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Annual Weed Survey of the Amrun Project Area
June 2019

Final Report

Prepared for Rio Tinto Aluminium, Brisbane.

5th November 2019

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Cover Photo: LSMP Ranger Tracey Matthew undertaking spot-treatement of regrowth weeds at Beagle Camp clearing, June 2019.

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1. Introduction

1.1 Background and Scope

Ecotone Flora Fauna Consultants have previously undertaken baseline and annual weed surveys of the Amrun Project Area as required to meet project approvals and site monitoring requirements. These surveys have included:

- a July 2013 Baseline Weed Survey, encompassing all accessible areas of the lease and adjoining area, and including areas surveyed for vegetation classification as part of the EIS for the project;
- a July 2015 Annual Weed Survey, which re-surveyed these access routes, with some additional, more detailed inspections of sites which could not be easily accessed in previous visits;
- a June 2016 Periodic Weed Survey, which covered the annual weed survey of construction areas and access roads plus the three yearly Periodic survey focussing on areas used for recreation and by Traditional Owners, and other areas where key weed species are most likely to become established, for instance rubber vine along mangrove edges near recreational areas;
- a June 2017 Annual Weed Survey, which re-surveyed access routes, and conducted baseline weed surveys of accessable areas around sites cleared for construction activities, including those areas established prior to the end of the wet season in April 2017. Some additional, more detailed inspections of sites which could not be easily accessed in previous visits were also made in this survey period where access permitted; and
- a July 2018 Annual Weed Survey, which re-surveyed initial access routes and established cleared areas of construction activities. This survey generally covered all areas surveyed in June 2017 where accessable, and the main access routes and perimeter areas of new clearings and constructions.

The implementation of these weed surveys is outlined in the Land Use Management Plan and Terrestrial Management Plan for the Amrun Project. The objective of these surveys has been to determine whether there have been any major changes both in the status of exotic weed species within the Amrun Project area since the previous weed surveys, and after targeted treatment of identified weeds conducted to date. As a result, these previous surveys have effectively documented the baseline level of incidence of exotic weeds within the Amrun Project area throughout both the assessment/early exploration and construction phases of the project, as well as along the main access tracks cleared and/or re-cleared to support these activities.

The June 2019 Periodic Weed Survey represents the first repetition of the initial 2016 Periodic Weed Survey,which in addition to covering the main access routes and construction footprint of the Annual Weed Surveys associated with current mine construction and operation , also focuses on areas used by Traditional Owners and others for recreation, and other areas where key weed species are most likely to become established. Notably this includes the Aurukun Road from Aurukun, the associated main entry track to Beagle Camp, and associated tracks to Amban and Waterfall Creek, including areas rarely visited over the intervening period.

The current June 2019 Periodic Weed Survey repeats the weed survey method used previously, where inspections are undertaken from a slow-moving vehicle along the main tracks and roads, supported by foot-based inspections at key locations including recent clearings and construction areas, where

these sites are safely accessable. The objective of the current (June 2019) Periodic Weed Survey is to document current levels of weed infestation over both the area frequently used and maintained for current mining operations at Amrun, and across the broader Amrun mining lease area, for comparision with previous levels of incidence of exotic weed species.

The scope of the current reporting is focused on determining the incidence of exotic weed species unintentionally introduced to the Amrun Project area. Any other exotic plant species which may have been used intentionally for landscaping (turf *etc*) and other forms of soil stabilisation around site facilities falls outside the scope of the current report.

2. Survey Approach

The survey utilised the rapid survey method approach of the previous surveys whereby inspections were undertaken from a slow-moving vehicle along the tracks and roads to be inspected, with supporting foot-based inspections at key locations. Surveys were undertaken by Jason Searle and Paul Mason of Ecotone Flora Fauna Consultants, together with LSMP Ranger Tracey Matthew between 17th and 25th June 2019.

The survey recorded all exotic plant species present, including all scheduled weeds and WoNS (Weeds of National Significance) under Queensland and Commonwealth legislation and provisions. Areas included in the 2019 Periodic Weed Survey are shown in **Figures 2-1 & 2-2** and comprised:

- Accessible parts of the MIA (Mine Infrastructure Area), including internal roads and perimeter tracks around port infrastructure, loader areas, and the tailings dam;
- Main bitumen access road between Amrun port facilities (MIA) and Hey River Terminal (HRT);
- Amrun Accomodation village, perimeter tracks and access road;
- HRT, perimeter area including frontage to Hey River foreshore, area around laydown area and communications tower, and track north to northern lease boundary;
- Access tracks north of Winda Winda Creek, including accessible parts of original Winda Winda Creek to Hey Point track, north-south heavy vehicle tracks between Winda Winda Creek and Hey Point;
- Clearing around Arraw Dam and overflow wall, including north and south access tracks, and ICT corridor between Arraw Dam and MIA area;
- All accessable access tracks south of the main bitumen access road, including
    - 70,000 line;
    - Seismic line;
    - North-south access to watering points, dam bores and dam area;
    - Accessable grid lines to old Fulton Hogan laydown area for dam construction, plane crash site and communications tower, Lucas road;
- Pera Swamp and associated western cliff access tracks;
- Boyd Point fly camp and Boyd Bay Point access tracks;
- Newly opened Thud Point beach access track south of MIA/tailings dam;
- Recent localised access tracks around facilities, including MIA, construction camp and communications towers;
- North-South access tracks between seismic line and South Gate;
- Beagle Camp, old airstrip, and main access track from South Gate to Arukun Road;
- Arukun Road verges between Aurukun and northern turnoff to site, with side extensions for Aurukun rubbish tip and old road diversion;
- Beagle camp to Amban outstation and beach area, including accessable side tracks to Norman Creek south landing point, and bore holes south of Amban track;

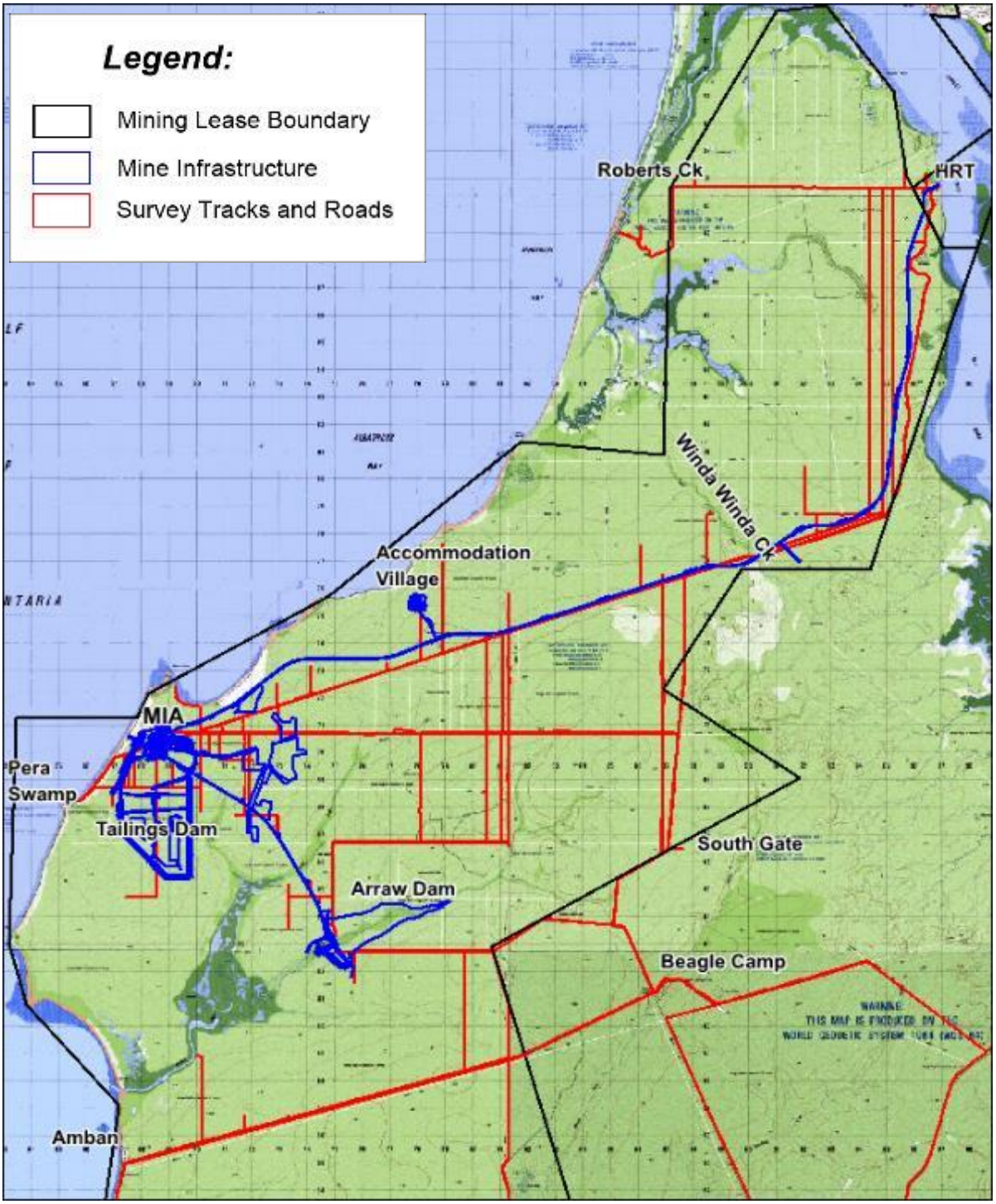

Figure 2.1 Amrun Weed Survey Locality Map (Northern Portion; Current mine area)

- Main access tracks to Waterfall Creek and Ina Creek, including western cliff to outstation areas; and
- Open access tracks between Beagle Camp/South Gate and Arraw Dam, used for southern during dam construction an to check water bores/survey stations.

The scope of the Amrun Weed Survey has changed progressively since the initial survey in 2013, when no infrastructure was present. Additional tracks have been made, and others widened or

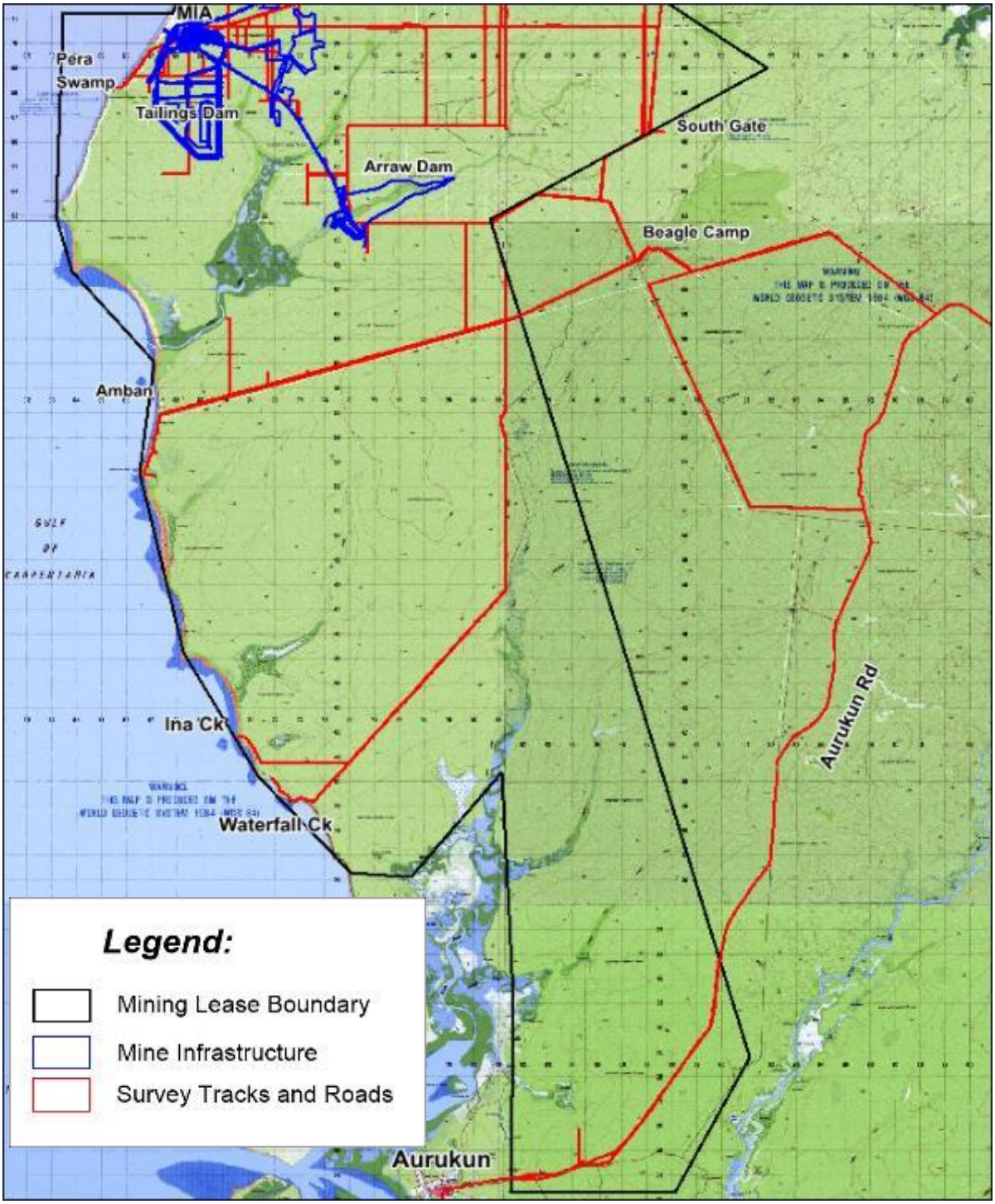

Figure 2.2 Amrun Weed Survey Locality Map (Southern Portion; broader lease area)

redeveloped for mine infrastructure. Large clearings have now also been created, and infrastructure developed, with internal access roads which adjoining sometimes large open areas where weeds can now potentially colonise. The focus to date has been to survey all accesable access tracks, perimeter areas and internal access tracks (with more detailed surveys of specific target areas). This approach has been based on the premise that weed translocation into the area was most likely to occur via vehicles and that weeds, if present, would initially colonise areas where vehicles had been operating especially tracks, laydown areas and parking areas. This approach is still valid and has been used for the 2019 weed surveys, although the limitiations of this approach will now increase into the future with the increase volume of open cleared areas. This limitiation is addressed further in the recommendations section of this report.

The initial identification of exotic weed species was undertaken by Senior Ecologist Jason Searle in the field. Any plants suspected to be potential new weed species were collected and submitted to the Queensland Herbarium for positive identification. This approach allows for any new weeds to the Amrun Project area to be positively identified, and for any unusual looking or otherwise unrecorded plants not regularly encountered in prior surveys of the site to be identified and eliminated from contention as new weed species.

Some land surrounding the tracks surveyed had recently been burnt, or otherwise had limited ground cover growth (as a result of grazing or seasonally dry conditions). It is expected that the recorded level of weed incidence across some portions of the property with a poorly represented understorey at the time of this survey would be greater if the survey were undertaken in more favourable conditions for understorey development (*i.e.* after wet season rains *etc*).

3. Results and Discussion

3.1 Weed Species Identification

A list of all known exotic weed species recorded at the Amrun site during recent field surveys (July 2013 onwards) is shown in **Table 3-1**.

This list formed the baseline "search" list for the current weed surveys with any additional suspected weed species also collected and sent to the Queensland Herbarium for positive identification. An additional 23 species of exotic plants have been recorded at the site in the past 12 months, and these are indicated by underlining in **Table 3-1**. The identification results and accompanying images of weed species are included in **Appendix B** and **Appendix C** respectively.

Table 3-1. Summary of Known Exotic Plant Species for the Amrun Area (up to September 2019).

Scientific Name	Common Name	Year First Recorded	Recorded 2019?	Herbarium Identification
Aeschynomene americana	Americian joint-vetch	2018	Yes	Not yet backed by confirmed specimen
Alternanthera brasiliensis	lesser joyweed	2019	Yes	Not yet backed by confirmed specimen
Alysicarpus ovalifolius	oval-leaved Alyce clover	2019	Yes	Matched with specimen confirmed for Andoom mine (JBS Confirmed BRI - 708/14, 12 Sep 2014)
Alysicarpus vaginalis	Alyce clover (hairy yellow form)	2019	Yes	Unconfirmed (potentially includes JBS BRI 531/07, 23 April 2007)
Andropogon gayanus	Gamba grass	2016	No	Matched with specimens from confirmed infestation at Andoom mine
Bidens bipinnata	beggar's ticks	2019	Yes	Matched with specimens from confirmed infestation at Andoom mine
Bothriochloa pertusa	Indian bluegrass	2019	Yes	JBS Confirmed BRI – 486/19, 23 Jul 2019
Calopogonium mucunoides	calapo vine	2019	Yes	Unconfirmed, matched with RTA herb (AM1680A, 17 April 1982)
Cassia fistula	golden shower tree	2019	Yes	Matched with specimens from confirmed infestation at Andoom mine
Cenchrus pedicellatus subsp unispiculus	mission grass	2016	Yes	JBS Confirmed BRI - 571/16, 29 Jul 2016
Cenchrus echinatus	spiny sandbur	2016	Yes	JBS Confirmed BRI - 393/17, 13 Jun 2017
Centrosema pubescens	Centro vine	2019	Yes	Unconfirmed, matched with RTA herb (AM641, 02 Oct 1980)
Chloris gayana	Rhodes grass	2018	Yes	Matched with confirmed specimens from Weipa mine
Citrillus lanatus	Watermelon	2018	Yes	Not yet backed by confirmed specimen

Crotalaria goreensis	rattlepod	2016	Yes	Matched with specimens confirmed for East Weipa (JBS Retained BRI - 623/10, 09 Aug 2010)
Cyperus aromaticus	Navua sedge	2019	Yes	JBS Confirmed BRI – 486/19, 23 Jul 2019
Dactyloctenium aegyptium	button grass	2018	Yes	Not yet backed by confirmed specimen
Desmodium tortuosum	Florida beggar-weed	2019	Yes	Not yet backed by confirmed specimen
Echinochloa esculenta	Japanese millet	2018	No	No specimens collected to date, but seen and seed mix used
Emilia sonchifolia	Cupid's shaving brush	2019	Yes	Not yet backed by confirmed specimen
Erechtites valerianifolius	Brazilian fireweed	2018	Yes	Not yet backed by confirmed specimen
Euphorbia heterophylla	painted spurge	2019	Yes	Matched with specimen confirmed for East Weipa mine (JBS Confirmed BRI - 707/14, 16 Sep 2014)
Euphorbia hirta	asthma plant	2019	Yes	Not yet backed by confirmed specimen
Hyparrhenia rufa	thatch grass	2019	Yes	Not yet backed by confirmed specimen
Ipomoea quamoclit	Star of Bethlehem	2018	Yes	Matched with specimen confirmed for East Weipa mine (JBS Retained BRI - 393/17, 13 Jun 2017)
Macroptilium atropurpureum	siratro	2018	Yes	Not yet backed by confirmed specimen
Melinus repens	red Natal grass	2019	Yes	Not yet backed by confirmed specimen
Megathyrsus maximus	Guinea grasss	2018	Yes	Not yet backed by confirmed specimen
Mesosphaerum suaveolens	horehound	2013	Yes	Matched with specimens from confirmed infestation at Weipa mine
Mitracarpus hirtus	tropical girdlepod	2016	Yes	JBS Confirmed BRI - 348/16, 10 May 2016
Paspalum mandiocanium	broad-leaved paspalum	2018	No	Unconfirmed
Paspalum urvillei	vasey grass	2019	Yes	JBS Confirmed BRI – 486/19, 23 Jul 2019
Passiflora foetida	stinking passionflower	2016	Yes	Not yet backed by confirmed specimen
Passiflora suberosa	corky passionflower	2019	Yes	Not yet backed by confirmed specimen
Phoenix dactylifera	date palm	2019	Yes	Not yet backed by confirmed specimen
Rottboellia cochinchinensis	Itch grass	2019	Yes	Not yet backed by confirmed specimen
Senna obtusifolia	sicklepod	2019	Yes	Matched with specimens confirmed for East Weipa (JBS Retained BRI - 623/10, 09 Aug 2010)
Sida acuta	smooth sida	2013	Yes	Matched with specimens confirmed for East Weipa (JBS Retained BRI - 623/10, 09 Aug 2010)
Sida cordifolia	flannel weed	2017	Yes	JBS Retained BRI - 393/17, 13 Jun 2017
Sida spinosa	prickly marrow	2019	Yes	Matched with specimens confirmed for NoW mine (JBS Retained BRI - 524/18, 04 Jul 2018)
Solanum nigrum	black nightshade	2018	Yes	Not yet backed by confirmed specimen
Stachytarpheta jamaicensis	Jamaican snakeweed	2018	Yes	Matched with specimens confirmed for East Weipa mine (JBS Confirmed BRI - 393/17, 13 Jun 2017)
Sporobolus jacquemontii	American rat's tail grass	2018	Yes	JBS Confirmed BRI - 784/18, 23 Oct 2018
Stylosanthes guianensis	Brazilian stylo	2018	No	Matched with specimens confirmed for East Weipa mine (JBS Retained BRI - 522/18, 04 Jul 2018)
Stylosanthes hamata	Caribbean stylo	2019	Yes	JBS Confirmed BRI – 486/19, 23 Jul 2019
Stylosanthes scabra	common stylo	2013	Yes	Matched with specimens from confirmed infestation at Weipa mine
Stylosanthes viscosa	sticky stylo	2013	Yes	Previously lumped with common stylo, confirmed in recent surveys at East Weipa mine
Tecoma stans	yellow bells	2019	Yes	Not yet backed by confirmed specimen

Themeda quadrivalvis	grader grass	2013	Yes	JBS Confirmed BRI - 720/15, 27 Aug 2015
Tridax procumbens	coat buttons	2018	Yes	Matched with specimens from confirmed infestation at Weipa mine
Triumfetta pentandra	burbark	2017	No	JBS Retained BRI - 393/17, 13 Jun 2017
Urena lobata	pink-flowered Chinese burr	2017	No	Matched with confirmed specimens from within regeneration at Weipa mine
Urochloa decumbens	signal grass	2018	Yes	Matched with confirmed specimens from Andoom mine (JBS Confirmed BRI - 708/14, 12 Sep 2014)
Urochloa mutica	para grass	2019	Yes	Matched with confirmed specimens from within regeneration at Weipa mine

Of the newly identified exotic species present at the site, all were recorded as isolated specimens, and are considered present but not currently 'established' at the site. These species can potentially be eliminated from the site if controlled urgently. Alternatively, two exotic species (signal grass *Urochloa decumbens* and Japanese millet *Echinochloa esculenta*) have been used intentionally in defined areas for soil stabilisation purposes and are not reported on further here.

Several plants suspected as new or additional weeds were also collected and sent to the Queensland Herbarium for confirmation of their identification, with their identification advice included in **Appendix A**. These include:

- A 2m high woody stemmed shrub collected on the Camp access road and in a bunded washdown area at the Remonded laydown yard at MIA. This plant was in poor condition at both localities and was suspected as *Senna obtusifolia* (Sicklepod; Restricted Category 3), but was later confirmed as the native *Sesbania cannabina var cannabina*. This plant is shown in **Figure 1, Appendix B**;
- A small daisy like plant thought to be exotic, but later confirmed as the native *Cyanthillium cineruem*. This plant is shown in **Figure 2, Appendix B**;
- A small legume to 40cm growing in drainage ditches around MIA and the accommodation camp. This plant has become numerous in these areas in the past 12 months and was suspected as exotic, but later confirmed as the native *Crotalaria montana*. This plant is shown in **Figure 3, Appendix B**;
- A locally common grass recorded at some locations on the verges of the main access track into site. This grass was also suspected as weed, but later confirmed as the native *Elionurus citreus*. This plant is shown in **Figure 4, Appendix B**; and
- A number of commonly occurring grasses in seeded open areas, which were suspected as different plants but later confirmed to be native species of different appearance to the local forms of the same plant species (*Ectrosia leporina; Sarga plumosum*).

3.2 Overall Weed Species Distribution and Abundance

The patterns of weed distribution and abundance over the Amrun Project area, as recorded in June 2019, July 2018 and June 2016 weed surveys are shown in **Figure 3-1** and **Figure 3-2** for each of these survey events respectively. These records have been overlaid to give a comparison in weed distribution and abundance over time. Each record taken during the current (July 2019), including location and associated details, is also listed in **Appendix D** of this report. The distribution and abundance of each individual weed species recorded during the current (June 2019) survey are also depicted in maps in **Appendix E**, and are compared with the same species over previous surveys.

A clear outcome of the June 2019 Amrun weed survey is that the overall incidence of weeds across the Amrun Project area and associated northern portions of the mining lease has reduced markedly, due to the efforts of the LSMP team and their ongoing weed control works. This is clearly evident in **Figure 3-1**, with the larger historical infestations (shown in grey) having been largely minimised or eradicated. Notable locations where this is particularly evident include:

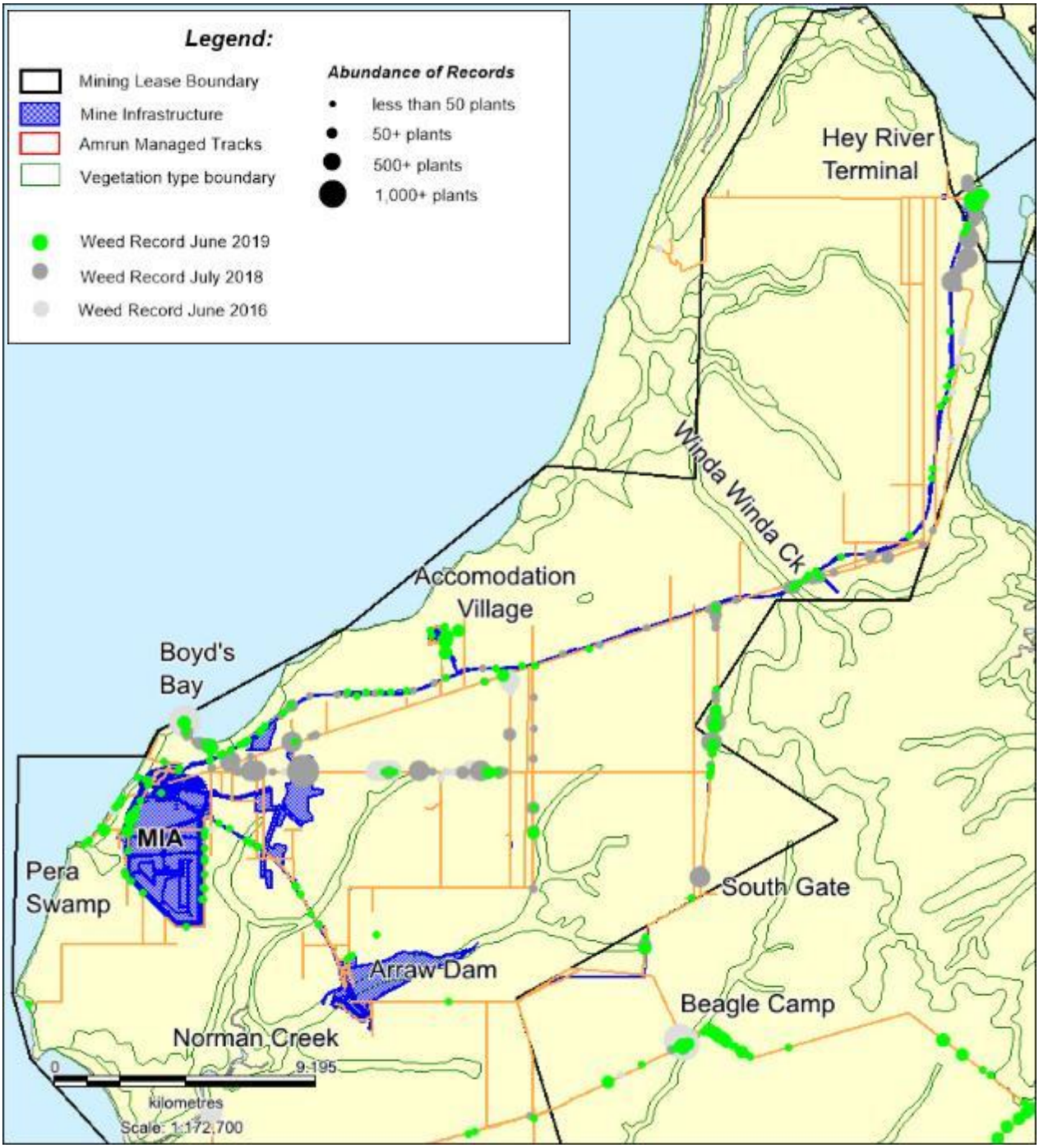

Figure 3.1 Amrun Weed Survey Results – Location of Weeds (Northern Portion; Current mine area)

1. The original Boyd's bay flycamp;
2. All along the main historical east-west access track (*i.e.* the 70,000 line), including the large previous infestations around the lay down areas and 'Cabbage Patch' effluent irrigation area along this line;
3. HRT (Hey River Terminal), including the original access track to the south and immediate north of HRT;
4. The east and west approaches to Winda Winda Creek;
5. South Gate and the associated original north-south track up to the seismic line/Winda Winda Creek; and
6. Beagle Camp clearing.

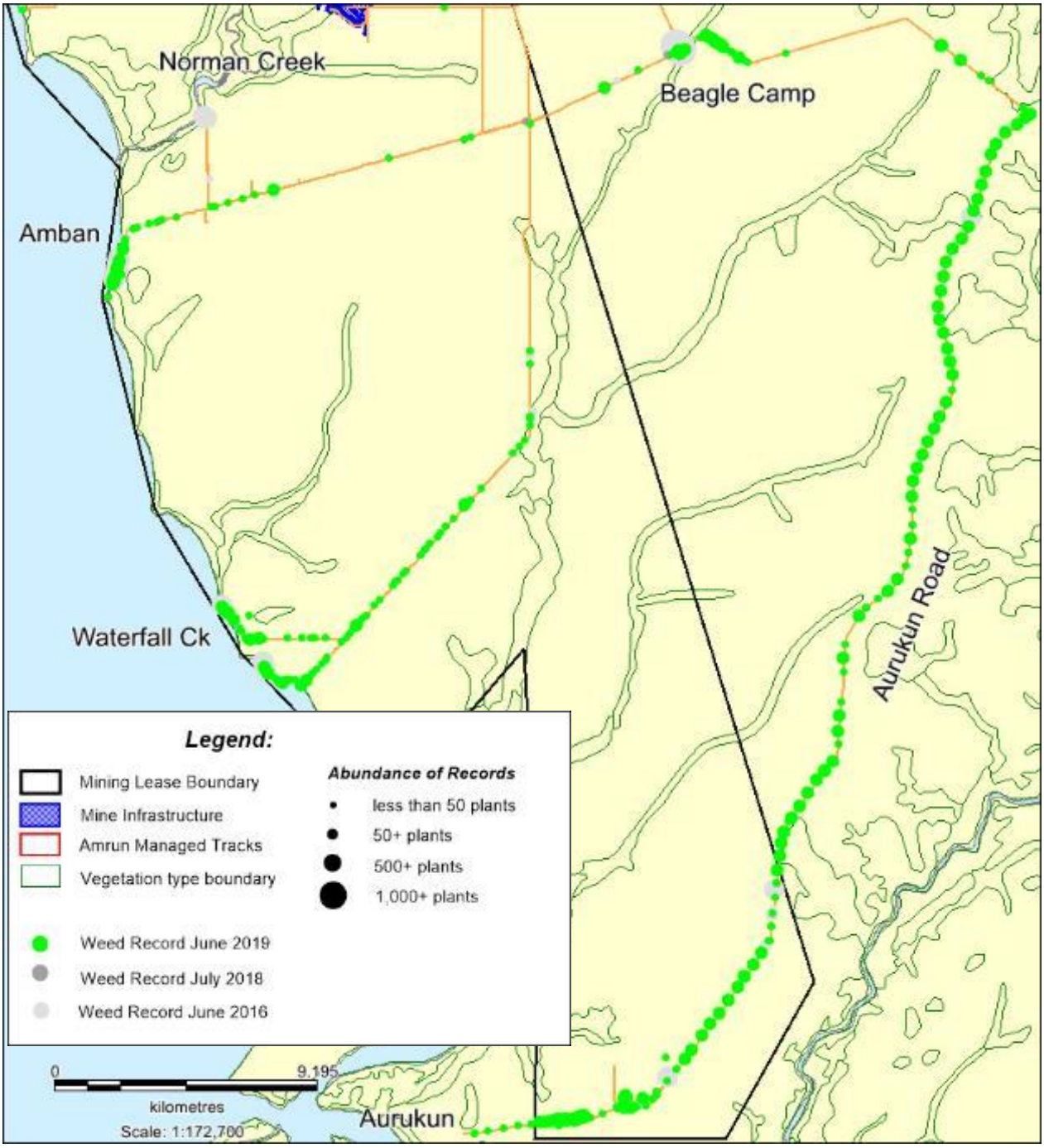

Figure 3.2 Amrun Weed Survey Results – Location of Weeds (Southern Portion; broader lease area)

Other significant points or trends in relation to the distribution and abundance of weeds across the Amrun mining leases, as edivent in the June 2019 weed survey, are summarised below:

1. Many of the current weed occurences recorded (as small green dotes in **Figure 3-1**) for June 2019 along the main bitumen access road, camp access and boundary areas, MIA perimeter and internal access roads, ICT corridor and Arraw Dam wall area, are from four weed species (Rhode's grass *Chloris gayana*, Indian bluegrass *Bothriochloa pertusa*, Guinea grass *Megathyrsus maximus* and American joint-vetch *Aeschynomene americana*) in areas seeded for batter stabilisation and erosion control. These four species all appear to have

been present in small quantities in the seed mix, and are now established at regular low densities in these areas;

2. Many of the 23 new additional weeds which have been added to the list of confirmed weeds for the Amrun mining lease area were recorded at Aurukun rubbish tip area. These include lesser joyweed (*Alternanthera brasiliensis*), oval-leaved Alyce clover (*Alysicarpus ovalifolius*), asthma plant (*Euphorbia hirta*), painted spurge (*Euphorbia heterophylla*), golden rain tree (*Cassia fistula*), Calapo vine (*Calopgonium mucunoides*), Star-of-Bethlehem vine (*Ipomoea quamoclit*) and the Category 3 restricted plants sicklepod (*Senna obtusifolia*) and yellow bells (*Tecoma stans*) with their distribution at the rubbish tip site (and across the broader area where relevant) shown in the figures in **Appendix E**.
3. The majority of the remaining records for weeds for the current (June 2019) survey period within the current mine area (*i.e.* north of Norman Creek, and along the southern track to Amban and the Arraw Dam southern access roads) are for the more common established weeds horehound (*Mesosphareum suaveolens*) and stylo (*Stylosanthes* species). Most of these now occur as localised infestations that have been sprayed or sprayed repeatedly, and are reduced in abundance. Small patches of regrowth of horehound in particular, have been largely eradicated, but have small percentages of persistent regrowth at the base of some of the plants. These records therefore have a considerable lag time between when they are first treated and when they are fully eradicated, and their ongoing presence is effectively exaggerated in the mapping and does not fully reflect the persistent and ongoing effort that has gone into follow up treatements to date;
4. The main incidence of weeds in the southern portion of the lease now occur from Beagle Camp to the Aurukun Road, and especially along the Aurukun Road (due mostly to more or less continuous infestation by grader grass *Themeda quadrivalvis*) and dense infestations at Aurukun rubbish tip. These areas are outside the direct control of Rio Tinto, although may impact on ongoing weed management as a continuous source of weed seed material;
5. The incidence of weeds at Waterfall Creek and the assocated track in from Beagle Camp is now the other major infestation on the mining lease. This area was effectively inaccessible during the construction stage of the project due to fallen timber on the tracks and other management priorities, and shows a similar level of weed occurrence as the previous Periodic Weed Survey in July 2016. These records are due largely to the long-established infestations of sticky stylo (*Stylosanthes viscosa*) in the Waterfall Creek area.

3.3 Listed Weed Species

Three species of weeds classed as restricted invasive plants (Category 3) under the Queensland *Biosecurity Act 2014* were recorded in the current (June 2019) weed survey of the Amrun Project area. These were:

- American rat's tail grass (*Sporobolus jacquemontii*), which was recorded as a single mature plant located at the end of the track to Waterfall Creek, just near the tin roof shed near the beach foreshore (see **Image C39 & C40, Appendix C**). This plant was removed by hand and sent to the Queensland Herbarium for confirmation. The GPS location is provided in **Appendix D**;
- Sicklepod (*Senna obtusifolia*), which was recorded in small patches at the Aurukun rubbish tip area off the Aurukun Road, technically within the southern portion of the mining lease, but currently operated by Aurukun Council. These plants were left *in situ*; and
- Yellow bells (*Tecoma stans*), which was also recorded in small patches at the Aurukun rubbish tip area off the Aurukun Road. These plants were also left *in situ*.

Previous infestations of Gamba grass (*Andropogon gayanus*), also a Restricted Category 3 weed under the Queensland *Biosecurity Act 2014*, at Boyd's Bay flycamp and at an isolated point on the access from South Gate to the bitumen access road, have been treated and no signs of regrowth or further infestation are present at these sites.

The Queensland *Biosecurity Act 2014* prohibits the release of any of these Category 3 Restricted Plants into the environment, and requires all parties to take all reasonable and practical steps to minimise the risks associated with restricted invasive plants on lands under their control (called a general biosecurity obligation, or GBO). The recent records of Gamba grass (July 2018) and American rat's tail grass (June 2019) within the mining lease area will therefore need to monitored (for a recommended minimum three-year annual follow up monitoring visits) as a high priority, and treated if required.

It is also recommended that Rio Tinto further examine their management obligations of that part of the lease covered by the Aurukun rubbish tip, and advise the Council of their general biosecurity obligation under the Queensland *Biosecurity Act 2014* in relation to the sicklepod plants recorded at the Aurukun rubbish tip area.

Other WoNS potentially present or with a higher likelihood of establishing within the Amrun Project area include rubber vine (*Cryptostegia grandiflora*), hymenachne (*Hymenachne amplexicaulis*) and several species of exotic asparagus ferns (*Asparagus* spp.) listed under WoNS and Queensland legislation. None of these species have been recorded on or in the vicinity of the Amrun Project area to date, although it is recommended that considerable focus should be placed on targeting the potential presence of these species more broadly across the Amrun Project area, and these weed species should be a focus of future Annual and Periodic Weed Surveys of the Amrun mining lease areas.

3.4 Weed Infestation Locations

3.4.1 Boyd Bay Flycamp and Beach Access

This area was previously heavily infested with weeds including several stylos (*Stylosanthes* species), horehound (*Mesosphareum suveolens*), smooth sida (*Sida acuta*), annual mission grass (*Cenchrus pedicellatus*) and grader grass (*Themeda quadrivalvis*), and was the location of the previous Gamba grass (*Andropogon gayana*) infestation.

These areas have been successfully treated for weeds and clearly show the benefits of the targeted and sustained weed treatment activities by the LSMP team (refer **Figures C1-C6, Appendix C**). Persistent low levels of mainly isolated weed regrowth still occur, and require ongoing maintence level control activity. These areas now require only selective and highly targeted weed spraying, and re-establishement of native ground cover is recommended as the primary focus for the remaining bare areas left after heavy weed removal.

3.4.2 Amrun Accommodation Village

Despite the large open area and high number of vehicles accessing this site, the area is still largely devoid of weeds. The main exception to this is the effluent treatment area on the bund on the eastern edge of the camp clearing, which supports an unusual assemblage of native plants (*eg.* mangrove fern *Acrostichum speciosum*, watersprite *Ceratopteris thalictroides* and vernonia *Cyanthillium cinereum*), together with a localised mix of exotic weed species. In addition to ongoing incidence of black nightshade (*Solanum nigrum*), stinking passionflower *Passiflora foetida*, Brazilian fireweed *Erechtites valerianifolius* and Jamaican snakeweed *Stachytarpheta jamaicensis*), additional species have colonised this area in the past 12 months. These include vasey grass (*Paspalum urvillei*), Navua sedge (*Cyperus aromaticus*) and Alyce clover (*Alysicarpus vaginalis*)(refer **Figures C12-14, Appendix C**).

The ongoing addition of new weeds at the irrigation bund site confirm it as a potential entry point for weeds into the Amrun Project area, and it is recommended that this location be monitored regularly (minimum every 6 months), and any identified weeds be controlled to prevent introduction of new and unusual weeds more broadly into the Project area.

3.4.3 Amrun Access (bitumen) Road and associated borrow pits

As mentioned previously, the seed source used for batter stabilisation in all these areas appears to have been contaminated with low densities of at least four unintended weed species, Rhode's grass (*Chloris gayana*), Indian bluegrass (*Bothriochloa pertusa*), Guinea grass (*Megathyrsus maximus*) and American joint-vetch (*Aeschynomene americana*)(refer **Figures C9-C11, Appendix C**). These species now occur as regular isolated occurences in the seeded areas, and are likely to become more prevalent if left untreated.

3.4.4 Winda Winda Creek Crossing

The Winda Winda Creek crossing is largely devoid of weeds, partially as a result of bridging and sealing the access road, and subsequent colonisation of the creek channel by native species. These include a ground cover of native spikey mat grass (*Pseudoraphis spinescens*) and low copses of native woody regrowth (*i.e.* broad-leaved paperbark *Melaleuca viridiflora,* swamp box *Lophostemon suaveolens*).

In contrast, the verges of the access road adjoining the crossing have been intentionally seeded for erosion control with other open batter areas, as have isolated regular occurences of Rhode's grass (*Chloris gayana*), Indian bluegrass (*Bothriochloa pertusa*), Guinea grass (*Megathyrsus maximus*) and particularly in this location, American joint-vetch (*Aeschynomene americana*).

3.4.5 Hey River Terminal

Hey River Terminal has historically had high incidences of weeds, especially horehound (*Mesosphareum suaveolens*). These infestations have been largely eradicated, and exemplify the benefits of the sustained weed control activities of the LSMP team in this location. Alternatively, the terminal access road, like much of the northern access road corridor, has been seeded for soil stabilisation and also has isolated regular occurences of Rhode's grass (*Chloris gayana*), Indian bluegrass (*Bothriochloa pertusa*) and American joint-vetch (*Aeschynomene americana*).

Horehound (*Mesosphareum suaveolens*), widespread and abundant in the general area of HRT in previous surveys (particularly the period between 2013-2017), still remains around this perimeter area as a small percentage of the original infestation, and forms persistent regrowth at the base of some of the treated plants (refer **Figures C49-51, Appendix C**). However, this site is now considered to be at maintenance level for ongoing weed treatment activities, and now requires only selective and highly targeted weed spraying, and re-establishement of native ground cover is recommended as the primary focus for the remaining bare areas left after heavy weed removal.

3.4.6 MIA, Tailings Dam, and ICT Corridor

The MIA, ICT Corridor and perimeter areas of the tailings dam reperesent large and recent clearings which have been extensively seeded for batter stabilisation and erosion control in the past 12-24 month period. It appears that the seed source used for each of these areas was contaminated with low densities of at least four unintended weed species, Rhode's grass (*Chloris gayana*), Indian bluegrass (*Bothriochloa pertusa*0, Guinea grass (*Megathyrsus maximus*) and American joint-vetch (*Aeschynomene Americana*), and these species each now occur as regular isolated occurences at these locations (refer **Figures C44-46, Appendix C**).

Although low in occurrence, the presence of these weeds in these relatively large open areas is problematical in that they are likely to become progressively more prevalent if left untreated, and could conceivably colonise large open areas at these locations. In this regard the current weed survey methodology, with a rapid survey approach focused on determining presence at perimeter areas and along the edge of access tracks, may no longer be sufficient to detect and monitor the potential expansion of weeds that could occur across these large cleared areas. It is suggested that a more regular and focused weed detection and treatement program may now be required in these locations.

3.4.7 Local access tracks between Arraw Dam/Norman Creek and the bitumen access road

The historical access tracks around the main site area (*i.e.* 70,000 line, seismic line, wash basket loop, ART bore hole access tracks, Arraw Dam access track, lease boundary loop), mostly represent upgraded access tracks that were in use between 2007 and 2017 for local site access. These areas

have a history of established localised weed infestation, especially previous large infestations around lay down areas and the 'Cabbage Patch' effluent irrigation area on the original east-west access track (*i.e.* the 70,000 line).

These areas now show a marked reduction of weeds at these locations, and also highlight the benefits of the targeted and sustained weed treatment activities by the LSMP team. Persistent low levels of the more common established weeds horehound (*Mesosphareum suaveolens*) and various stylos (*Stylosanthes* species) still occur despite repeated treatment, and still require ongoing maintence level control activity. These areas now require only selective and highly targeted weed spraying, and re-establishement of native ground cover is recommended as the primary focus for the remaining bare areas left after heavy weed removal.

3.4.8 Pera Swamp and western access areas.

These localised tracks around the shiploader and adjoining coast including Pera Swamp previously supported established incidences of weeds (including stlyos *Stylosanthes* species, rattlepod *Crotalaria goreensis*, horehound *Mesosphareum suaveolens*, smooth sida *Sida cuta*, annual mission grass *Cenchrus pedicellatus* and grader grass *Themeda quadrivalvis*), and is now largely devoid of weeds (refer **Figure C21, Appendix C**). These areas highlight the benefits of the targeted and sustained weed treatment activities by the LSMP team, with these areas now being regarded as requiring only maintence level weed control activity, including selective and highly targeted weed spraying, and re-establishement of native ground cover over bare areas left after heavy weed removal.

3.4.9 Arraw Dam, including clearing apron and wall batters

The perimeter area of the Arraw Dam, including the broad, open areas of the clearing apron required for peak water retention, and the batters and fore-slope and fishway access areas, represent large and recent clearings, some of which remains unvegetated, and other parts which have been extensively seeded for batter stabilisation and erosion control in the past 12-24 month period. It appears that the seed source used for the batters was also contaminated with low densities of several unintended weed species, particularly Rhode's grass (*Chloris gayana*) and Indian bluegrass (*Bothriochloa pertusa*), and potentially includes other exotic species at these locations.

Although currently largely devoid of weeds except around the northern access point, the large open clearing and presence of some source weed species is concerning in that there is high potential for weeds to become progressively more prevalent if left unmonitored and untreated (refer **Figures C8 & C31-32, Appendix C**). The current weed survey methodology, with a rapid survey approach focused on determining presence of weeds along perimeter areas and at the edge of access tracks, may be insufficient to detect and monitor the potential colonisation and expansion of weeds across the large open areas at this location in the future. It is suggested that a more regular and focused weed detection and treatment program may now be required in these locations.

3.4.10 Beagle Camp

The Beagle camp site clearing has a long history of site access and as a lay down and storage area for heavy vehicles and equipment, with an associated history of particularly dense infestations of numerous weeds (including horehound, *Stylosanthes* species, smooth sida, mission grass, grader grass, tropical girdlepod and Star-of-Bethlehem weeds all recorded in June 2017). It was also previously the site of a known, established American rat's tail grass infestation, a Category 3 restricted invasive plant.

This area has clearly been the focus of sustained and targeted weed control activities by the LSMP team, and the incidence of the majority of exotic weeds previously present in this location has been greatly reduced (refer **Figures C23-24, Appendix C**). The Beagle Camp clearing still has an ongoing low incidence of weed occurrence, and is now approaching a maintenance level of ongoing weed control. However, given the recent presence of a small patch of American rat's tail grass, the strategic location of the clearing which must be passed through to access the site, and the high amount of vehicle traffic which passes through, it is recommended that:

- initial targeted treatment and potential quarantining of this site be implemented as a priority to eradicate American rat's tail grass before it has the opportunity to further spread into the Amrun Project area; and,
- ongoing sustained and targeted weed spraying be applied to this area, together with the progressive re-establishement of native ground cover for the remaining bare areas left after heavy weed removal.

3.4.11 Amban track and Outstation/Beach area

The track from Beagle Camp to Amban beach, and the clearing along the beachfront south to the Outstation, has a history of weed infestation, with regular occurrence of established weeds (including horehound, *Stylosanthes* species, Rattlepod, *Sida* species) along the access track, and dense infestations of horehound and other weeds along the beachfront area.

Both the access track and particularly the denser infestations of horehound along the beachfront, have been subject to recent targeted control activities by the LSMP team, and the abundance of weeds has reduced dramatically as a result. Horehound in particular remains at low densities along the beachfront, with a portion of the original infestation forming persistent regrowth at the base of some of the plants (refer **Figures C25-30, Appendix C**).

Alternatively, only isolated patches or individual weed plants now occur at various locations along the Amban access track (refer **Figure 3-2**), particularly *Stylosanthes* species, most of which appear to have persisted or partially regrown despite having been treated. The Amban access track is considered to be at a maintenance level for ongoing weed control, whilst the beachfront area is likely to require at least one heavy treatment, together with ongoing monitoring and follow-up targeted weed control.

3.4.12 Waterfall Creek access track and Beach/Outstation areas

Waterfall Creek beachfront and outstation areas have been periodically closed and largely inaccessible during the construction stage of the Amrun project, and were only recently cleared and accessable. This access track and particularly the beachfront areas currently have high incidences of weed infestations, and in particular are characterised by large and established infestations of Sticky Stylo (*Stylosanthes viscosa*)(refer **Figure C37, Appendix C**). In addition, a number of other localised occurences of additional weed species occur at the Waterfall Creek site, including Guinea grass (*Megathyrsus maximus*), coat buttons (*Tridax procumbens*), itch grass (*Rottboellia cochinchinensis*)(refer **Figure C38, Appendix C**) and the Category 3 restricted invasive plant American rat's tail grass (*Sporobolus jacquemontii*)(refer **Figure C39/40, Appendix C**).

It is suggested that both the Waterfall Creek beachfront/Outstation sites and associated access road be subjected to a detailed weed control program in 2019-2020, now that the area is accessable. It is envisaged that an initial heavy treatement (or treatments) of weeds will need to be undertaken, with ongoing monitoring and regular follow-up targeted spaying of any persistent weed regrowth.

3.4.13 Beagle Camp to Aurukun Road

The airstrip immediately east of Beagle Camp, and crossing points of Tappelbang Creek further along the access road to east were characterised by moderate infestations of established weed species during the recent June 2019 weed survey, particularly horehound (*Mesosphareum suaveolens*) and sticky stylo (*Stylosanthes viscosa*)(refer **Figures C33-34, Appendix C**). These areas, although outside the mining lease boundary and not directly under control of Rio Tinto, form a potential source of weed proaguiles that can be spread across the mining lease by traffic entering from Aurukun Road. It is suggested that Rio Tinto contact the land managers responsible for this land and attempt to negotiate appropriate weed control along this access corridor.

3.4.14 Aurukun Road

The road verge on both sides of the Aurukun Road south from the eastern access point to Aurukun was surveyed during June 2019, and the incidence of weeds was found to be high and virtually continuous along both sides of the road all the way to Aurukun (refer **Figure 3-2**). Grader grass (*Themeda quadrivalvis*) was the dominant weed along the road verge corridor, although low

incidences of other weed species in the verge were also recorded (refer **Figures C35-36, Appendix C**). Only a small portion of the road occurs within the mining lease at the southern end of the road near Aurukun, and management of this public road is unlikely to be the responsibility of Rio Tinto. Similarly, much of the road verge is outside the mining lease boundary and not directly under control of Rio Tinto. However, the presence of a continuous infestation of grader grass represents a potential source of weed propagules that can be spread across the mining lease by traffic entering from Aurukun Road. It is suggested that Rio Tinto similarly contact the land managers responsible for the road verge and attempt to negotiate appropriate weed control along this access corridor.

3.4.15 Aurukun rubbish tip

The Aurukun rubbish tip is located on the southern portion of the mining lease just off the main Aurukun Road. The area is characterised by heavy infestations of a large number of exotic plant species (at least 25 species), including horehound, *Stylosanthes* species, Florida beggar-weed, lesser joyweed, rattlepod, stinking passionflower, Guinea grass, grader grass, Alyce clovers, calapo vine, painted spurge, asthma plant, siratro, Rhodes grass, coat buttons, golden shower tree, Star-of-Bethlehem vine, *Sida* species, and the Category 3 restricted plants sicklepod and yellow bells.

Although technically within the mining lease area, the Aurukun rubbish tip is unlikely to be the management responsibility of Rio Tinto. However, the presence of dense infestations of weeds within the mining lease area is a source of weed propagules that can potentially be spread across the broader mining lease area. It is suggested that Rio Tinto contact the land managers responsible for the Aurukun rubbish tip and attempt to negotiate appropriate weed control over this area.

3.5 Summary, Recommendations and Actions

The main outcome of the current (June 2019) Amrun weed survey is that the overall distribution and abundance of weeds across the Amrun mining lease, particularly the construction areas and associated tracks regularly used and maintained around these areas, are much reduced in their overall incidence of weeds. In particular, the more widespread, established weeds, especially horehound (*Mesosphareum suaveolens*) and the more common species of stylo (*i.e. Stylosanthes hamata* and *S viscosa*), although persistent and difficult to eradicate, have been much reduced by the weed control activities and efforts of the LSMP ranger team.

The main occurrence of many weeds is now in the peripheral, and until recently inaccessible, outer parts of the Amrun mining lease, notably including the Waterfall Creek track. Similarly, the southern portion of Aurukun Road and rubbish tip area in the southern part of the mining lease area is also characterised by a high incidence of numerous weed species.

In terms of areas under direct control and management by Rio Tinto on the Amrun mining lease, targeted areas for ongoing weed control activities, in terms of past and existing weed incidence include:

- Hey River Terminal (HRT) clearing and northern section (*i.e.* northernmost 2km or so) of the original access track heading south to Winda Winda Creek;
- Boyd's Bay flycamp and beach access track;
- Accomodation camp area, particularly the wastewater treatement irrigation bund on the eastern boundary;
- Amban beachfront and Outstation area, and access track from the eastern lease boundary;
- And in particular, Waterfall Creek Outstation and beach access sites, and the associated access track from the turnoff on the Amban track.

Each of these areas, with the exception of Waterfall Creek and associated access tracks, can be regarded as being at, or near, a maintence level for weed control, and now only requires regular periodic monitoring and targeted treatment of any emerging or remaining weeds where they occur.

It is recommended that an ongoing program of periodic (*i.e.* suggested 6 monthly interval) monitoring, and where required targeted weed control, be scheduled and implemented for these areas.

Alternatively, Waterfall Creek has had a long-established infestation of weeds, particularly dense historical patches of sticky stylo (*Stylosanthes viscosa*), and would benefit from 2-3 heavy treatments to remove the bulk of these weeds, to then establish this area as another maintence level weed control site. It is recommended that this area be scheduled for 2-3 intensive weed control treatments over the next 12-month period, after which this area be reassessed and added to the list of areas scheduled for maintenance level weed control (identified in the dot points above).

Aurukun Road is a source area of weeds particularly grader grass (*Themeda quadrivalvis*), and the Aurukun rubbish tip area off this road is a site of heavy infestation of many weed species. Although outside the direct control of the mine, it is recommended that Rio Tinto undertake initial and ongoing consultations with other relevant land managers to try and minimise the incidence of weeds at these locaties outside the mining lease boundary, and reduce the probability of associated weed propagules potentially enter the mining lease from these locations.

The naure of both the Amrun mine, and the associated weed control requirements for the mine, has changed markedly since weed surveys first commenced in June 2013 at Amrun. In particular the extent of open or diturbed areas has increased from small linear corridors along track and access roads, to large open areas for the accommodation camp, port and infrastructure areas, tailings dams and operating mine floor. This fundamental change has brought with it a tenfold to 100-fold increase in the potential habitat areas available for weed colonisation, and the large open areas covering tens to hundreds of hectares in particular have emerged around the tailings dam and in active mine area clearings over the past 12-24 months. Despite this, weed incidence has been reduced overall, and is a positive reflection of both the weed management protocols implemented on site, and especially the efforts of the LSMP team in monitoring and targeting weeds in their current weed control activities.

As the site has now transitioned from construction into the operational phase of mining operations in a relatively weed-free condition, and these new large open areas now exist, it is suggested that now is the time to develop a new strategy and approach to manage potential weeds and prevent them from establishing in these areas before a larger problem develops. It is therefore recommended that a strategy in which all of these open areas are identified as they are progressively cleared, and divided into manageable block sizes or sectors, and a schedule be developed where each sector is monitoried at regular intervals (*i.e.* 6 monthly intervals are suggested), and implemented by LSMP rangers together with immediate spot treatement of any weeds present each time a sector is surveyed. In this way large potential outbreaks of weeds can be effectively and efficiently prevented.

Some further positive outcomes that were evident during the June 2019 survey, in particular with respect to the past 12 months of weed management activities include:

- The Gamba grass infestation at Boyd Bay has been effectively controlled since February 2017, and the area can be declared free of this restricted invasive plant if no regrowth of this weed occurs by February 2020;

- Similarly there is no sign of re-emergence of Gamba grass found on the access tract in July 2018, and the area can also potentially be declared free of this restricted invasive plant if no regrowth occurs by July 2021;

- The weed protocols currently in place on site have been largely effective in preventing the invasion and spread of exotic weed species into the Amrun Project area, with only a single mature specimen of American rat's tail grass (*Sporobolus jacquemontii*) recorded and removed at Waterfall Creek. This plant is likely to have been an historical introduction, and there in no reason to expect an outbreak of this weed at Waterfall Creek or elsewhere on the lease, provided this site is monitoried locally;

- Similarly the incidence of American rat's tail grass at Beagle Camp recorded in July 2018 appears to have been treated effectively, and with ongoing local monitoring can be prevented from entering the Amrun Project area;

- Despite the persistence and ongoing regrowth of the established herbaceous perennial weed species (particularly common stylo, sticky stylo and horehound), these species have been greatly reduced across the acessable parts of the mining lease and are considered to now be at a maintenance level for weed control. With focused effort the remaining heavy infestation at Waterfall Creek can similarly be reduced to a maintenance level for weed control. The success of these weed treatment activities to achieve this result highlights the benefit of targeted and sustained weed control activities undertaken by the LSMP team;

- Despite the isolated occurences of a variety of new weed species (considered inevitable from time to time, with 23 new weed species recorded in the past 12 months), there is no evidence of broad-scale infestation of new weed species or large increases in the incidence of established weeds at the site. This is also despite the greatly increased extent of clearing and volume of heavy machinery activity on site. This is positive reflection of both the current weed control efforts, and the existing weed management practices including weed washdown practices and other weed control protocols currently enforced on site; and

- very few weeds were recorded in newly opened areas for construction (such as the tailings storage facility clearing area, Arraw Dam wall and fishway clearing footprint, ICT corridor and MIA expansion areas). This also implies that the existing weed management practices currently enforced on site have been largely effective.

One exception to the reduction in weed occurrence is the presence of several exotic weed species in open areas deliberately seeded for batter stabilisation and erosion control. It appears the seed mix contained low amounts of at least four unintended exotic species (Rhode's grass *Chloris gayana*, Indian bluegrass *Bothriochloa pertusa*, Guinea grass *Megathyrsus maximus* and American joint-vetch *Aeschynomene americana*), and these four weeds now occur as isolated plants throughout seeded areas including the verges of the main bitumen access road, HRT, MIA, the ICT corridor and around the perimeter of the tailings dam. A decision will need to be made by RTW whether to now accept these four species as part of the batter stabilisation seed mix for these areas, or attempt to eradicate them from these areas as part of future weed control activities.

It is worth noting that native seed mixes used around the Arraw Dam wall, and around the broad perimeter areas of the tailings dam, have germinated successfully and performed to stabilise these areas. Significantly, several native species (notably including spikey mat grass *Pseudoraphis spiescens*, kerosene grass *Schizachyrium pachyarthron* and other prostrate spreading grasses including *S fragile, Thaumastochloa pubescens, T major* and *T rariflora*) appear to have performed the best as ground cover species for stabilising the soil surface in many situations. It is recommended that these native species be fully utilised with an initial cover crop of Japanese millet (*Echinochloa esculenta*, which disappears after initial stabilisation growth is complete) in future soil stabilisation works.

The numerous successes of the current weed control program provide an effective and efficient platform to further develop and refine the ongoing management and control of weeds within the Amrun Project area. As the Amrun mine fully transitions into the current operation stage, now is the critical time to refine and enhance the existing weed planning, and management protocols and practices, and effectively implement weed control and treatment activities so the site remains relatively weed free into the future.

Much of the success of weed control at Amrun to date has been the result of the efforts of the LSMP team, and it is recommended that ongoing training and skill development for the LSMP rangers, particularly new staff members, be given a high priority. In particular, weed identification and advanced weed control techniques including targeted spot-treatment and herbicide preparation (including correct mixing tequniques/application rates and use of new and advanced products such as surfactants and continue to ensure their skills continue to develop.

4. References

Australian Government (2019). Australian Government Weeds of National Significance (WoNS) Website, Weeds in Australian Publications and Resources, **http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html** Accessed 04 November 2019.

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Queensland Government (2019b). Queensland Government Business & Industry Portal Website, Rat's Tail Grasses Factsheet. **https://www.daf.qld.gov.au/data/assets/pdf_file/0010/69616/IPA-Giant-Rats-Tail-Grass-PP48.pdf** Biodiversity Queensland, Department of Agriculture and Fisheries, Queensland Government, 2018. Accessed 04 November 2019.

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5. Appendices

Appendix A **Schedule of Data Deliverables**

Appendix B **Weed Species Identification Results**

Appendix C **Survey Site Images**

Appendix D **Three-Yearly Periodic Weed Survey Results –Amrun Mining Lease (18-25 June 2019 Survey)**

Appendix E **Distribution Maps for Individual Weed Species**

Appendix A Schedule of Data Deliverables

Data Type	Filename
Raw survey data	*Weed Survey Results 31Oct19.xlsx*
Summary species list	*N/A; included in Appendix D*
Survey site locations	*Amrun Mining Lease area, including:* - *Main bitumen access road between Amrun port facilities (MIA) and Hey River Terminal (HRT);* - *Amrun Accomodation village, perimeter tracks and access road;* - *HRT, perimeter area including frontage to Hey River foreshore, area around laydown area and communications tower, and track north to northern lease boundary;* - *Access tracks north of Winda Winda Creek, including accessible parts of original Winda Winda Creek to Hey Point track, north-south heavy vehicle tracks between Winda Winda Creek and Hey Point;* - *Clearing around Arraw Dam and overflow wall, including north and south access tracks, and ICT corridor between Arraw Dam and MIA area;* - *All accessable access tracks south of the main bitumen access road, including* > *70,000 line;* > *Seismic line;* > *North-south access to watering points, dam bores and dam area;* > *Accessable grid lines to old Fulton Hogan laydown area for dam construction, plane crash site and communications tower, Lucas road;* - *Pera Swamp and associated western cliff access tracks;* - *Boyd Point fly camp and Boyd Bay Point access tracks;* - *Newly opened Thud Point beach access track south of MIA/tailings dam;* - *Recent localised access tracks around facilities, including MIA, construction camp and communications towers;* - *North-South access tracks between seismic line and South Gate;* - *Beagle Camp, old airstrip, and main access track from South Gate to Arukun Road;* -

Survey site locations	- *Arukun Road verges between Aurukun and northern turnoff to site, with side extensions for Aurukun rubbish tip and old road diversion;* - *Beagle camp to Amban outstation and beach area, including accessable side tracks to Norman Creek south landing point, and bore holes south of Amban track; •* - *Main access tracks to Waterfall Creek and Ina Creek, including western cliff to outstation areas; and* - *Open access tracks between Beagle Camp/South Gate and Arraw Dam, used for southern during dam construction an to check water bores/survey stations.*
	-
Survey trackers	*N/A*
Survey coverage polygons (flora and fauna)	*N/A*
Polyline tracks/Waypoints	*17_June_2019_Track_polyline.shp* *18_June_2019_Track_polyline.shp* *19_June_2019_Track_polyline.shp* *20_June_2019_Track_polyline.shp* *21_June_2019_Track_polyline.shp* *22_June_2019_Track_polyline.shp* *23_June_2019_Track_polyline.shp* *24_June_2019_Track_polyline.shp* *25_June_2019_Track_polyline.shp* *Amrun_Weed_Survey_Tracks_2019 _polyline.shp*
GIS map output files	*Amrun_Weeds_20191105_font_point (Amrun Weeds combined layer)* *Aes_americana_2019_font_point (Aeschynomene americana)* *Alt_brasiliensis_2019_font_point (Alternanthera brasiliensis)* *Aly_ovalifolius_2019_font_point (Alysicaprus ovalifolius)* *Aly_vaginalis_2019_font_point (Alysicaprus vaginalis)* *(Aeschynomene americana)* *Bid-bipinnata_2019_font_point (Bidens bipinnata)* *Bot_pertusa_2019_font_point (Bothriochloa pertusa)* *Cal_mucunoides_2019_font_point (Calopogonium mucunoides)* *Cas_fistula_2019_font_point (Cassia fistula)* *Cen_echinatus_2019_font_point (Cenchrus echinatus)* *Cen_pedicellatus_2019_font_point (Cenchrus pedicellatus subsp unispiculus)*

GIS map output files	*Chl_gayana _2019_font_point* *(Chloris gayana)* *Cit_lanatus_2019_font_point* *(Citrillus lanatus)* *Cro_goreensis_2019_font_point* *(Crotalaria goreensis)* *Cyp_aromaticus_2019_font_point* *(Cyperus aromaticus)* *Dac_aegypticum_2019_font_point* *(Dactyloctenium aegyptium)* *Des_tortuosum_2019_font_point* *(Desmodium tortuosum)* *Emi_sonchifolia_2019_font_point* *(Emilia sonchifolia)* *Ere_valerianifolius_2019_font_point* *(Erechtites valerianifolius)* *Eup_heterophylla_2019_font_point* *(Euphorbia heterophylla)* *Eup_hirta_2019_font_point* *(Euphorbia hirta)* *Hyp_rufa_2019_font_point* *(Hyparrhenia rufa)* *Ipo_quamoclit_2019_font_point* *(Ipomoea quamoclit)* *Mac_atropurpureum_2019_font_point* *(Macroptilium atropurpureum)* *Mel_repens_2019_font_point* *(Melinus repens)* *Mes_suaveolens_2019_font_point* *(Mesosphaerum suaveolens)* *Mit_hirtus_2019_font_point* *(Mitracarpus hirtus)* *Pas_urvillei_2019_font_point* *(Paspalum urvillei)* *Pas_foetida_2019_font_point* *(Passiflora foetida)* *Pas_suberosa_2019_font_point* *(Passiflora suberosa)* *Pho_dactylifera_2019_font_point* *(Phoenix dactylifera)* *Sid_acuta_2019_font_point* *(Sida acuta)* *Sid_cordifolia_2019_font_point* *(Sida cordifolia)* *Sid_spinosa_2019_font_point* *(Sida spinosa)* *Sol_nigrum_2019_font_point* *(Solanum nigrum)* *Spo_jacquemontii_2019_font_point* *(Sporobolus jacquemontii)* *Sta_jamaicensis_2019_font_point* *(Stachytarpheta jamaicensis)* *Sty_guianensis_2019_font_point* *(Stylosanthes guianensis)* *Sty_hamata_2019_font_point* *(Stylosanthes hamata)* *Sty_scabra_2019_font_point* *(Stylosanthes scabra)* *Tec_stans_2019_font_point* *(Tecoma stans)* *The_quadrivalvis_2019_font_point*

	(Themeda quadrivalvis) *Tri_procumbens_2019_font_point* *(Tridax procumbens)* *Uro_decumbens_2019_font_point* *(Urochloa decumbens)* *Uro_mutica_2019_font_point* *(Urochloa mutica)*
Reference images	*Included as deliverables in folder "Amrun Weed Survey Images June 2019"*
Details of Herbarium/Museum specimen	*N/A; included in Appendix B*
Flora fauna data	*N/A*

Appendix B Weed Species Identification Results

Queensland Government
Department of Environment and Science

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http://www.qld.gov.au/herbarium

Enquiries: Andrew Starke
Telephone: 07 3199 7656
Your reference:
Our reference: AJP-mb 68019

23 July 2019

Jason Searle
57 Fifteenth Ave
PALM BEACH Qld 4221

Dear Jason

The botanical specimens received by the Queensland Herbarium on 18 July 2019 have been identified as:

19171 **Bothriochloa pertusa*
19173 **Paspalum urvillei*. If you are on site again, we would appreciate a complete specimen of this species including base and roots.
19174 **Cyperus aromaticus*
19176 *Ipomoea racemigera*
19182 **Stylosanthes hamata*
19184 **Sporobolus jacquemontii*
19187 *Crotalaria montana* var. *angustifolia*
19188 *Digitaria bicornis*
19189 *Sesbania cannabina* var. *cannabina*

*Naturalised, non-native species

You can contribute to Queensland's biodiversity information by submitting this/these plant identification(s) and associated information to the Atlas of Living Australia using the 'Report a sighting' template at (https://www.ala.org.au/)

Yours sincerely

G.P.Guymer
Director

Download a full version of Census of the Queensland Flora 2018
https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2018

Centre for botanical research and information on the Queensland flora

Queensland Government
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Enquiries Sandy Pollock
Telephone 07 3199 7665
Your reference
Our reference ADP:mb 563/19

15 October 2019

Jason B. Searle
57 Fifteenth Ave
PALM BEACH Qld 4221

Dear Jason

The botanical specimens received by the Queensland Herbarium on 15 August 2019 have been identified as:

JS 19056	*#Arthrochilus lavarackiana*
JS 19143	*#Cyanthillium cinereum*
JS 19118	*#Hoya australis* subsp. *australis*
JS 19041	*#Fuirena arenosa*
JS 19178	*#Pterocaulon sphacelatum*
JS 19175	*#Pterocaulon ciliosum*
JS 19142	*#Pterocaulon ciliosum*
JS 19137	*Turraea pubescens*
JS 19161	*#Antidesma ghaesembilla*

#These specimens have been kept for incorporation into the Herbarium collection, with thanks.

You can contribute to Queensland's biodiversity information by submitting this/these plant identification(s) and associated information to the Atlas of Living Australia using the 'Report a sighting' template at (https://www.ala.org.au/)
Note that for specimens retained by the Queensland Herbarium we provide the specimen data to the Australasian Virtual Herbarium and to the Atlas of Living Australia.

Yours sincerely

G.P.Guymer
Director

Download a full version of Census of the Queensland Flora 2018
https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2018

Centre for botanical research and information on the Queensland flora

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Enquiries Melinda Laidlaw
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Your reference
Our reference MJL: 784/18

23 October 2018

Jason Searle
57 Fifteenth Ave
PALM BEACH Qld 4221

Dear Jason

The botanical specimens received by the Queensland Herbarium on 11 October 2018 have been identified as:

JS18067	*#Blumea axillaris*
JS18068	*Sporobolus* sp. possibly **Sporobolus jacquemontii* This specimen has been identified as an invasive, non-native species of *Sporobolus* (Restricted Category 3) under the *Biosecurity Act 2014*. The taxonomy of this species group is currently being researched by the Herbarium and Biosecurity Queensland.
JS18069	*Dichanthium sericeum* subsp. *polystachyum*
JS18125	*#Macaranga polyadenia*
JS18129	*Cryptocarya hypospodia*
JS18133	*#Taenitis blechnoides*
JS18135	*Sterculia shillinglawii*
JS18184	*Melaleuca argentea*
JS18185	*#Dalbergia densa*

* Naturalised, non-native species
# These specimens have been retained for incorporation into the Herbarium collection, with thanks.

Yours sincerely

G.P.Guymer
Director

Download a full version of Census of the Queensland Flora 2017
https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2017

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Appendix C Survey Site Images

Image C1. Caribbean stylo (*Stylosanthes hamata*), persisting as low lawn under native grass regrowth at Boyds Bay main flycamp clearing, despite repeated spraying (18 June 2019).

Image C2. Caribbean stylo (*Stylosanthes hamata*), close up showing reddish stems and distinctive hook on seed pods, Boyds Bay main flycamp clearing (18 June 2019).

Image C3. Annual mission grass (*Cenchrus edicellatus subsp unispiculus*) persisting in small patches on the eastern margin of the Boyds Bay main flycamp clearing, despite repeated spraying (18 June 2019).

Image C4. Access track to Boyds Bay, showing open verge edges where dense weed layer has been successfully removed (18 June 2019).

Image C5. Previous quarantine area at the end of the Boyds Bay track, showing low incidence of exotic weeds and absence of Gamba grass. This area has been free of Gamba grass for over 2 years and is at a low level of weed incidence (*i.e.* maintenance level), and could now be taken down (18 June 2019).

Image C6. Access track to Boyds Bay, showing open verge edges where dense weed layer has been successfully removed. Small amounts of non-target (native plant) removal have also occurred (18 June 2019).

Image C7. The native grass *Elionurus citreus* was collected as a suspected weed on access tracks between the main bitumen access road and South Gate during the June 2019 survey, and was later identified as a native species (18 June 2019).

Image C8. Cupid's shaving brush (*Emilia sonchifolia*), recorded as isolated patches at the Arraw Dam laydown area for the first time at Amrun during the June 2019 survey (19 June 2019).

Image C9. Rhode's grass (*Chloris gayana*), occurring as regular isolated plants in open areas seeded for soil stabilisation (19 June 2019).

Image C10. Indian bluegrass (*Bothriochloa pertusa*), occurring as regular isolated plants in open areas seeded for soil stabilisation (19 June 2019).

Image C11. American joint-vetch (*Aeschemone americana*), recorded as isolated patches along the main bitumen access road at Amrun during the June 2019 survey (19 June 2019).

Image C12. Navua sedge (*Cyperus aromaticus*), found as a single dense clump growing on the accommodation camp irrigation bund for the first time in June 2019 (19 June 2019).

Image C13. Vasey grass (*Paspalum urvillei*), found as a single clump of around 50 plants growing on the accommodation camp irrigation bund for the first time in June 2019 (19 June 2019).

Image C14. Broad-leaved Alyce clover (*Alysicarpus vaginalis*), occurring as an isolated weed on the accommodation camp irrigation bund, and at HRT during the June 2019 surveys (19 June 2019).

Image C15. New plants of black nightshade (*Solanum nigrum*), found across the accommodation camp irrigation bund and locally numerous in this area (19 June 2019).

Image C16. Inland bell-vine (*Ipomoea racemigera*), suspected as a weed and confirmed as native to parts of inland Australia. This native vine has not previously been recorded for Cape York, and was found as an isolated large clump on the accommodation camp irrigation bund (19 June 2019).

Image C17. Vernonia (*Cyanthillium cinereum*), abundant on the accommodation camp irrigation bund and beginning to occur in other cleared areas. This native plant was suspected as a weed and confirmed by the Queensland Herbarium as native to Amrun lease area (19 June 2019).

Image C18. A native legume (*Sesbania cunninghamii var cunninghamii*), originally suspected as sicklepod (*Senna obtusifolia*), a Class 3 Restricted plant, occurring as an isolated colonising plant along the main access road to the accommodation camp (19 June 2019).

Image C19. Thatch grass (*Hyparrhenia rufa*), found as a few single plants within seeded areas along the main access road for the first time at Amrun in the June 2019 surveys (19 June 2019).

Image 20. Guinea grass (*Megathyrsus maximus*), one of several exotic plant species found as isolated patches of plants in seeded areas. Found along the roadside of the ICT corridor during the June 2019 weed surveys (19 June 2019).

Image C21. The open grassy areas around Pera Swamp and the associated open western cliff top north to the shiploader were largely devoid of weeds. Small amounts of rattlepod (*Crotalaria goreensis*) and stylo (*Stylosanthes* species) were recorded in the June 2019 surveys (19 June 2019).

Image C22. Watermelon (*Citrullus lanatus*), an exotic species found on a disturbed bund area at South Gate in the mining lease area during the June 2019 weed survey (20 June 2019).

Image C23. Beagle Camp, large open laydown area where previous dense infestations have been largely removed. The open area has a considerable seed store of exotic weeds and will require follow-up monitoring and targeted spraying (20 June 2019).

Image C24. LSMP ranger Tracey Matthew undertaking targted spraying at Beagle Camp (20 June 2019).

Image C25. Caribbean stylo (*Stylosanthes hamata*), occurring as an under-layer in the ground cover at Beagle Camp and Amban Outstation. This form of the plant is difficult to treat and required targted application of herbicide and careful spraying to avoid overspray to non-target native plants (20 June 2019).

Image C26. Open trackside areas along the beach strip to Amban Outstation. Heavy infestations of horehound (*Mesosphareum suaveolens*) have been largely eradicated by sustained targeted spraying (20 June 2019).

Image C27. Small patches of regrowth of horehound (*Mesosphareum suaveolens*) on the track to Amban Outstation. These areas will require further ongoing spraying (20 June 2019).

Image C28. Treated plants of tropical girdlepod (*Mitracarpus hirtus*) with apparent chemical burn. Concentration of herbicide even slightly above the recommended mixing rate can result in burning plants rather than the full dose of chemical being taken up by the plants internal tissues (20 June 2019).

Image C29. Flannel weed (*Sida cordifolia*), one of three species of *Sida* weeds known from the Amrun project area. Recorded at Amban Outstation, where it occurs in low numbers (20 June 2019).

Image C30. Date palm (*Phoenix dactylifera*), recorded from one isolated plant on the dunes south of Amban Outstation during the June 2019 weed survey (20 June 2019).

Image C31. Spoon drain on side of track at Arraw Dam. This area has been revegetated with native grasses and was devoid of weeds during the June 2019 weed survey (20 June 2019).

Image C32. Lower portion of fishway, revegetated with native grasses and sedges. Devoid of weeds during the June 2019 weed survey, this is a large open area with potential for future weed invasion (20 June 2019).

Image C33. Caribbean stylo (*Stylosanthes hamata*), one of four species of stylo occurring at the Amrun project area, confirmed by the Queensland Herbarium from specimens collected during the June 2019 weed survey. Collected on the entrance tract near Beagle Camp (21 June 2019).

Image C34. Sticky stylo (*Stylosanthes viscosa*), the most distinctly different of four species of stylo collected during the June 2019 weed survey, with leaves sticky to touch. Collected on the entrance track near Beagle Camp (21 June 2019).

Image C35. Continuous dense infestations of grader grass (*Themeda quadrivalvis*), occurring along almost the entire length of both sides of Aurukun Road from the Aurukun to the site turn-off (21 June 2019).

Image C36. Dense infestation of sticky stylo (*Stylosanthes viscosa*), occurring regularly in patches along Aurukun Road (outside the mining lease)(21 June 2019).

Image C37. End of old clifftop track at southern part of Waterfall Creek Outstation area, densely infested with sticky stylo (*Stylosanthes viscosa*), until recently inaccessable due to fallen timber and track closure (22 June 2019).

Image C38. Itch grass (*Rottboellia cochinchinensis*), an exotic weed first recorded for Amrun at the end of the Waterfall Creek track at the top edge of the beach under beach she-oak (*Casuarina equisetifolia*) during the June 2019 weed survey (22 June 2019).

Image C39 & C40. American rat's tail grass (*Sporobolus jacquemontii*), single mature plant recorded at the end of the Waterfall Creek track where cars park. First confirmed records for this weed within the Amrun mining lease (22 June 2019)

Image C41. Drainage areas within the MIA and port area have been seeded on batters for erosion control purposes. A few suspected weeds were collected here (see images below)(23 June 2019).

Image C42. Asian crabgrass (*Digitaria bicornis*), suspected as a weed and confirmed as native by the Queensland Herbarium, collected in drainage ditch beside MIA access road (23 June 2019).

Image C43. A native legume (*Croatalria montana var angustifolia*), suspected as a weed and confirmed as native by the Queensland Herbarium, collected in drainage ditch beside MIA access road (23 June 2019).

Image C44. Guinea grass (*Megathuris maximus*), occurring as an isolated weed along the eastern boundary of the Amrun tailings dam clearing (23 June 2019).

Image C45. Large open area seeds with native grasses, and drainage corridor with exotic signal grass (*Urochloa decumbens*), washed down from batter stabilisation seeding of the eastern wall of the tailings dam (23 June 2019).

Image C46. Large open area east of the dam wall, seeded with native grasses and also colonised by exotic signal grass (*Urochloa decumbens*) and American joint-vetch (*Aeschynomene americana*), washed down from batter stabilisation seeding of the eastern wall of the tailings dam (23 June 2019).

Image C47. Kerosine grass (*Schizachyrium pachyarthron*), a native grass colonising an open sediment control basin on the verge of the ICT corridor. One of several native species naturally colonising many of the open clearings (23 June 2019).

Image C48. Red Natal grass (*Melinus repens*) newly discovered as isolated specimen of this weed in the June 2019 weed surveys, roadside along the main a ccess road north of Winda Winda Creek (24 June 2019).

Image C49. Horehound (*Mesosphareum suaveolens*) recent weedy regrowth at the southern entry to the cleared parking area at HRT. These weeds although present as regrowth, are now at a maintenance level (24 June 2019).

Image C50. Para grass (*Urochloa mutica*) newly discovered as a single specimen of this weed in the June 2019 weed surveys, roadside verge at HRT (24 June 2019).

Image C51. Entry to an established north-south heavy vehicle tracks between HRT and Winda Winda Creek, no longer accessable due to fallen timber and regrowth (25 June 2019).

Image C52. Recently graded logging track in the northern area operated by Wik forestry operations, replacing the established north-south heavy vehicle tracks between HRT and Winda Winda Creek (25 June 2019).

Appendix D Three-Yearly Periodic Weed Survey Results –Amrun Mining Lease (18-25 June 2019 Survey)

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
1444	54	570093	8571538	18/06/2019	*Stylosanthes hamata*	50	Dense localised patch	sprayed area
1444	54	570093	8571538	18/06/2019	*Mitrasacme hirtus*	100	Dense localised patch	sprayed area
1444	54	570093	8571538	18/06/2019	*Cenchrus pedicellatus subsp unispiculus*	100	Dense localised patch	sprayed area
1444	54	570093	8571538	18/06/2019	*Themeda quadrivalvis*	10	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Cenchrus pedicellatus subsp unispiculus*	10	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Macroptilium atropurpureum*	1	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Passiflora foetida*	1	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Themeda quadrivalvis*	5	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Stylosanthes hamata*	1	Isolated occurrence	sprayed area
1445	54	570124	8571662	18/06/2019	*Alysicarpus ovalifolius*	1	Isolated occurrence	sprayed area
1446	54	569867	8571649	18/06/2019	*Stylosanthes hamata*	5	Isolated occurrence	sprayed area
1446	54	569867	8571649	18/06/2019	*Cenchrus pedicellatus subsp unispiculus*	20	Isolated occurrence	sprayed area
1447	54	569235	8572018	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1448	54	569210	8572253	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1449	54	569191	8572404	18/06/2019	*Mitracarpus hirtus*	100	Scattered plants over 100m area	sprayed area
1449	54	569191	8572404	18/06/2019	*Stylosanthes hamata*	50	Scattered plants over 100m area	sprayed area
1449	54	569191	8572404	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1450	54	570106	8571372	18/06/2019	*Urochloa decumbens*	5	Isolated occurrence	sprayed area
1454	54	581310	8568565	18/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	sprayed area
1455	54	581312	8569426	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1456	54	587458	8570572	18/06/2019	*Themeda quadrivalvis*	5	Isolated occurrence	sprayed area
1456	54	587458	8570572	18/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	sprayed area
1457	54	587477	8570657	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1458	54	587500	8570826	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1459	54	587541	8571307	18/06/2019	*Mesosphaerum suaveolens*	30	Scattered plants over 100m area	sprayed area
1460	54	587559	8571630	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1461	54	587644	8572264	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1462	54	587650	8572359	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1463	54	587674	8572740	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1464	54	587691	8572833	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1465	54	587690	8573528	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1466	54	587690	8576320	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1467	54	587655	8576413	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1468	54	580275	8574032	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1469	54	579587	8573812	18/06/2019	*Stylosanthes hamata*	5	Scattered plants over 100m area	sprayed area

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
1471	54	572997	8571697	18/06/2019	*Stylosanthes hamata*	20	Scattered plants over 100m area	sprayed area
1473	54	580091	8570661	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1474	54	579969	8570663	18/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	sprayed area
1475	54	579756	8570665	18/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
1476	54	579628	8570664	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1480	54	576480	8570664	18/06/2019	*Stylosanthes hamata*	5	Isolated occurrence	sprayed area
1481	54	576358	8570664	18/06/2019	*Stylosanthes hamata*	5	Isolated occurrence	sprayed area
1481	54	576358	8570664	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1482	54	576293	8570665	18/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	sprayed area
1483	54	576107	8570665	18/06/2019	*Stylosanthes hamata*	10	Scattered plants over 100m area	sprayed area
1495	54	578280	8575326	19/06/2019	*Alysicarpus ovalifolius*	100	Dense localised patch	Irrigation bund
1495	54	578280	8575326	19/06/2019	*Tridax procumbens*	20	Isolated occurrence	Irrigation bund
1495	54	578280	8575326	19/06/2019	*Solanum nigrum*	100	Dense localised patch	Irrigation bund
1496	54	578292	8575349	19/06/2019	*Solanum nigrum*	100	Dense localised patch	Low end irrigation bund
1496	54	578292	8575349	19/06/2019	*Passiflora foetida*	20	Isolated occurrence	Low end irrigation bund
1496	54	578292	8575349	19/06/2019	*Paspalum urvillei*	100	Dense localised patch	Low end irrigation bund
1496	54	578292	8575349	19/06/2019	*Erechtites valerianifolius*	5	Isolated occurrence	Low end irrigation bund
1497	54	578280	8575225	19/06/2019	*Passiflora foetida*	20	Isolated occurrence	Central part irrigation bund
1497	54	578280	8575225	19/06/2019	*Dactyloctenium aegyptium*	10	Isolated occurrence	Central part irrigation bund
1497	54	578280	8575225	19/06/2019	*Cyperus aromaticus*	100	Dense localised patch	Central part irrigation bund
1497	54	578280	8575225	19/06/2019	*Alysicarpus ovalifolius*	50	Dense localised patch	Central part irrigation bund
1498	54	578731	8575583	19/06/2019	*Mitracarpus hirtus*	5	Isolated occurrence	Tope end irrigation bund
1498	54	578731	8575583	19/06/2019	*Pterocaulon sp A collected*	1	Isolated occurrence	Tope end irrigation bund
1498	54	578731	8575583	19/06/2019	*Solanum nigrum*	5	Isolated occurrence	Tope end irrigation bund
1502	54	618077	8521040	19/06/2019	*Urochloa decumbens*	500	Dense localised patch	Seeded
1503	54	566244	8568754	19/06/2019	*Passiflora foetida*	1	Isolated occurrence	
1507	54	570399	8555751	20/06/2019	*Stylosanthes scabra*	10	Isolated occurrence	track to Amban, collected
1508	54	567100	8553838	20/06/2019	*Mesosphaerum suaveolens*	0	Isolated occurrence	Large kill 100%
1509	54	566707	8552561	20/06/2019	*Phoenix dactylifera*	1	Isolated occurrence	
1509	54	566707	8552561	20/06/2019	*Cenchrus echinatus*	5	Isolated occurrence	
1512	54	586813	8566277	20/06/2019	*Citrillus lanatus*	1	Isolated occurrence	South gate
1516	54	588294	8561112	21/06/2019	*Stylosanthes viscosa*	20	Isolated occurrence	patch in gully beside track
1516	54	588294	8561112	21/06/2019	*Stylosanthes scabra*	20	Isolated occurrence	patch in gully beside track
1520	54	583073	8524023	21/06/2019	*Crotalaria goreensis*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1520	54	583073	8524023	21/06/2019	*Passiflora foetida*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1520	54	583073	8524023	21/06/2019	*Megathyrsus maximus*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1520	54	583073	8524023	21/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	Aurukun Rubbish Dump

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
1520	54	583073	8524023	21/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Crotalaria goreensis*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Calopogonium mucunoides*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Megathyrsus maximus*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Euphorbia heterophylla*	10	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Passiflora foetida*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Macroptilium atropurpureum*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Desmodium tortuosum*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1521	54	583175	8524090	21/06/2019	*Senna obtusifolia*	5	Isolated occurrence	Aurukun Rubbish Dump
1522	54	583224	8524042	21/06/2019	*Crotalaria goreensis*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1522	54	583224	8524042	21/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1522	54	583224	8524042	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1522	54	583224	8524042	21/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Megathyrsus maximus*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Crotalaria goreensis*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Stylosanthes hamata*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1523	54	584668	8524779	21/06/2019	*Calopogonium mucunoides*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1524	54	584614	8524662	21/06/2019	*Megathyrsus maximus*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1524	54	584614	8524662	21/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	Aurukun Rubbish Dump
1524	54	584614	8524662	21/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	Aurukun Rubbish Dump
1524	54	584614	8524662	21/06/2019	*Calopogonium mucunoides*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1524	54	584614	8524662	21/06/2019	*Stylosanthes hamata*	20	Scattered plants over 100m area	Aurukun Rubbish Dump
1537	54	567915	8570375	23/06/2019	*Urochloa decumbens*	500	Dense localised patch	Around conveyers etc, seeded
1537	54	567915	8570375	23/06/2019	*Chloris gayana*	5	Isolated occurrence	Around conveyers etc, seeded?
1538	54	567204	8567948	23/06/2019	*Urochloa decumbens*	500	Dense localised patch	Seeded
1538	54	567204	8567948	23/06/2019	*Chloris gayana*	5	Isolated occurrence	In seed mix ?
1539	54	567069	8567831	23/06/2019	*Urochloa decumbens*	500	Dense localised patch	Seeded
1541	54	563755	8562591	23/06/2019	*Bidens bipinnata*	5	Isolated occurrence	
1548	54	569775	8566246	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1548	54	569775	8566246	23/06/2019	*Chloris gayana*	5	Isolated occurrence	Seeded, top stockpile
1549	54	569849	8567638	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1549	54	569849	8567638	23/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
1551	54	570176	8568993	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1552	54	571473	8568215	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
1553	54	571710	8568074	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1552	54	571473	8568215	23/06/2019	*Chloris gayana*	5	Isolated occurrence	In seed mix ?
1553	54	571710	8568074	23/06/2019	*Chloris gayana*	5	Isolated occurrence	In seed mix ?
1554	54	573033	8566698	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1555	54	573181	8566439	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1556	54	573576	8565768	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1559	54	568481	8570818	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1560	54	570036	8571068	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1560	54	570036	8571068	23/06/2019	*Chloris gayana*	5	Isolated occurrence	In seed mix ?
1561	54	570417	8571262	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1562	54	570611	8571354	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1563	54	570765	8571433	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1564	54	571270	8571706	23/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1563	54	570765	8571433	23/06/2019	*Chloris gayana*	5	Isolated occurrence	In seed mix ?
1563	54	570765	8571433	23/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
1564	54	571270	8571706	23/06/2019	*Cenchrus pedicellatus subsp unispiculus*	5	Isolated occurrence	
1564	54	571270	8571706	23/06/2019	*Hyparrhenia rufa*	5	Isolated occurrence	
1565	54	581635	8574540	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1566	54	585336	8575734	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1567	54	589133	8576773	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1568	54	589880	8576883	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1569	54	590692	8577363	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1570	54	590855	8577469	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1571	54	591842	8576931	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1572	54	592257	8578236	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1573	54	595186	8580900	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1574	54	595309	8581835	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1575	54	595363	8582268	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1576	54	596192	8589236	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1577	54	596719	8590558	24/06/2019	*Urochloa decumbens*	1000	Main access road measure points	Seeded
1579	54	596713	8590375	24/06/2019	*Emilia sonchifolia*	50	Dense localised patch	
1	54	570102	8571542	17/06/2019	*Stylosanthes hamata*	100	Dense localised patch	
2	54	574981	8564281	18/06/2019	*Emilia sonchifolia*	5	Isolated occurrence	
3	54	574970	8564259	18/06/2019	*Emilia sonchifolia*	20	Scattered plants over 50m area	
4	54	574954	8564263	18/06/2019	*Urochloa decumbens*	5	Isolated occurrence	
5	54	574823	8564182	18/06/2019	*Chloris gayana*	5	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
6	54	575971	8564296	18/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded area
7	54	575850	8564992	18/06/2019	*Bothriochloa pertusa*	5	Scattered plants over 50m area	silver rhodes grass question
9	54	574643	8564028	18/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded ICt road
10	54	573824	8565357	18/06/2019	*Urochloa decumbens*	10000	Heavy infestation approximately 100m x 100m plus	seexed ICT road
11	54	573821	8565363	18/06/2019	*Chloris gayana*	20	Isolated occurrence	
12	54	573831	8565361	18/06/2019	*Megathyrsus maximus*	1	Isolated occurrence	in seed mix
13	54	573833	8565365	18/06/2019	*Bothriochloa pertusa*	20	Isolated occurrence	
14	54	574440	8564438	18/06/2019	*Urochloa decumbens*	5	Isolated occurrence	
15	54	581358	8573420	18/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded
16	54	578245	8574804	18/06/2019	*Aeschynomene americana*	50	patch	silver grass seeded
17	54	578332	8574854	18/06/2019	*Chloris gayana*	5	Isolated occurrence	
18	54	578295	8574834	18/06/2019	*Hyparrhenia rufa*	1	Isolated occurrence	
19	54	578024	8575587	18/06/2019	*Urochloa decumbens*	200	Scattered plants over 50m area	edve of seeded aea
20	54	577693	8575448	18/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded area
21	54	577744	8575407	18/06/2019	*Aeschynomene americana*	20	Scattered plants over 100m area	
22	54	577727	8575609	18/06/2019	*Aeschynomene americana*	20	Scattered plants over 100m area	
23	54	578072	8575709	30/12/1899	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded
24	54	578237	8575721	30/12/1899	*Chloris gayana*	5	Isolated occurrence	
25	54	578283	8575712	18/06/2019	*Urochloa decumbens*	100	Scattered plants over 100m area	seeded
26	54	578295	8575410	18/06/2019	*Cenchrus pedicellatus subsp unispiculus*	50	Scattered plants over 100m area	bund
28	54	578283	8575410	18/06/2019	*Erechtites valerianifolius*	5	Isolated occurrence	
29	54	578270	8575325	18/06/2019	*Themeda quadrivalvis*	20	Isolated occurrence	
30	54	578287	8575328	18/06/2019	*Alysicarpus ovalifolius*	50	Scattered plants over 100m area	
31	54	568331	8569955	18/06/2019	*Chloris gayana*	10000	Heavy infestation approximately 100m x 100m plus	seeded
32	54	567670	8569731	18/06/2019	*Urochloa decumbens*	100	Scattered plants over 100m area	seeded
33	54	567495	8569393	18/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
34	54	567495	8569393	18/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
35	54	567440	8569275	18/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
36	54	567381	8569161	18/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
37	54	567381	8569156	18/06/2019	*Chloris gayana*	1	Isolated occurrence	
38	54	567312	8569012	18/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
39	54	567220	8568601	18/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
40	54	566394	8568671	18/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	

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41	54	565829	8568293	18/06/2019	*Themeda quadrivalvis*	10	Isolated occurrence	
42	54	565762	8568208	18/06/2019	*Crotalaria goreensis*	20	Isolated occurrence	
43	54	565642	8568175	18/06/2019	*Passiflora foetida*	5	Isolated occurrence	
44	54	566743	8569417	18/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
45	54	566833	8569539	18/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
46	54	566948	8569699	18/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
47	54	567010	8569774	18/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
48	54	586544	8561093	19/06/2019	*Mesosphaerum suaveolens*	100	Dense localised patch	mostly sprayed
49	54	586531	8561088	19/06/2019	*Sida acuta*	20	Isolated occurrence	
50	54	586549	8561128	19/06/2019	*Sida cordifolia*	5	Isolated occurrence	
51	54	586557	8561112	19/06/2019	*Sida spinosa*	50	Dense localised patch	
52	54	586536	8561109	19/06/2019	*Alysicarpus vaginifolius*	50	Dense localised patch	
53	54	586524	8561112	19/06/2019	*Crotalaria goreensis*	200	Dense localised patch	
54	54	586596	8561151	19/06/2019	*Stylosanthes viscosa*	100	Dense localised patch	
55	54	586553	8561132	19/06/2019	*Stylosanthes hamata*	200	Dense localised patch	
56	54	586566	8561144	19/06/2019	*Mitracarpus hirtus*	50	Dense localised patch	
57	54	586574	8561150	19/06/2019	*Themeda quadrivalvis*	20	Isolated occurrence	
58	54	586562	8561167	19/06/2019	*Stylosanthes viscosa*	10	Dense localised patch	
59	54	586572	8561154	19/06/2019	*Crotalaria goreensis*	50	Dense localised patch	
60	54	586575	8561138	19/06/2019	*Passiflora suberosa*	1	Isolated occurrence	
61	54	586504	8561153	19/06/2019	*Themeda quadrivalvis*	20	Dense localised patch	
62	54	586505	8561152	19/06/2019	*Cenchrus echinatus*	20	Dense localised patch	
63	54	586503	8561153	19/06/2019	*Stylosanthes hamata*	50	Dense localised patch	
64	54	586504	8561153	19/06/2019	*Mitracarpus hirtus*	20	Dense localised patch	
65	54	586504	8561153	19/06/2019	*Sida acuta*	20	Dense localised patch	
66	54	586212	8561007	19/06/2019	*Mesosphaerum suaveolens*	10	Isolated occurrence	
67	54	585065	8560491	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
68	54	583906	8559902	19/06/2019	*Mesosphaerum suaveolens*	50	Isolated occurrence	resprayed
69	54	579286	8558133	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
70	54	579019	8558047	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
71	54	576452	8557429	19/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	killed
72	54	572448	8556307	19/06/2019	*Sida spinosa*	50	Dense localised patch	
73	54	571787	8556133	19/06/2019	*Sida spinosa*	5	Isolated occurrence	
74	54	571362	8556015	19/06/2019	*Sida spinosa*	10	Isolated occurrence	
75	54	570877	8555882	19/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
76	54	570409	8555748	19/06/2019	*Stylosanthes scabra*	20	Isolated occurrence	collected
77	54	570288	8555718	19/06/2019	*Stylosanthes scabra*	5	Isolated occurrence	

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78	54	569066	8555380	19/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
79	54	568601	8555256	19/06/2019	*Sida spinosa*	10	Scattered plants over 100m area	
80	54	568507	8555227	19/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
81	54	568392	8555198	19/06/2019	*Sida spinosa*	5	Isolated occurrence	
82	54	568140	8555130	19/06/2019	*Stylosanthes scabra*	5	Isolated occurrence	
83	54	567721	8555012	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
84	54	567580	8554976	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
85	54	567298	8554571	19/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	large spray kill
86	54	567282	8554517	19/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
87	54	567266	8554418	19/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
88	54	567262	8554376	19/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
89	54	567248	8554248	19/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
90	54	567135	8554002	19/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	large spray area killed
91	54	567105	8553843	19/06/2019	*Stylosanthes scabra*	100	Scattered plants over 100m area	
92	54	567077	8553699	19/06/2019	*Stylosanthes scabra*	100	Scattered plants over 100m area	
93	54	567041	8553551	19/06/2019	*Stylosanthes scabra*	500	Scattered plants over 100m area	
94	54	567134	8553405	19/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
95	54	567157	8553369	19/06/2019	*Sida acuta*	30	Scattered plants over 100m area	
96	54	567007	8553351	19/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	mostly killed
97	54	566960	8553312	19/06/2019	*Stylosanthes scabra*	100	Scattered plants over 100m area	
98	54	566938	8553236	19/06/2019	*Stylosanthes scabra*	500	Scattered plants over 100m area	
100	54	566950	8553235	19/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	mainly regrowth
101	54	566950	8553234	19/06/2019	*Mitracarpus hirtus*	100	Scattered plants over 100m area	mainly regrowth
102	54	566935	8553216	19/06/2019	*Sida cordifolia*	5	Isolated occurrence	
103	54	566923	8553118	19/06/2019	*Mitracarpus hirtus*	100	Dense localised patch	rerowth
104	54	566927	8553114	19/06/2019	*Dactyloctenium aegyptium*	50	Scattered plants over 50m area	
105	54	566928	8553123	19/06/2019	*Sida acuta*	50	Scattered plants over 50m area	
106	54	566907	8553109	19/06/2019	*Stylosanthes scabra*	200	Scattered plants over 100m area	
107	54	566907	8553109	19/06/2019	*Stylosanthes viscosa*	20	Isolated occurrence	
108	54	566884	8553054	19/06/2019	*Stylosanthes scabra*	100	Scattered plants over 50m area	
109	54	566692	8552577	19/06/2019	*Cenchrus echinatus*	20	Isolated occurrence	
110	54	578361	8562667	19/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
111	54	585195	8564563	19/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
112	54	585215	8564903	19/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 50m area	
113	54	587425	8570513	19/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	
114	54	586711	8561207	20/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 50m area	lage spayed kill
115	54	586707	8561199	20/06/2019	*Crotalaria goreensis*	50	Scattered plants over 50m area	sprayed area

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
116	54	586744	8561247	20/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
117	54	587215	8561609	20/06/2019	*Sida spinosa*	5	Isolated occurrence	
118	54	587335	8561622	20/06/2019	*Sida spinosa*	10	Isolated occurrence	
119	54	587446	8561700	20/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 50m area	
120	54	587458	8561695	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
121	54	587578	8561634	20/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
122	54	587664	8561573	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
123	54	587662	8561574	20/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
124	54	587755	8561505	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
126	54	587754	8561505	20/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	sprayed area
127	54	587747	8561501	20/06/2019	*Passiflora suberosa*	20	Scattered plants over 100m area	
129	54	587862	8561429	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
130	54	587937	8561374	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
131	54	588049	8561294	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
133	54	588048	8561295	20/06/2019	*Themeda quadrivalvis*	5	Scattered plants over 100m area	
135	54	588279	8561130	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
136	54	588408	8561037	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
137	54	588580	8560921	20/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
138	54	588712	8560828	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
140	54	588873	8560747	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
141	54	590176	8561092	20/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
142	54	595616	8561335	20/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
143	54	595586	8561358	20/06/2019	*Stylosanthes scabra*	100	Scattered plants over 100m area	
144	54	595585	8561358	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
145	54	595605	8561356	20/06/2019	*Urochloa decumbens*	100	Scattered plants over 100m area	
146	54	596237	8560862	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
147	54	596949	8560304	20/06/2019	*Stylosanthes viscosa*	30	Isolated occurrence	
148	54	597204	8560105	20/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
149	54	597212	8560100	20/06/2019	*Sida spinosa*	1	Isolated occurrence	
150	54	598398	8559173	20/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
151	54	598677	8558985	20/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
153	54	598677	8558985	20/06/2019	*Sida spinosa*	1	Isolated occurrence	
154	54	598677	8558985	20/06/2019	*Crotalaria goreensis*	5	Isolated occurrence	
155	54	598698	8558977	20/06/2019	*Themeda quadrivalvis*	1000	Heavy infestation approximately 100m x 100m plus	
156	54	598517	8558844	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
157	54	598517	8558843	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	

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158	54	598232	8558630	20/06/2019	*Themeda quadrivalvis*	500	Scattered plants over 100m area	
160	54	598230	8558629	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
161	54	597822	8558319	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
162	54	597499	8557941	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
163	54	597297	8557540	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
165	54	597296	8557539	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
166	54	597129	8556973	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
167	54	596994	8556523	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
168	54	596835	8556005	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
169	54	596835	8556008	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
170	54	596720	8555621	20/06/2019	*Stylosanthes scabra*	20	Scattered plants over 50m area	
171	54	596719	8555619	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
172	54	596718	8555617	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
173	54	596547	8555034	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
174	54	596319	8554630	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
175	54	596319	8554631	20/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
176	54	595973	8554278	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
177	54	595771	8553804	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
178	54	595773	8553803	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
179	54	595773	8553803	20/06/2019	*Stylosanthes scabra*	10	Isolated occurrence	
180	54	595773	8553803	20/06/2019	*Sida spinosa*	10	Isolated occurrence	
181	54	595668	8553315	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
182	54	595666	8553318	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
183	54	595563	8552825	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
184	54	595562	8552825	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
185	54	595492	8552276	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
186	54	595490	8552277	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
187	54	595541	8551815	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
188	54	595657	8551346	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
189	54	595654	8551347	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
190	54	595788	8550813	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
191	54	595901	8550345	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
192	54	595901	8550346	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
193	54	596005	8549885	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
194	54	595958	8549354	20/06/2019	*Themeda quadrivalvis*	10	Isolated occurrence	
195	54	595957	8549355	20/06/2019	*Stylosanthes hamata*	1	Isolated occurrence	
196	54	595957	8549355	20/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
197	54	595766	8548916	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
198	54	595534	8548425	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
199	54	595343	8548023	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
200	54	595124	8547557	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
201	54	594919	8547113	20/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
202	54	594921	8547114	20/06/2019	*Stylosanthes hamata*	1	Isolated occurrence	
203	54	594921	8547114	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
204	54	594920	8547114	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
205	54	594738	8546656	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
206	54	594740	8546657	20/06/2019	*Stylosanthes viscosa*	20	Isolated occurrence	
207	54	594620	8546167	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
208	54	594624	8546166	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
209	54	594624	8546166	20/06/2019	*Stylosanthes scabra*	10	Isolated occurrence	
210	54	594555	8545632	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
211	54	594558	8545188	20/06/2019		1	Isolated occurrence	
212	54	594559	8545187	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
213	54	594560	8544627	20/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
214	54	594553	8544640	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
215	54	594506	8544174	20/06/2019	*Themeda quadrivalvis*	100	Isolated occurrence	
216	54	594505	8544172	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
217	54	594424	8543688	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
218	54	594424	8543687	20/06/2019	*Themeda quadrivalvis*	30	Isolated occurrence	
219	54	594333	8543203	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
220	54	594075	8542742	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
221	54	594076	8542739	20/06/2019	*Themeda quadrivalvis*	50	Isolated occurrence	
222	54	593769	8542331	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
223	54	593768	8542334	20/06/2019	*Themeda quadrivalvis*	100	Isolated occurrence	
224	54	593386	8542078	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
225	54	593385	8542079	20/06/2019	*Themeda quadrivalvis*	20	Isolated occurrence	
226	54	592956	8541775	20/06/2019	*Stylosanthes viscosa*	20	Isolated occurrence	
227	54	592956	8541775	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
228	54	592719	8541462	20/06/2019	*Stylosanthes viscosa*	500	Heavy infestation approximately 100m x 100m plus	
229	54	592720	8541462	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
230	54	592239	8540468	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
231	54	592204	8540000	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
232	54	592204	8540000	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
233	54	592171	8539519	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
234	54	592097	8538477	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
235	54	592067	8538007	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
236	54	592066	8538007	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
237	54	592031	8537444	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
238	54	592002	8537007	20/06/2019	*Themeda quadrivalvis*	5	Scattered plants over 100m area	
239	54	591997	8536992	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
240	54	591816	8536435	20/06/2019	*Themeda quadrivalvis*	200	Heavy infestation approximately 100m x 100m plus	
241	54	591564	8536103	20/06/2019	*Themeda quadrivalvis*	200	Heavy infestation approximately 100m x 100m plus	
242	54	591562	8536103	20/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
243	54	591298	8535752	20/06/2019	*Themeda quadrivalvis*	200	Heavy infestation approximately 100m x 100m plus	
244	54	590977	8535338	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
245	54	590671	8534872	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
246	54	590398	8534449	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
247	54	590279	8534297	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
248	54	590157	8533946	20/06/2019	*Aeschynomene americana*	500	Heavy infestation approximately 100m x 100m plus	
249	54	590155	8533948	20/06/2019	*Stylosanthes scabra*	100	Scattered plants over 100m area	
250	54	590155	8533943	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
251	54	590064	8533561	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
252	54	589982	8533123	20/06/2019	*Themeda quadrivalvis*	500	Heavy infestation approximately 100m x 100m plus	
253	54	589919	8532610	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
254	54	589918	8532612	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
255	54	589863	8532145	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
256	54	589863	8532146	20/06/2019	*Themeda quadrivalvis*	5	Isolated occurrence	
257	54	589800	8531675	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
258	54	589737	8531115	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
259	54	589684	8530662	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
260	54	589680	8530661	20/06/2019	*Themeda quadrivalvis*	10	Scattered plants over 100m area	
261	54	589610	8530149	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
262	54	589616	8530140	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
263	54	589375	8529729	20/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
264	54	589372	8529735	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
265	54	589063	8529315	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
266	54	589078	8529319	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
267	54	588778	8528909	20/06/2019	*Stylosanthes viscosa*	100	<Null>	
268	54	588777	8528909	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
269	54	588530	8528563	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
270	54	588205	8528109	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 50m area	
271	54	587878	8527664	20/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
272	54	587877	8527665	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
273	54	587592	8527269	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
274	54	587592	8527270	20/06/2019	*Sida cordifolia*	1	Isolated occurrence	
275	54	587339	8526824	20/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	
276	54	587297	8526864	20/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
277	54	587319	8526862	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
278	54	586950	8526390	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
279	54	586950	8526388	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
280	54	586705	8526053	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
281	54	586711	8526051	20/06/2019	*Themeda quadrivalvis*	100	Scattered plants over 100m area	
282	54	586414	8525667	20/06/2019	*Stylosanthes scabra*	5	Isolated occurrence	
283	54	586414	8525659	20/06/2019	*Themeda quadrivalvis*	30	Scattered plants over 100m area	
284	54	586068	8525250	20/06/2019	*Themeda quadrivalvis*	5	Scattered plants over 100m area	
285	54	585694	8524881	20/06/2019	*Themeda quadrivalvis*	10	Scattered plants over 100m area	
286	54	585273	8524695	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
287	54	584357	8524339	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
288	54	584317	8524326	20/06/2019	*Themeda quadrivalvis*	5	Isolated occurrence	
289	54	583839	8524134	20/06/2019	*Themeda quadrivalvis*	5	Isolated occurrence	
290	54	583413	8523973	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
291	54	582876	8523821	20/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
292	54	582877	8523820	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
293	54	582345	8523714	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
294	54	582349	8523717	20/06/2019	*Tecoma stans*	5	Scattered plants over 100m area	
295	54	582346	8523718	20/06/2019	*Themeda quadrivalvis*	10	Scattered plants over 100m area	
296	54	581858	8523766	20/06/2019	*Mesosphaerum suaveolens*	5	Scattered plants over 100m area	
297	54	581857	8523766	20/06/2019	*Stylosanthes viscosa*	1	Scattered plants over 100m area	
298	54	581856	8523768	20/06/2019	*Themeda quadrivalvis*	5	Scattered plants over 100m area	
299	54	581367	8523776	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
300	54	581366	8523775	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
301	54	580913	8523731	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
302	54	580389	8523631	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
303	54	579866	8523536	20/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
304	54	579427	8523458	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
305	54	579425	8523458	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
306	54	579425	8523458	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
307	54	581706	8523841	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
308	54	581911	8523874	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
309	54	582116	8523906	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
310	54	582298	8523935	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
311	54	582300	8523935	20/06/2019	*Mesosphaerum suaveolens*	20	Isolated occurrence	
312	54	582299	8523934	20/06/2019	*Alysicarpus vaginifolius*	50	Scattered plants over 100m area	
313	54	582416	8523947	20/06/2019	*Calopogonium mucunoides*	500	Scattered plants over 100m area	
314	54	582417	8523948	20/06/2019	*Themeda quadrivalvis*	20	Scattered plants over 100m area	
315	54	582431	8523947	20/06/2019	*Crotalaria goreensis*	20	Scattered plants over 100m area	
316	54	582574	8523919	20/06/2019	*Passiflora foetida*	10	Scattered plants over 100m area	
317	54	582555	8523937	20/06/2019	*Megathyrsus maximus*	100	Heavy infestation approximately 100m x 100m plus	
318	54	582555	8523937	20/06/2019	*Calopogonium mucunoides*	50	Scattered plants over 100m area	
319	54	582595	8523928	20/06/2019	*Alternanthera brasiliensis*	20	Isolated occurrence	
320	54	582614	8523930	20/06/2019	*Themeda quadrivalvis*	200	Scattered plants over 100m area	
321	54	582619	8523930	20/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	
322	54	582616	8523885	20/06/2019	*Desmodium tortuosum*	100	Scattered plants over 100m area	
323	54	582668	8523935	20/06/2019	*Stylosanthes hamata*	20	Isolated occurrence	
324	54	582669	8523934	20/06/2019	*Macroptilium atropurpureum*	5	Isolated occurrence	
325	54	582669	8523931	20/06/2019	*Chloris gayana*	10	Isolated occurrence	
326	54	582740	8523931	20/06/2019	*Tridax procumbens*	10	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
327	54	582745	8523931	20/06/2019	*Megathyrsus maximus*	30	Isolated occurrence	
328	54	582758	8523930	20/06/2019	*Ipomoea quamoclit*	5	Isolated occurrence	
329	54	582761	8523929	20/06/2019	*Euphorbia heterophylla*	10	Isolated occurrence	
330	54	582760	8523930	20/06/2019	*Euphorbia hirta*	5	Isolated occurrence	
331	54	582798	8523926	20/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	
332	54	582815	8523925	20/06/2019	*Sida acuta*	10	Isolated occurrence	
333	54	582856	8523927	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
334	54	582858	8523928	20/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
335	54	582860	8523927	20/06/2019	*Crotalaria goreensis*	50	Isolated occurrence	
336	54	583013	8523927	20/06/2019	*Mesosphaerum suaveolens*	30	Scattered plants over 100m area	
337	54	583021	8523924	20/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
338	54	583069	8524017	20/06/2019	*Crotalaria goreensis*	100	Scattered plants over 100m area	
339	54	583104	8524026	20/06/2019	*Passiflora foetida*	10	Scattered plants over 100m area	
340	54	586049	8526098	20/06/2019	*Mesosphaerum suaveolens*	30	Isolated occurrence	
341	54	584733	8524654	20/06/2019	*Mesosphaerum suaveolens*	20	Isolated occurrence	
342	54	584593	8524381	20/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
343	54	584599	8524379	20/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
344	54	584594	8524373	20/06/2019	*Themeda quadrivalvis*	50	Scattered plants over 100m area	
345	54	584699	8524380	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
346	54	584701	8524381	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
347	54	584849	8524375	20/06/2019	*Stylosanthes scabra*	50	Scattered plants over 100m area	
348	54	584859	8524376	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
349	54	585041	8524378	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
350	54	585362	8524414	20/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	
351	54	585557	8524624	20/06/2019	*Mesosphaerum suaveolens*	10	Scattered plants over 100m area	
352	54	585704	8524784	20/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
353	54	581315	8558627	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
354	54	581320	8550693	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
355	54	581314	8550255	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
356	54	581321	8548424	21/06/2019	*Mesosphaerum suaveolens*	20	Isolated occurrence	
357	54	581311	8548326	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
358	54	581315	8548090	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
359	54	581148	8547604	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
360	54	580965	8547388	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
361	54	580729	8547136	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
362	54	579622	8545919	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
363	54	579274	8545521	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	

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364	54	579170	8545408	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
365	54	579101	8545342	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 50m area	
366	54	579004	8545224	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
367	54	578685	8544870	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
368	54	578422	8544594	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
369	54	578230	8544376	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
370	54	578106	8544232	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
371	54	577865	8543979	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 50m area	
372	54	577731	8543821	21/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
373	54	577677	8543751	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
374	54	577519	8543583	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
375	54	577034	8543031	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
376	54	576942	8542940	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
377	54	576752	8542735	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
378	54	576686	8542654	21/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
379	54	576565	8542524	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
380	54	576127	8542028	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
381	54	575938	8541828	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
382	54	575644	8541498	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
383	54	575526	8541373	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
384	54	575325	8541145	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
385	54	575209	8541007	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
386	54	575060	8540835	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
387	54	574959	8540724	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
388	54	574813	8540573	21/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
389	54	574296	8540009	21/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
390	54	574240	8539941	21/06/2019	*Stylosanthes viscosa*	30	Scattered plants over 100m area	
391	54	574102	8539795	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 50m area	
392	54	573947	8539623	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
393	54	573808	8539466	21/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
394	54	573679	8539333	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
395	54	573622	8539253	21/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
396	54	573433	8539051	21/06/2019	*Stylosanthes viscosa*	200	Scattered plants over 100m area	
397	54	573182	8539238	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
398	54	573028	8539265	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
399	54	572945	8539253	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 100m area	
400	54	572898	8539249	21/06/2019	*Stylosanthes scabra*	10	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
401	54	572873	8539226	21/06/2019	*Mesosphaerum suaveolens*	10	Isolated occurrence	
402	54	572825	8539186	21/06/2019	*Mesosphaerum suaveolens*	10	Isolated occurrence	
403	54	572823	8539182	21/06/2019	*Stylosanthes viscosa*	20	Isolated occurrence	
404	54	572761	8539150	21/06/2019	*Stylosanthes viscosa*	100	Scattered plants over 100m area	
405	54	572610	8539173	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
406	54	572545	8539252	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 50m area	
407	54	572528	8539268	21/06/2019	*Mesosphaerum suaveolens*	10	Isolated occurrence	
408	54	572268	8539468	21/06/2019	*Macroptilium atropurpureum*	50	Isolated occurrence	
409	54	572190	8539592	21/06/2019	*Stylosanthes viscosa*	500	Dense localised patch	
410	54	572140	8539681	21/06/2019	*Stylosanthes viscosa*	1000	Scattered plants over 100m area	
411	54	574262	8540721	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
412	54	573879	8540716	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
413	54	573731	8540708	21/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
414	54	573415	8540690	21/06/2019	*Stylosanthes viscosa*	20	Scattered plants over 50m area	
415	54	572905	8540683	21/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
416	54	572115	8540681	21/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 50m area	
417	54	571966	8540689	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
418	54	571643	8540677	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
419	54	571526	8540676	21/06/2019	*Stylosanthes viscosa*	10	Scattered plants over 100m area	
420	54	571462	8540686	21/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 50m area	
422	54	571283	8540979	21/06/2019	*Mesosphaerum suaveolens*	20	Isolated occurrence	
423	54	571254	8541011	21/06/2019	*Stylosanthes viscosa*	50	Scattered plants over 100m area	
424	54	571258	8541007	21/06/2019	*Crotalaria goreensis*	10	Isolated occurrence	
425	54	571094	8541304	21/06/2019	*Mesosphaerum suaveolens*	10	Isolated occurrence	
426	54	571071	8541349	21/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	
427	54	571600	8541496	21/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
428	54	571025	8541397	21/06/2019	*Stylosanthes viscosa*	10	Isolated occurrence	
429	54	570925	8541554	21/06/2019	*Mesosphaerum suaveolens*	200	Dense localised patch	
430	54	570873	8541614	21/06/2019	*Mesosphaerum suaveolens*	50	Dense localised patch	
431	54	570792	8541675	21/06/2019	*Mesosphaerum suaveolens*	50	Scattered plants over 100m area	
432	54	570757	8541716	21/06/2019	*Cenchrus pedicellatus subsp unispiculus*	20	Isolated occurrence	
433	54	570720	8541742	21/06/2019	*Mesosphaerum suaveolens*	30	Isolated occurrence	
434	54	570704	8541753	21/06/2019	*Cenchrus pedicellatus subsp unispiculus*	30	Isolated occurrence	
435	54	570681	8541780	21/06/2019	*Mesosphaerum suaveolens*	500	Scattered plants over 100m area	
436	54	570581	8541775	21/06/2019	*Sporobolus jacquemontii*	1	Isolated occurrence	
437	54	570583	8541776	21/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
438	54	567913	8570375	22/06/2019	*Urochloa mutica*	5000	Heavy infestation approximately 100m x 100m plus	seeded
439	54	567913	8570375	22/06/2019	*Chloris gayana*	5	Isolated occurrence	in seeded area
440	54	567540	8570495	22/06/2019	*Urochloa mutica*	5000	Heavy infestation approximately 100m x 100m plus	seeded
441	54	567543	8570490	22/06/2019	*Chloris gayana*	5	Isolated occurrence	in seeded
442	54	567542	8570490	22/06/2019	*Stylosanthes viscosa*	5	Isolated occurrence	
443	54	567783	8570405	22/06/2019	*Chloris gayana*	5	Isolated occurrence	in seeded
444	54	567909	8570207	22/06/2019	*Chloris gayana*	5	Isolated occurrence	in seeded
445	54	567624	8569649	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
446	54	567443	8569264	22/06/2019	*Stylosanthes viscosa*	5	Scattered plants over 100m area	
447	54	567177	8568606	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
448	54	567203	8567952	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seded
449	54	567067	8567829	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded
450	54	567085	8567205	22/06/2019	*Chloris gayana*	5	Isolated occurrence	in seeded
451	54	567084	8567063	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded
452	54	567120	8567060	22/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
453	54	567195	8566996	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	seeded along edge
454	54	567323	8566870	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
455	54	567695	8566474	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
456	54	567696	8566474	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
457	54	569221	8565290	22/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
458	54	569850	8565829	22/06/2019	*Urochloa decumbens*	10000	Heavy infestation approximately 100m x 100m plus	
459	54	569800	8566251	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
460	54	569799	8566251	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
461	54	569850	8566617	22/06/2019	*Megathyrsus maximus*	5	Isolated occurrence	
462	54	569819	8566631	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
463	54	569870	8567146	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
464	54	569848	8567122	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
465	54	569855	8567400	22/06/2019	*Urochloa decumbens*	10000	Heavy infestation approximately 100m x 100m plus	spillway
466	54	569847	8567552	22/06/2019	*Megathyrsus maximus*	1	Isolated occurrence	
467	54	569865	8567630	22/06/2019	*Aeschynomene americana*	1	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
468	54	569851	8568012	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
469	54	569861	8568430	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
470	54	569852	8568620	22/06/2019	*Megathyrsus maximus*	1	Isolated occurrence	
471	54	569838	8568619	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
472	54	570195	8568961	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
473	54	570355	8568903	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
474	54	570715	8568683	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
475	54	571340	8568286	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
476	54	571699	8568078	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
477	54	573043	8566697	22/06/2019	*Megathyrsus maximus*	1	Isolated occurrence	
478	54	573031	8566701	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
479	54	573184	8566434	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
480	54	573574	8565753	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
481	54	568953	8570733	22/06/2019	*Chloris gayana*	1	Isolated occurrence	
482	54	567557	8570319	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
483	54	569013	8570793	22/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
484	54	568498	8570822	22/06/2019	*Urochloa decumbens*	1000	Heavy infestation approximately 100m x 100m plus	
485	54	568466	8571053	22/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	regrowth
486	54	570028	8571060	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
487	54	570394	8571257	22/06/2019	*Aeschynomene americana*	20	Dense localised patch	
488	54	570418	8571268	22/06/2019	*Sida acuta*	1	Isolated occurrence	
489	54	570513	8571306	22/06/2019	*Chloris gayana*	10	Scattered plants over 100m area	
490	54	571076	8571608	22/06/2019	*Chloris gayana*	10	Scattered plants over 100m area	
491	54	571277	8571648	22/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
492	54	571350	8571778	22/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
493	54	571790	8572016	22/06/2019	*Chloris gayana*	10	Isolated occurrence	
494	54	571783	8572094	22/06/2019	*Hyparrhenia rufa*	1	Isolated occurrence	
495	54	571827	8572128	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
496	54	571835	8572127	22/06/2019	*Cenchrus pedicellatus subsp unispiculus*	1	Isolated occurrence	
497	54	571964	8572256	22/06/2019	*Cenchrus pedicellatus subsp unispiculus*	10	Isolated occurrence	
498	54	571976	8572273	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
499	54	572591	8572743	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
500	54	572874	8572995	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
501	54	574847	8573445	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
502	54	575478	8573448	22/06/2019	*Chloris gayana*	5	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
503	54	575977	8573430	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
504	54	576357	8573450	22/06/2019	*Chloris gayana*	5	Isolated occurrence	
505	54	575148	8573323	23/06/2019	*Hyparrhenia rufa*	1	Isolated occurrence	
506	54	576889	8573486	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
507	54	578250	8573966	23/06/2019	*Cassia fistula*	1	Isolated occurrence	
508	54	579999	8574270	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
509	54	580924	8574350	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
510	54	581353	8574365	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
511	54	583262	8574969	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
512	54	590807	8577432	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
513	54	590539	8577255	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
514	54	590363	8577083	23/06/2019	*Mesosphaerum suaveolens*	5	Isolated occurrence	
515	54	590338	8577098	23/06/2019	*Themeda quadrivalvis*	10	Isolated occurrence	
516	54	590354	8577148	23/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
517	54	590386	8577169	23/06/2019	*Aeschynomene americana*	10	Isolated occurrence	
518	54	590877	8577496	23/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
519	54	591134	8577638	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
520	54	591150	8577645	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
521	54	591293	8577468	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	sprayed
522	54	591221	8577448	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	sprayed
523	54	591992	8578168	23/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
524	54	595157	8580879	23/06/2019	*Crotalaria goreensis*	1	Isolated occurrence	
525	54	595211	8581227	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
526	54	595499	8583385	23/06/2019	*Chloris gayana*	1	Isolated occurrence	
527	54	595664	8583648	23/06/2019	*Cenchrus pedicellatus subsp unispiculus*	5	Isolated occurrence	
528	54	595716	8584078	23/06/2019	*Melinus repens*	1	Isolated occurrence	
529	54	595786	8584437	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	
530	54	595871	8584579	23/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
531	54	595823	8586007	23/06/2019	*Hyparrhenia rufa*	1	Isolated occurrence	
532	54	596314	8589429	23/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
533	54	596386	8589634	23/06/2019	*Stylosanthes viscosa*	1	Isolated occurrence	
534	54	596395	8589711	23/06/2019	*Crotalaria goreensis*	5	Isolated occurrence	
535	54	596595	8590499	23/06/2019	*Mesosphaerum suaveolens*	200	Dense localised patch	
536	54	596628	8590532	23/06/2019	*Mesosphaerum suaveolens*	20	Dense localised patch	
537	54	596679	8590547	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
538	54	596712	8590550	23/06/2019	*Sida acuta*	1	Isolated occurrence	
539	54	596713	8590551	23/06/2019	*Alysicarpus vaginifolius*	5	Isolated occurrence	

Wpt	Zone	X	Y	Date	Weed Species	Count	Count Description	Comments
540	54	596713	8590571	23/06/2019	*Mesosphaerum suaveolens*	5	Dense localised patch	
541	54	596703	8590617	23/06/2019	*Urochloa mutica*	1	Isolated occurrence	
542	54	596735	8590628	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
543	54	597017	8590723	23/06/2019	*Passiflora foetida*	1	Isolated occurrence	
544	54	596776	8590635	23/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
545	54	596780	8590640	23/06/2019	*Stylosanthes scabra*	1	Isolated occurrence	
546	54	596812	8590658	23/06/2019	*Aeschynomene americana*	5	Isolated occurrence	
547	54	596821	8590661	23/06/2019	*Crotalaria goreensis*	1	Isolated occurrence	
548	54	596855	8590664	23/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
549	54	596939	8590721	23/06/2019	*Mesosphaerum suaveolens*	20	Scattered plants over 100m area	
550	54	596939	8590765	23/06/2019	*Aeschynomene americana*	50	Dense localised patch	
551	54	596913	8590774	23/06/2019	*Aeschynomene americana*	100	Scattered plants over 100m area	
552	54	596914	8590784	23/06/2019	*Mesosphaerum suaveolens*	1	Isolated occurrence	
553	54	596838	8590745	23/06/2019	*Mesosphaerum suaveolens*	200	Scattered plants over 100m area	
554	54	596766	8590674	23/06/2019	*Aeschynomene americana*	50	Scattered plants over 100m area	
555	54	596740	8590670	23/06/2019	*Mesosphaerum suaveolens*	100	Scattered plants over 100m area	
556	54	596525	8590617	23/06/2019	*Mesosphaerum suaveolens*	50	Dense localised patch	
557	54	596592	8590511	23/06/2019	*Stylosanthes scabra*	5	Dense localised patch	
558	54	594378	8578892	23/06/2019	*Aeschynomene americana*	1	Isolated occurrence	

Appendix E Distribution Maps for Individual Weed Species

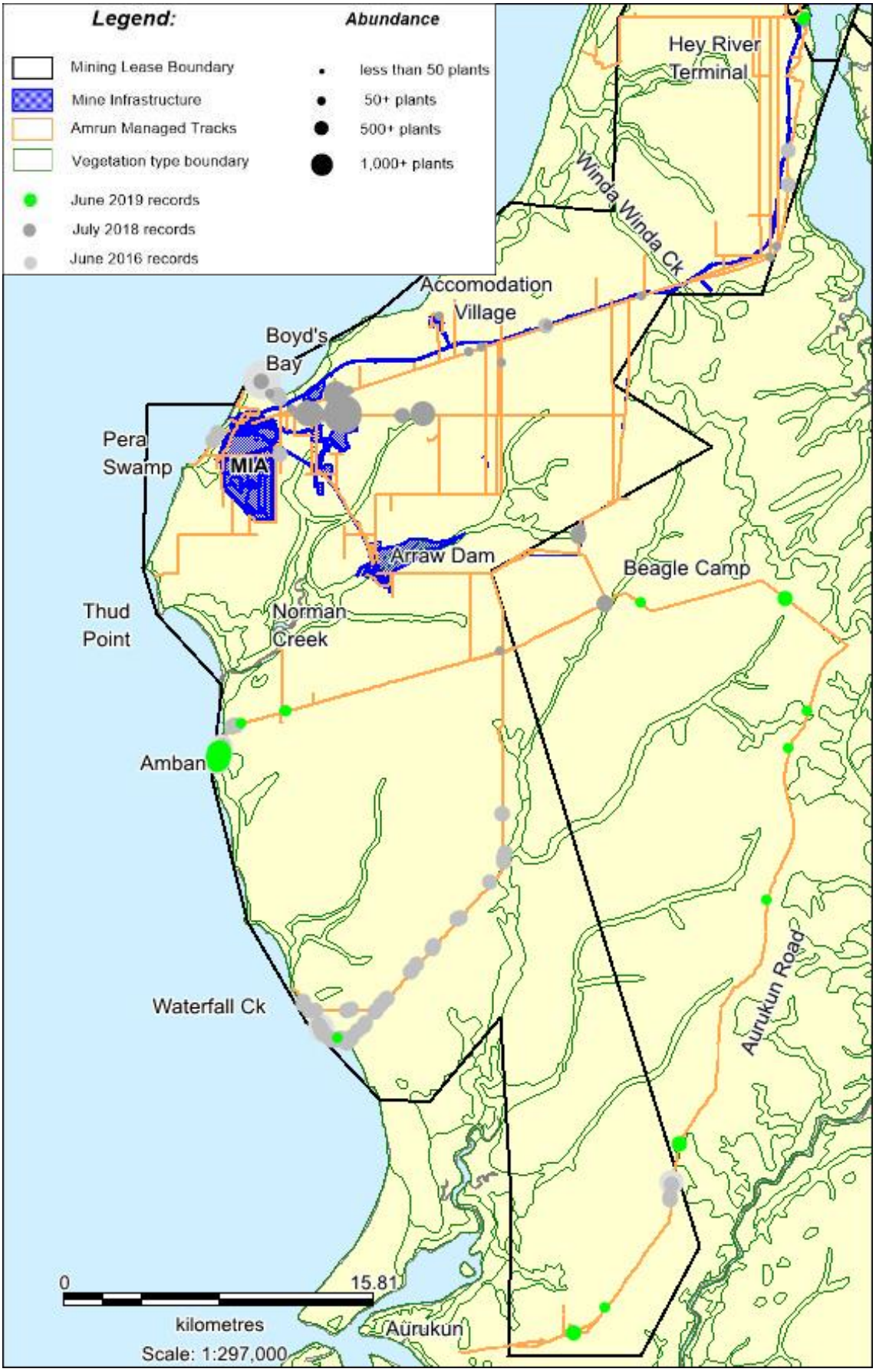

Figure E1 Common stylo (*Stylosanthes scabra*) occurrence (June 2019)

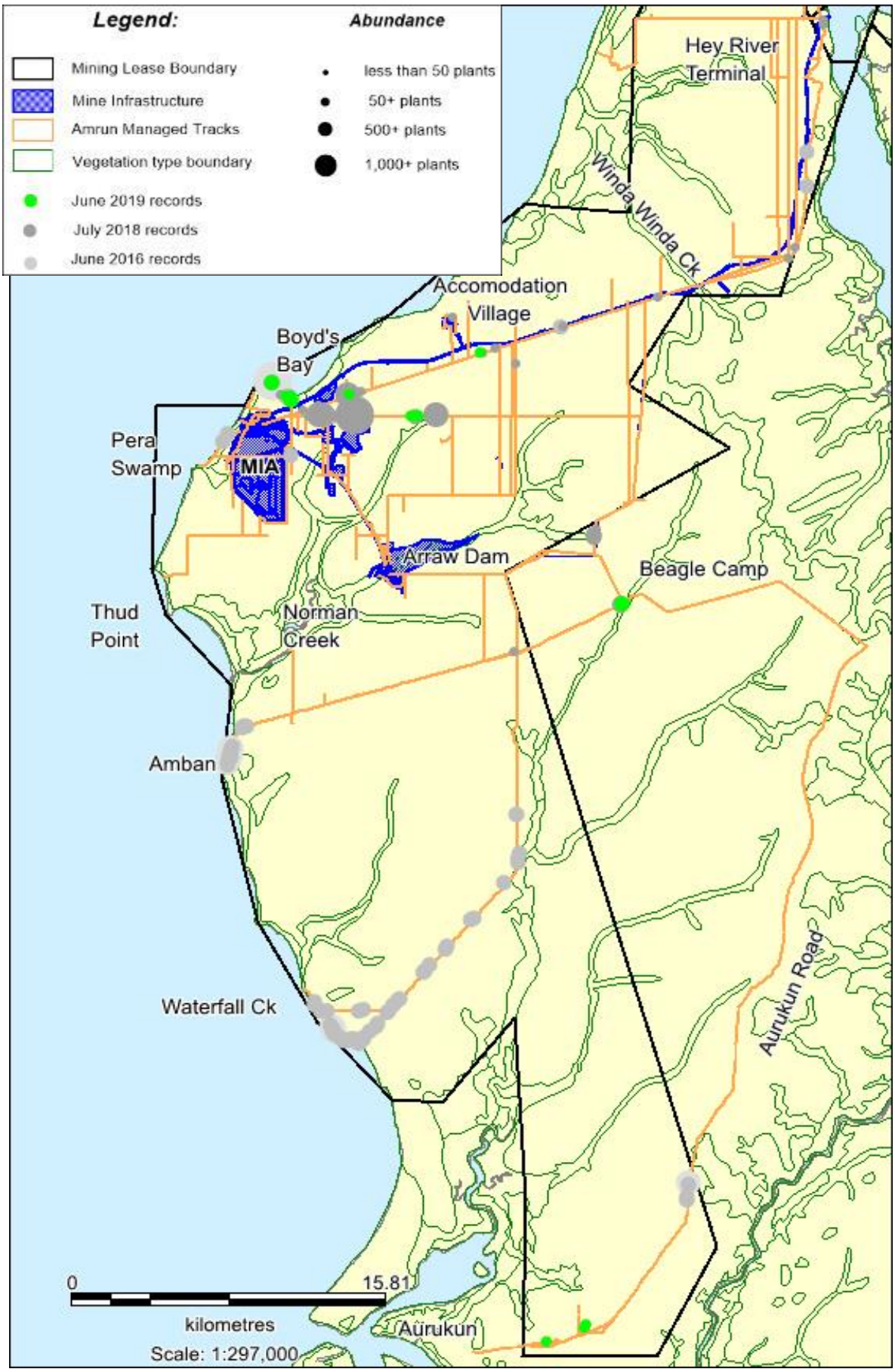

Figure E2 Caribbean stylo (*Stylosanthes hamata*) occurrence (June 2019)

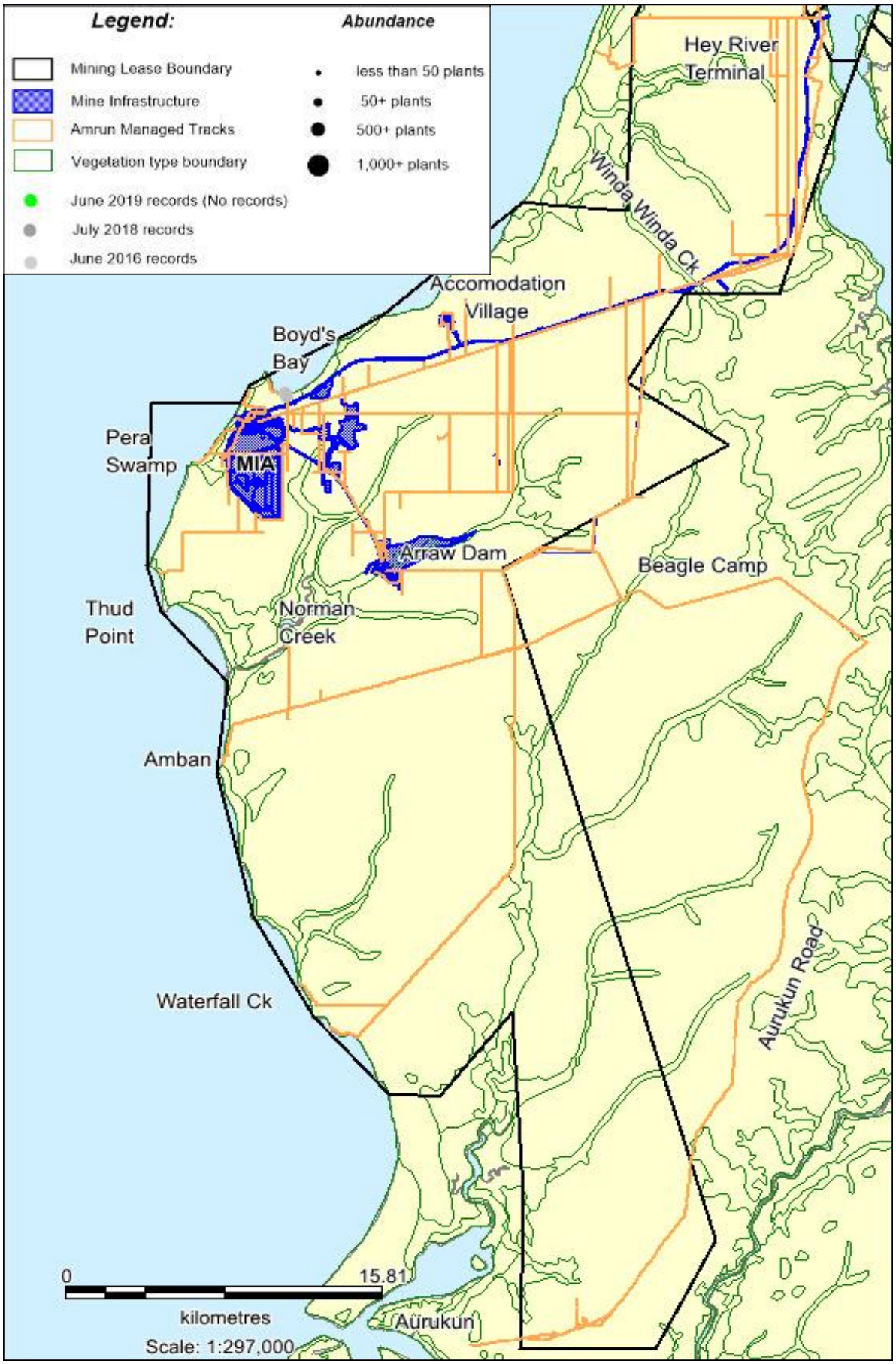

Figure E3 Brazilian stylo (*Stylosanthes guianensis*) occurrence (June 2019)

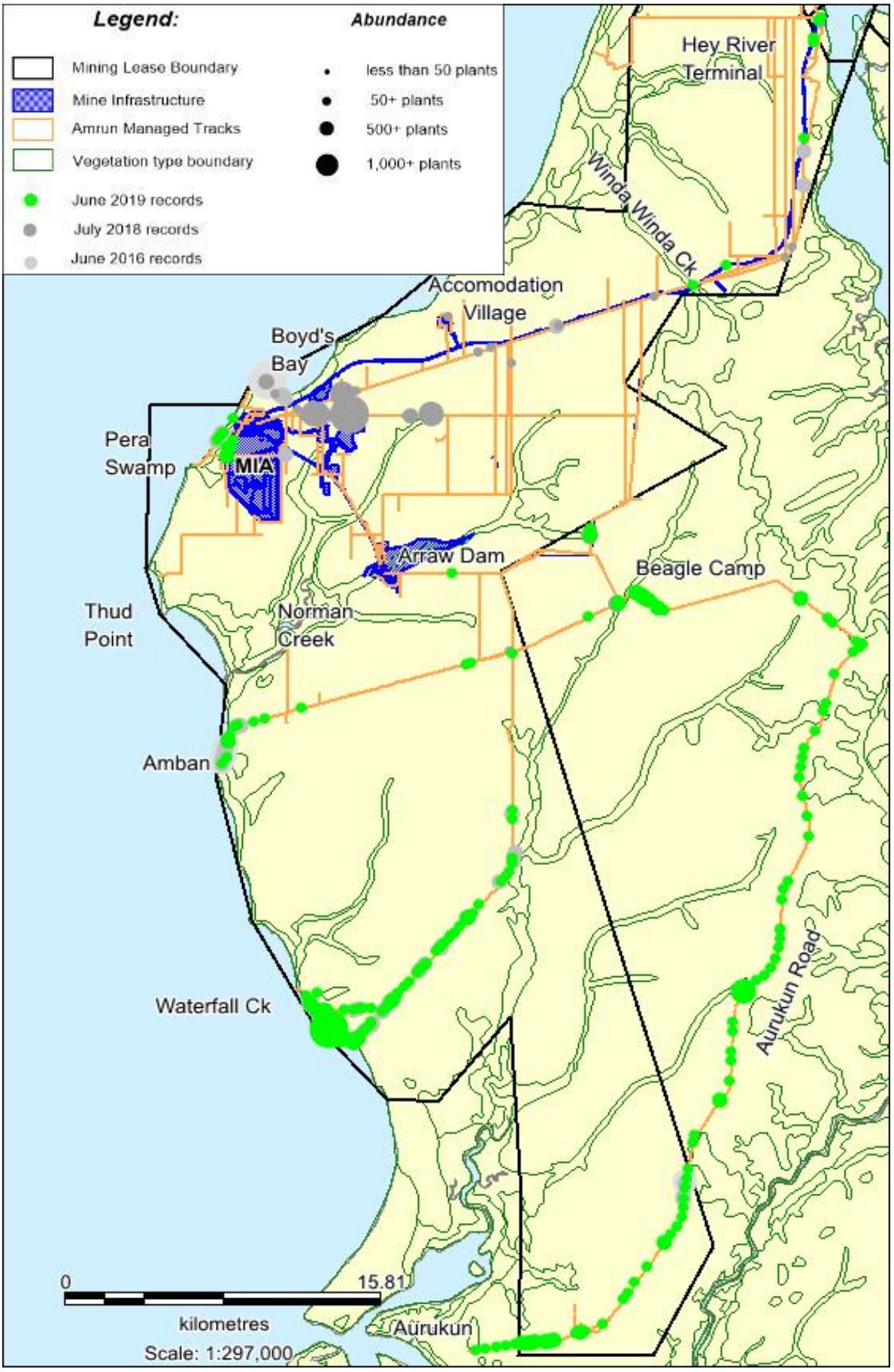

Figure E4 Sticky stylo (*Stylosanthes viscosa*) occurrence (June 2019)

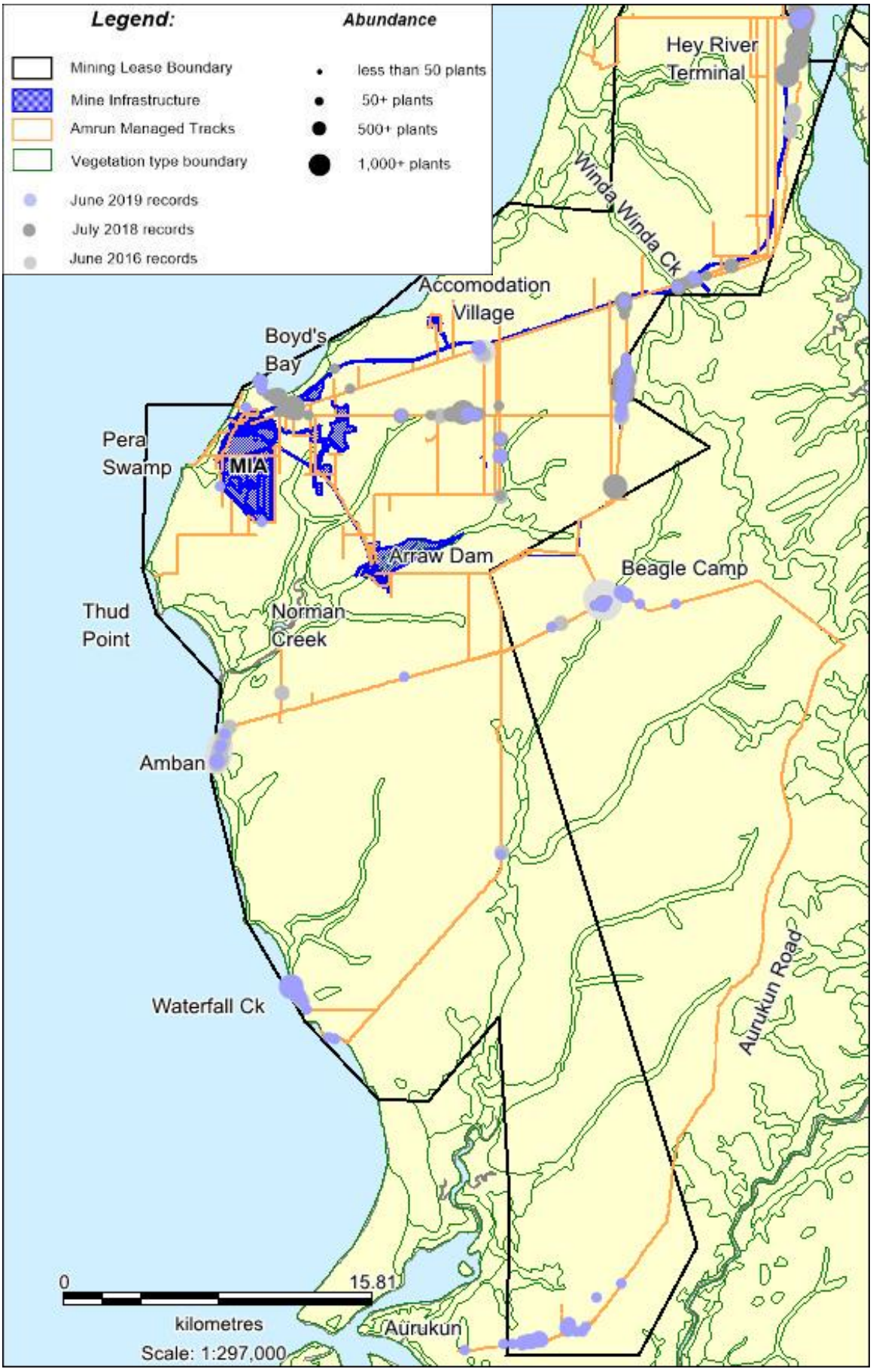

Figure E5 Horehound (*Mesosphareum suaveolens*) occurrence (June 2019)

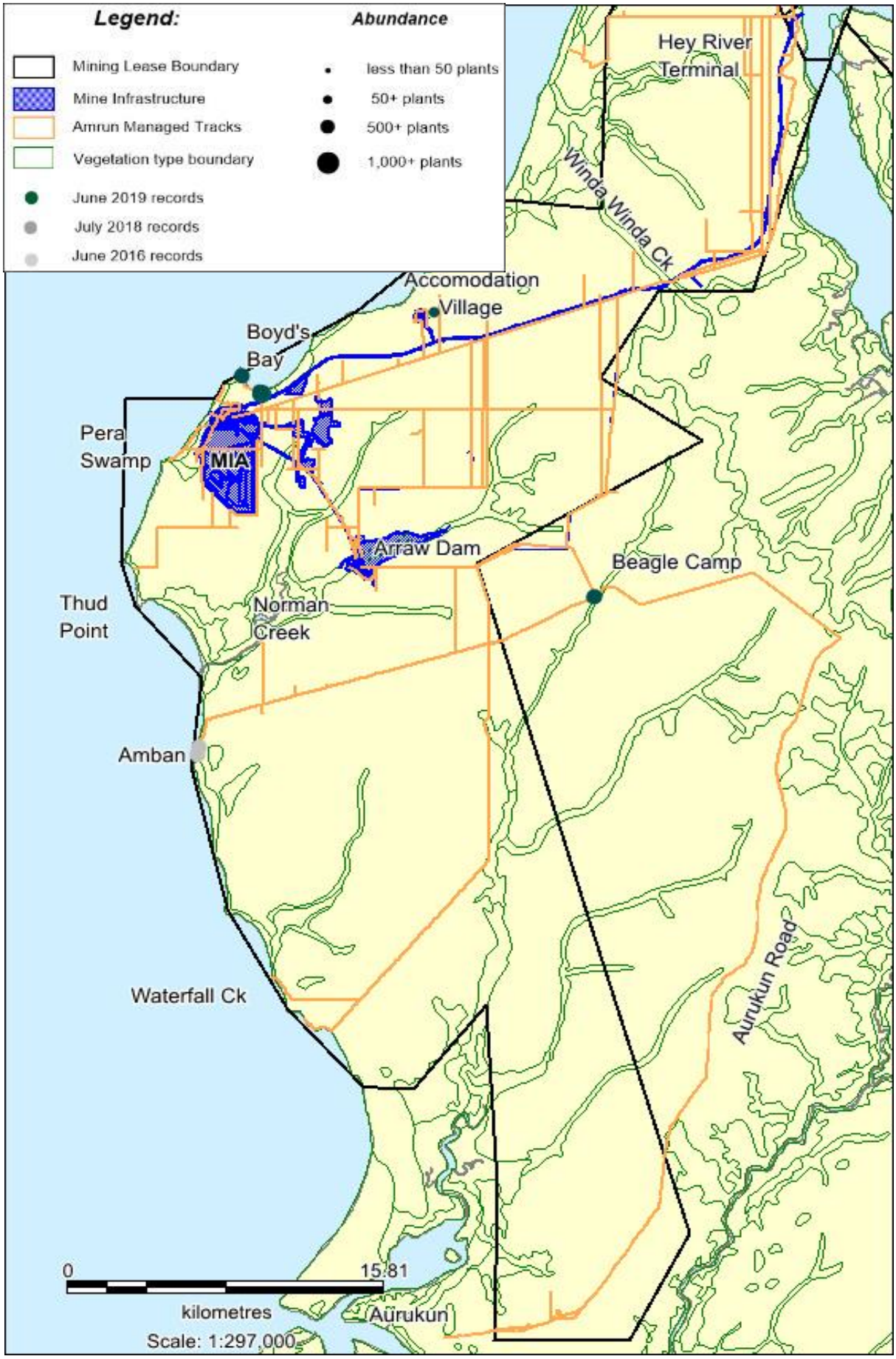

Figure E6 Tropical girdlepod (*Mitracarpus hirtus*) occurrence (June 2019)

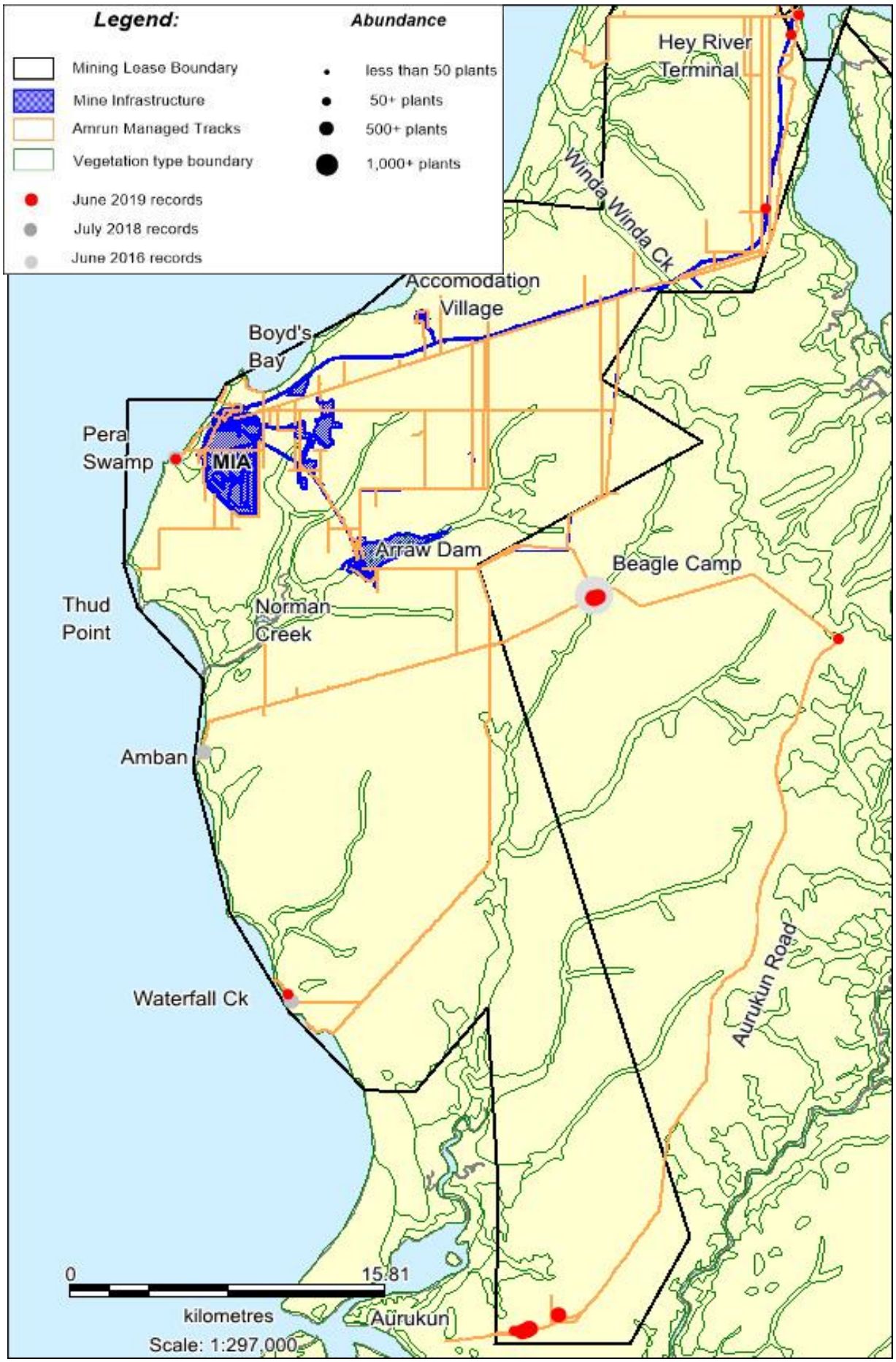

Figure E7 Rattlepod (*Crotalaria goreensis*) occurrence (June 2019)

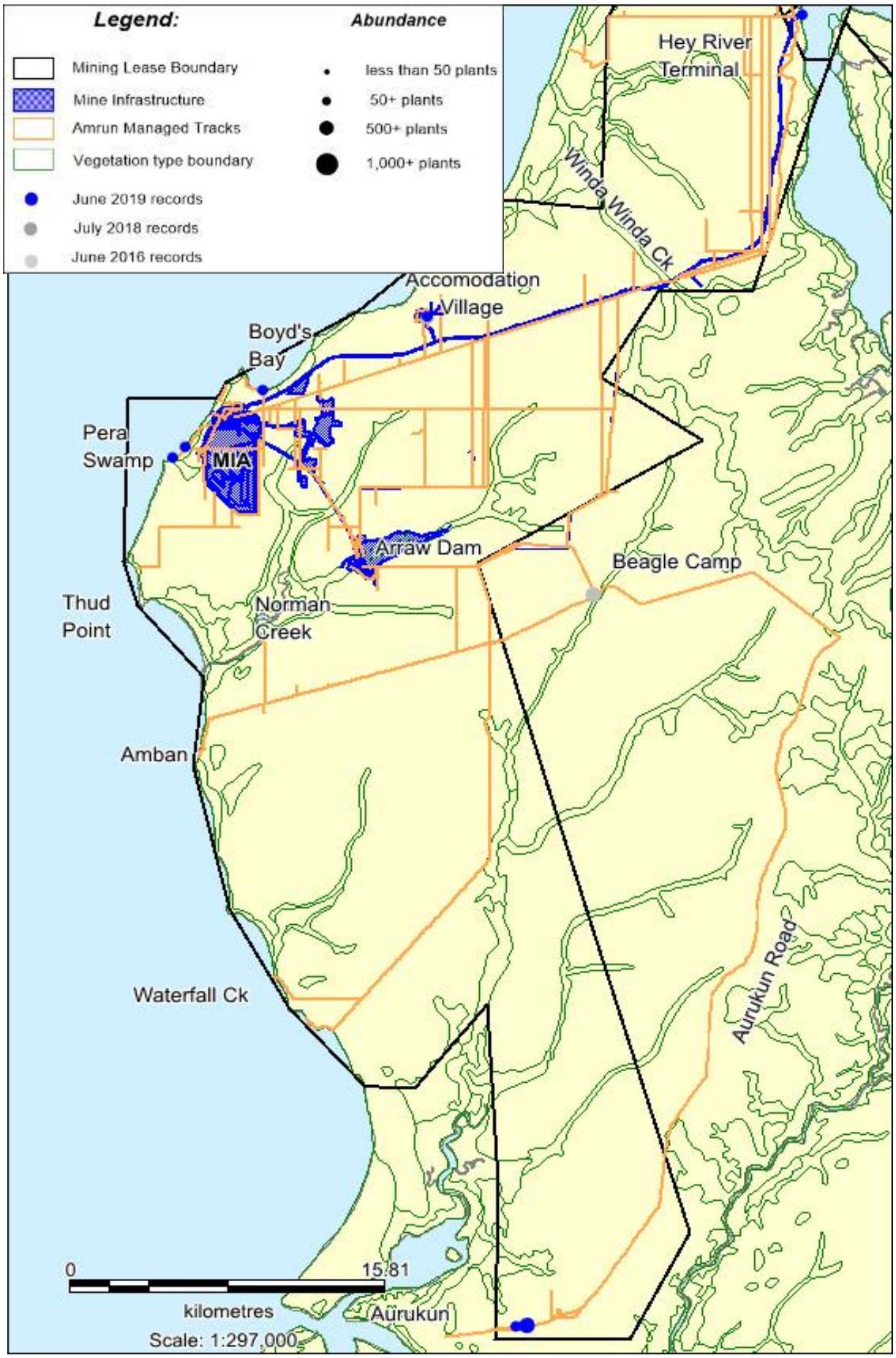

Figure E8 Stinking passionflower (*Passiflora foetida*) occurrence (June 2019)

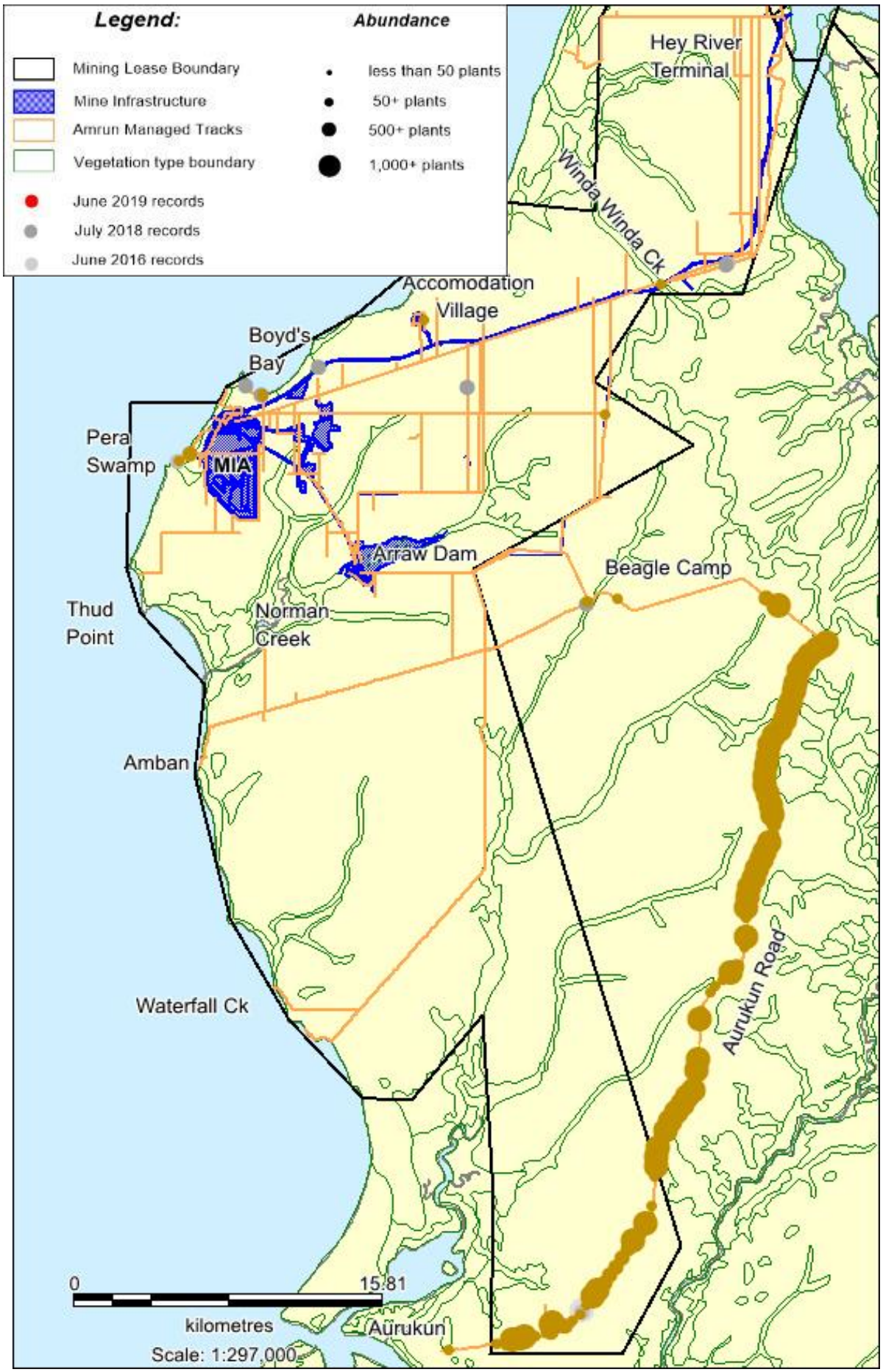

Figure E9 Grader grass (*Themeda quadrivalvis*) occurrence (June 2019)

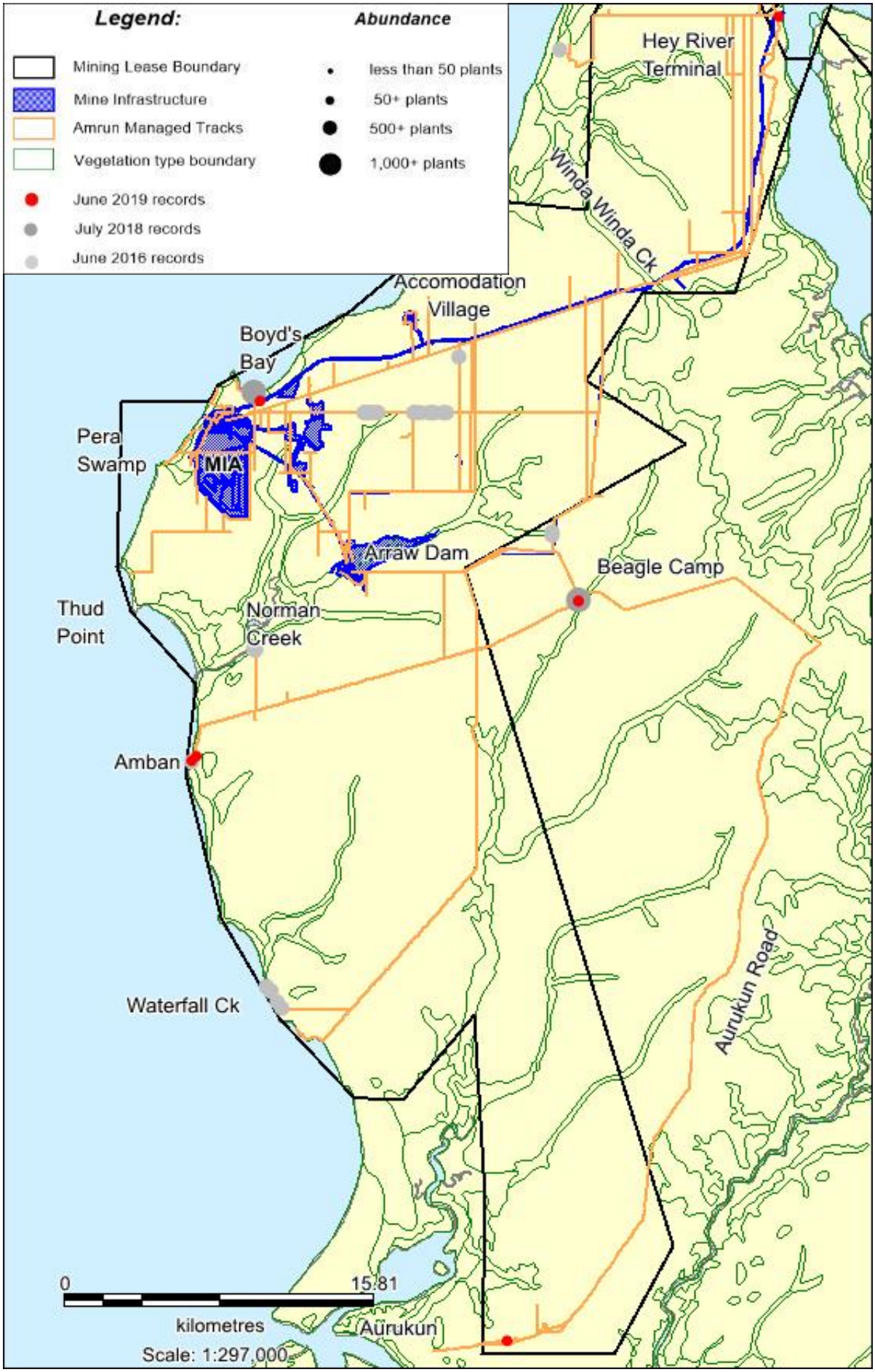

Figure E10 Smooth sida (*Sida acuta*) occurrence (June 2019)

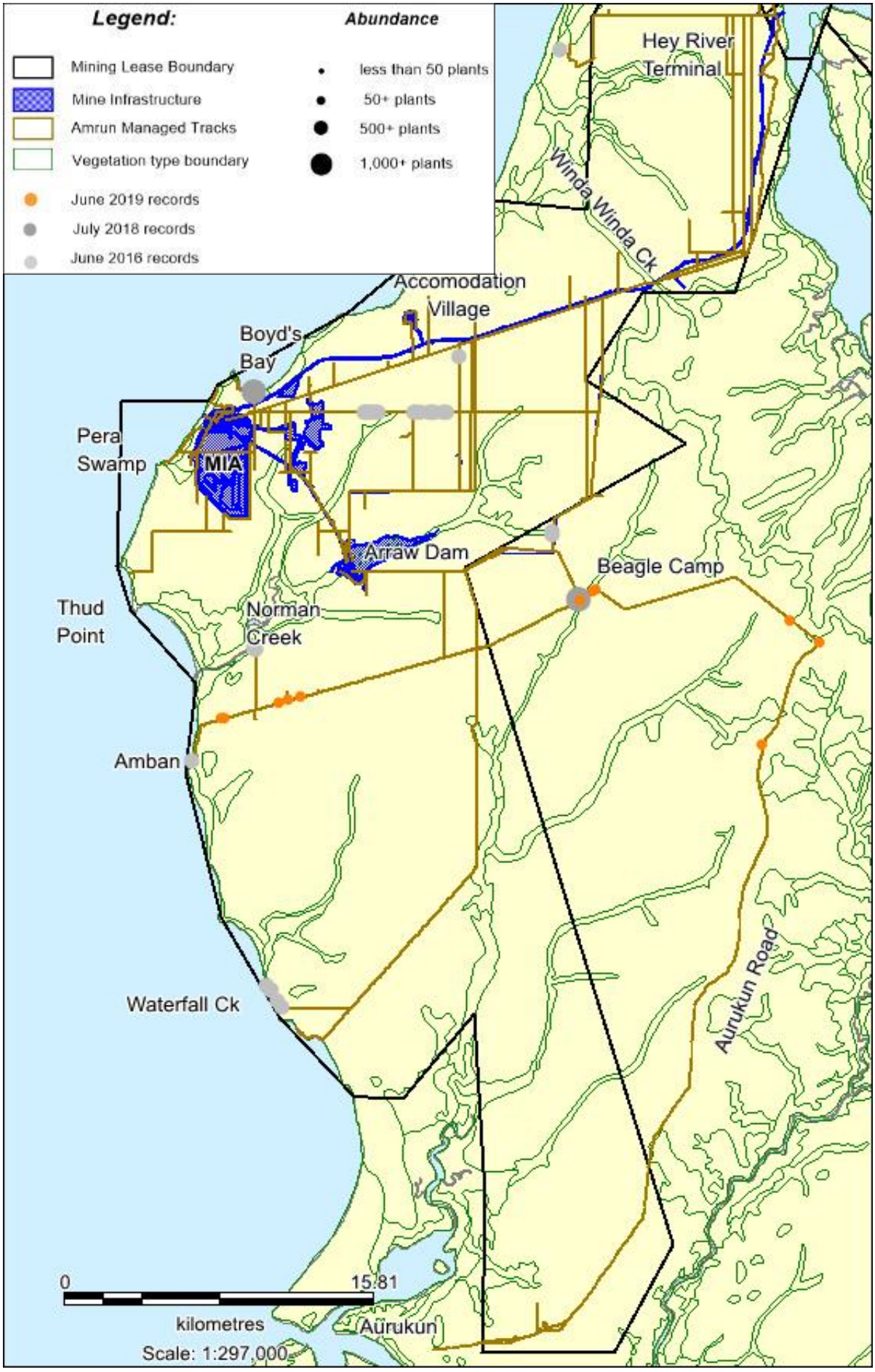

Figure E11 Prickly marrow (*Sida spinosa*) occurrence (June 2019)

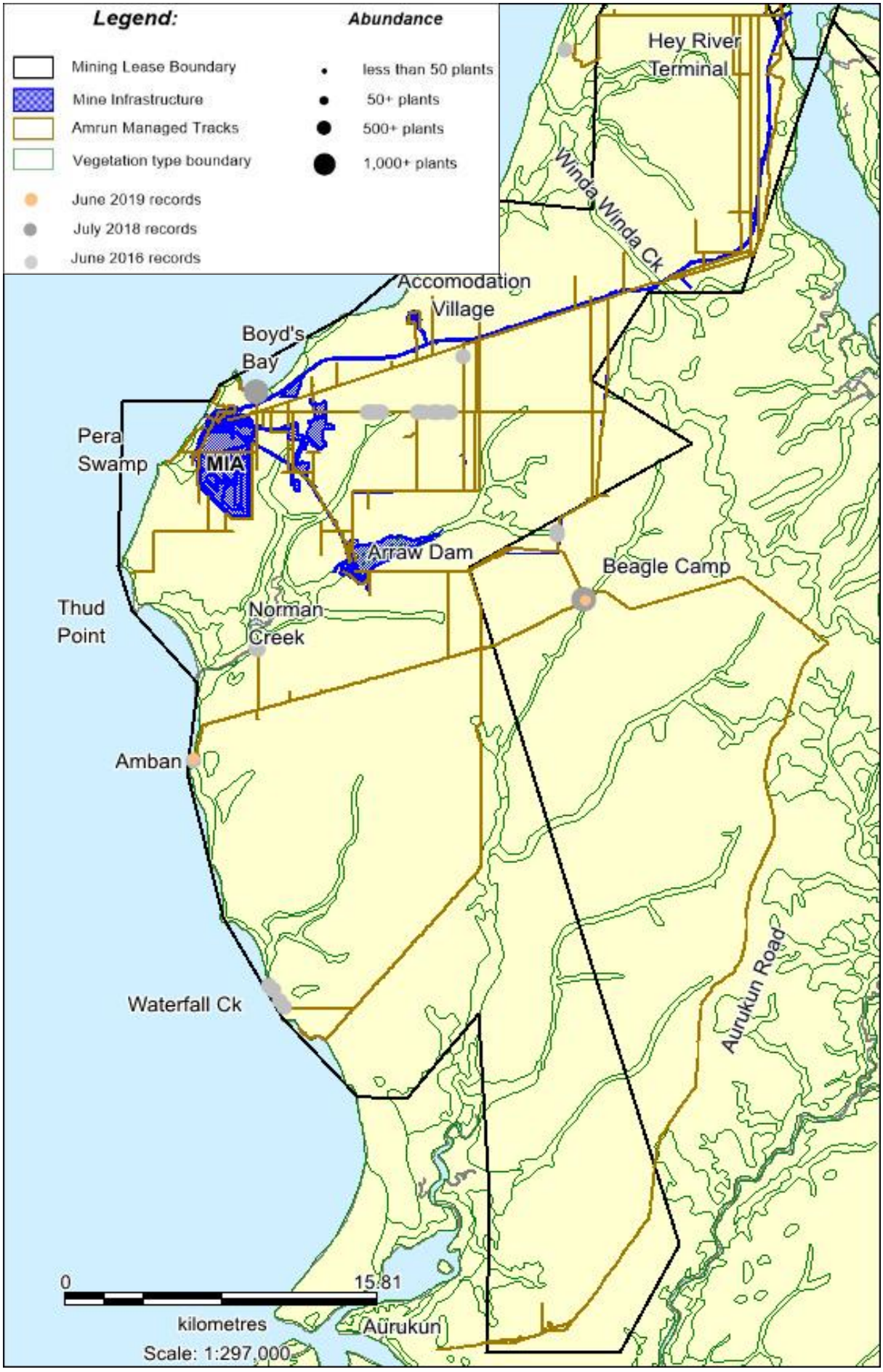

Figure E12 Flannel weed (*Sida cordifolia*) occurrence (June 2019)

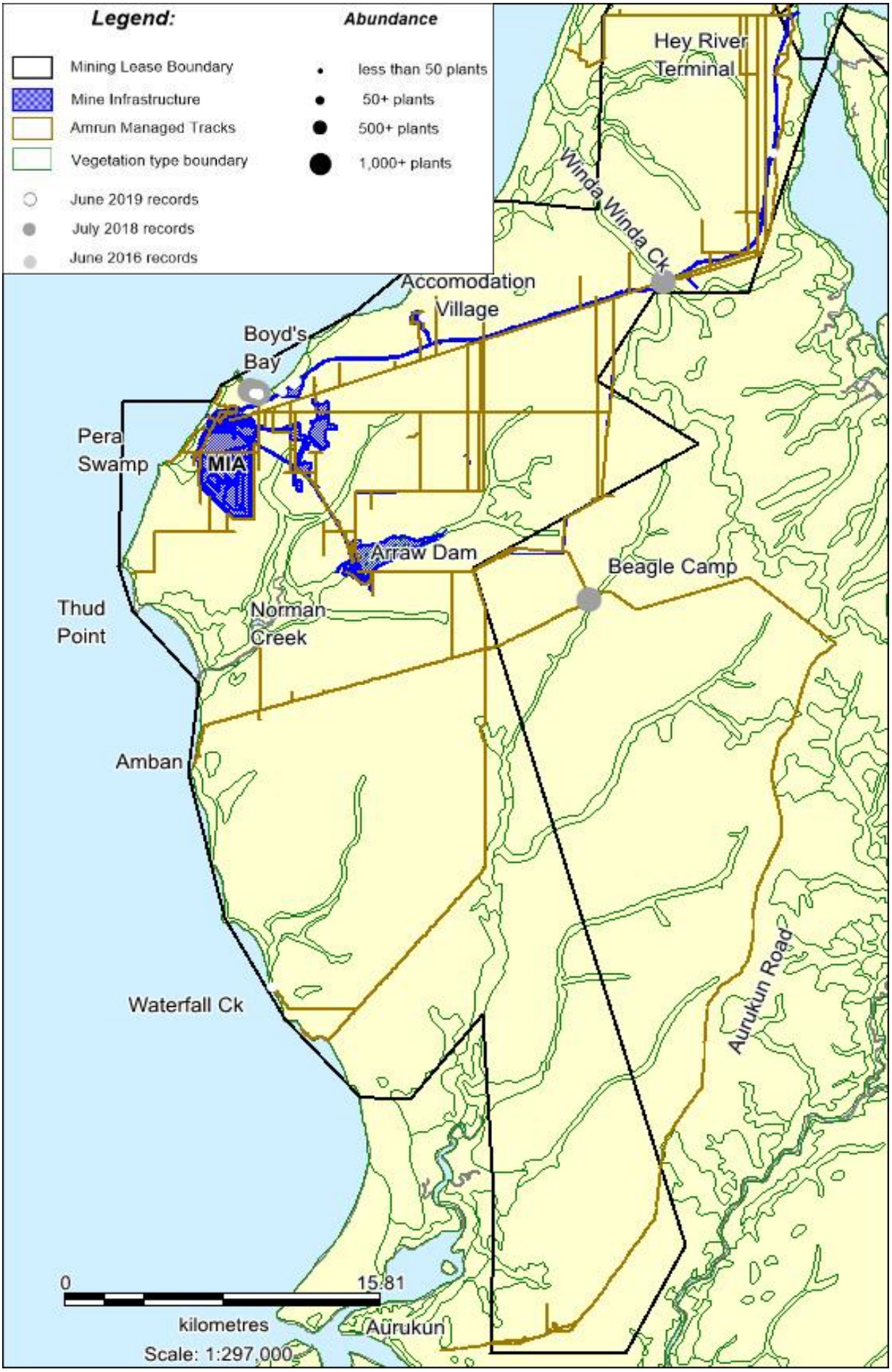

Figure E13 Annual mission grass (*Cenchrus pedicellatus*) occurrence (June 2019)

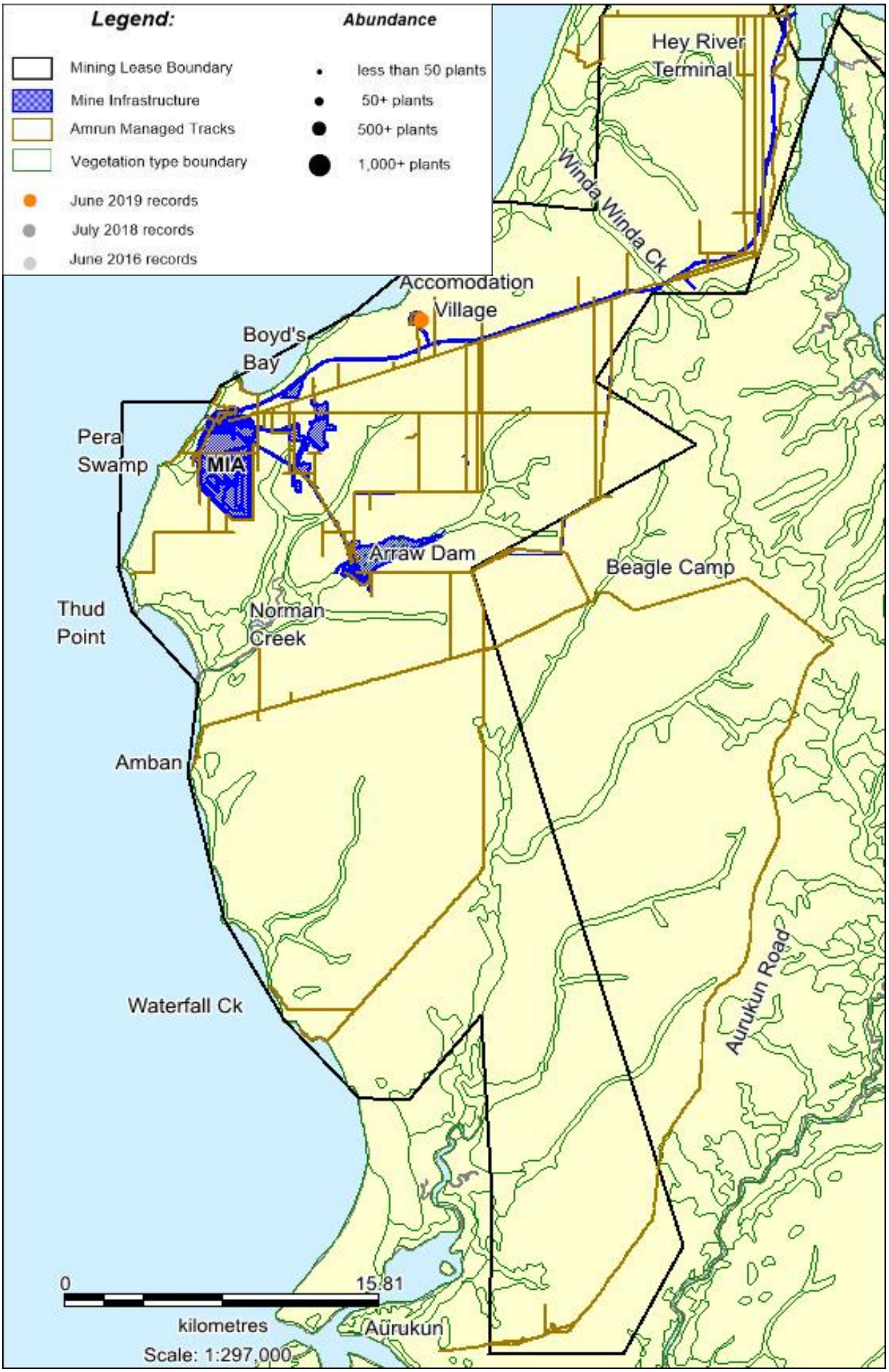

Figure E14 Brazilian fireweed (*Erechtites valerianifolius*) occurrence (June 2019)

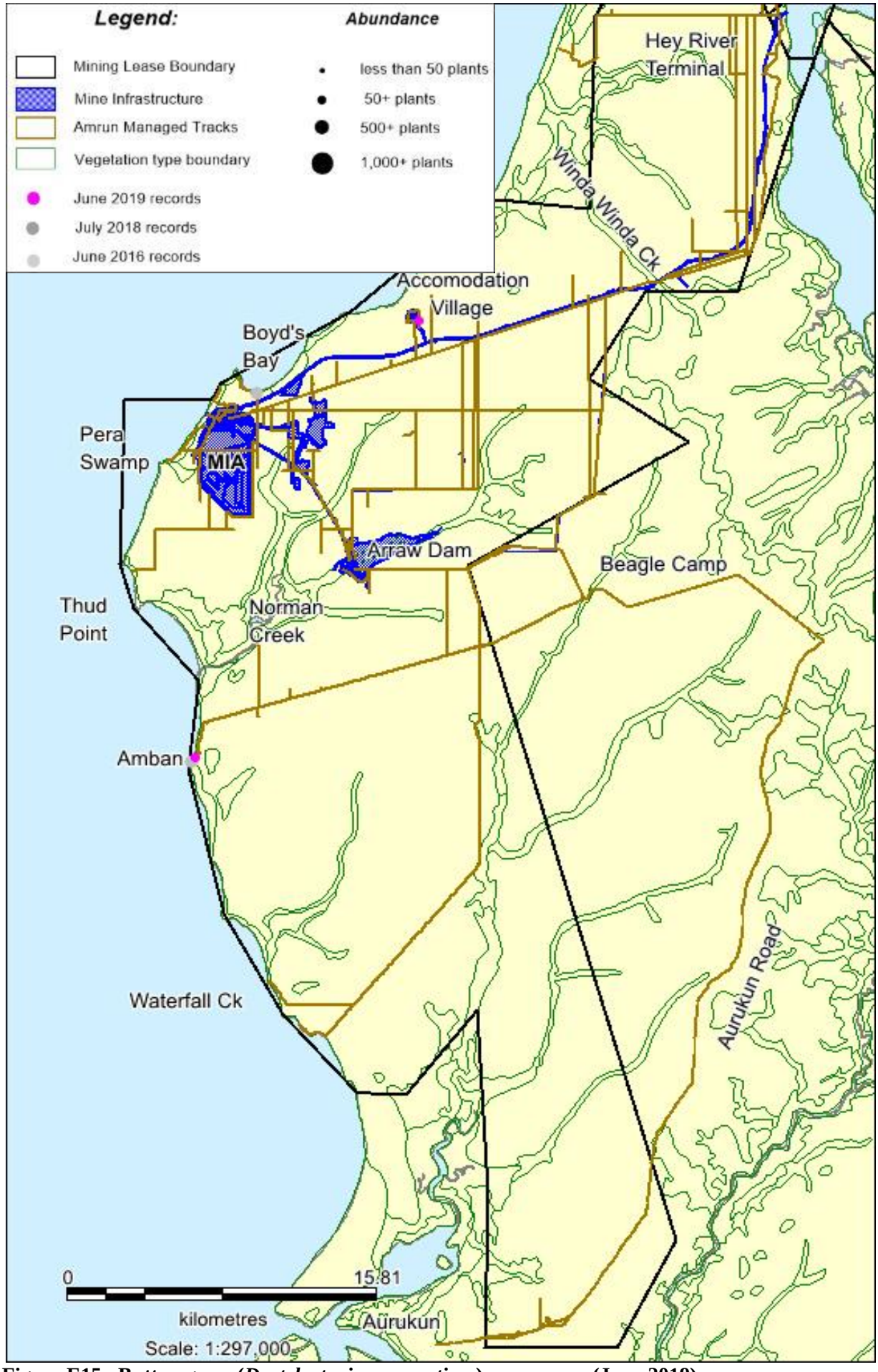

Figure E15 Button grass (*Dactyloctenium aegyptium*) occurrence (June 2019)

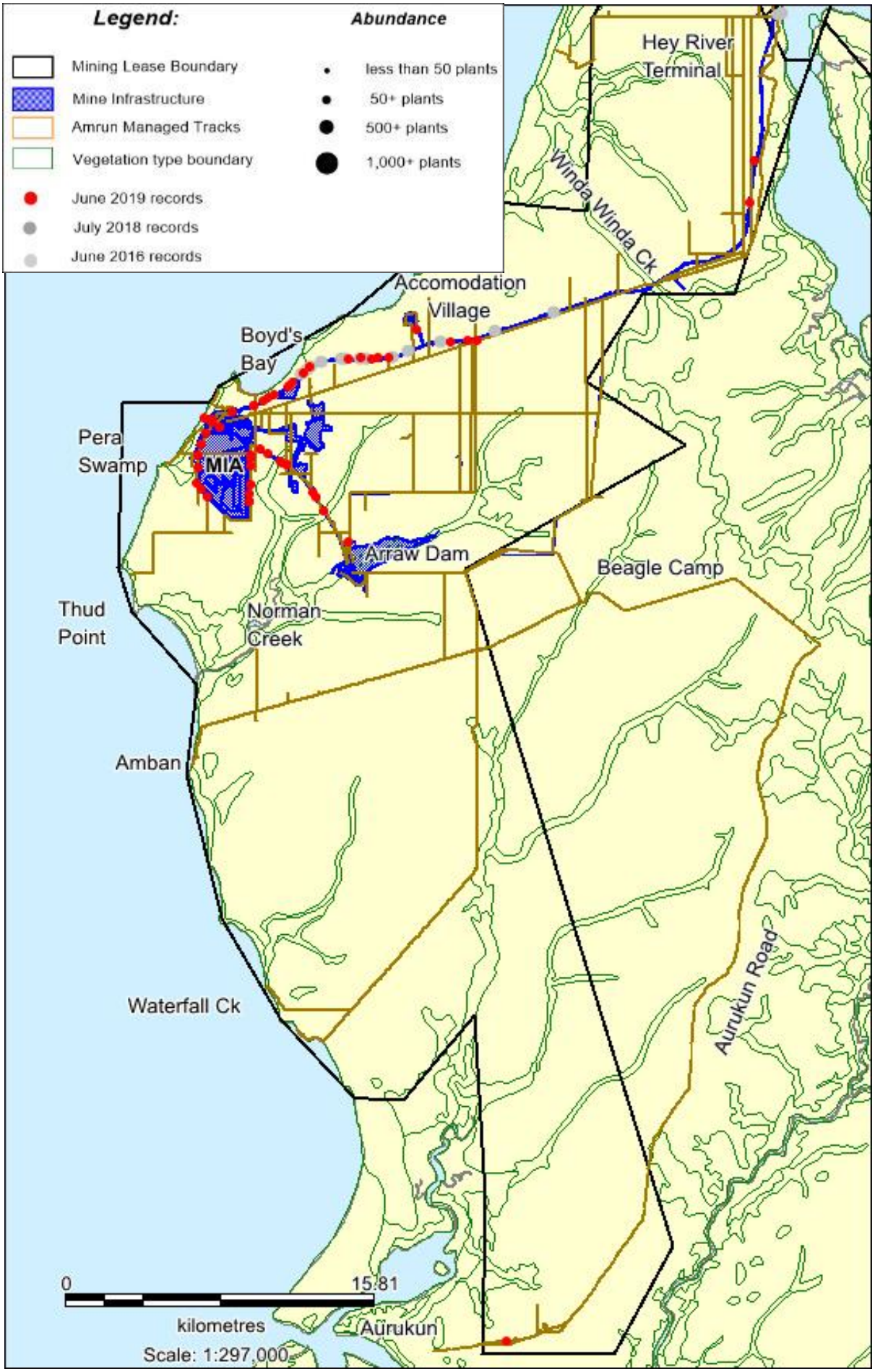

Figure E16 Rhode's grass (*Chloris gayana*) occurrence (June 2019)

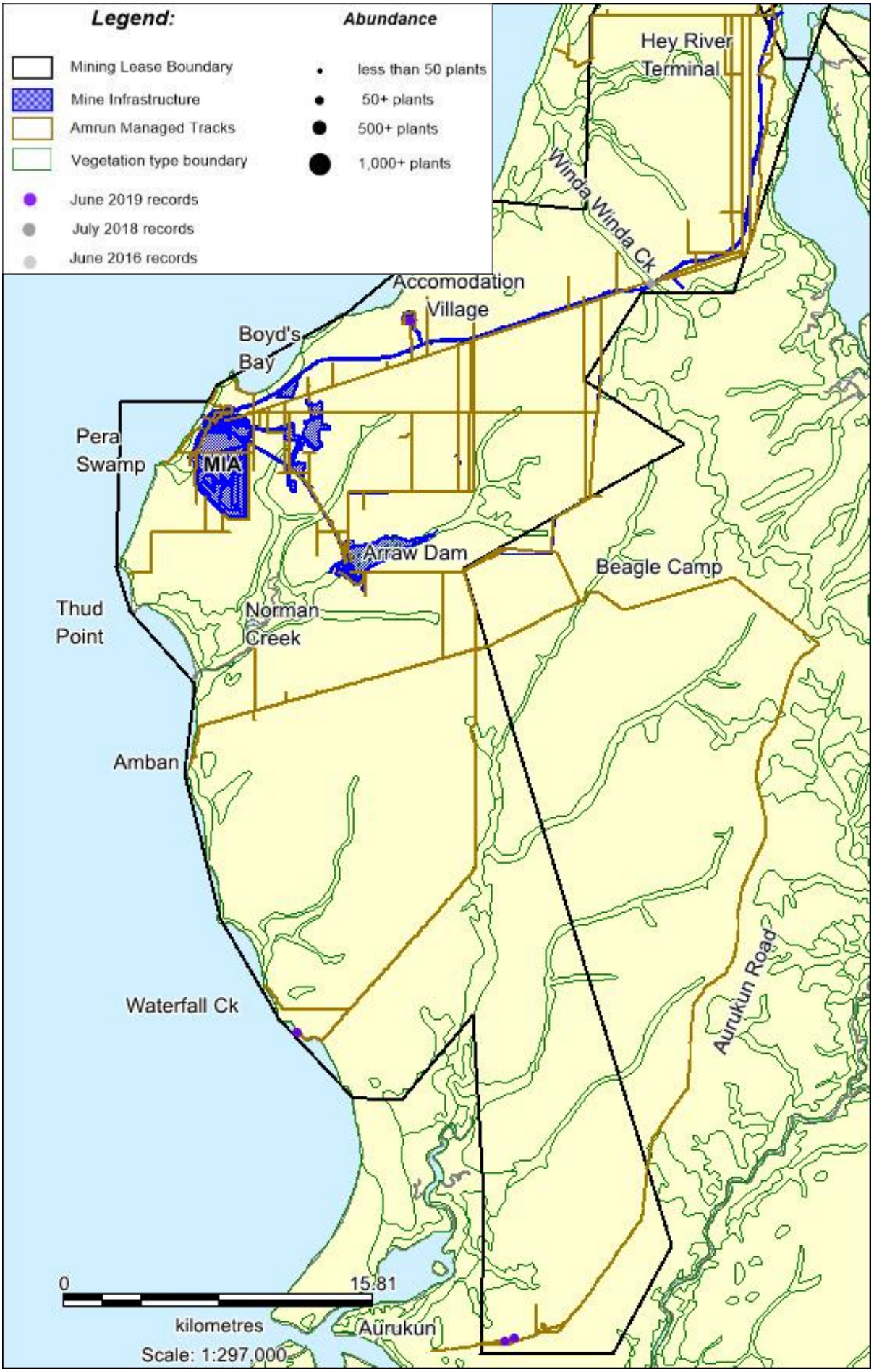

Figure E17 Siratro (*Macroptilium atropurpureum*) occurrence (June 2019)

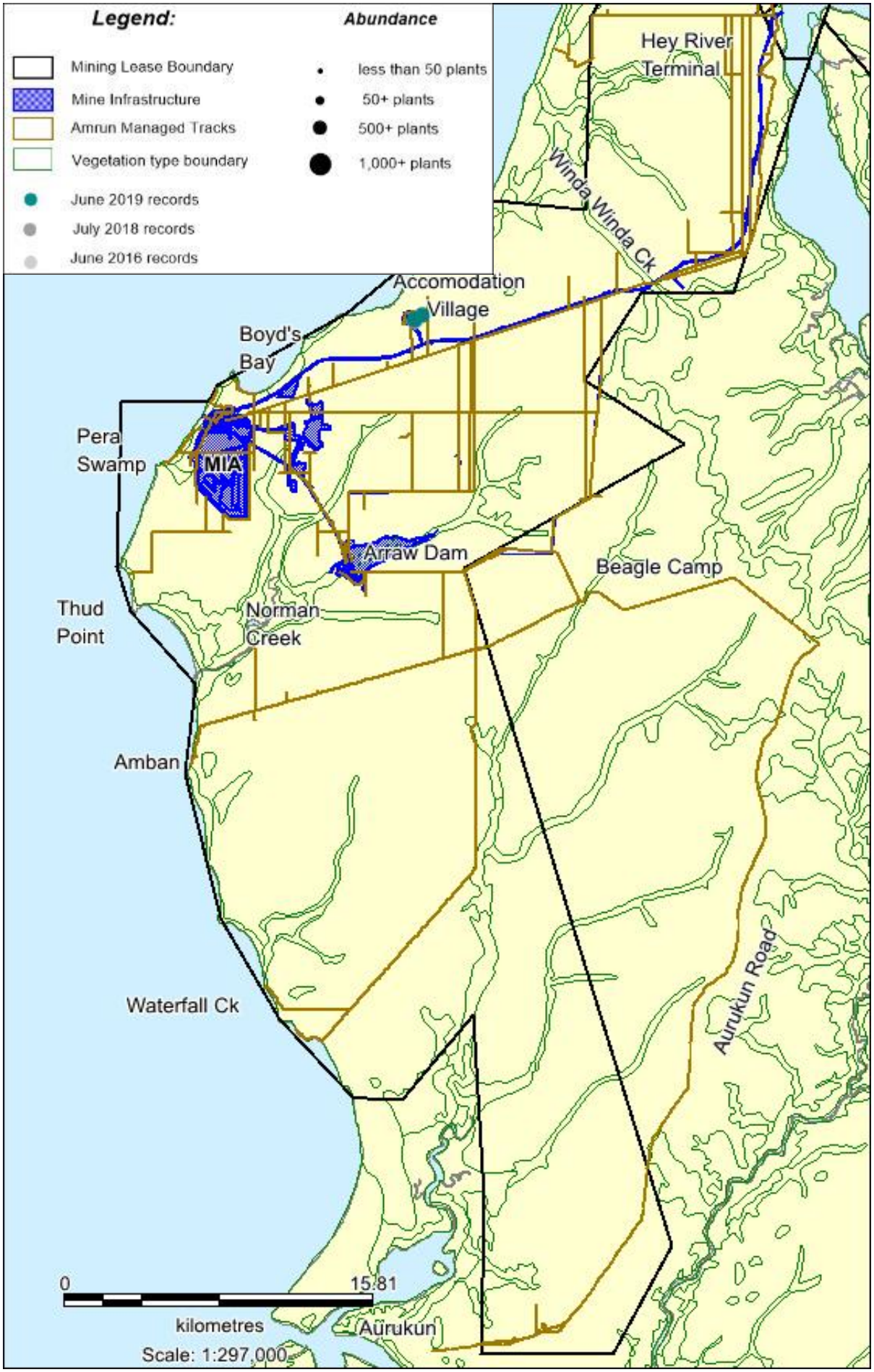

Figure E18 Black nightshade (*Solanum nigrum*) occurrence (June 2019)

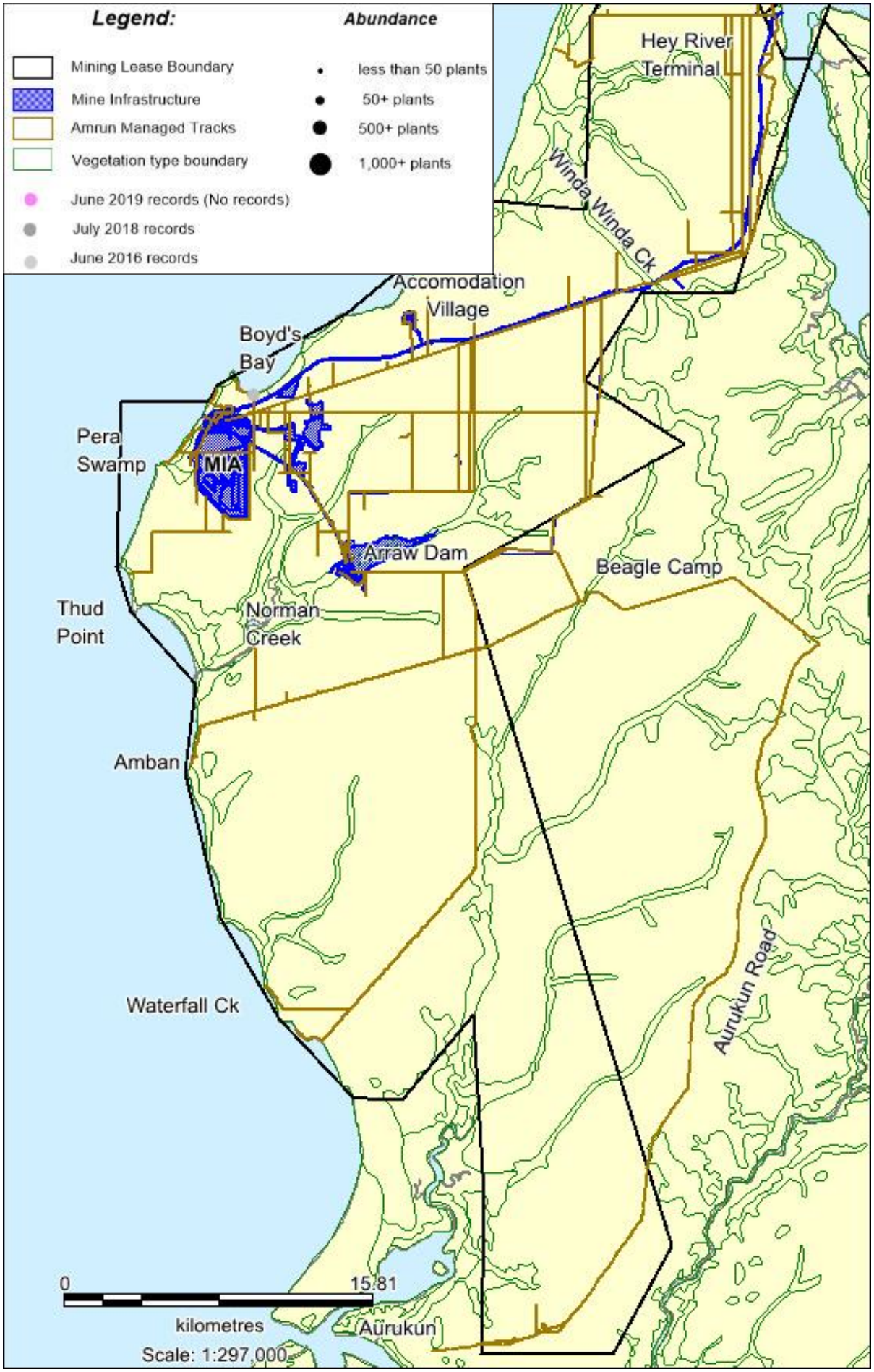

Figure E19 Pink-flowered Chinese burr (*Urena lobata*) occurrence (June 2019)

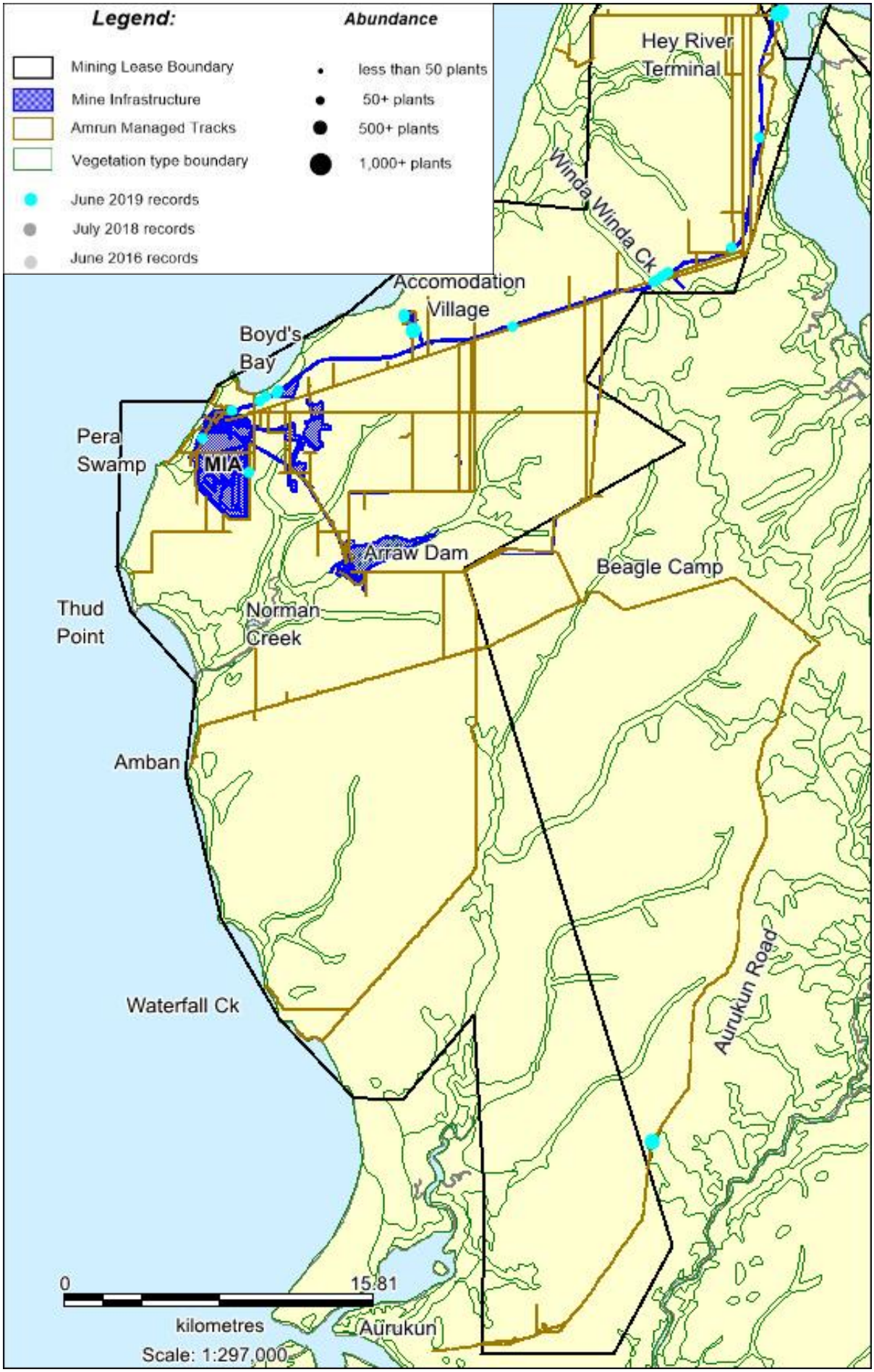

Figure E20 American joint-vetch (*Aeschynomene americana*) occurrence (June 2019)

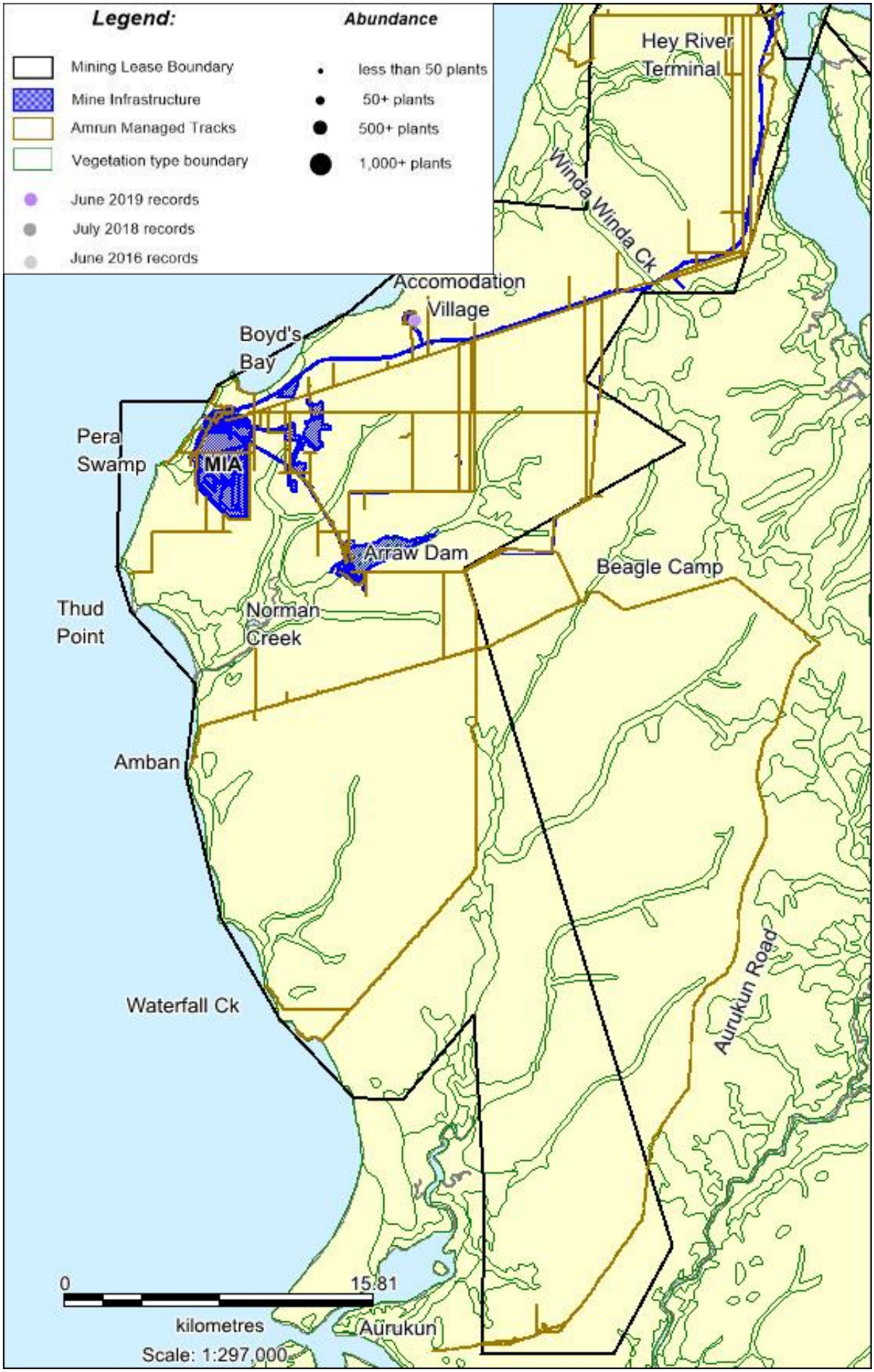

Figure E21 Jamaician snakeweek (*Stachytarpheta jamaicensis*) occurrence (June 2019)

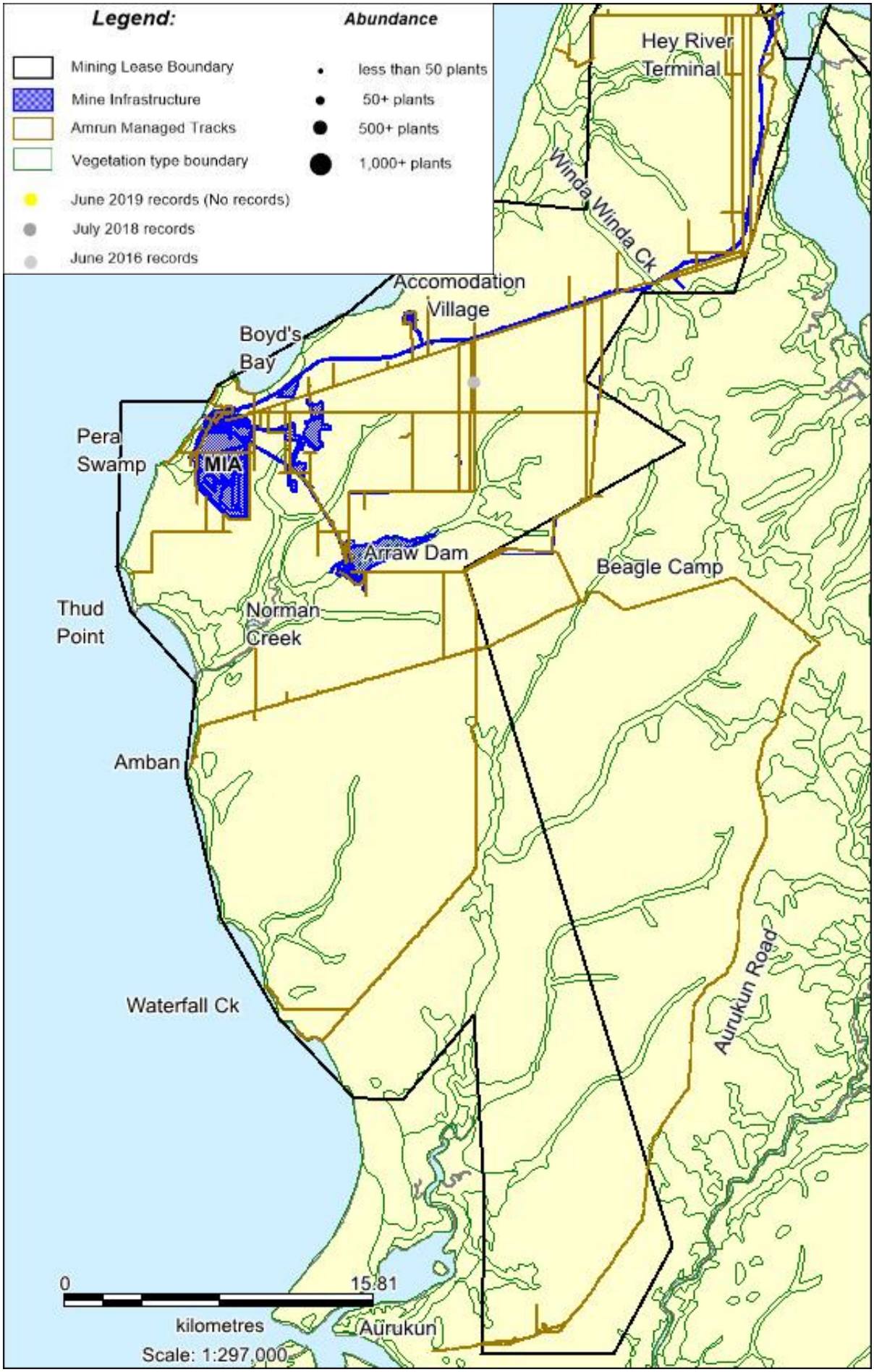

Figure E22 Gamba grass (*Andropogon gayanus*) occurrence (June 2019)

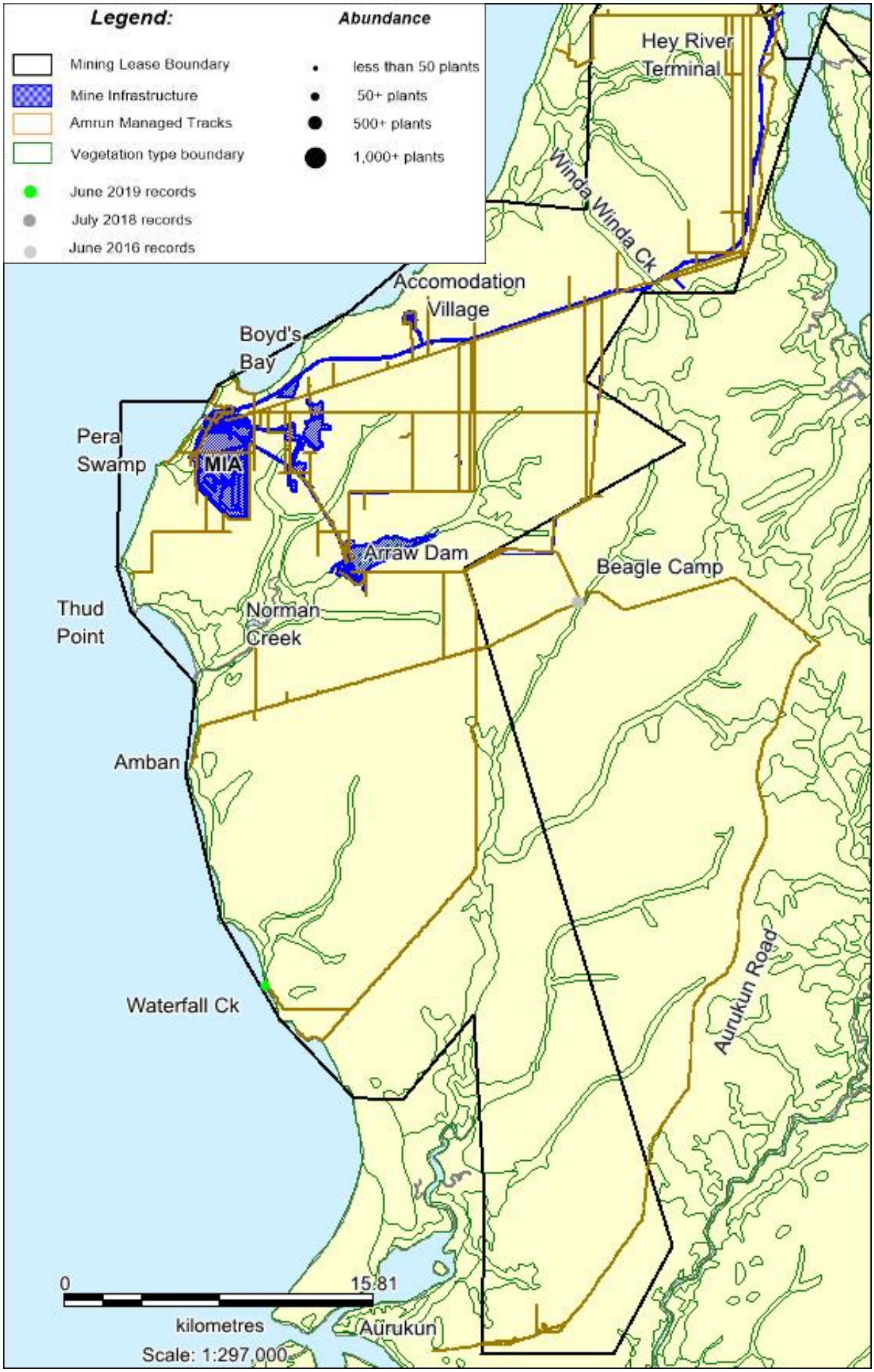

Figure E23 American rat's tail grass (*Sporobolus jacquemontii*) occurrence (June 2019)

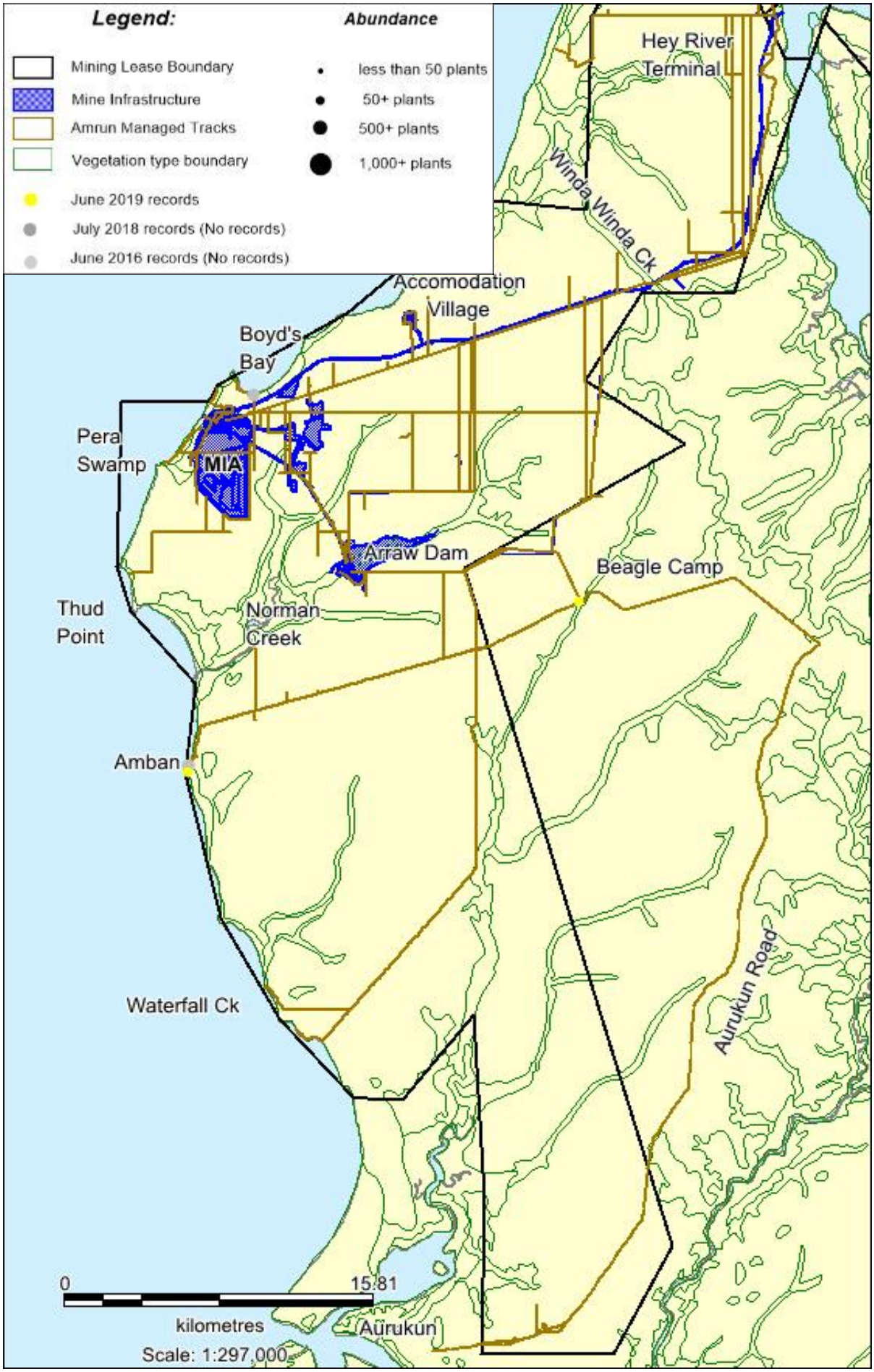

Figure E24 Spiny sand-burr (*Cenchrus echinatus*) occurrence (June 2019)

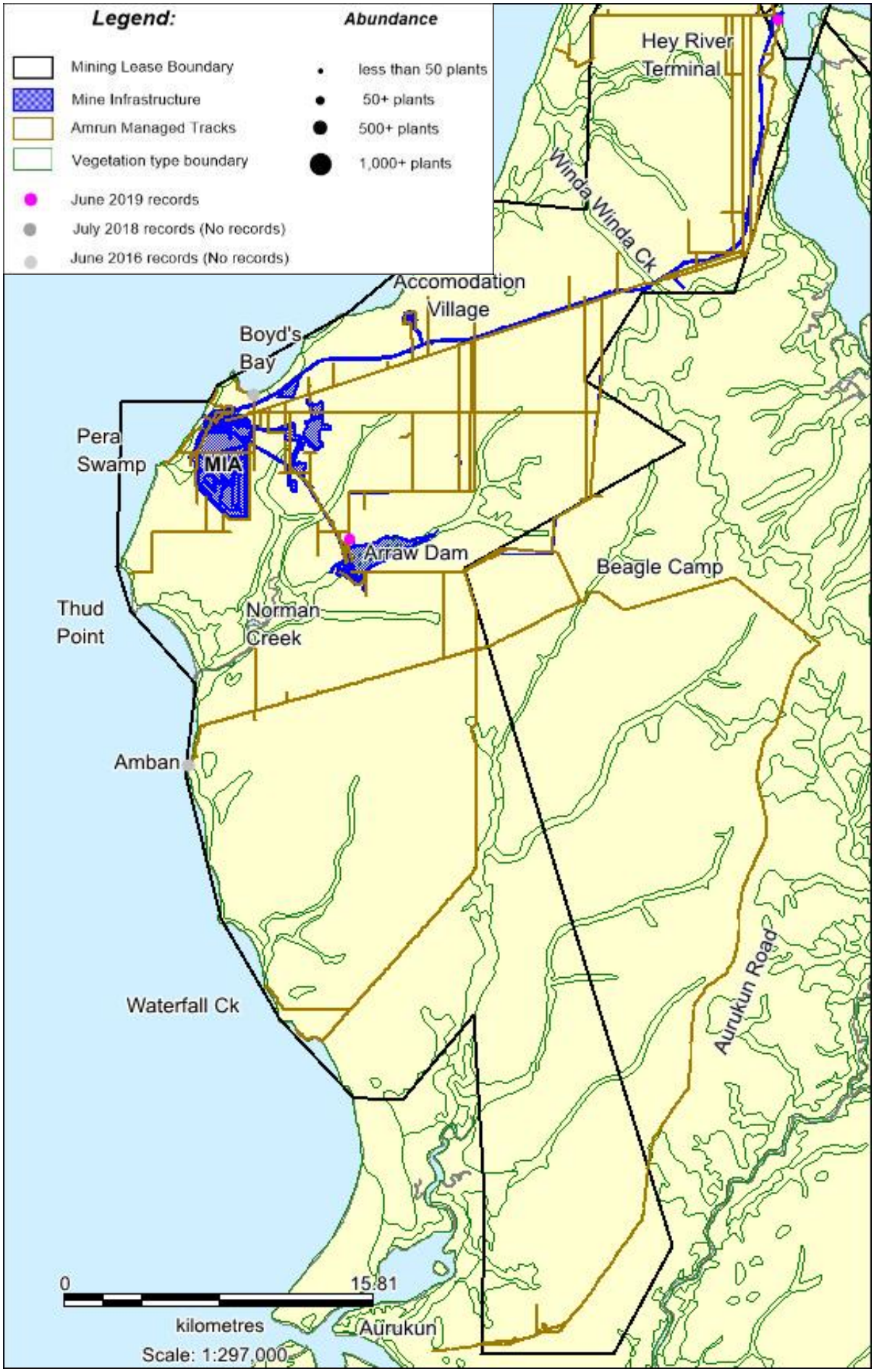

Figure E25 Cupid's paint-brush (*Emilia sonchifolia*) occurrence (June 2019)

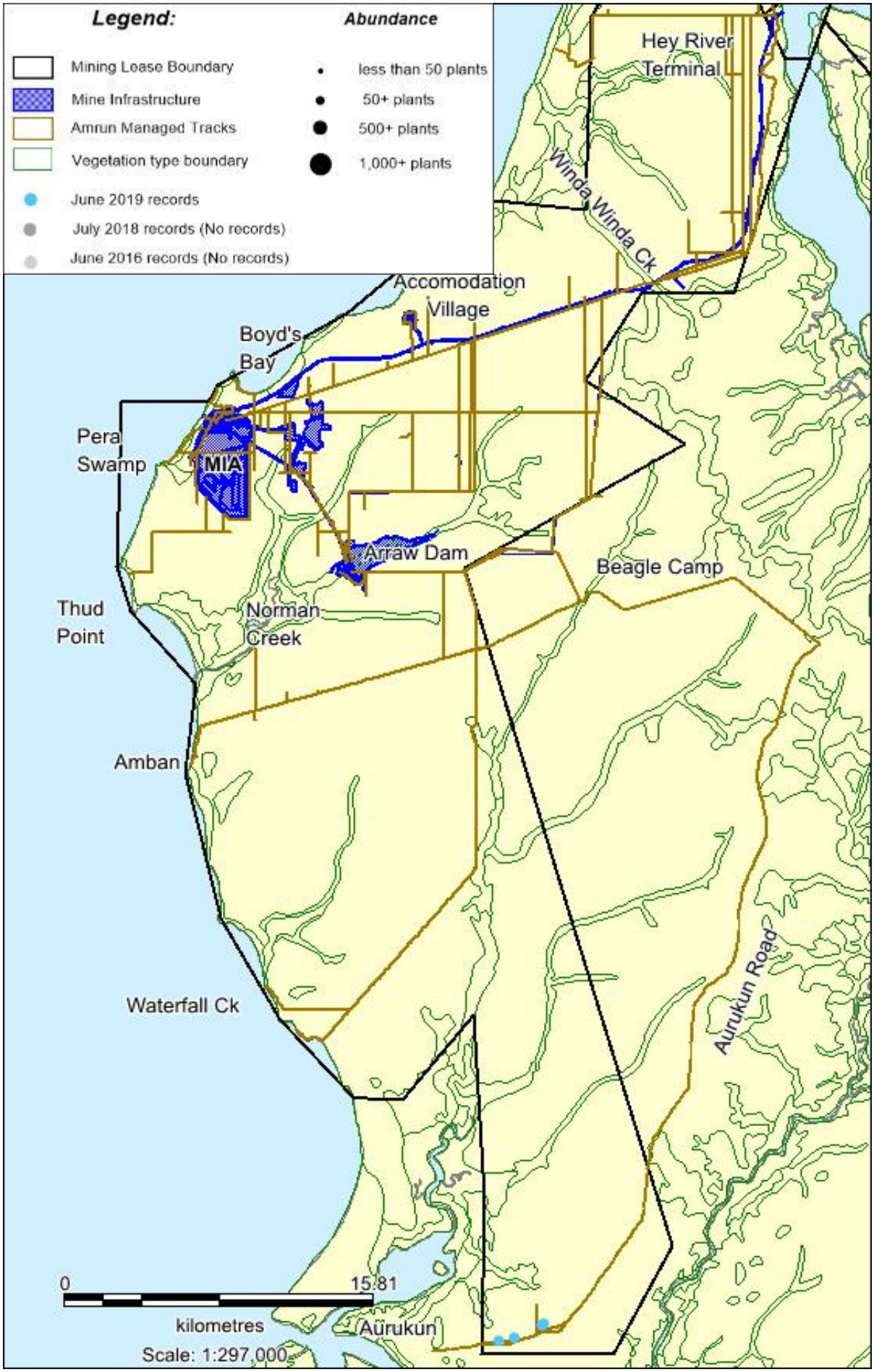

Figure E26 Calapo vine (*Calopogonium mucunoides*) occurrence (June 2019)

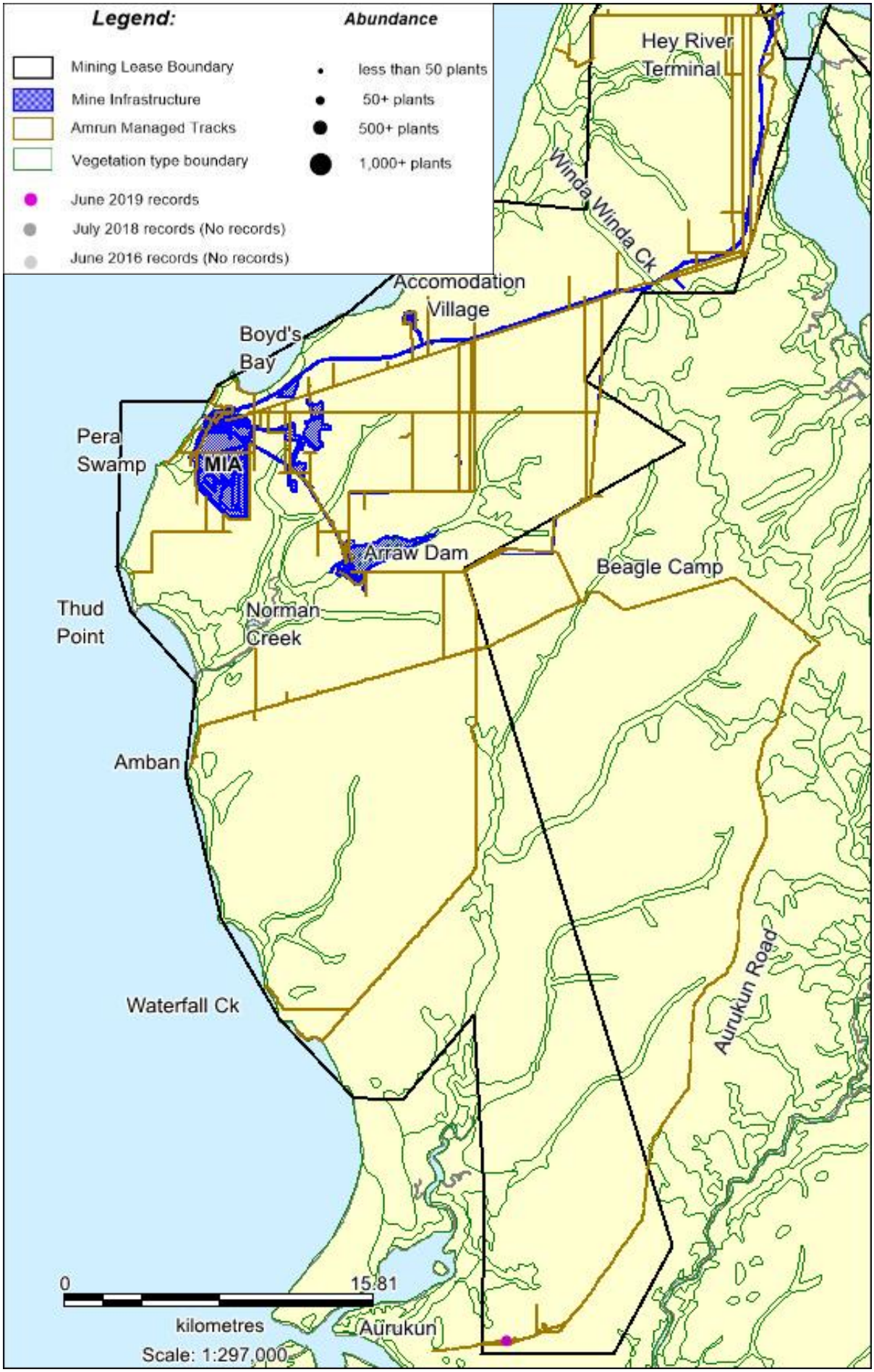

Figure E27 Star-of-Bethlehem vine (*Ipomoea quamoclit*) occurrence (June 2019)

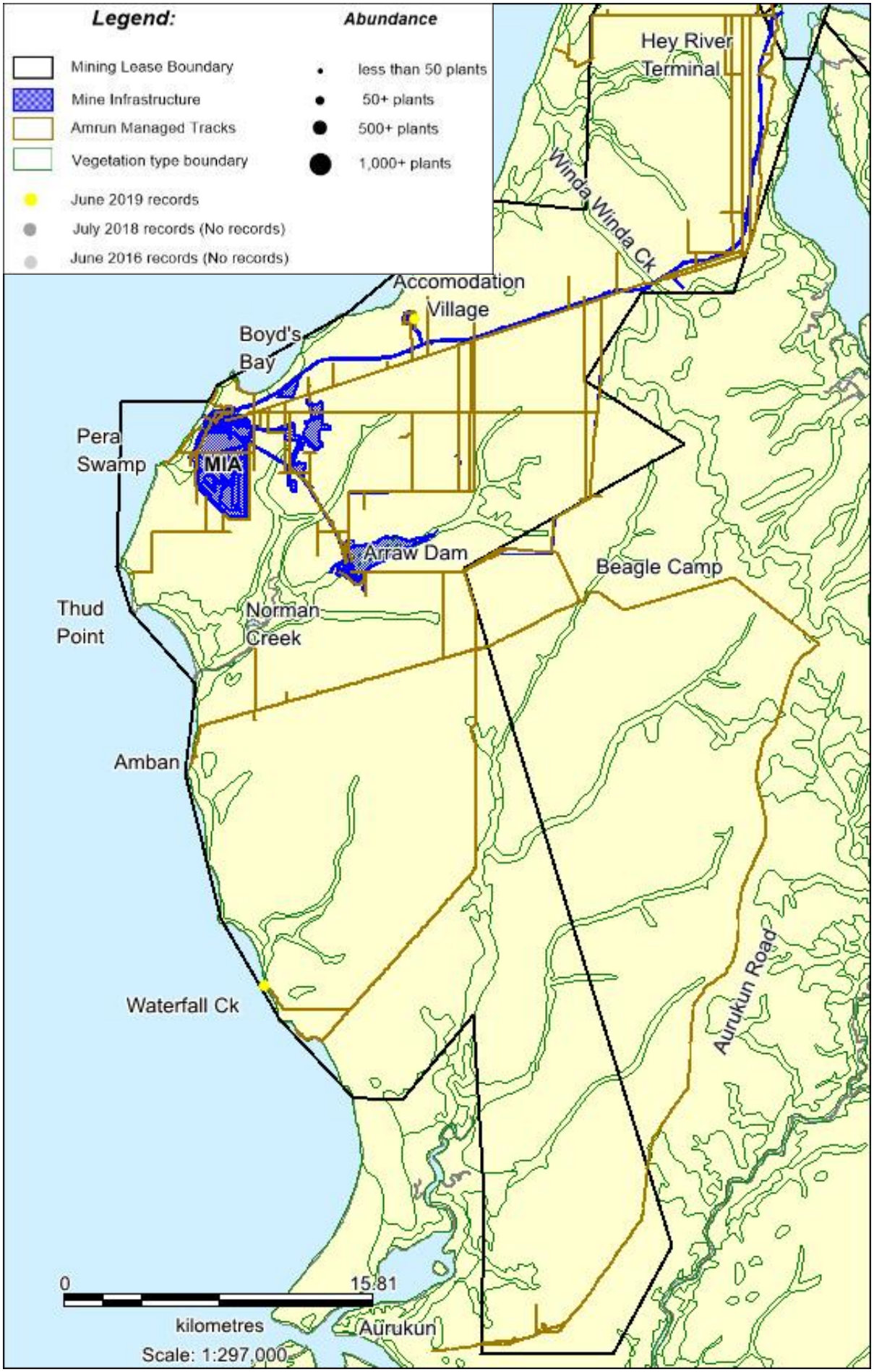

Figure E28 Coat buttons (*Tridax procumbens*) occurrence (June 2019)

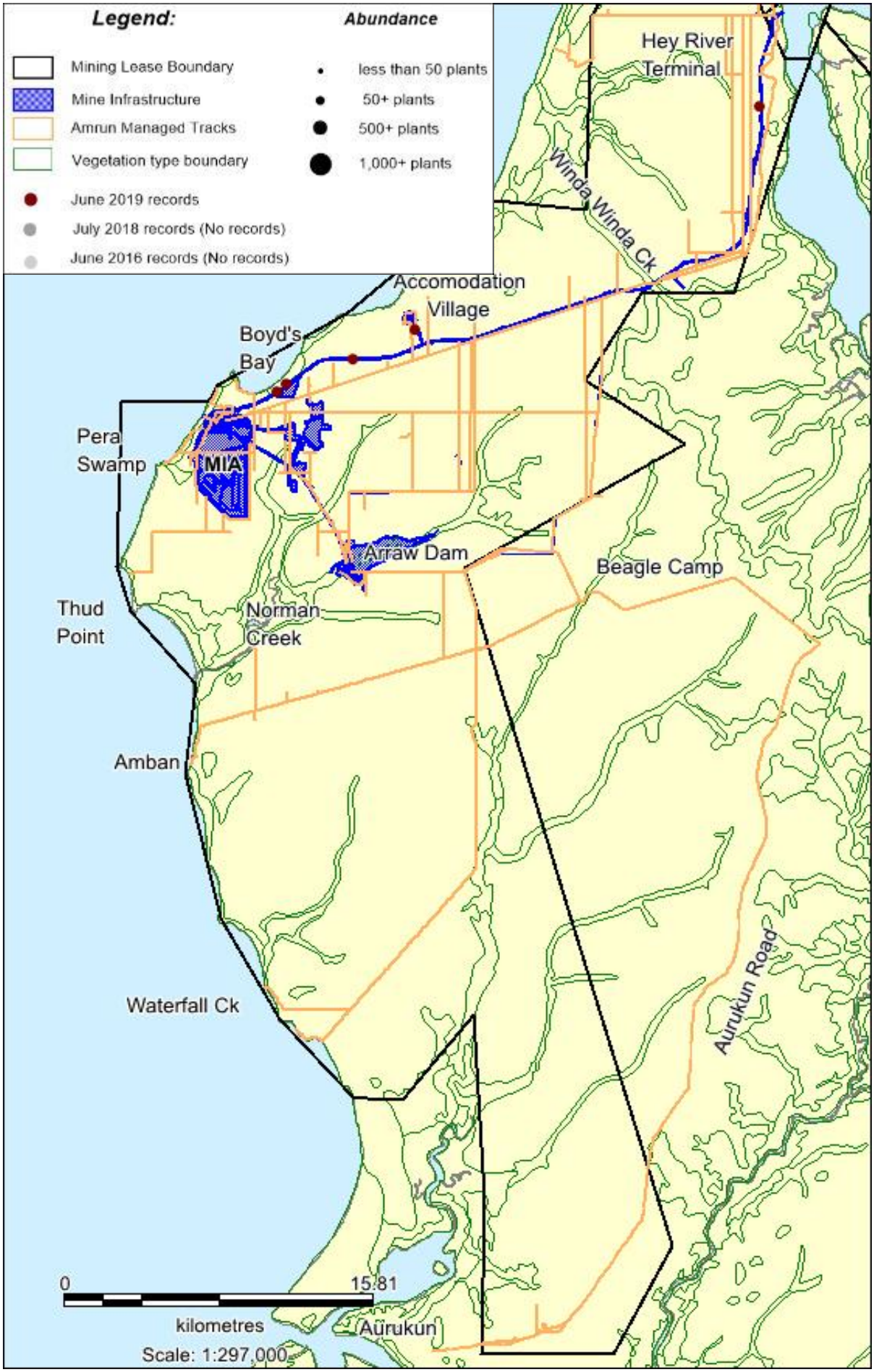

Figure E29 Thatch grass (*Hyparrhenia rufa*) occurrence (June 2019)

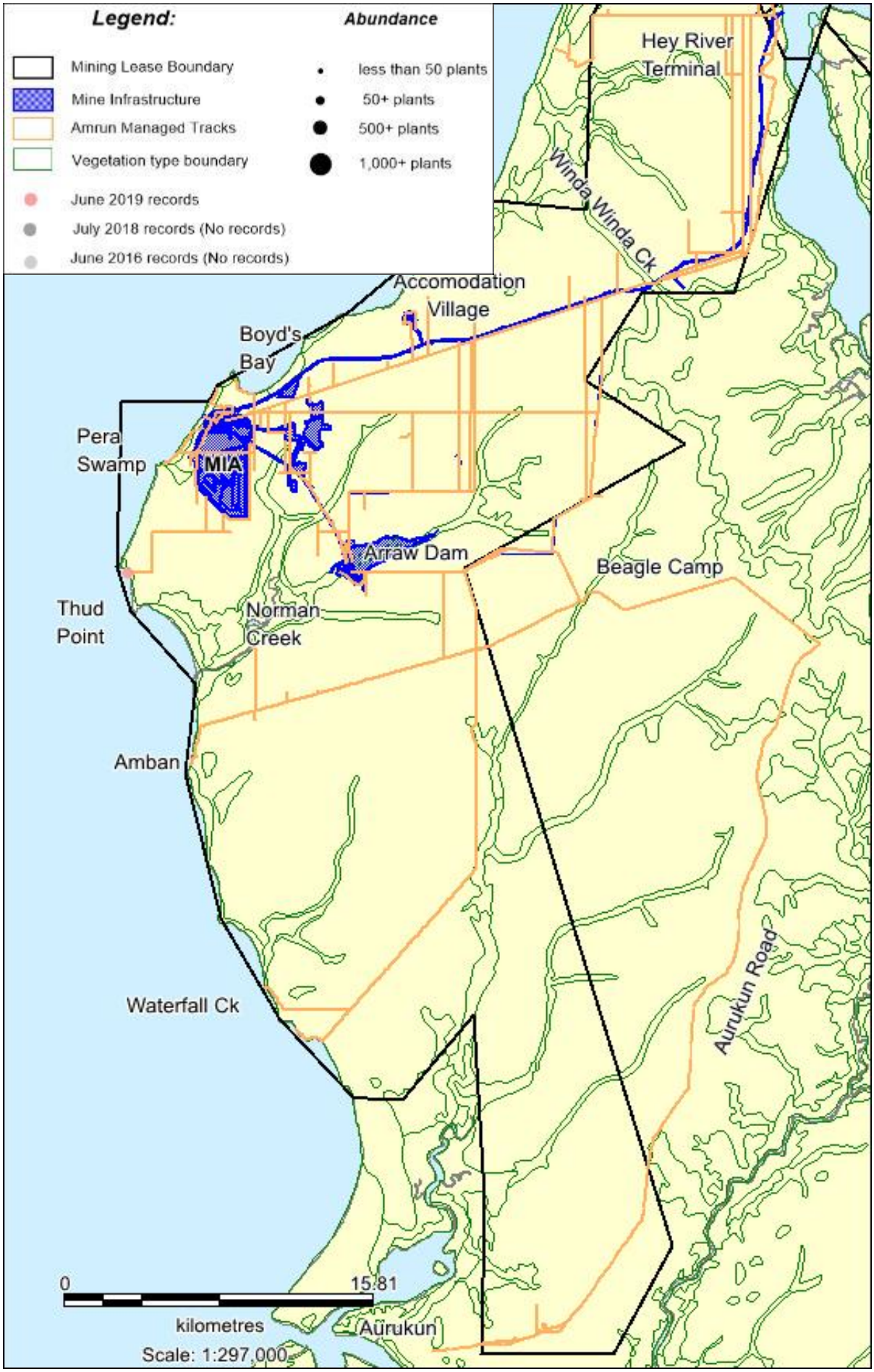

Figure E30 Beggar's ticks (*Bidens bipinnata*) occurrence (June 2019)

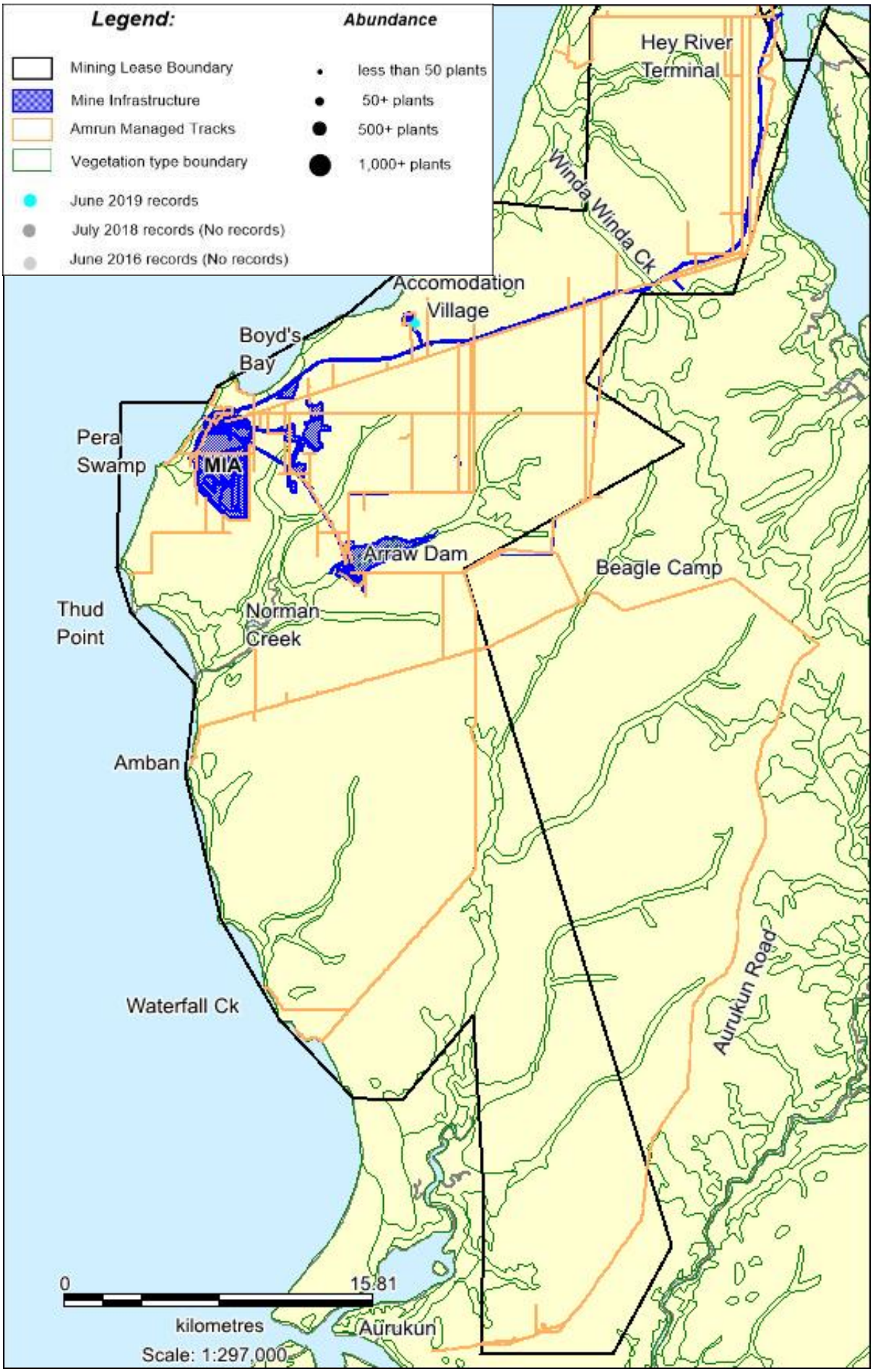

Figure E31 Navua sedge (*Cyperus aromaticus*) occurrence (June 2019)

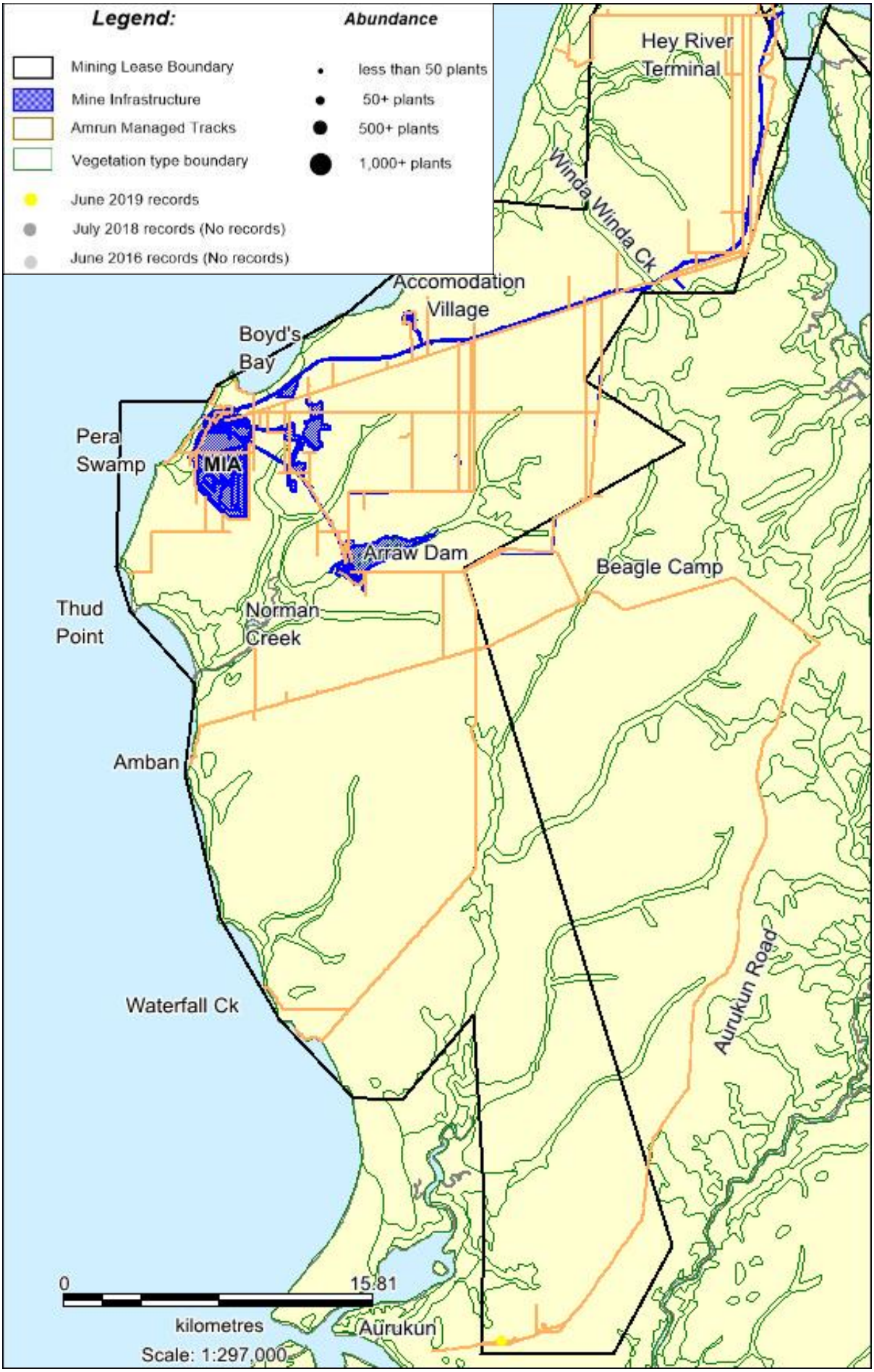

Figure E32 Golden shower tree (*Cassia fistula*) occurrence (June 2019)

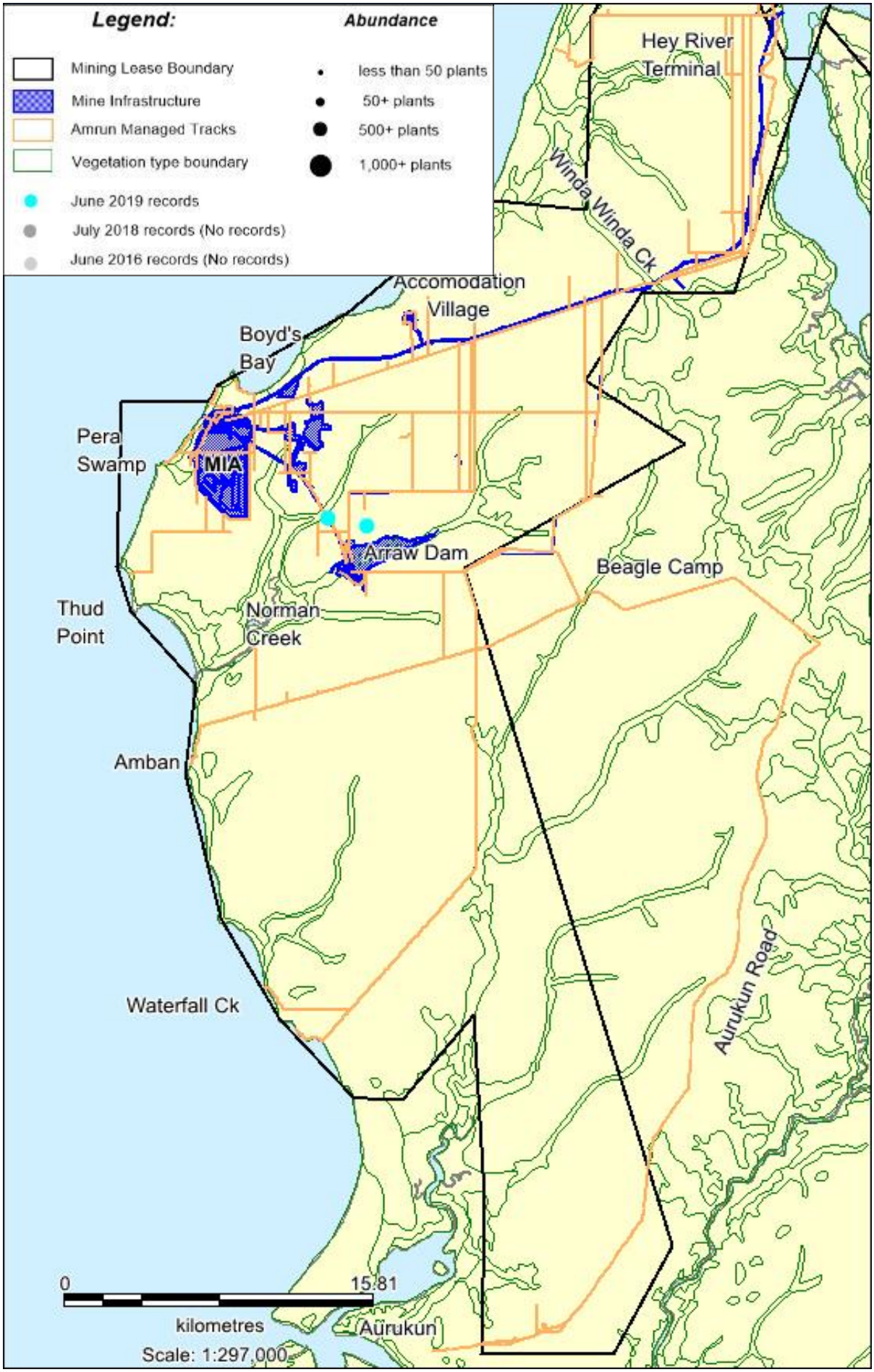

Figure E33 Indian bluegrass (*Bothriochloa pertusa*) occurrence (June 2019)

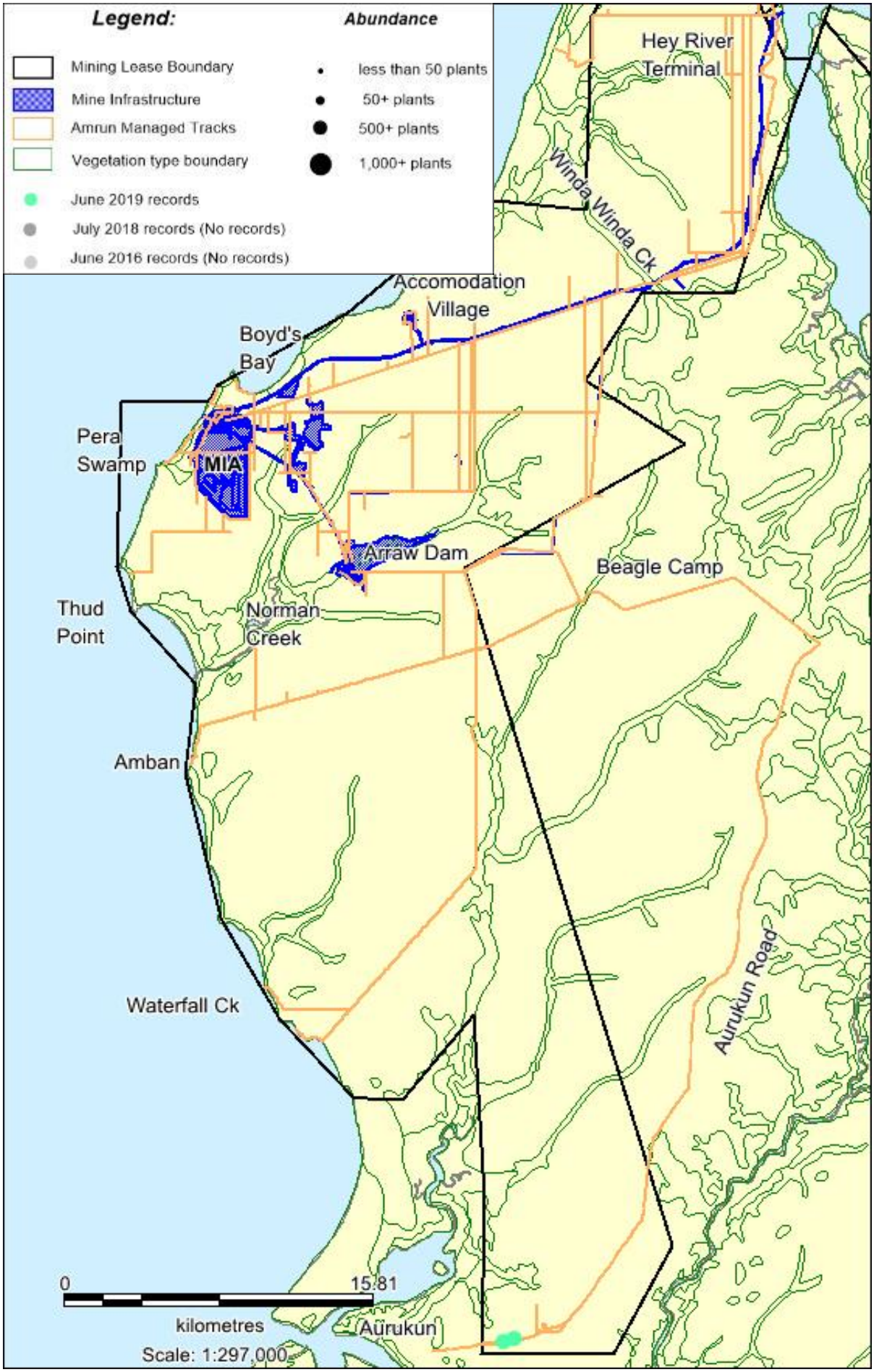

Figure E34 Florida beggar-weed (*Desmodium tortuosum*) occurrence (June 2019)

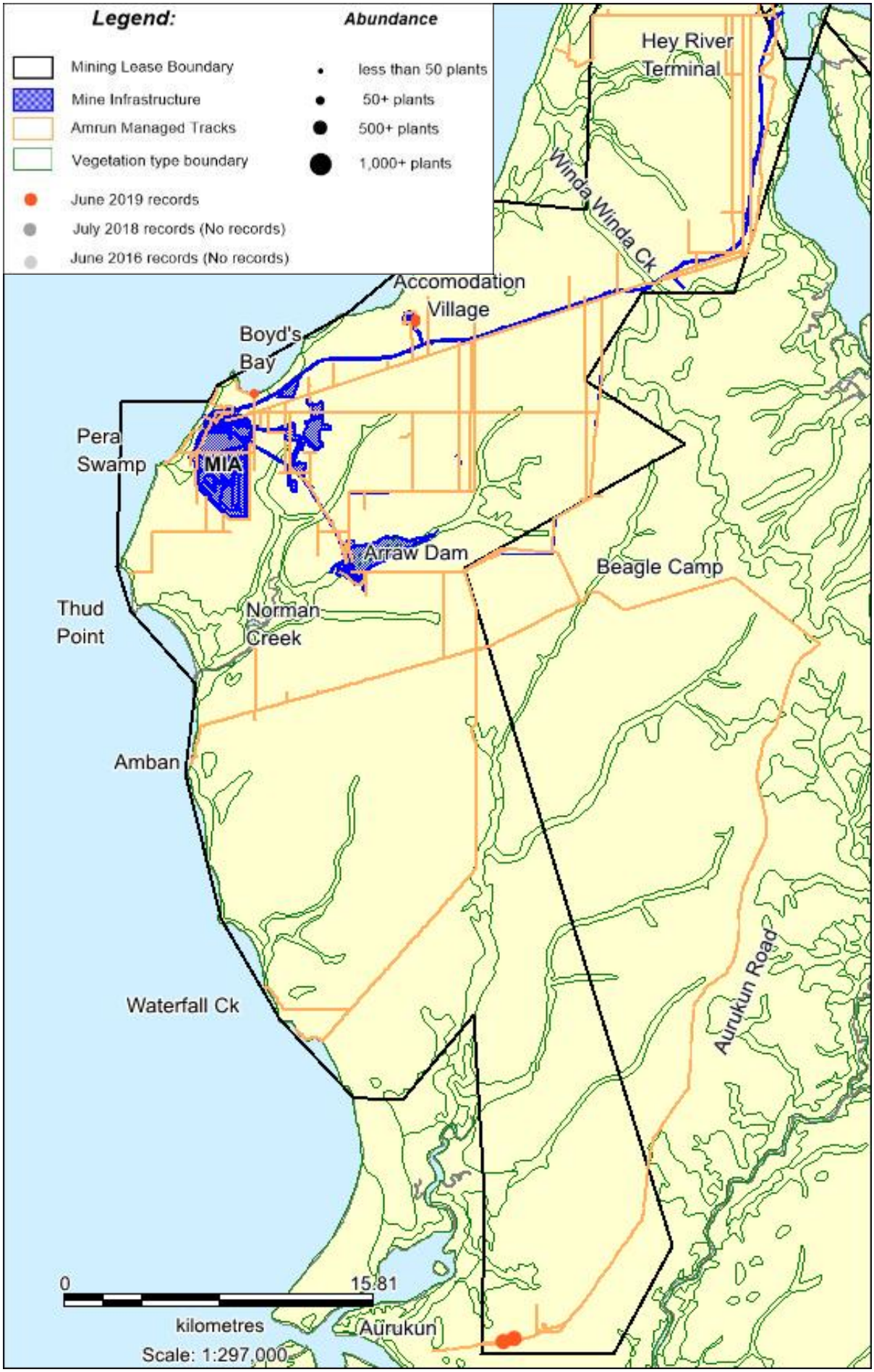

Figure E35 Alyce clover (*Alysicarpus ovalifolius*) occurrence (June 2019)

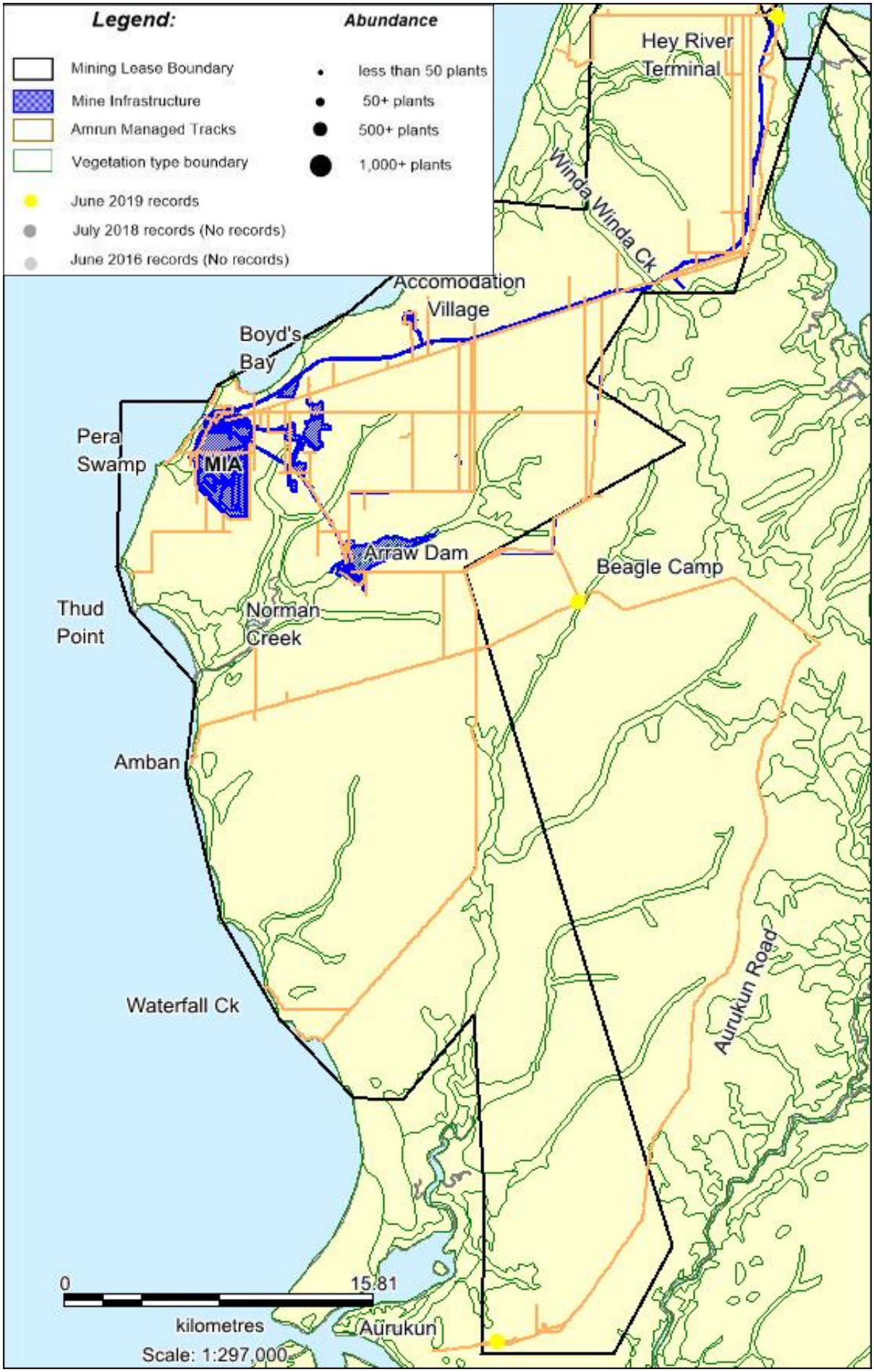

Figure E36 Broad-leaved Alyce clover (*Alysicarpus vaginalis*) occurrence (June 2019)

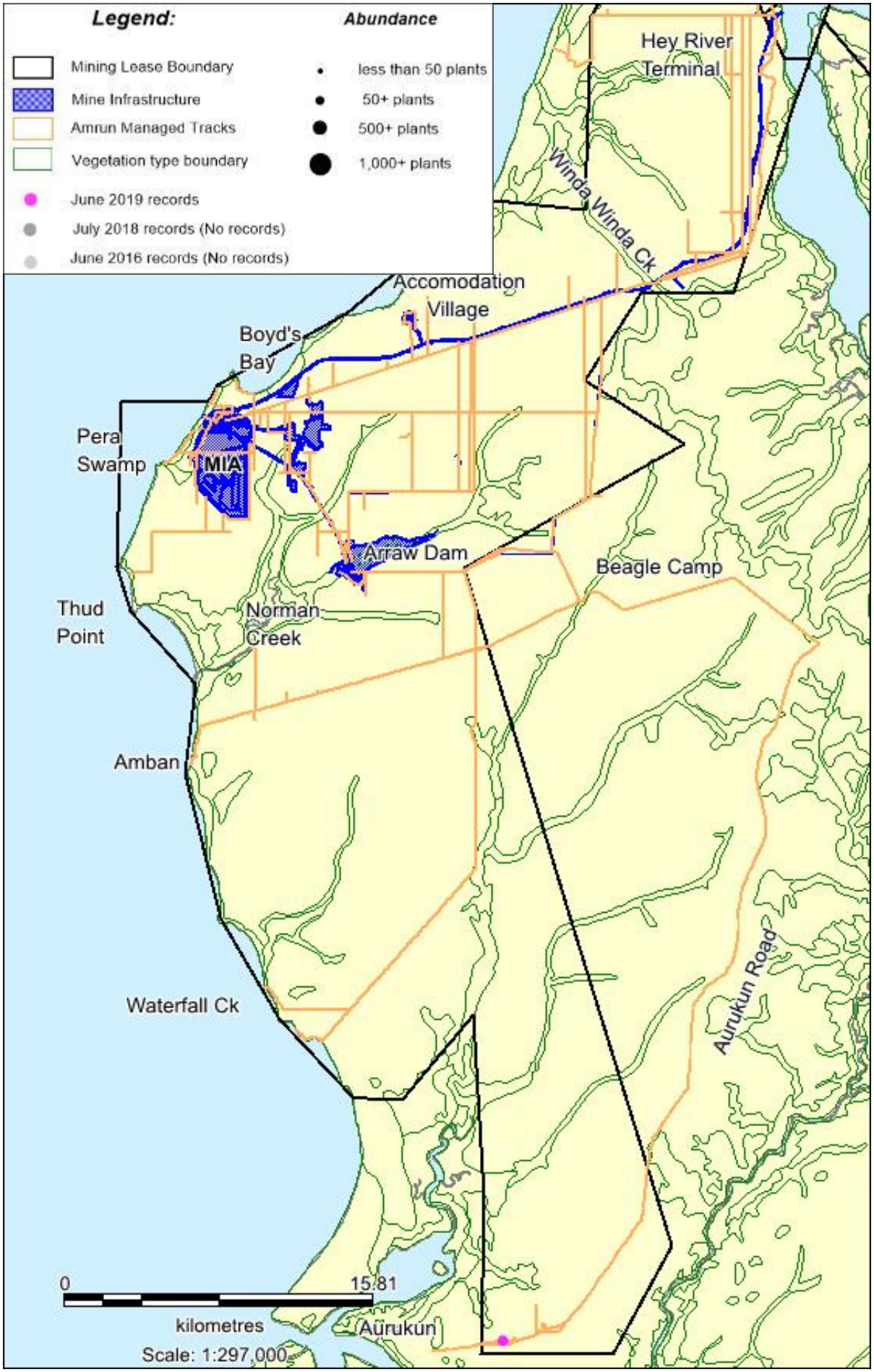

Figure E37 Lesser joyweed (*Alternanthera brasiliensis*) occurrence (June 2019)

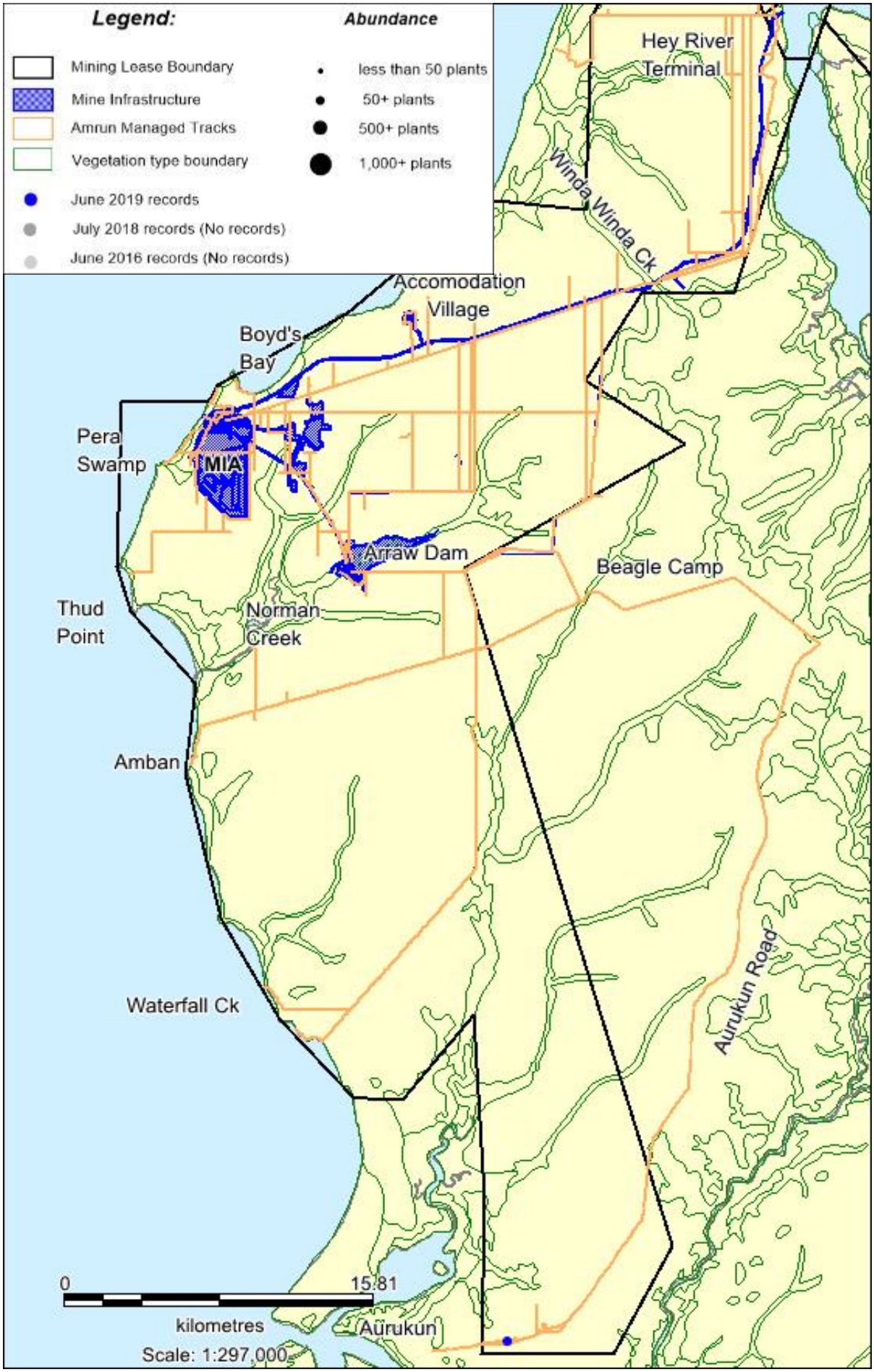

Figure E38 Asthma plant (*Euphorbia hirta*) occurrence (June 2019)

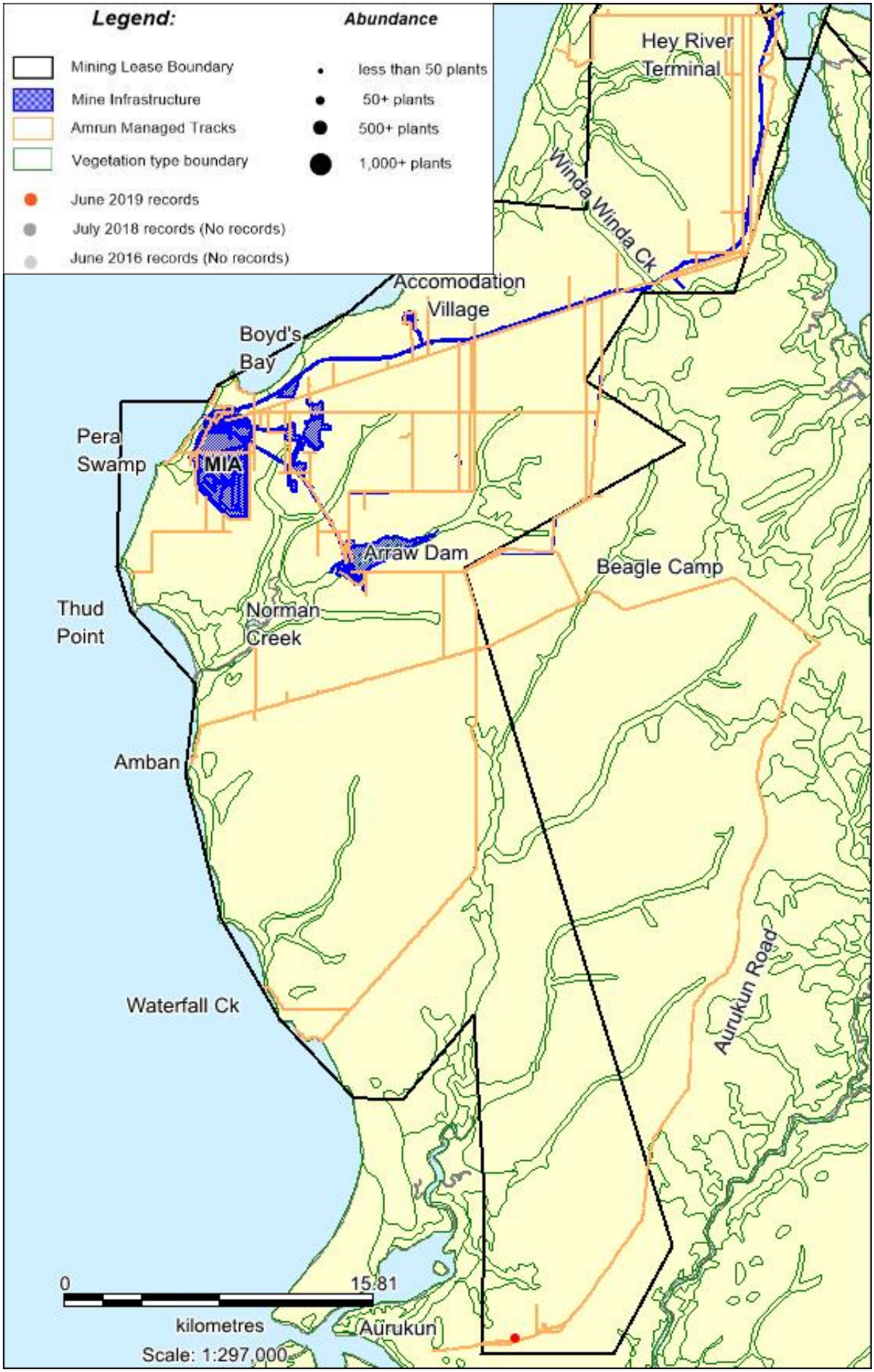

Figure E39 Painted spurge (*Euphorbia heterophylla*) occurrence (June 2019)

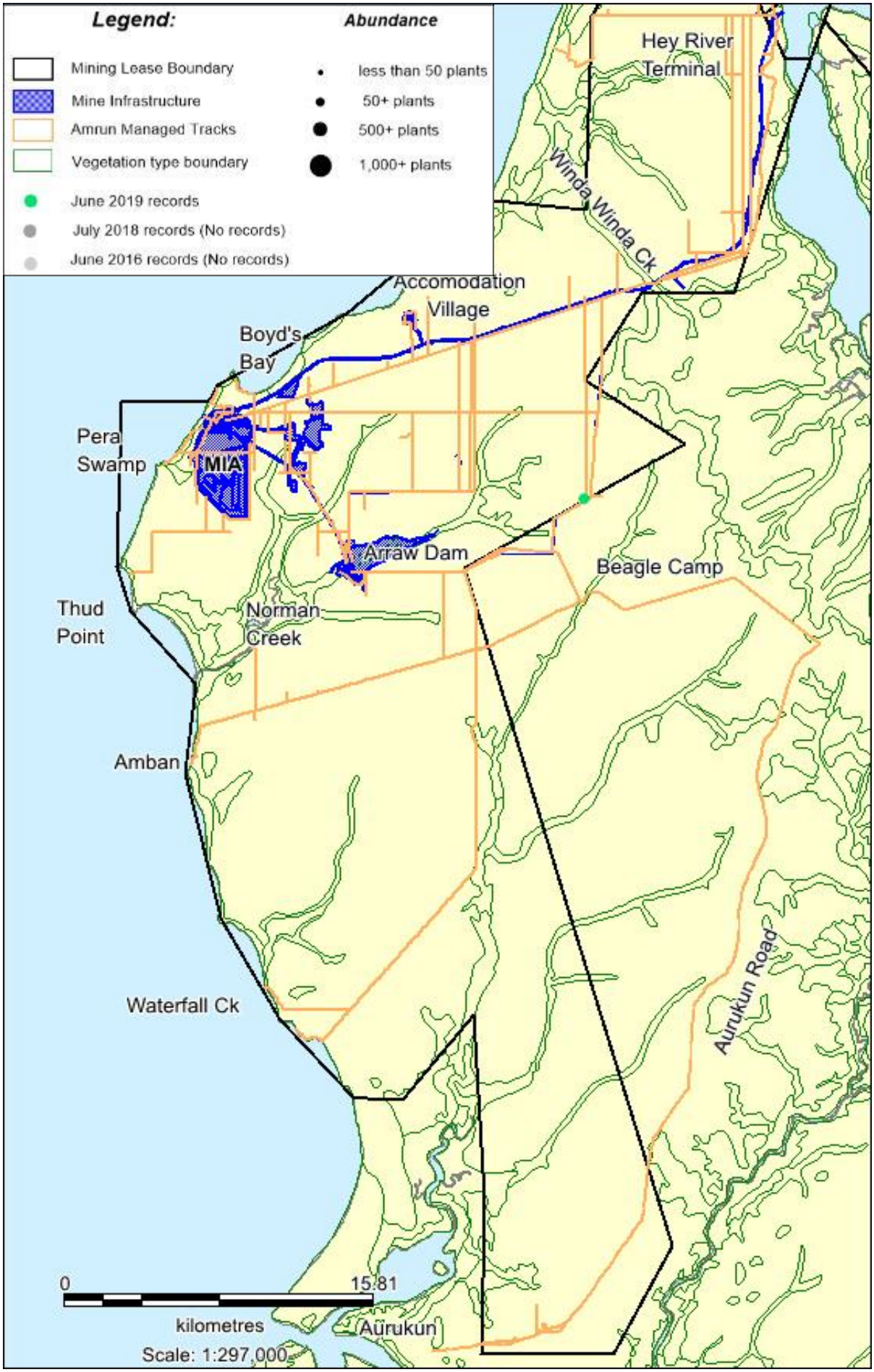

Figure E40 Watermelon (*Citrillus lanatus*) occurrence (June 2019)

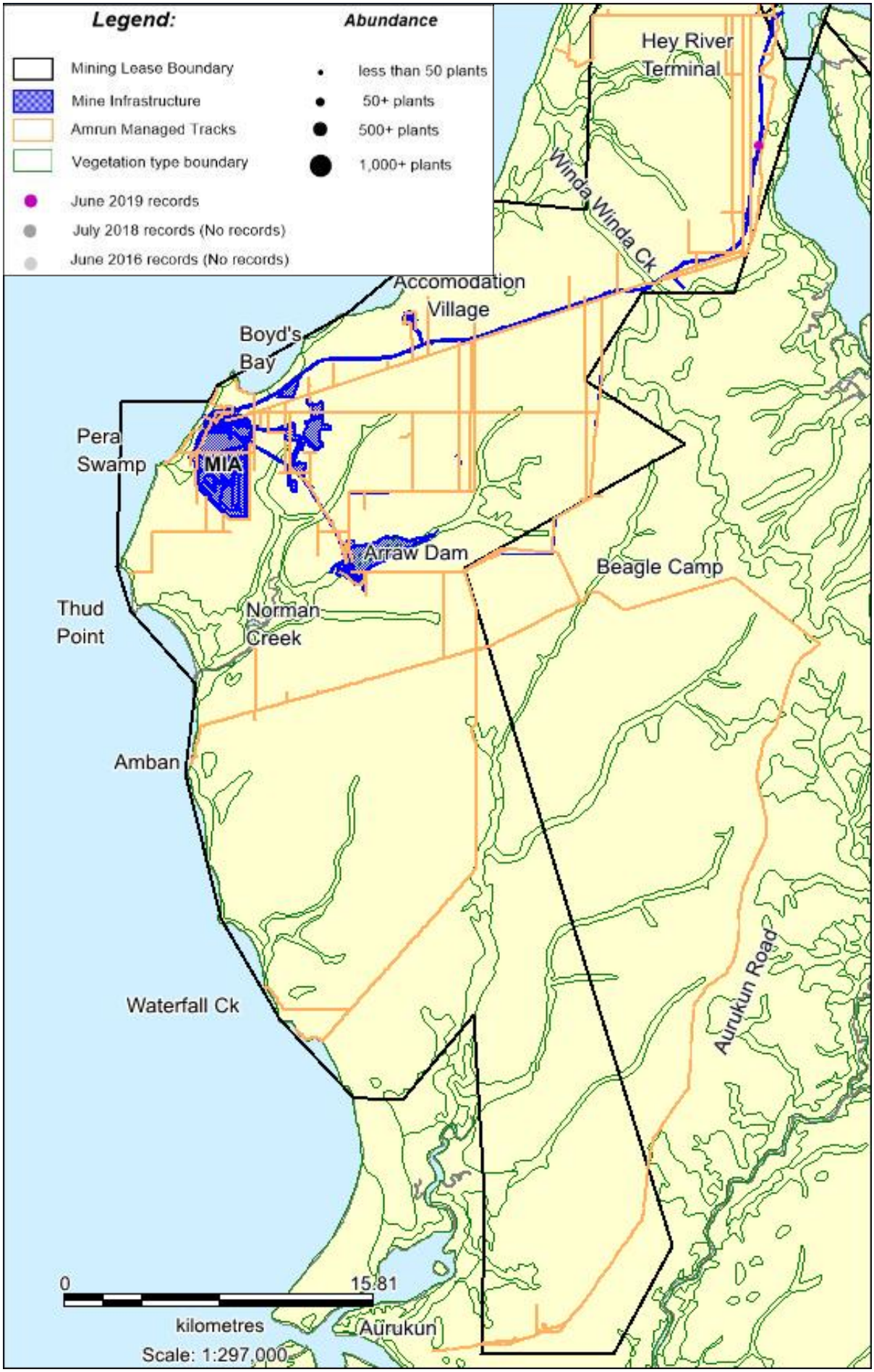

Figure E41 Red Natal grass (*Melinus repens*) occurrence (June 2019)

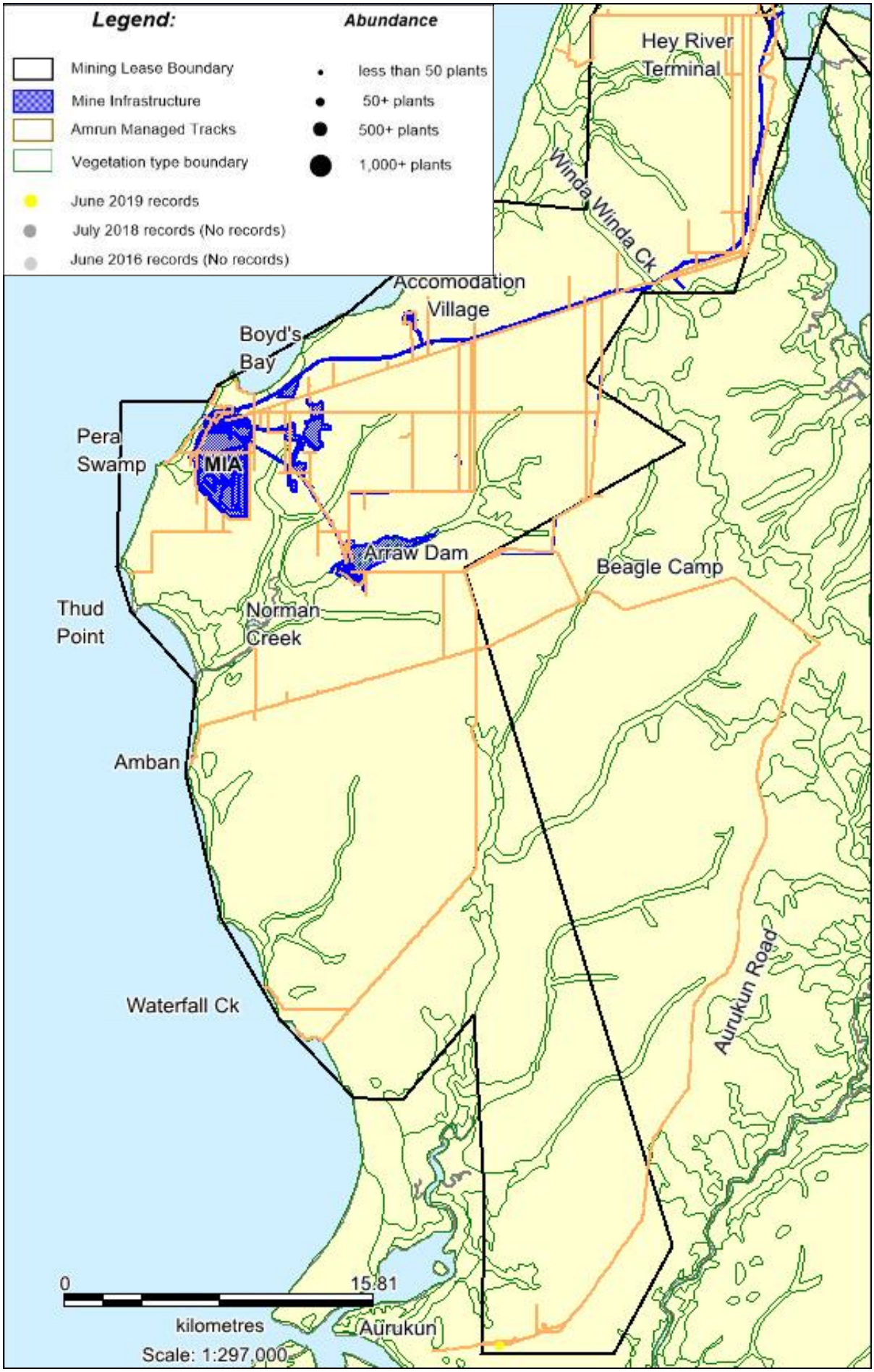

Figure E42 Yellow bells (*Tecoma stans*) occurrence (June 2019)

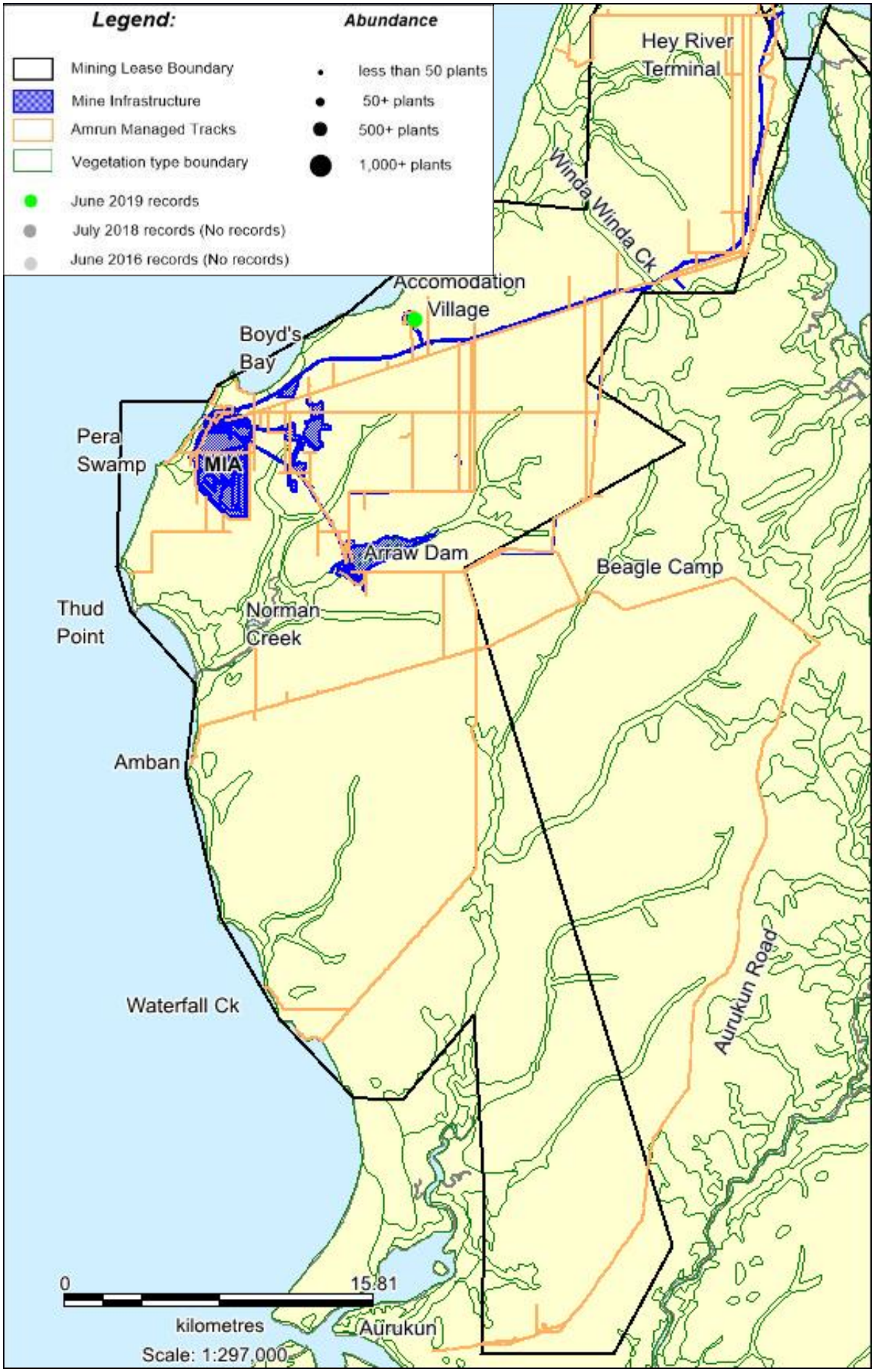

Figure E43 Vasey grass (*Papsaplum urvillei*) occurrence (June 2019)

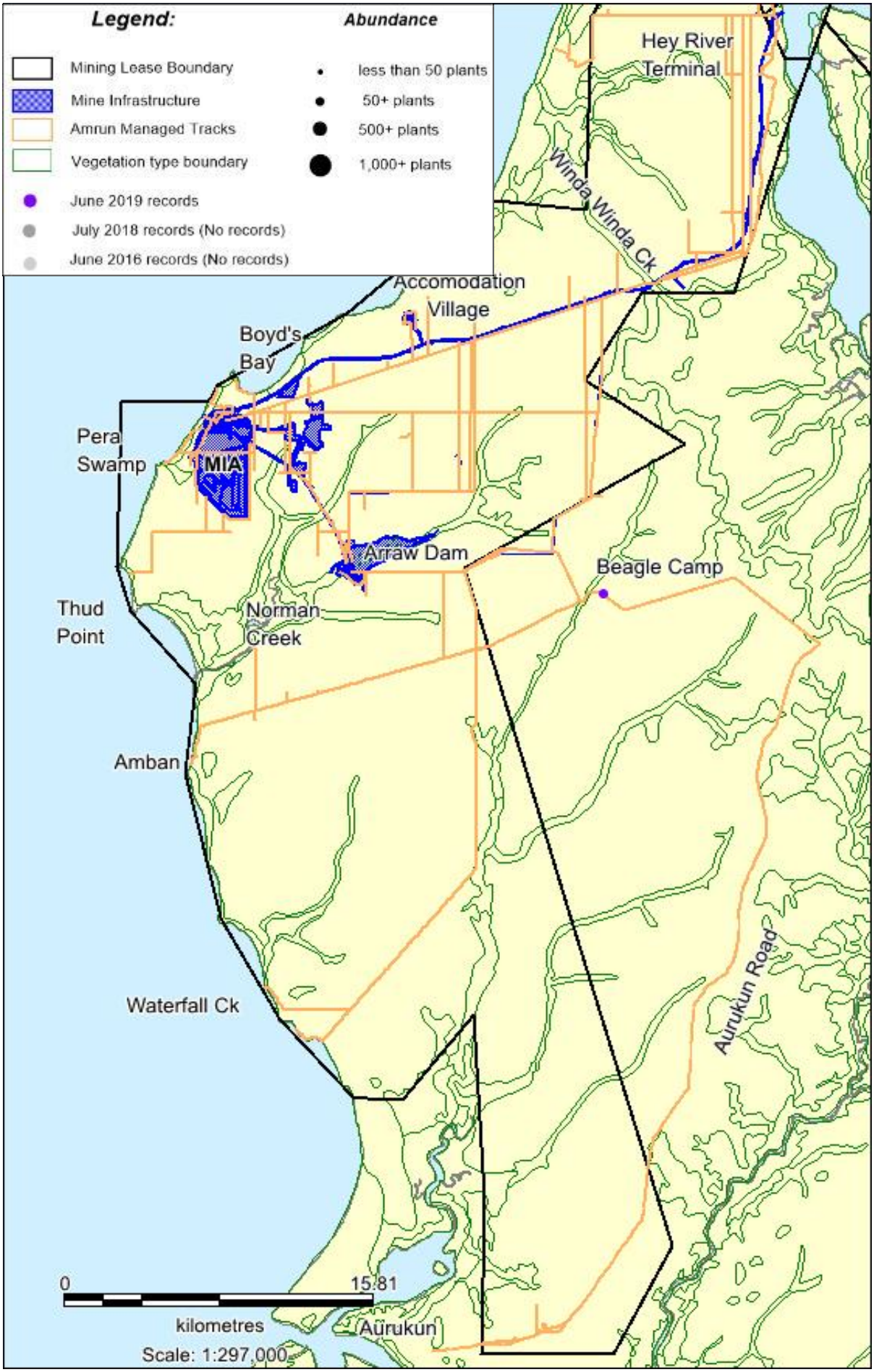

Figure E44 Corky passionflower (*Passiflora suberosa*) occurrence (June 2019)

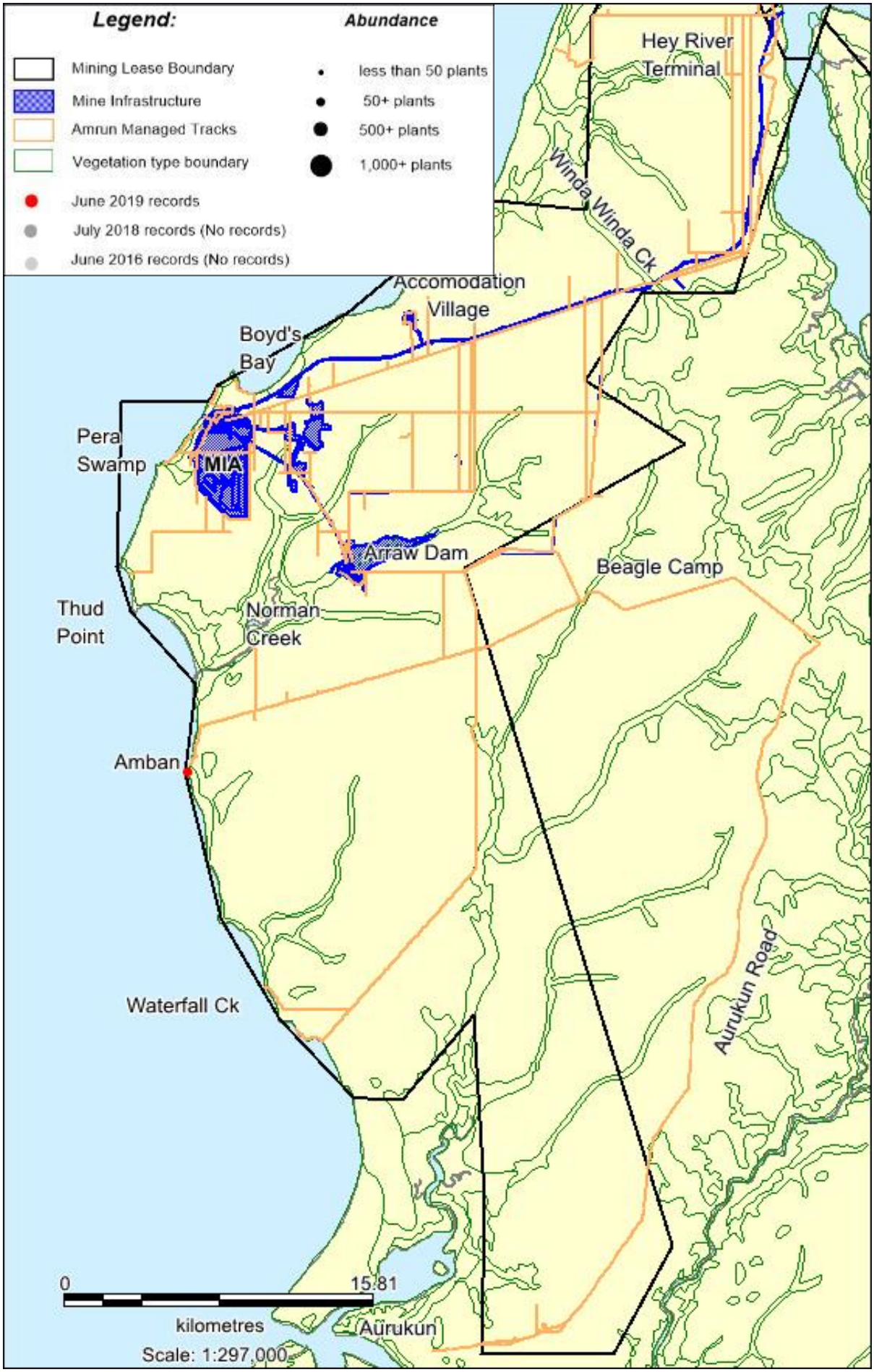

Figure E45 Date palm (*Phoenix dactylifera*) occurrence (June 2019)

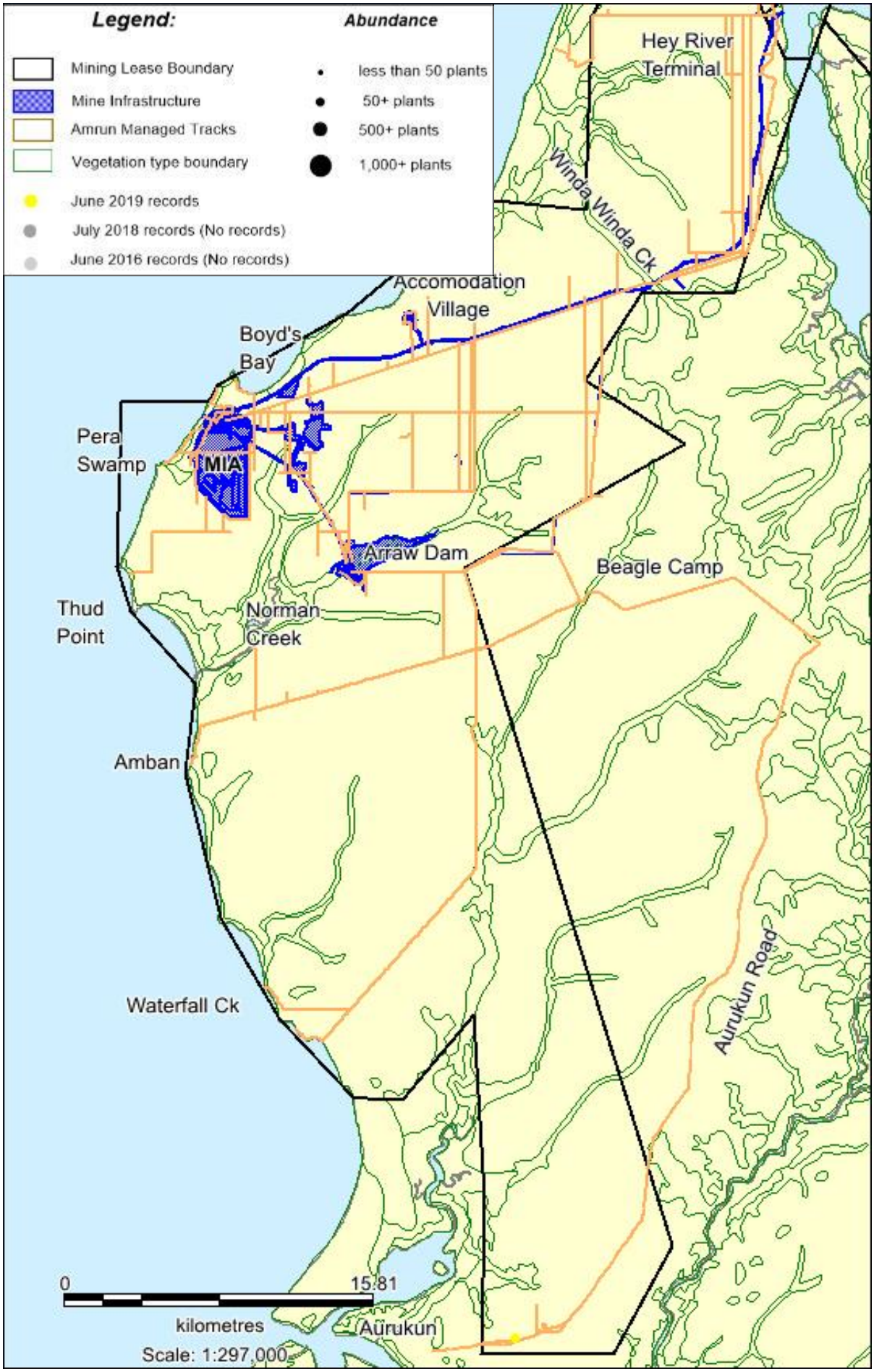

Figure E46 Sicklepod (*Senna obtusifolia*) occurrence (June 2019)

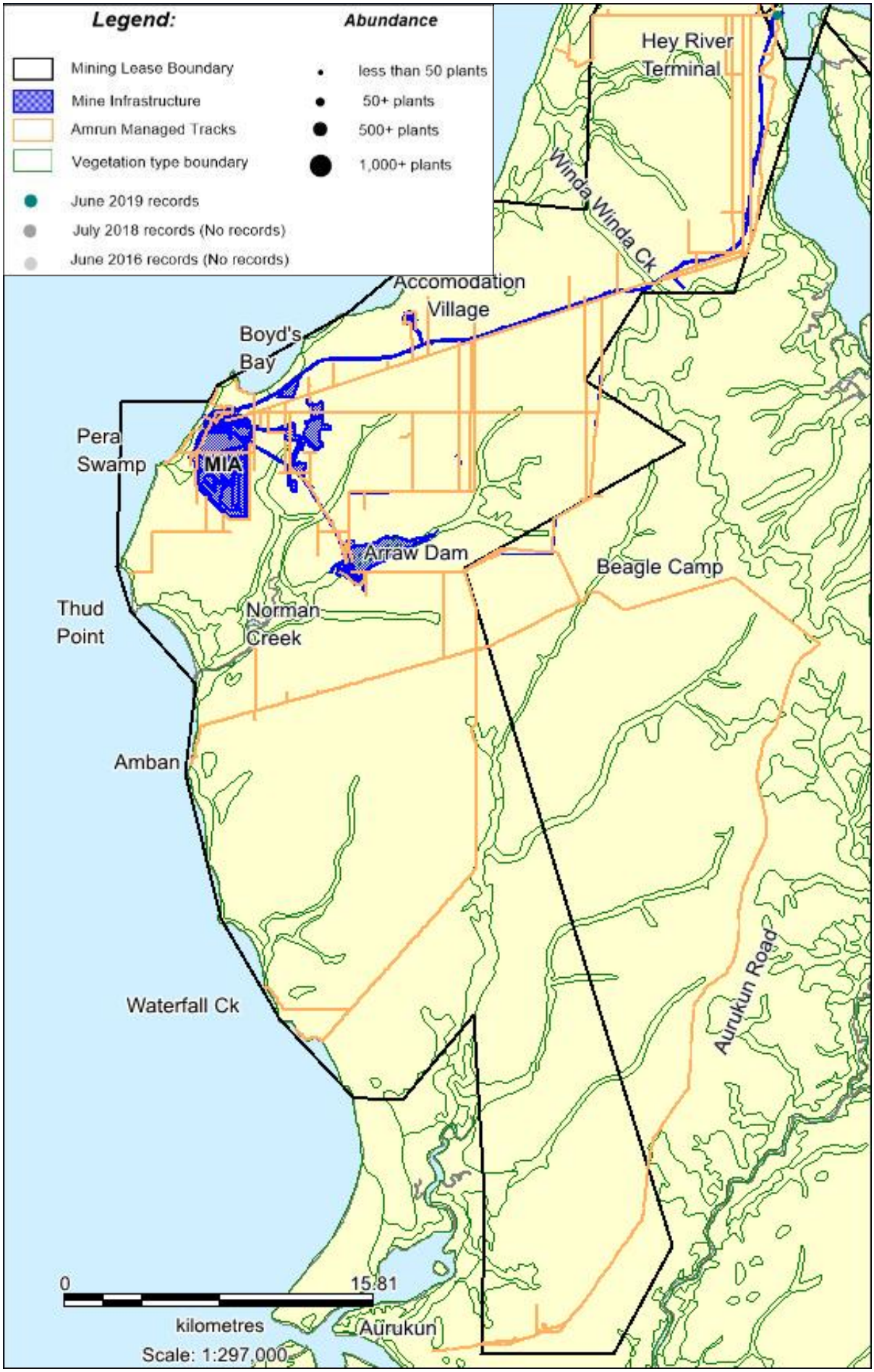

Figure E47 Para grass (*Urochloa mutica*) occurrence (June 2019)

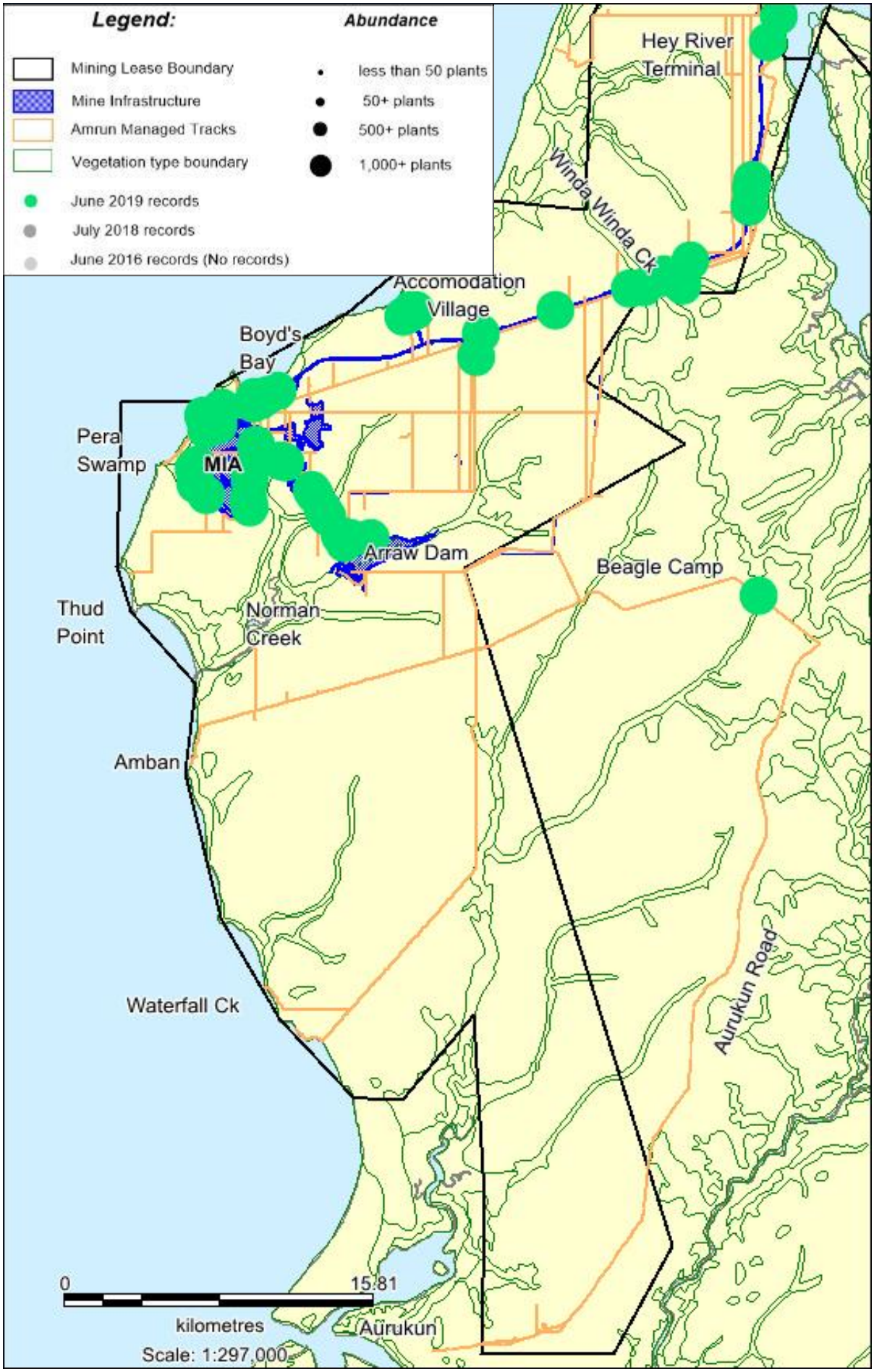

Figure E47 Signal grass (*Urochloa decumbens*) occurrence (June 2019)