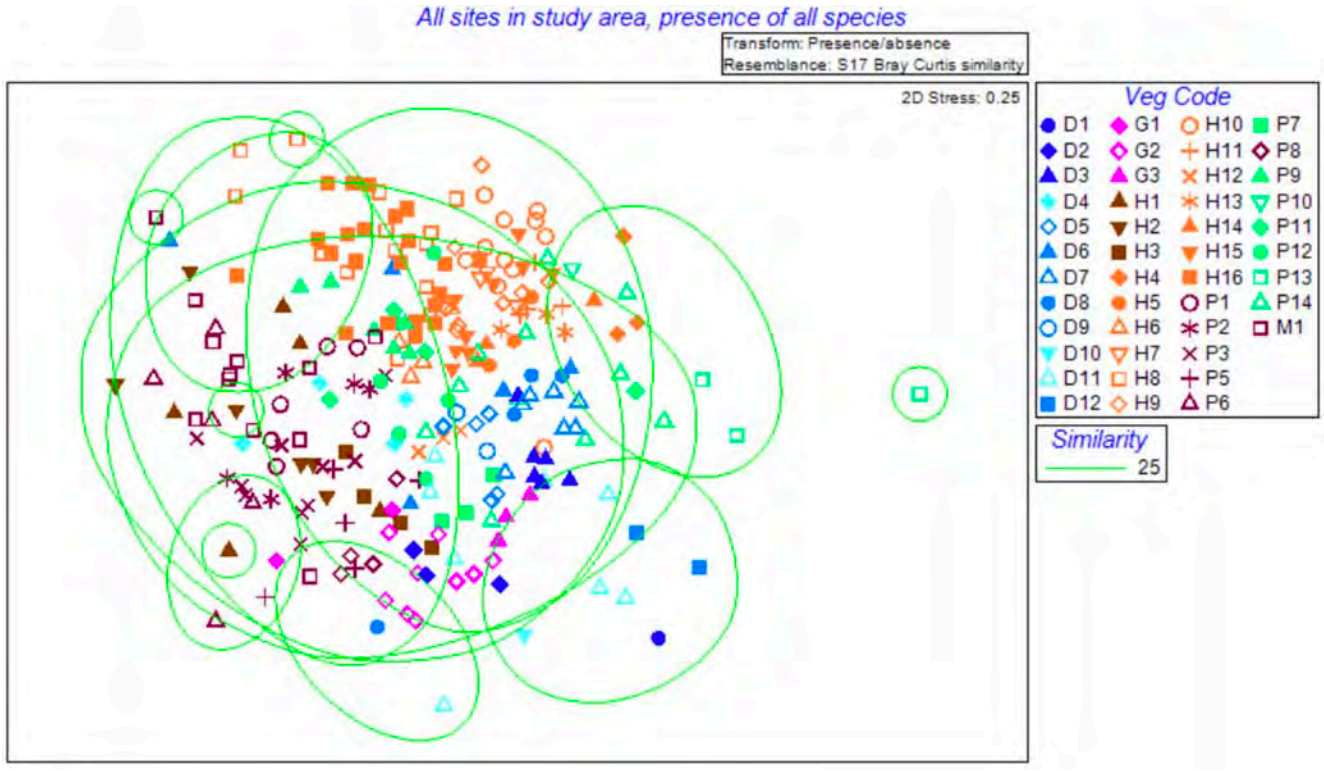


Figure 6: NMDS plot of similarity between sites in the study area only, based on presence data for all species (coded by vegetation type).