

APPENDIX 1. EIS SUBMISSIONS – ISSUES AND RESPONSE TABLE

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.1	Environmental impact		Noting environmental context of proposal. Cape York Peninsula is recognised for its natural heritage values. Global biodiversity crisis including declining faunal populations, particularly in northern Australia.	Noted.
1	Private submitter 1	1.2	Environmental impact	3.10.5, 3.10.6	Document indicates Rio Tinto intends to operate South of the Embley in the same way as existing operations which will result in unacceptable environmental outcomes and will not achieve Rio Tinto's stated Biodiversity goal (i.e. to have net positive impact on biodiversity). Impact could be minimised by minimising physical footprint and improving rehabilitation.	RTA proposes to build on knowledge gained from the existing operations and utilise revegetation methodologies and refine them in the context of SoE (refer Section 3.10.5 of the EIS). On-site revegetation trials would be undertaken to test seeding rates and establishment methodologies for the selected species (refer Section 3.10.6 of the EIS). RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) outlined in Table 3-A of this Supplementary report and in the proposed Environmental Authority conditions contained in the Environmental Management Plan (refer Appendix 3 of this Supplementary report). The rehabilitation strategy for SoE would be confirmed following site specific trials and further stakeholder consultation.
1	Private submitter 1	1.3	Environmental impact	3.4.5, 7.5.1, 7.5.2, Appendix 7B	EIS is comprehensive however some issues have been inadequately dealt with or inaccurate (e.g. Section 3.4.5 uses incorrect vegetation descriptions).	Section 3.4.5 of the EIS (Soil Description) provided information on soils. Some flora species associated with the various soil types are listed, however the section is not intended to provide vegetation community descriptions. <i>Corymbia nesophila</i> should have been listed for Red and Yellow Kandosol soils, not <i>C. clarksoniana</i> . Vegetation in the Project area was mapped using vegetation (land) units defined by Godwin (1985) and Gunness et al. (1987), which are specific to the Weipa area (refer Section 7.5.1 of the EIS). The EIS also contains Regional Ecosystem (RE) mapping, which was undertaken by assigning the existing RE type as defined by the Department of Environment and Resource Management (DERM) that most closely described the vegetation unit identified during field surveys (refer Section 7.5.2 of the EIS). Appendix 7B of the EIS provides a detailed description and photos of the RE's found in the Project area.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.4	Environmental impact	7.2.2	Failure to adequately recognise natural heritage values of Cape York.	Section 7.2.2 of the EIS (Protected Areas, Conservation Areas and Biodiversity Areas) notes the conservation significance of Cape York, including Pera Head and the Hey-Embley Rivers and refers to Abrahams et al (1995) and Mackey et al (2001). Mitigation measures for impacts on terrestrial flora are provided in Section 7.9.2 and Section 7.10.2 of the EIS. Mitigation measures for impacts on terrestrial fauna are provided in Sections 7.17.2, 7.18.2, and 7.19.2 of the EIS.
1	Private submitter 1	1.5	Environmental impact	7.9.2, 7.10.2, 7.17.2, 7.18.2, 7.19.2	Does not adequately address how the impacts on natural heritage values will be mitigated	RTA is not proposing to mine the bauxite cliffs in the Pera Head area. Section 7.2.2 of the EIS identifies the natural heritage values centred on Pera Head identified by Abrahams et al. (1995); specifically the extensive bauxite cliff profile, the very high wilderness quality of 60% of the area, and representative vegetation present in the area including patches of tussock grassland and bare saltpans with a sparse herbland. The EIS (Section 12.2) notes that bauxite cliffs from 7 to 20m high occur along various parts of the coastline, most notably between Boyd Point and Thud Point. The red bauxite overlaying a band of white kaolin clays forms an aesthetically prominent landscape (Abrahams et al. 1995) and reveals the local stratigraphy. The jetty for the proposed port will cross the top of the bauxite cliffs to the north of Pera Head. Field mapping of the Pera Head area shows the area lacks the patches of tussock grassland and bare saltpans with a sparse herbland noted by Abrahams et al. (1995) (refer Figure 7-6a of the EIS). Pera Head is frequented by Traditional Owners, recreational fishers and campers. RTA would work with Traditional Owners and other relevant stakeholders to develop an effective permit system to protect significant cultural heritage sites and environmental values and allow controlled access for recreational purposes to this area. The administration of such a system by Traditional Owners would be subject to discussions between Traditional Owners, RTA and other stakeholders (refer Section 16.3.2 of the EIS).
1	Private submitter 1	1.6	Environmental impact	7.2.2	Specifically, does not adequately address how the impacts on natural heritage values of Pera Head (as identified by Abrahams et al 1995) will be mitigated	

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1	Private submitter 1	1.7	Environmental impact		Specifically, does not adequately address how the impacts on natural heritage values of the Hey-Embley River area (as identified by Abrahams et al 1995) will be mitigated	Abrahams et. al. (1995) identified the eastern section of the Hey-Embley Rivers area as having conservation significance due to the vegetation being among the best examples of their vegetation class (refer Section 7.2.2 of the EIS). The Project area overlaps part of the westernmost part of the Hey-Embley Rivers area but does not include the area identified by identified by Abrahams et. al. (1995) as having conservation significance. A 200m buffer would be established between mining areas and the Hey-Embley River, which is consistent with the Queensland Government's Regional Vegetation Management Code (refer Section 7.9.2 of the EIS). The ferry and barge terminals have also been designed to minimise disturbance where possible. Only 400m ² of mangroves would be disturbed at the Hey River terminal and the Humbug barge terminal and Hornbrook ferry terminal would be located on land that has been previously disturbed.
1	Private submitter 1	1.8	Environmental impact		Specifically, does not adequately address how the impacts on bauxite formations of the west coast (which have been identified as significant for geodiversity by Mackey et al 2001) will be mitigated	Mackey et al (2001) identified four areas with significant geological features on Cape York, all of which are located outside the Project area. Mackey et al (2001) also identified five other areas as warranting further investigation, including bauxite formations on the western coast, including stratigraphic cross sections. Section 12.2 of the EIS notes that bauxite cliffs from 7 to 20m high occur along various parts of the coastline, most notably between Boyd Point and Thud Point. The red bauxite overlaying a band of white kaolin clays forms an aesthetically prominent landscape (Abrahams et al. 1995) and reveals the local stratigraphy. The jetty for the proposed port would cross the top of the bauxite cliffs and the bauxite cliffs would not be mined as a result of the Project.

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1	Private submitter 1	1.9	Environmental impact		<p>Specifically, does not adequately address how the impacts on internationally significant integrity and connectivity of intact tropical vegetation (as identified by Mackey et al 2001) will be mitigated. In particular continuity of intact tropical vegetation cover, and:</p> <ul style="list-style-type: none"> – impact on continuous intact tropical vegetation cover (by catchment) – impact of loss of habitat connectivity on migratory species – impact of habitat loss on fauna in the context of the existing impacts on species. 	<p>The Project would result in the disturbance of 29,658ha of vegetation including approximately 29,366ha of Regional Ecosystem (RE) 3.5.2 which comprises 4.4% and 3.7% of its subregional and bioregional distribution respectively (Refer to Table 7-10(sup.) in this Supplementary report). Mitigation measures for minimising disturbance of vegetation and vegetation continuity are proposed in Section 7.9.2 of the EIS. The proposed vegetation disturbance represents an unavoidable impact of the Project; however, intra and inter catchment habitat continuity would be maintained by the protection of habitat within environmental buffers and within unmined areas of Darwin Stringybark open forest (RE 3.5.2) throughout the Project area.</p> <p>Overall, the migratory species possibly, likely or confirmed as occurring within the Project area predominantly utilise habitats that are located within proposed environmental buffers and would not be directly affected by mining. In particular, trans-equatorial migratory waders utilise coastal and estuarine habitats that would be predominantly unaffected by the Project. The continuity of aquatic and marine habitats utilised by the Estuarine Crocodile would be maintained apart from at Dam C where natural continuity would be affected, although the spillway structure would be constructed to host fish passage which would also provide movement opportunities for Estuarine Crocodile. Habitat continuity for terrestrial migratory species would be maintained within the system of environmental buffer areas and un-mined areas of Darwin Stringybark open forest.</p> <p>Impacts on fauna due to habitat removal would be mitigated by improvements to habitat quality in undisturbed areas of the Project area resulting from improved land management under the proposed fire and feral animal management programs (refer Section 7.10.2 of the EIS). These programs would address the key drivers of habitat degradation currently identified on the Western Cape.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.10	Rehabilitation	3.10.1	The aim for post mining rehabilitation in regional of globally significant intact vegetation should be to establish vegetation that is as similar as possible to the pre-mining vegetation as possible. Rehabilitation goals should include clearly defined biodiversity goals. The end-point criteria should include, as a minimum, establishment of appropriate stem densities of 4 framework species: Eucalyptus tetradonta, Corymbia nesophylla, Erythrophloeum chlorostachys, and Corymbia stockeri. End-point criteria should be established and agreed prior to project approval.	The objective for the rehabilitation of areas disturbed by mining activities would be to establish a self-sustaining vegetation community using appropriate local native tree, shrub and grass species (refer Section 3.10.1 of the EIS). RTA has committed to developing completion criteria within 3 years of the commencement of mining, incorporating results from site-specific SoE rehabilitation trials to ensure they are suited to the specific post-mining landscape at SoE. The criteria would include framework species such as Eucalyptus tetradonta, Corymbia nesophylla and Erythrophloeum chlorostachys, with appropriate stem densities for these species. Corymbia stockeri was present in only 7% of the SoE Project area survey plots. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.
1	Private submitter 1	1.11	Rehabilitation	3.10.6, 3.10.8	Adoption of a formal adaptive management approach including scientifically robust monitoring, reporting and resources until it meets end point criteria. Third party monitoring of post-mining rehabilitation and public disclosure of results.	The proposed rehabilitation monitoring program is described in Section 3.10.8 of the EIS. The results of the monitoring would be used to refine and adapt the rehabilitation techniques employed. On-site revegetation trials would be undertaken to test selected species, seedling rates and establishment methodologies (refer Section 3.10.6 of the EIS). Rehabilitation monitoring and reporting requirements will be defined in the Environmental Authority. Refer also to the response to issue 1.2.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.12	Rehabilitation		Report is generally evasive about post-mining ecological outcomes. After 50 years of mining at Weipa, there are no agreed endpoint criteria and little is known about the success of rehabilitation for both flora and fauna. My research indicates that rehabilitation has been unable to achieve acceptable rehabilitation outcomes.	RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques required to routinely achieve this at the existing operations. Specific completion criteria for the various post-mining domains at the existing operations are being developed in accordance with the requirements of the recently issued Environmental Authority for existing operations. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.
1	Private submitter 1	1.13	Environmental impact	20.7.1	Cumulative impact does not take into account existing disturbance on Weipa plateau.	The cumulative impact section of the EIS includes information on clearing associated with current mining operations, the SoE Project, and available information on the former Aurukun Bauxite Project and Cape Alumina Project proposed in the Weipa region (refer Section 20.7.1 of the EIS).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.14	Rehabilitation		Disagree with direct seeding as being best method for revegetation. Direct seeding favours establishment of large seeded species (e.g. Acacia rather than Eucalyptus species) leading to domination of rehabilitation by species that do not survive fire as individuals but as seeds. Research is needed to determine the most efficient methods for successful establishment of suitable densities of dominant local tree species.	Earlier rehabilitation establishment techniques were influenced by agronomic approaches which advised that high-proportions of nitrogen-fixing "pioneer" species, such as Acacias, were the best way to 'jump start' rehabilitation development. Many tropical Australian experiences (including Weipa and Groote Eylandt) have since shown that at the high densities established in the past, these aggressive species can prevent the subsequent establishment of preferred native species at anything near natural proportions. It has been found at Weipa (and other sites) that reducing Acacia seed quantities in the seed mix and ensuring inclusion of appropriate seed rates of other target species enables appropriate densities and proportions of target species to become established. Recent experience at Weipa and at a very similar site (Gove) clearly demonstrate that establishment of Eucalyptus and other native genera from seed is achievable.
1	Private submitter 1	1.15	Environmental impact	7.9.2	Proposed environmental buffer system is inadequate. Recommend minimum buffer width of 500m be adopted for streams (order 5) wetlands, riparian zones and vine forests. Clarification on definition of vegetation boundary is required as is the minimum size of recognised vegetation communities. In the past "small areas" of vine forest were not considered sufficiently large to be recognised as vine forest. Table 7-11 should list the width of the environmental buffer for each vegetation community.	The proposed environmental buffer system would exceed the minimum requirements of the Queensland Government's Regional Vegetation Management Code as they relate to clearing set-back distances from watercourses and wetlands (refer Section 7.9.2 of the EIS). Section 7.11.1 of the EIS states "Observations over a number of years of similar vine forest areas within other mining areas near Weipa suggest deleterious effects on vine forest communities have not occurred where appropriate environmental buffers have been implemented. It is anticipated there would not be any adverse impacts on threatened flora occurring within vine forest patches from Project-related disturbance." The Land Unit descriptions of Godwin (1985) and Gunness et al. (1987) were used as the basis for identifying vegetation boundaries, with the characteristic landform, soil and floristic features described for each land unit used to determine vegetation boundaries during field surveys. The threshold size for mapping land unit occurrences was 0.1ha (approximately equivalent to 30m x 30m). Any patches under this size were mapped with adjoining land unit polygons.

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1	Private submitter 1	1.16	Environmental impact	7.6.4, 7.10.2	Inaccuracy in discussion on weeds including (a) incomplete listing of weed species already established at Weipa and (b) lack of recognition of their invasiveness. Neem is of particular concern.	<p>Section 7.6.4 of the EIS identifies weed species that pose the greatest risk to the Project area in terms of alteration of natural habitat and therefore represent species particularly relevant to assessment of potential impacts. These species could become established if weed propagules enter the Project area. All of the species mentioned in the submission have been identified as threats in Section 7.6.4 of the EIS. Leucaena was identified as a significant weed species in the northern Cape York Peninsula region (page 7–45 of the EIS), however it, together with Neem, were omitted from the Weipa Region list (page 7–44 of the EIS). Neem was identified on page 7–44 of the EIS.</p> <p>The weed prevention and management program for the Project is discussed in Section 7.10.2 of the EIS and includes a commitment to the development of a weed management program comprising monitoring and control components that would be developed and implemented to prevent impacts on undisturbed vegetation. The main focus of the weed management program would be early detection and early control of any weed invasions and under this approach the establishment of particularly invasive species such as gamba grass in undisturbed areas is not anticipated. The invasion into undisturbed areas is not anticipated provided appropriate control measures are implemented (refer Section 7.10.1 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.17	Environmental impact	7.9.2, 7.18.1	Research has indicated that palm cockatoos have a low reproductive rate on the east coast of Australia. Project should aim to minimise impact to breeding success and mortality of palm cockatoos including increasing buffers to 500m.	<p>Palm Cockatoos are known to occur in the Project area, including within riparian rainforest of the Dam C footprint. Darwin Stringybark open forest habitat represents peripheral habitat to the main habitat areas for these species, which comprise riparian, wetland and vine forest habitats, although the species is also known to nest in eucalypts close to main habitat types. Under the environmental buffer system proposed in the EIS (refer Section 7.9.2), most of the main areas of habitat for the Palm Cockatoo (i.e. wetlands, riparian gallery, vine forest) would be buffered and retain peripheral areas of Darwin Stringybark open forest habitat adjacent to these key habitat areas. Also, variations to environmental buffer widths are proposed to accommodate important locations of threatened flora and fauna and in the case of the Palm Cockatoo buffers could be tailored to protect identified nests in Darwin Stringybark open forest areas. Under the proposed buffer system none of the key habitats for the species would be affected by mining; consequently, long-term impacts on the species related to development of the mining area are not anticipated (refer Section 7.18.1 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.18	Environmental impact	7.17.2	<p>It is misleading to use species count data as an indicator of faunal recolonisation of mine rehabilitation. Recent research has indicated that post-mining rehabilitation at Weipa results in habitat conversion, not in habitat restoration. 30% of bird species recorded in pre-mining native forest did not occur in mine rehabilitation. Many of these species are of conservation concern (great frigatebird, lesser frigatebird, varied sittella, square-tailed kite, grey goshawk, grey-crowned babbler, brown treecreeper, red-tailed black cockatoo, radjah shelduck, palm cockatoo, channel-billed cuckoo and oriental cuckoo. of the 55 bird species recorded, 40% were significantly more abundant in native forest and only partially used mine rehabilitation.</p>	<p>Section 7.17.2 of the EIS provides a general assessment of the anticipated effectiveness of post-mining rehabilitation in accommodating the pre-disturbance fauna community and states that rehabilitated areas are unlikely to support an equivalent diversity of fauna species as found in pre-mining habitats unless the full range of micro-habitats were developed in the long term. For example, it would take many years for certain micro-habitats such as tree hollows to develop in rehabilitated areas. Monitoring of fauna communities in rehabilitated bauxite mine areas near Weipa indicates that a majority of pre-disturbance fauna would re-occupy the rehabilitated areas but a number of species are either absent or under-represented in rehabilitated areas (Winter and Alford 1999, Reeders and Morton 1983). In addition, there is evidence (Winter and Alford 1999, Reeders and Morton 1983) that rehabilitated areas may be used by many species as a component of an overall habitat suite that must also include undisturbed habitat areas, or that rehabilitated areas are annually recolonised by individuals (particularly frogs) from nearby undisturbed areas. This includes species of conservation concern.</p> <p>Overall Section 7.17.2 of the EIS was not intended as a detailed review of fauna in rehabilitation, but uses the species diversity data in Table 7-20 as a simple indication of how fauna communities in rehabilitated areas are unlikely to be the same as pre-disturbance communities, and that consequently, other mitigation measures in addition to rehabilitation are required (including retention of environmental buffers).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
1	Private submitter 1	1.19	Environmental impact	Table 7-5	<p>Impacts should be mitigated by minimising footprint and offset through a formal agreement to support a transparent and scientifically robust conservation planning process leading to a protected area network for the Weipa Bauxite Plateau.</p> <p>Does not address the location of impacted vegetation in the context of the location of protected areas of similar habitat. There is no protected area network on the Weipa bauxite plateau or north west coast of Cape York Peninsula. There is a need to establish a protected area network that (a) protection for all habitat types (b) distribution of a range of vegetation types at a range of scales (c) retaining integrated vegetation mosaics (d) habitat needs of local fauna.</p>	<p>The Queensland Parks and Wildlife Service is responsible for identifying and recommending areas as suitable for inclusion in the protected area network. If all criteria are met and the recommendation is accepted the area is declared under the <i>Nature Conservation (Protected Areas) Regulation, 1994</i>.</p> <p>Table 7-5 of the EIS provides details of all Regional Ecosystems (RE) identified in the Project area, including whether each RE is represented in reserves or Protected Areas in the Cape York Bioregion. The Darwin Stringybark RE (3.5.2) is represented in the Jardine River and Mungan Kandju National Parks (26,400ha in total, Sattler and Williams 1999). The majority of the Mungan Kandju National Park is within the Weipa Plateau subregion.</p>
1	Private submitter 1	1.20	Socio-economic		<p>Disagree with the way consultation has been presented in EIS. Process was a one-way process of providing information. Information provided about rehabilitation was misinformation. My attempts to follow up inaccuracies were ignored. Hence, any support given by community is based on misinformation.</p>	<p>Section 15 of the EIS describes the consultation program undertaken throughout the development of the Project. Section 16 of the EIS describes how the issues raised have been addressed. RTA disagrees that consultation has been a “one-way process”. This is demonstrated by the Project changes that have been made in response to community concerns, such as the removal of a proposed water supply dam on the Ward River. RTA has committed to the preparation of a Stakeholder Engagement Plan as part of the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).</p>
2	Private submitter 2	2.1	Other		<p>Weipa operations have breached the Agreement Act (1957) and cannot be trusted.</p>	<p>Due enquiry indicates that RTA Weipa Pty Ltd and Rio Tinto Aluminium Limited have not been the subject of any proceedings under a Commonwealth or State law for the protection of the environment. ML7024 was granted in 1958 pursuant to the <i>Commonwealth Aluminium Corporation Limited Agreement Act, 1957</i>. RTA Weipa maintains an Environmental Management System certified by an independent third-party to ISO14001. This system facilitates environmental monitoring and review of compliance with regulatory requirements, as well as driving continuous improvement.</p>

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2	Private submitter 2	2.2	Other		Recommend that the Coordinator General make contact with the Crime and Misconduct Commission and also the Premier's office regarding alleged culture of misconduct in the Mines Department.	Noted, not relevant to SoE Project.
2	Private submitter 2	2.3	Rehabilitation		Huge areas of mining open and not rehabilitated at any time. Regeneration of mined areas at Weipa appears largely to have failed. Provide, as soon as possible, a detailed regeneration plan, to bring more certainty to regeneration and lease-relinquishment outcomes.	Refer to responses 1.10 and 1.14. RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques to routinely achieve this. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.
2	Private submitter 2	2.4	Infrastructure area		The marine ecosystem is endangered by the close proximity of massive quantities of mine tailings in potentially unstable containment structures. Has a trust fund been set up for on-going maintenance of the tailings structures? Compliance with Corporations Act for accounting standards for making appropriate provisions.	The stability of tailings storage facilities at Weipa is regulated by the Department of Environment and Resource Management (DERM) in accordance with the Environmental Authority. Financial provisions are determined in accordance with DERM requirements through the Plan of Operations. In addition, internal provisioning is addressed in accordance with Rio Tinto Closure Planning requirements. It should also be noted that bauxite tailings are non-hazardous (refer to Section 13.3.4 of the EIS).
2	Private submitter 2	2.5	Environmental impact		Pollution of Embley and Mission Rivers	Water quality is regulated by the Department of Environment and Resource Management (DERM) through the Environmental Authority.
2	Private submitter 2	2.6	Other		Poor track record of other Rio operations in the region.	Comment noted, not relevant to the SoE Project EIS.
2	Private submitter 2	2.7	Other		Betrayal of trust	Comment noted.

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2	Private submitter 2	2.8	Other		Who is Queensland Minister responsible for ensuring compliance? What professional staff does the Minister have to delegate authority to for regulation of environmental obligations?	The current Minister for Environment is the Hon. Vicky Darling.
2	Private submitter 2	2.9	Other		Provide, every two years, an environmental review of monitoring and regeneration data to the Queensland parliament.	The requirements to provide environmental data to the Department of Environment and Resource Management (DERM) are set out in the Environmental Authority. Such data is provided to the administering authority, DERM.
2	Private submitter 2	2.10	Other		There should be no decision made by the Queensland government, re this approval application, until after the next Queensland election, and after a new Parliament is formed.	Comment noted.
3	Weipa Town Authority	3.1	Other		Supports the SoE Project and acknowledges benefits the project will bring Weipa and the Western Cape Region.	Noted.
3	Weipa Town Authority	3.2	Socio-economic		Weipa should transition to a self-governing local authority during this time. Weipa is the Regional Centre of Cape York for mining, government and business services. Weipa has a town area of 1,200ha and 3,500 people. Home ownership exceeds 80% of the total 1300 residential dwellings. While RTA is the major employer there are approximately 450 State and Federal Government employees in Weipa. Since 2008, WTA has progressively aligned itself with the Local Government legislation. In 2009, WTA, RTA an the State Government agreed to pursue the issue of self-governance.	Noted. Outside scope of the SoE EIS.

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3	Weipa Town Authority	3.3	Socio-economic	16.2.1	The population projections in the EIS indicate only a minor increase in population on the 2006 figures into the future. This is clearly based on RTA's mining operations with no other industries operating in the region. External factors can impact the demographics (e.g. improvement of the PDR and the State and Federal Government's regional and national priorities).	The population estimates provided in Section 16.2.1 of the EIS have been made using the population multiplier determined from the relationship between population at the time of the 2006 Census and RTA's overall workforce numbers. RTA is by far the dominant local employer and the size of the mine-related workforce is the key driver of the residential population. It is noted that external factors such as the use of the RAAF Scherger base by the Commonwealth to house detainees can arise. A recent external factor reducing accommodation in Weipa has been the introduction of about 200 Commonwealth staff and contractors to support the operations of a new Detention Centre at the Scherger RAAF Base. This has resulted in shortage of accommodation for tourists and regular contractors and increased pressure on services and infrastructure. RTA proposes to build an additional 200 bed SoE contractor camp adjacent to Nanum to avoid placing further pressure on accommodation. RTA have received development approval from the Weipa Town Authority to proceed with the development of a new residential housing area, Golf Links Stage 2, including 50 detached blocks plus 150 townhouse sites. RTA has also committed to undertake capital works to upgrade the town water infrastructure in 2012, to be completed prior to construction of housing on these blocks.
3	Weipa Town Authority	3.4	Socio-economic		Opportunity to enhance local tourist industry from RTA's ferry and barge terminals. The sharing of these assets for public and other use could enhance the tourism industry (e.g. the establishment of a marina facility and maybe a passenger. vehicle ferry to Gove and Darwin). Infrastructure to support the industry would need to be developed, but this could form part of the Government's Regional or National Plan.	North Queensland Bulk Ports is responsible for safe operations of public facilities within the Port of Weipa. RTA does not propose to build a public marina facility.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
3	Weipa Town Authority	3.5	Socio-economic		DIACs presence at the RAAF Scherger base has meant an additional 200 staff and contractors are occupying accommodation normally reserved for tourists, contractors and consultants. Although many businesses are enjoying the increased numbers this is matched by a fair degree of frustration by the community. Apart from RTA's operations the Weipa community is not positioned, nor does it have sufficient infrastructure, to support additional industries or operations the size of Scherger.	Refer to response 3.3. RTA acknowledges that the Weipa Town Governance and community services and infrastructure are important to the WTA. RTA is currently working with the WTA through the Weipa Town Governance Working Group and the Scherger Detention Centre Community Consultative Committee on these matters. The Commonwealth Government did not undertake any consultation with RTA with regard the provision of town services prior to the use of the RAAF Scherger base to house asylum seekers. It is currently not clear whether Scherger will be used as a detention centre on a permanent basis.
3	Weipa Town Authority	3.6	Socio-economic	16.2.1, 16.3.11	The EIS highlights the Town boundaries can be expanded when required. The expansion of boundaries is a lengthy process, however once achieved the boundary issue would not have to be revisited again. Apart from Golf Links Stage 2 there are no large tracts of land suitable for residential development. Additionally there is no rural residential, industrial tourist commercial and entertainment, community or special use or retail/commercial land suitable for development in the existing boundary. This limits Weipa's development and continues to inflate the economy. The neighbouring indigenous communities and non-mining employees are the most effect by an inflated economy.	The EIS does not predict a significant increase in population until such time that production increases above 30Mdtpa (Sections 16.2.1 and 16.3.11). It is not currently possible to predict when market conditions would enable SoE production to increase above 30Mdtpa, however it is likely that this would be a number of years in the future. RTA has committed to seek approval for adjustment of the town boundary and development of additional housing when required (refer Section 16.3.11 of the EIS). A Housing and Accommodation Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads- Assets and Operations	4.1	External transport infrastructure	14.1.6	<p>The EIS identifies during construction phase an increase in Peninsula Developmental Road (PDR) and Aurukun Road traffic volumes of an additional 20 vehicle trip ends (vte) per day prior to the establishment of the barge terminals and a maximum of 16 vte per day thereafter. The PDR and Aurukun Rd are gravel and the increase in traffic volumes is likely to impact on the safety and efficiency of the PDR. When further information is available on vehicle types and numbers, RTA must produce a revised road impact assessment (RIA) in accordance with the <i>Guidelines for Assessment of Road Impacts of Development</i> (2006) in consultation with the Manager of the DTMR Far North Regional Office. The revised RIA must be reviewed and approved by the manager of the DTMR Far North Regional Office prior to construction. In addition RTA must prepare a road-use management plan (RMP) which must update and summarise the use of the PDR and other roads during each phase of the project and must include: the latest traffic generation; finalised assessment of impacts on safety and efficiency of the PDR and PDR-Aurukun Rd intersection; and impact mitigation strategies such as maintenance and improvements. RTA must commit to undertaking/funding all necessary mitigation strategies, and any mitigation strategies in the state-controlled road reserve of the PDR must be approved by DTMR in accordance with the <i>Transport Infrastructure Act</i>.</p>	<p>Table 14-3 of the EIS provides the calculated peak trip generation between Weipa and the Project area during construction. Calculated average daily traffic on the PDR and Aurukun Road during construction are shown in Table 14-6 of the EIS. However, as a result of further investigative works, these figures have been recalculated to include additional aggregate from the Archer River quarry and are presented in Section 14.1 of this Supplementary report.</p> <p>The methodology for assessment of the Project's traffic and transport elements presented in Section 14.1.6 of the EIS considers the requirements of the Guidelines for Assessment of Road Impacts of Development (GARID) and the Road Planning and Design Manual. By following the guidelines stipulated within GARID, development generated impacts can be identified and managed, as required by the <i>Transport Infrastructure Act, 1994</i>. Mitigation measures associated with traffic and transport are presented in Section 14.1.7 of the EIS.</p> <p>In the EIS, RTA have committed to monitoring the road condition and repairing any damage to the PDR or Aurukun Road resulting directly from project-related haulage (refer Section 14.1.7 of the EIS). In consultation with the Manager of the DTMR Far North Regional Office, RTA will prepare a road impact assessment (RIA) and a road use management plan (RMP).</p>
4	Department of Transport and Main Roads- Assets and Operations	4.2	External transport infrastructure	14.1.7	<p>Increase in traffic volumes along the PDR and Aurukun Rd will increase the traffic risks associated with reduced visibility due to dust. RTA should consider additional dust mitigation strategies such as the use of water trucks for the PDR between the Archer River Quarry and Aurukun Rd intersection as part of the RMP. Mitigation strategies should be developed in consultation with the DTMR Far North Regional Office and in accordance with the <i>Transport Infrastructure Act</i>.</p>	<p>In consultation with the Manager of the DTMR Far North Regional Office, RTA will prepare a road use management plan (RMP) based on Section 14.1.7 of the EIS. Any mitigation measures for the state-controlled road reserve of the PDR would be submitted for approval by the DTMR Far North Regional Office prior to construction.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads- Rail, Ports and Freight	4.3	Port/shipping	1.9	Table 1-2 states harbour works are authorised under the <i>Comalco Agreement Act</i> . Provide advice on which sections of the <i>Comalco Agreement Act</i> negate the need for Sustainable Planning Act approvals for port facilities. As this is a State Significant project, development approvals for harbour works would be required under the <i>State Development and Public Works Organisation Act 1971</i> ?	<p>Mining Lease 7024 was granted for several purposes, including for the purpose of constructing any harbour works. The <i>Comalco Agreement Act</i> (given the force of law by the <i>Commonwealth Aluminium Corporation Pty Limited Agreement Act, 1957</i>) contains provisions with respect to harbours, in particular, in clause 37 of the Agreement which expressly authorises the construction of harbours and harbour works in or adjacent to the “bauxite field” (an area designated in the Agreement, which includes all land within ML 7024).</p> <p>Upon commencement of the <i>Mineral Resources Act, 1989</i> (MRA), Comalco (now RTA) was deemed by the transitional provisions in the MRA to hold ML 7024 subject to the provisions of both the MRA and the Comalco Agreement Act. Importantly, under section 319 of the MRA, the <i>Sustainable Planning Act, 2009</i> (SPA) does not apply to development authorised by the MRA.</p>
4	Department of Transport and Main Roads- Rail, Ports and Freight	4.4	Port/shipping	2.5.3, 2.6, 14.4.5	<p>The EIS states that “Capacity (at the port) may be provided for third parties following agreement on suitable commercial terms”. RTA should undertake to provide capacity for third party shipments subject to negotiation and agreement on commercial terms. Section 2.6 Port facility and Shipping should state “The proposed port, stockpile and shipping facilities will be developed to enable third party shipments. The provision of third party access and shipment however will be subject to negotiation and agreement on suitable commercial terms”.</p>	<p>The stockpile facilities have been designed by RTA so as not to preclude a third party developer from the construction and operation of an additional stockpile, stacker, reclaim, and conveyor. Expansion of the stockpile area could be carried out by a third party, if a suitable commercial agreement is reached with RTA and port capacity is available. Stage 1 of the wharf would be designed and constructed by RTA to permit a future extension to provide additional berths. The proposed port facility would not preclude expansion for a third party, if a suitable commercial agreement were reached between the third party and RTA and subject to the additional capacity not being required by RTA. This information is also discussed in Section 2.6 of this Supplementary report.</p>
4	Department of Transport and Main Roads- Maritime Safety Queensland	4.5	Port/shipping	2, 13, 14	<p>Maritime Safety Queensland (MSQ) has developed guidelines for major development proposals which specify the minimum information required by MSQ to evaluate significant development proposals. The preferred format for presentation of this information is through the development of management plans for:</p> <ul style="list-style-type: none"> – vessel traffic management – aids to navigation – ship-sourced pollution prevention 	<p>The information presented in Section 2, 13 and 14 of the EIS would be used to prepare the relevant management plans in accordance with the “Maritime Safety Queensland (MSQ) guidelines for major development proposals (Sept 2010)”. These plans would be developed in consultation with MSQ prior to construction commencing.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.6	Port/shipping	2.3.1, 14.4	<p>RTA should identify the locations and arrangements for the safe mooring of construction craft and dredging plant during the construction phase.</p> <p>Appropriate mooring arrangements and/or procedures should be employed to mitigate risk during extreme weather events.</p> <p>RTA should prepare, for MSQ endorsement, a CycloneContingency Plan for the construction and operating phase</p>	<p>The locations and arrangements for severe weather mooring of construction craft and dredging plant would be provided to Maritime Safety Queensland (MSQ) prior to construction commencing. This commitment is included in the Supplementary report's Summary of Commitments (refer Appendix 2).</p> <p>Marine aspects of the Emergency Management Plan would be developed for the Project in consultation with MSQ and include mooring arrangements and procedures to mitigate risks during cyclones during construction.</p>
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.7	Port/shipping	2.6.1, 14.4	<p>Lack of clarification on the provision of Aids to Navigation. RTA will prepare an Aids to Navigation Management Plan (ANMP) in consultation with MSQ and the Regional Harbour Master (RHM). The ANMP should identify what Aids to Navigation are required to ensure safe vessel movements through the construction and operational phase.</p> <p>RTA must commit to cover any cost to MSQ associated with implementing the ANMP for the SoE Project.</p>	<p>The information presented in Section 2, 13 and 14 of the EIS would be used to prepare the relevant management plans, including the Aids to Navigation Management Plan (ANMP), in accordance with the "Maritime Safety Queensland (MSQ) guidelines for major development proposals". These plans would be developed in consultation with the MSQ and the Regional Harbour Master (RHM). The ANMP would include commitments regarding covering costs to MSQ associated with implementing the ANMP.</p>
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.8	Port/shipping	2.6.1, 14.4	<p>Clarification required on Pilotage and Port Rules.</p> <p>RTA should note that the movement of vessels at the proposed port and surrounding waterways will be subject to Port Procedures and Information to Shipping documentation.</p>	<p>The movement of vessels at the proposed port and surrounding waterways would be subject to "Port Procedures and Information to Shipping" documentation.</p>
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.9	Port/shipping	2.6.2, 14.4.6	<p>The EIS should describe MSQ's role as the regulator of shipping in Queensland waters. In particular the EIS should note that MSQ regulates the movement and mooring of ships in Queensland waters.</p>	<p>Maritime Safety Queensland's (MSQ) role as the regulator of shipping in Queensland waters is noted, and in particular that MSQ regulates the movement and mooring of ships in Queensland waters.</p>
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.10	Port/shipping	2.8, 3.10.9	<p>RTA should further identify detailed plans for the eventual decommissioning of the site.</p>	<p>Decommissioning and closure is described in Section 3.10.9 of the EIS. This section notes that the Port and other facilities may have some ongoing beneficial use and, that subject to agreement with relevant regulators and Traditional Owners, some of these facilities would be left in place following closure. The decommissioning plans for the Port would be detailed in a Final Rehabilitation Report, as required under the <i>Environmental Protection Act, 1994</i>.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.11	Port/shipping	13	The EIS should note that the MSQ requires that all ship-sourced pollutants associated with the project and the operation of the facility are managed through a Ship-Sourced Pollution Prevention Management Plan (SSPPMP) in accordance with Queensland legislative requirements. In developing the SSPPMP in consultation with MSQ and the RHIM, RTA should provide descriptions of the design and operation of appropriate ship-sourced waste reception facilities including sewage pump-out and treatment, as well as other facilities for the reception of garbage, recyclable materials, quarantine waste and oily water as generated by vessels during the construction and operation phases of the facility.	Refer to response to 4.5.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.12	Port/shipping	13.3.8	Tables 13-1 and 13-2 make no reference to ship-sourced waste or disposal techniques. Tables 13-1 and 13-2 should include references to ship-sourced waste or disposal techniques.	Table 13-1 of the EIS relates to the construction period of the Project. There would be no bulk carriers generating ship-sourced waste during the construction period of the Project. Ship-sourced waste from any vessels delivering construction materials is anticipated to be minor in volume and would be managed through the existing Weipa waste management system. The second last row in Table 13-2 of the EIS lists volumes of ship waste expected to be generated under each production scenario of the Project. The 13 th row in Table 13-2 of the EIS describes the Sewage Treatment Plant solid waste and residues (sludge) generated from various sources, including ships. Ship waste disposal is described in Section 13.3.8 of the EIS.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.13	Port/shipping	13.3.8	<p>The EIS states that “Weipa does not currently have any facilities for treatment of waste that does not meet the AQIS requirements, therefore any of this type of waste would need to be stored on the ship in a sealed area and disposed of at another port or outside Australian waters...”</p> <p>The EIS should clarify whether RTA intends to provide waste treatment facilities that meet AQIS requirements and if not, how does RTA intend to manage waste treatment?</p> <p>Reference to “Transport Operations (Marine Pollution) Regulation 1995” is incorrect and should be 2008.</p>	<p>The sentence contains a typographical error and should read “Weipa does not currently have any facilities for treatment of waste that meet the AQIS requirements...”</p> <p>As Weipa does not currently have any facilities for treatment of waste that meet the AQIS requirements any of this type of waste would need to be stored on ships in a sealed area and disposed of at another port or outside Australian waters.</p> <p>The reference to “Transport Operations (Marine Pollution) Regulation, 2008” is noted.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.14	Port/shipping	14.4	RTA must develop a Vessel Traffic Management Plan (VTMP). In developing the VTMP, RTA, through consultation with MSQ and the RHM, should identify what Vessel Traffic Management upgrades are required to ensure safe vessel movements through the construction and operational phase. Examples of Vessel Traffic Management include radar, Automatic Identification Systems and Closed Circuit Television.	Refer to response to 4.5.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.15	Port/shipping	14.4.5	<p>Lack of detail regarding pilotage. The EIS should note that:</p> <ul style="list-style-type: none"> all ships or combination of ships that are 50 metres or more operating within a Queensland compulsory pilotage area must either carry a licensed marine pilot or be under the command of a master who holds a Pilotage Exemption Certificate. The waterways surrounding the SoE Project will be a declared pilotage area. MSQ provides pilotage services at the Port of Weipa to meet the existing shipping demands. <p>RTA should consult MSQ to determine how pilotage services can be provided to meet demands associated with the proposed facility.</p>	RTA acknowledge that the waterways surrounding the SoE Project would be a declared pilotage area and that all ships and combination of ships that are 50 metres or more operating within a Queensland compulsory pilotage area must either carry a licensed marine pilot or be under the command of a master who holds a Pilotage Exemption Certificate. While pilotage services for existing shipping demands are provided by Maritime Safety Queensland (MSQ) at the Port of Weipa, RTA will consult with MSQ to determine how pilotage services can be provided to meet demands associated with the proposed facility.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.16	Port/shipping	14.4.5	Lack of detail regarding severe weather management plans. RTA should prepare for MSQ's endorsement, a Severe Weather Management Plan (Berth Warning System) for the bauxite loading facility that includes berth limits, monitoring of weather and sea conditions, escalating alert system and communications arrangements.	RTA is currently considering the Port operation rules, incorporating an appropriate response to severe weather. Port operation rules would be prepared in consultation with Maritime Safety Queensland (MSQ) and the Regional Harbour Master. This information would form part of port operational rules which will be developed in consultation with MSQ.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.17	Port/shipping	14.4.5	Lack of detail regarding under keel clearance. RTA should prepare, for MSQ endorsement, a Dynamic and Static Ships Under Keel Clearance Management Plan that includes Berth Pocket and arrival/departure channel depth monitoring, proposed ship type dynamics, environmental monitoring and allowances, linkages to severe weather contingency plans and communications arrangements.	Refer to response to 4.5.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.18	Port/shipping	14.4.5	The EIS states that the proposed port has been designed to accommodate Capesize vessels of up to 185,000 deadweight tonnage. Details of results from successful ship simulations of the proposed facility should be provided in the EIS.	This information would form part of port operational rules which will be developed in consultation with Maritime Safety Queensland (MSQ).
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.19	Port/shipping	14.4.5	RTA should provide details of the minimum and maximum size ships and demonstrate that fendering and mooring arrangements are suitable for the proposed ship types under expected weather conditions. Details shall also be provided on the operational aspects of lines handling to ensure the safety of the ship is maintained throughout mooring operations.	This information would form part of port operational rules which will be developed in consultation with Maritime Safety Queensland (MSQ).
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.20	Port/shipping	14.4.5	RTA should provide details of how they are to determine and provide adequate tug capability and capacity.	This information would form part of port operational rules which will be developed in consultation with Maritime Safety Queensland (MSQ).
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.21	Port/shipping	14.4.5	RTA should prepare for MSQ endorsement a plan to manage the movements of project and later production support vessels and general port movements	RTA will prepare for Maritime Safety Queensland (MSQ) endorsement, a Vessel Traffic Management Plan (VTMP) to manage the movements of Project and later production support vessels and general Port movements.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.22	Port/shipping	14.4.6	RTA should demonstrate to MSQ that Bulk Fuel Transfer Facilities and their operation comply with agreed International Standards.	RTA recently completed a number of upgrades to the Bulk Transfer Fuel Facilities. RTA will consult further with Maritime Safety Queensland (MSQ) on fuel transfer matters.
4	Department of Transport and Main Roads-Maritime Safety Queensland	4.23	Port/shipping	14.4.6, 14.4.7	In developing the SSPPMP RTA should identify how they will manage the risk of ship-sourced pollution including, but not limited to, the discharge of oil during the construction and operational phases, including first-response capability.	Refer to response to 4.5.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.1	Infrastructure area	4.2.2, 19.3.2	To ensure compliance with State Planning Policy (SPP) 1/03 "Mitigating the Adverse Impacts of Flood, Bushfire and Landslide" with regards to flood: Identify the areas in the Project Area that are susceptible to flooding, expressed as a Defined Flood Event (DFE), as required by SPP1/03 Outcome 4. An aerial map highlighting the flooding areas across the corridor would benefit the EIS (suggest inclusion in Section 4 Climate, Part 4.2.2 Flooding). A detailed explanation of how areas of flooding along the corridor will be managed during construction and maintenance phases should also be provided as part of the EMP.	<p>State Planning Policy (SPP) 1/03 outlines the State's interest in ensuring that the natural hazards of flood, bushfire, and landslide are adequately considered when making decisions about development. This SPP comes into effect when development applications are assessed under the <i>Sustainable Planning Act, 2009</i>. Under Schedule 4 of the <i>Sustainable Planning Regulation, 2009</i>, mining and mining-related development is exempt from assessment against a planning scheme.</p> <p>The natural hazard management area for a flood hazard is dependent on a local government identifying the affected area in a planning scheme (SPP1/03 Outcome 4). The current planning scheme for Cook Shire does not identify natural hazard management areas.</p> <p>Regardless of the exemptions of the mining activities to the <i>Sustainable Planning Act, 2009</i> and SPP1/03 the potential adverse impacts of flood hazards on people, property and economic activity and measures to mitigate those impacts are described in the EIS and are consistent with SPP1/03 (refer Section 4.2.2 and Section 19.3.2 of the EIS). Section 19.2 of this Supplementary report provides further information in relation to flooding and evacuation. The Business Resilience and Recovery (BRR) Plan (also known as an "Emergency Management Plan") would be updated to address these issues prior to the commencement of construction.</p>
5	Department of Community Safety	5.2	Infrastructure area	4.2.2, 19.3.2, 19.3.4	To ensure compliance with SPP 1/03 (flood): The EMP should confirm that the safety of workers on the development site will be maintained by the proposed flood mitigation measures from all floods up to and including the DFE, in accordance with SPP 1/03 Annex 4.2. The EMP should also explain how the monitoring of cyclone and flood events will be managed.	<p>Refer to response 5.1.</p> <p>Measures to mitigate flood risk, that are consistent with State Planning Policy (SPP) 1/03, are described in the EIS (refer Section 4.2.2 and Section 19.3.2). The risk to the health and safety of employees and the community from potential cyclone impact would be managed by a detailed BRR Plan and specific Cyclone Emergency Procedures which are described in Section 19.3.4 of the EIS.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.3	Infrastructure area	19.3, 19.3.2	To ensure compliance with SPP 1/03 (flood): The design of the Mine Access Road to cater for flooding to a depth greater than 300mm once in 10 years causes concern for the project's compliance with Specific Outcome 2 and associated solutions. The decreased flood immunity of this road may affect the capacity of the community to respond to emergencies during a DFE. Insufficient information is provided on what measures would be taken if an emergency did occur onsite while the road was flooded. Suggest inclusion in EMP.	<p>Refer to response 5.1.</p> <p>Section 19.3.2 of the EIS describes evacuation process for personnel during a flood, which would reduce the likelihood of an on site emergency while the road was flooded: "The Mine Access Road is designed such that flooding to a depth greater than 300mm may occur once in 10 years. In such an event, the workforce would be evacuated prior to the road closing. The BRR Plan for the Weipa operations outlines the appropriate procedures for evacuating people and would be updated for the Project area prior to the commencement of construction. In this event, an alert signal would sound and personnel would move to designated assembly areas. Non-essential personnel would be evacuated from site. If necessary, personnel may be evacuated by boat (from the port) or by aircraft."</p> <p>Section 19.3 of the EIS describes the proposed capabilities of the mine to manage onsite emergencies: "Designated first-aid and emergency rescue facilities and equipment would be available on site during the construction and operation phases. A paramedic and ambulance would be based at the Boyd infrastructure area (on shift) and a nearby two-kilometre section of the Mine Access Road would be designed to accommodate Royal Flying Doctor Service flight landings and takeoffs. First-aid response would be included in the workplace induction training. The site would have fire brigade-approved fire-fighting equipment and fire alarms."</p> <p>There are no community buildings or public roads in the Project area south of the Embley River. The Project would not have any impact on flooding risk of community buildings or public roads in areas north of the Embley River. Further information has been provided in Section 19.2 of this Supplementary EIS to address this comment.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.4	Mining	5.2.4	To ensure compliance with SPP 1/03 (flood): identify the possible impacts that vegetation clearing may have on run-off and flooding, and how this will be managed (suggest inclusion in Section 4 Climate, Part 4.2.2 Flooding and EMP)	<p>See response 5.1.</p> <p>The impacts on vegetation clearing on run-off are described in Section 5.2.4 of the EIS: "The modelling indicates the overall impact of mining on catchment discharge is very much less than the normal year-to-year variation driven by rainfall variation. This is consistent with the calibrated rainfall-runoff model which shows that surface runoff is extremely low and hence changes to surface drainage patterns have little impact on overall discharge into streams."</p> <p>The impacts of vegetation clearing on flooding are described in Section 5.2.4 of the EIS: "Wet season inundation of floodplains resulting of overtopping of the main channel banks is a seasonal characteristic of the area. There are no buildings or public roads downstream of the mining areas that would be at risk of flooding. The main impact of seasonal flooding is restricted access for vehicles rather than flood damage. Mining would not increase the risk of flooding as the geometry of pits provides a large sump, resulting in infiltration rather than runoff to the external catchment."</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.5	Mining	3.3, 19	<p>The South of Embley Project EIS does not appropriately identify all of the slope gradients or areas at risk of slope failure for the whole project area. Consequently, natural hazard management areas (landslide) are unable to be identified. The EIS does not adequately consider the environmental impacts or management strategies that would result from the project. The EIS states that significant changes to the broad scale topography will not occur as a result of the project, however it is difficult to determine if this statement is correct as the areas at risk of erosion and landslide have not been identified in the first instance.</p> <p>To ensure compliance with SPP1/03 (landslide): Identify the areas in the project area that contain slopes of 15% or more prior to and following construction of the bauxite pit. An aerial map highlighting the slopes across the project area would be appropriate (suggested inclusion in Section 3 Land, Part 3.3 Topography).</p>	<p>SPP1/03 sets out the State's interest in ensuring that the natural hazards of flood, bushfire, and landslide are adequately considered when making decisions about development. The SPP has effect when development applications are assessed under the <i>Sustainable Planning Act 2009</i>. The Cook Shire is identified in SPP 1/03 as identified as an applicable local government area for landslide hazards. However Under Schedule 4 of the <i>Sustainable Planning Regulation 2009</i>, mining and mining-related development is exempt from assessment against a planning scheme. The natural hazard management area for a landslide hazard is dependent on a local government identifying the affected area in a planning scheme (SPP1/03 Outcome 4) . The current planning scheme for Cook Shire does not identify natural hazard management areas.</p> <p>Given the flat topography of the SoE Project area, RTA considers the landslide risk is low. Figure 3-2 of the EIS shows labelled contour lines illustrating the pre-mining topography of the Project area and surrounds . With the exception of the cliffs along the coastline of the Project area, there are no slopes of more than 15% within the Project area. In terms of post-mining landslide risk, RTA have committed to establishing a stable post-mining landform as described in Section 3.10.2 of the EIS: "Areas disturbed by mining activities and infrastructure would be rehabilitated to a stable landform with a self-sustaining vegetation cover. After overburden and soil are returned to mined-out pits, the final rehabilitated landform would be at a lower elevation than the original landform due to the removal of the bauxite, but the overall slope of the landform would be similar. Where mining leaves batters on the edges of the pit, these would be recontoured to a maximum slope of 20% (1 in 5, or 11 degrees). The final landform would not have any out-of pit dumps of excavated overburden or soil." Where mining leaves batters these would be internal to the pit and shallow, as the average thickness of the ore that is removed is 3.4m. Also there are no buildings or public roads downstream of the mining areas that would be at risk.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.6	Mining	3.3, 19	To ensure compliance with SPP1/03 (landslide): Where geotechnical information is not available, a site specific geotechnical analysis may need to be prepared for the project to demonstrate the site is not subject to landslide.	Refer to response 5.5.
5	Department of Community Safety	5.7	Mining	3.3, 19	To ensure compliance with SPP1/03 (landslide): An overlay of the required vegetation clearance and topography would be useful in identifying 'at risk' areas (suggested inclusion in Section 3 Land, Part 3.3 Topography)	Refer to response 5.5.
5	Department of Community Safety	5.8	Mining	3.3, 19	Identify components of the project which traverse high risk erosive Hydrosol and Tenosol soil types in the drainage lines and coastal margins, and how the risk of land slide will be mitigated	Refer to response 5.5. Table 3-2 of the EIS states: "Bauxite does not occur in swamps and drainage lines where soils with higher erosion potential occur. Most of the area to be disturbed for mining is on Red Kandosol soil, which has low erosion potential". Some hydrosols within the tributary of Norman Creek may be disturbed during the construction of Dam C. However, given their location within the drainage line, risk of landslide is negligible.
5	Department of Community Safety	5.9	Mining	3.3, 19	If landslide risk is identified, suitable measures that ensure the long term stability of the project site should be detailed in the EMP.	Refer to response 5.5.
5	Department of Community Safety	5.10	Infrastructure area	19.3.3	As per Appendix 3 of the SPP 1/03 Guideline, a natural hazard management area (bushfire) is defined as medium and high hazard areas on the Bushfire Risk Analysis maps produced by the Queensland Fire and Rescue Service (QFRS). Following analysis of the relevant maps, it has been determined that the South Embley Project area covers land classed from 'low' to 'medium bushfire hazard' and is therefore required to comply with the SPP 1/03.	State Planning Policy (SPP) 1/03 outlines the State's interest in ensuring that the natural hazards of flood, bushfire, and landslide are adequately considered when making decisions about development. The SPP comes into effect when development applications are assessed under the <i>Sustainable Planning Act, 2009</i> . However Under Schedule 4 of the <i>Sustainable Planning Regulation, 2009</i> , mining and mining-related development is exempt from assessment against a planning scheme. Regardless of the exemptions of the mining activities from the <i>Sustainable Planning Act, 2009</i> and SPP1/03 the potential adverse impacts of bushfire hazards on people, property and economic activity and measures to mitigate those impacts are described in the EIS and are consistent with SPP1/03 (refer Section 4.2.2 and Section 19.3.3 of the EIS). Further information has been provided in Section 19.2 of this Supplementary EIS to address this comment.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
5	Department of Community Safety	5.11	Infrastructure area	19.3.3	It is recommended that the EMP add additional mitigation measures that ensure adequate access for fire fighting/other emergency vehicles and safe evacuation is provided for during construction and maintenance in the project area.	Section 19.3.3 of the EIS describes measures to mitigate the risk of bushfire damage to people and property, including evacuation of people. RTA has committed to updating the Business Resilience and Recovery (BRR) Plan to include the Project area (refer Section 19.3 of the EIS). RTA has also committed to ongoing consultation and engagement with key stakeholders, including Department of Community Safety (refer Section 16.3.1 of the EIS). A commitment is also included in the Summary of Commitments (Appendix 2 of this Supplementary report) to ensure adequate access for fire fighting/other emergency vehicles and safe evacuation during construction and operations in the Project area.
5	Department of Community Safety - Queensland Fire and Rescue Service	5.12	Infrastructure area	19.3.3	QFRS aware that although non-statutory that they may provide RTA with advice regard hazard and risk management. QFRS noted that RTA will comply where necessary with relevant Queensland statutory legislation and will implement mine safety and health management systems so as to mitigate hazard and risk, as described in Section 19.	Noted.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
6	Western Cape Communities Co-existence Agreement	6.1	Socio-economic		RTA Weipa's implementation efforts since the commencement of the Western Cape Communities Co-existence Agreement have been limited and have failed to live up to Traditional Owners' expectations at the time of establishment of the Agreement.	<p>RTAW is committed to working together with all signatories of the WCCCA to implement the agreement to the fullest extent. In recent years the work RTAW has undertaken with Traditional Owners has seen the following:</p> <ul style="list-style-type: none"> – RTAW reaching record levels of local Indigenous employment and training with a continued focus to further increase this level of implementation – Ensured all new employs complete cultural awareness training – Over \$4m annual spend in sourcing goods and services from local Indigenous owned and operated businesses – Over \$20m annual spend on salaries and benefits to Indigenous employees – Development and implantation of comprehensive Cultural Heritage Management system – Traditional Owners involved in over 3000 hours per annum of casual employment assisting with cultural heritage surveys and studies <p>Through RTAWs representation on the Coordinating Committee and Sub-committees, we will continue to work collaboratively with all parties to the agreement to meet our obligations.</p> <p>The highlighting of the negative perception of RTAWs performance in implementation WCCCA reinforces the need to ensure the work that has been done is effectively communicated to our stakeholders.</p> <p>To this end RTAW, will utilise existing engagement forums to raise awareness of the achievements made under the WCCCA to address any negative perceptions about past process and practices and to communicate the implementation, monitoring and review process imbedded within the WCCCA.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
6	Western Cape Communities Co-existence Agreement	6.2	Socio-economic		Over the past 2 years the coordinating committee has undertaken a comprehensive technical review of the draft EIS. 389 amendments were proposed and 265 amendment have been resolved to Traditional Owners' satisfaction. There are 21 outstanding key messages and 124 outstanding technical recommendations (which are summarised in the following items). The work that has occurred over the past 2 years has been immense and we acknowledge RTA Weipa for allowing us the opportunity to work closely with them on the development of their SoE Project EIS.	RTA provided the WCCCA Final Review report of the EIS to DEEDI on 16 March 2011.
6	Western Cape Communities Co-existence Agreement	6.3	Socio-economic	16.3.1	<p>Requirement that RTA Weipa facilitate the provision of daily access and transport between Aurukun and the mine, so that Wik and Wik Waya native title holders and other WCCCA stakeholders and residents of Aurukun are able to live in the mine. Require following condition to be imposed by the Coordinator General:</p> <p><i>That RTA Weipa establish and maintain an all-weather road between Aurukun and the mine site as a part of its South of Embley mine construction, to be completed prior to the commencement of mining South of the Embley and provide daily transport between Aurukun and the mine for Wik and Wik-Waya native title holders and the other Aurukun residents living in Aurukun and working at the mine for the duration of mining activities South of Embley.</i></p>	RTA has committed to facilitate the provision of access and transport for Traditional Owners living in Aurukun and working in the mine (Section 16.3.1 of the EIS). RTA will initiate a study of the options for providing access and transport, including consultation with relevant stakeholder groups and identification of the preferred option with the aim to implement these arrangements from the commencement of mine operations. The initial consultation feedback from Traditional Owners was that they wanted a commitment from RTA that access and transport would be provided for people living in Aurukun and working in the mine. The request that this must be a road was communicated later in the EIS process. RTA will examine options (including road access) to allow Wik and Wik Waya native title holders and other WCCCA stakeholders and residents of Aurukun to continue to reside in Aurukun and work at the mine. Consultation with relevant stakeholders on each option is required and final views of relevant parties reported in the final report. A Community Commute (Aurukun to the mine) Action plan is in the Social Impact Management Plan.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
6	Western Cape Communities Co-existence Agreement	6.4	Socio-economic	16.3.2	<p>Requirement that RTA Weipa fund the establishment and ongoing implementation of a Wik and Wik Waya native title holder <i>Land and Sea Management Ranger Program</i> to ensure that Wik-Waya native title holders are properly involved in implementation measures at the mine for:</p> <ul style="list-style-type: none"> – Land management and rehabilitation – Water management – Fire management – Native flora and fauna management – Weed and feral animal management <p>Require following condition to be imposed by the Coordinator General:</p> <p><i>That RTA Weipa fund the establishment of a Wik and Wik-Waya native title holders' Land and Sea Management Ranger Program, auspiced by the Aurukun Shire Council and reporting to the Coordinating Committee, prior to the commencement of the South of Embley mine construction and provide sufficient funds to the program to ensure that Wik and Wik Waya native title holders are able to fully participate in land and sea management and monitoring activities through the construction and mining activities South of Embley.</i></p>	<p>RTA is committed to ensuring that Traditional Owners are actively engaged through direct employment in land and sea management activities across the mining lease area south of the Embley River. RTA currently employs Traditional Owners north of the Embley to assist with activities such as, but not limited to, fire management, flora and fauna surveys and studies, hydrological studies, water quality monitoring programs and would implement a similar model south of the Embley. In collaboration with Traditional Owners and WCCCA SoE Project Sub-Committee, RTA will develop and implement a Communities, Heritage and Environment Management Plan which will include a structured annual work plan for all land and sea management activities. (Section 16.3.2, page 16-50 of the EIS). As part of the CHEMP, RTA is committed to working collaboratively with Traditional Owners to jointly develop land and sea management plans for the Project. RTA is committed to working with Traditional Owners, WCCT and other key stakeholders to establish a program to support caring for land and sea, including assistance with the development and implementation of a ranger program for the Project area and the direct employment of Traditional Owners with RTA in both full time and casual roles to support the implementation of work programs (Section 16.3.2, page 16-51 of the EIS). Details on land and sea management and employment opportunities are included in the Land and Sea Management Action Plan and the Communities, Heritage, and Environment Management Plan in the SJMP (refer to Appendix 6 of this Supplementary Report). This includes engagement with Traditional Owners, WCCCA SoE Project Sub-Committee and the Aurukun Council.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
6	Western Cape Communities Co-existence Agreement	6.5	Socio-economic		<p>Requirement that RTA Weipa enter into a "post EIS implementation agreement" to ensure that the WCCCA is properly and fully implemented in relation to all aspects of mining activity South of Embley, to ensure that significant problems that have arisen north of the Embley in relation to RTA Weipa's failure to implement the WCCCA are not repeated South of Embley, particularly in relation to the following areas:</p> <ul style="list-style-type: none"> – Cultural site protection – Environmental management – Employment and youth education – Economic development <p>Require following condition to be imposed by the Coordinator General:</p> <p><i>That RTA Weipa enter into a WCCCA implementation agreement with all other signatories to the WCCCA, prior to the commencement of the South of Embley mine construction, in relation to:</i></p> <ul style="list-style-type: none"> – <i>Cultural site protection implementation measures</i> – <i>Environmental management implementation measures</i> – <i>Employment and youth education implementation measures</i> – <i>Economic development implementation measures</i> <p><i>such an agreement to include arrangements to ensure that RTA Weipa continues to implement the WCCCA for the duration of its mining activities South of Embley.</i></p>	<p>The WCCCA has requested RTAW to enter into a post EIS implementation agreement to ensure that the WCCCA is properly and fully implemented in relation to aspects of mining activity associated with SoE. The WCCCA have specifically requested that the agreement detailed implementation plans on a number of key areas considered in the WCCCA. In response to this request, RTAW has developed and SoE Implementation Framework that clearly outlines how the EIS commitments will be implemented. This draft document has been submitted to the WCCCA for review and feedback.</p> <p>The Queensland DEEDI Social Impact Assessment Unit (SIAU) requires RTAW to develop stand alone Social Impact Management Plan (SIMP) to outline the roles and responsibilities of proponents, government, stakeholders and communities throughout the life of a project, in mitigating and managing social impacts and opportunities during construction, operation and the decommissioning of major resource development projects. RTAW is working collaboratively with the SIAU to develop the draft SIMP, this collaboration includes ongoing briefings and engagement with relevant government agencies. RTA believes the SIMP will achieve the outcome of formally establishing the detailed Action Plans for addressing the social impacts associated with the SoE Project whilst ensuring that in implementation is undertaken in an open, transparent and accountable manner. The proposed governance structure will utilise existing engagement forums and the establishment of a SIMP Steering Committee with representatives from these forums including the WCCCA to monitor and guide implementation.</p>
6	Western Cape Communities Co-existence Agreement	6.6	Socio-economic		<p>Submission summarises WCCCA Coordinating Committee Consultation</p>	Noted.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
6	Western Cape Communities Co-existence Agreement	6.7	Socio-economic		<p>RTA Weipa's consultation process was profoundly flawed. RTA Weipa has not conducted any stand-alone consultation meetings with Wik and Wik-Waya native title holders and residents of Aurukun since early 2009 (excluding the current public consultation period where extensive RTA consultation has been occurring). The Coordinating Committee has previously advised RTA Weipa that it cannot satisfy its obligations to consult by relying on the Coordinating Committee's consultation processes and that it considers that RTA Weipa has not met the EIS terms of reference in relation to community consultation. Complete lack of consultation on its proposal to significantly increase the size of the proposed Port.</p>	<p>Since 2008, RTA Weipa has undertaken significant consultation with Wik & Wik Waya Traditional Owners. This consultation and engagement far exceeds that of any other stakeholder group. The formal consultation process is summarised in Chapter 15 of the EIS. The WCCCA SoE Sub-Committee Charter, as provided by the WCCCA in their submission, also highlights that the primary role of this group is to provide a forum for RTA Weipa to consult, review and seek advice in relation to the activities related to the SoE EIS. The Traditional Owners represented on this committee have been nominated as representatives of the Wik & Wik Waya people. RTA has consulted with this group every 12 weeks for the past 3 years. In addition to these meetings, RTA Weipa has also spent a considerable amount of time engaging directly with families in Aurukun and across other communities on the Western Cape. As an example, RTA Weipa personnel have already spent more than 35 days in Aurukun in 2011 alone. RTA are currently in discussions with the Aurukun Shire Council to establish a permanent office and accommodation to support RTA's ongoing engagement with the community moving towards the construction period. Under the WCCCA, the Coordinating Committee are required to also consult with the broader Traditional Owner groups. The Coordinating Committee has undertaken this work, and at times RTA has also participated in these sessions. Any concerns raised through this process have also been considered in RTA's response to key issues in the EIS. RTA has committed to preparation of a Stakeholder Engagement Plan as part of the SIMP (refer Appendix 6 of this Supplementary report) for ongoing engagement.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
7	Private submitter 7	7.1	Rehabilitation	3.10	The regeneration after 50 years has failed to meet criteria. References a number of articles. Mining should not continue until a successful process is determined and this cannot be accomplished in 3 years. There are still no end point criteria. Progress should be made to address past mining failures before moving on to new mining. No mined land has been handed back to the Traditional Owners. There is an urgent need to bring specific knowledgeable people together to discuss present issues. There needs to be a group employed and funded for a long term commitment to research, implementation and process development. It should be an independent group mostly funded by Rio. Such a group would also be responsible for seed collection, regeneration establishment, management, monitoring, fire management and for opportunity development on mined lands.	Refer to responses to 1.12 and 1.14. RTA is currently developing a Rehabilitation Management Plan in accordance with the Department of Environment and Resource Management's (DERM) requirements for the existing mining operations. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.
7	Private submitter 7	7.2	Rehabilitation	3.7.3, 16.2.8	There are land uses/end point criteria. Workshops previously held (2003) clearly states Land Relinquishment criteria including forestry plantations or agro-forestry pasture and forest. Forestry has been recognised as an opportunity. Two valuable species (African Mahogany and Sandalwood) are proven suitable commercial species on the mined land. A long term forestry programme would provide many sustainable benefits for Cape Indigenous people.	Refer to responses to 1.12, 1.14 and 7.1. RTA has been working to rehabilitation criteria which have changed over time in line with stakeholder expectations. However, formal criteria have not yet been agreed to by government or other stakeholders, including Traditional Owners. RTA is currently working towards formalising rehabilitation criteria under the Environmental Authority for the existing operations.
7	Private submitter 7	7.3	Rehabilitation	7.17.2	Have the recommendations made in the report by Winter and Alford been addressed? 19 recommendations that would improve suitability of the regeneration to animals etc.	Further information on the implementation of recommendations from Winter and Alford is provided in Table 3-C of Section 3.1.2 of this Supplementary report.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
7	Private submitter 7	7.4	Rehabilitation	3.1.2	With respect to the proposed timber project that would remove quantities of commercial timber prior to the commencement of mining, a resource identified to be worth half a billion dollars. What other options are being considered should this particular company not be successful with its application? In addition to the timber there are other resources (e.g. posts for farming, native bee hive, palms, rails, hollow logs suitable for fauna habitat if used in regeneration). Most of the timber resource has been destroyed in the past 50 years. The resource belongs to the government. Carbon sequestration should also be considered. Ample time should be allowed to remove these resources.	RTA is supportive of timber harvest activities up to 5 years in advance of mining, and supports the government process of seeking public comment on the proposed Harvest Permit for areas SoE. RTA has committed to facilitating access for timber harvesting in Sections 3.1.2 and 16.3.7 of the EIS.
7	Private submitter 7	7.5	Rehabilitation	7	Do you think present fire management is effective? During my work at Weipa over the last 10 years I observed fires that were lit in fire mitigation operations that were inadequately managed. Regeneration should be protected from fire until proven otherwise. The EIS mentions studies to observe the effect of fire on the regeneration. Need a fire regime that works.	Figure 7-9 of the EIS demonstrates that the fire frequency in the active mining areas on the East Weipa peninsula is much less than surrounding areas. Current practice in the existing operations is to attempt to protect young rehabilitation from fire.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
8	Private submitter 8	8.1	Socio-economic	16.3.7, 17.4.7	<p>Development of economic business opportunities. Suggest more supply chain analysis to fully investigate opportunities for Traditional Owners. Generally communities do not have the in-house skills or resources needed to facilitate the development of the community's project ideas. Immediate priorities are: Further refinement of Project ideas, more detailed analysis of specific project ideas that are likely to be commercially viable and identification of implementation requirements, investigative work to understand potential opportunities, and determine 'entry points': Unrealised business development opportunities in the area of supply chain initiatives, however there does not appear to be any significant degree of networking or planned approach to the identification of opportunities. "In remote areas (i.e. Aurukun) where there is little pre-existing market-based economic activity, there needs to be a proactive approach and the support of companies to assist Indigenous people to participate in the supply chain" (Report to the Qld Resources Council June 2007 www.csr.com.au). TOs are not generally in a position to effectively quote for provision of project requirements and services. The involvement of TOs in supply chain analysis automatically provides many other benefits (e.g. capacity building in skills, facilities, enterprise, negotiation and commercial relationships). Work necessary to involve TO's in implementation of CHEMP (basic labour skills etc).</p>	<p>Indigenous business development is discussed in Section 16.3.7 of the EIS. This work will be carried forward through the existing WCCCA Coordinating Committee and the WCCT. Section 17.4.7 of the EIS also discusses local sourcing strategies including:</p> <ul style="list-style-type: none"> – proactive consideration of tenders which involve local Indigenous people and/or Indigenous enterprises; – examining applicable contracts for local and Indigenous business opportunities, including a breakdown of large jobs into smaller jobs; and – informing the WCCT of all Project construction and operation tenders in advance of public notification. <p>RTA Weipa's annual spending on contracts with Indigenous owned and operated entities in 2011 (YTD) is \$3.6M. Furthermore, a Local & Indigenous Sourcing Action Plan has been identified in the Social Impact Management Plan (Appendix 6 of this Supplementary Report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
8	Private submitter 8	8.2	Socio-economic	17.4.7, 15.2.4	Strategies for local participation within the economic environment and consultation with and feedback from Traditional Owners. More assistance needs to be provided to WCCC and its sub-committees to fully examine opportunities.	Following the submission of the SoE EIS to Government, RTA Weipa has co-developed a RTA Weipa Indigenous Employment and Training Strategy for the next three years. This strategy includes key objectives for company policies and procedures, school to work pathways, pre work development, direct employment, retention, and career development. The strategy is supported by a structured monitoring and reporting framework that requires RTA Weipa to report on employment and training outcomes to the WCCCA Sub-Committees and Coordinating Committees on a quarterly, annual and 3 yearly basis. The current strategy has an area dedicated to employment and training strategies for the construction period of the SoE Project. RTA has also developed a Local and Indigenous Employment and Training Action Plan and Local and Indigenous Sourcing Action Plan (refer to the Social Impact Management Plan in Appendix 6 of this Supplementary report). In the development of the Local and Indigenous Sourcing Strategy, RTA will incorporate principles of the State Local Industry Participation Plan (LIPP).
8	Private submitter 8	8.3	Socio-economic	16.3.4, 16.3.8	Access and transport from Aurukun to the Project area to increase employment and business opportunities. More analysis is required to investigate the options of Aurukun locals commuting from Aurukun to the mine site on a daily basis for work.	RTA has committed to facilitate the provision of access and transport for Traditional Owners living in Aurukun and working in the mine (Section 16.3.1 of the EIS). RTA will initiate a study of the options for providing access and transport, including consultation with relevant stakeholder groups and identification of the preferred option with the aim to implement these arrangements from the commencement of mine operations. The initial consultation feedback from Traditional Owners was that they wanted a commitment from RTA that access and transport would be provided for people living in Aurukun and working in the mine. The request that this must be a road was communicated later in the EIS process. RTA will examine options (including road access) to allow Wik and Wik Waya native title holders and other WCCCA stakeholders and residents of Aurukun to continue to reside in Aurukun and work at the mine. Consultation with relevant stakeholders on each option is required and final views of relevant parties reported in the final report. A Community Commute (Aurukun to the mine) Action plan is in the Social Impact Management Plan.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
8	Private submitter 8	8.4	Socio-economic	16.3.4, 16.3.7	RTA should be congratulated on its approach to consultation with and involvement of Traditional Owners in the redevelopment of the SoE Project. More work required to ensure economic benefits flow more effectively to the Aurukun community in the initial construction phase and over the 40 year mine life.	RTA has committed to encourage employment, education and training (Section 16.3.4 of the EIS) and Indigenous business development (Section 16.3.7 of the EIS), particularly for the Aurukun community. RTA has also developed a Local and Indigenous Employment and Training Action Plan and Local and Indigenous Sourcing Action Plan (refer to the Social Impact Management Plan in Appendix 6 of this Supplementary report).
8	Private submitter 8	8.5	Socio-economic		Whilst independent advice has been obtained for the WCCC and various sub-committees, a great deal is expected of and from them in a complex and demanding environment.	Noted.
8	Private submitter 8	8.6	Socio-economic	16.3.4	The local Aboriginal Traineeship Program and the RTA Destinations Program have highlighted the significant barriers that still exist for Aboriginal people looking to pursue a career in the mining industry. SoE committee members have similar barriers in regard to skills necessary to further the objectives of the community.	Following the submission of the SoE EIS, RTA has co-developed an RTA Weipa Indigenous Employment and Training Strategy for the next three years. This strategy includes key objectives for company policies and procedures, school to work pathways, pre work development, direct employment, retention, and career development. The strategy is supported by a structured monitoring and reporting framework that requires RTA to report on employment and training outcomes to the WCCCA Sub-Committees and Coordinating Committees on a quarterly, annual and 3 yearly basis. The current strategy has an area dedicated to employment and training strategies for the construction period of the SoE Project. The strategy also identified the need to implement specific strategies for Aurukun such as the Destinations Program. RTA will continue to work with Traditional Owners, through the relevant WCCCA Sub-Committees to continue enhancing the effectiveness of these programs. Further information on employment and training is provided in the Social Impact Management Plan (Appendix 6 of this Supplementary report), including a Local and Indigenous Employment and Training Action Plan.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
8	Private submitter 8	8.7	Socio-economic	15.2.4., 3.10.1	Further consideration of the SoE EIS by TOs at committee and community level would also provide the Aurukun community with the opportunity to generate new ideas, perhaps such as creating a leading practice rehabilitation project including turning excavated areas into a major new wetlands area.	RTA has facilitated an extensive consultation program with the WCCCA and the SoE sub-committee, as well as directly with Traditional Owners (refer Section 15.2.4 of the EIS). Ongoing community consultation is discussed in Section 15.4 of the EIS. Under the WCCCA, RTA has commitments to consult Traditional Owner groups about rehabilitated land completion criteria (refer Section 3.10.1 of the EIS) and further information is provided in Section 3.1.3 of this Supplementary report. Due to the discontinuous nature of the shallow aquifer in the SoE Project area, together with the water table being generally below the mine floor, there are unlikely to be significant areas of the post-mining landscape that are suitable for wetlands. RTA has committed to preparation of a Communities, Heritage, and Environment Management Plan and a Stakeholder Engagement Plan as part of the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.1	Socio-economic	6.9.3.1	<p>What is highlighted throughout the EIS document is the lack of fisheries related data available through any research having been undertaken in Albatross Bay that could inform the EIS.</p> <p>The Three Mile fishery underpins both the commercial mackerel line fishery and the day-charter sport fishing eco-tourism industry.</p> <p>The importance of Three Mile is deliberately underplayed throughout the document.</p> <p>Suggest that:</p> <p>As priority, a research project (prior to any dredging approvals) funded by Rio Tinto will need to be undertaken to ascertain</p> <ul style="list-style-type: none"> – potential impacts to the related fisheries by habitat loss by significant impact by dredging, – alteration to existing currents, and – effects on bait school activity/migration to include resultant impacts/risks to sport fishing eco-tourism more broadly. 	<p>RTA recognised that the Three Mile area was a popular fishing area (refer page 16–52 of the EIS). The EIS acknowledges that there would be a temporary impact on fish assemblages in the vicinity of the Port and spoil ground due to turbidity generated by dredging and disposal of sediment, however following dredging activities, the impacts are anticipated to be minor (Section 6.9.4.5 of the EIS). The proposed departure channel is relatively narrow (182m wide). It should also be noted that the shipping channel at the mouth of the Embley River has been reported as an attractive fishing area (http://www.fishingearth.com/fishing-articles-detail.asp?ArticleID=54&FishingTypeID=-1&btID=-1&bgID=3).</p> <p>The potential for change to coastal processes has been assessed and is discussed in Section 6.9.1 of the EIS. It concluded that the proposed wharf jetty and berth pockets have a low potential to impact alongshore transport of sediment.</p> <p>The EIS concludes that physical disturbance to the dredged site, deposition of spoil, and the re-suspension of disturbed and deposited sediment are anticipated to have minor impacts on fish assemblages (refer Section 6.9.4.5 of the EIS) and therefore a fisheries research project is not proposed. The establishment of artificial reefs is proposed (refer to response to 11.3). More detail on the catch and value of the commercial fisheries is presented in the response to 11.4 and in Section 6.4 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.2	Port/shipping	6.9.3.1	<p>In addition to the above comment regarding the lack of data available,</p> <p>It is also the case that the EIS data in relation to the Nine Mile is less than convincing when the following statements have been included indicating risk to priority reef assemblages.</p> <ul style="list-style-type: none"> – Turbidity plumes generated from dredging, and subsequent deposition and re-suspension of fine sediments, can result in potential indirect impacts on reef assemblages. – Some loss of habitat at these locations may be expected which may locally affect feeding preferences in marine turtles. – If monitoring determines that there are unacceptable impacts to Nine Mile Reef due to the turbidity plume associated with the spoil ground, then appropriate management measures would be developed and implemented in consultation with DSEWPac. 	<p>Modelling identified that the sediment plume from the proposed spoil disposal ground tend to disperse along a south-south-east trajectory due to tidal currents and are not predicted to affect Nine Mile Reef, which is located approximately 6km south-south-west of the spoil ground (refer Figure 6 60a-c of the EIS). Modelling has predicted that a median TSS of less than 0.2mg/L and maximum of 1.2mg/L above background would occur over Nine Mile Reef (refer Table 6-45 of the EIS). These increases would be negligible given background TSS characteristics at offshore areas, as represented by existing conditions at the proposed spoil ground where recorded TSS concentrations had a median of 33mg/L, mean of 135mg/L and maximum of 1056mg/L during the Project's in-situ logger program (refer to Section 6.4.4.1 of the EIS).</p> <p>The EIS concluded that the turbidity plume generated by the spoil ground would not impact Nine Mile Reef (refer Section 6.9.2.3 and Section 6.9.2.4 of the EIS). However, turbidity monitoring is proposed for the purposes of model validation of spoil disposal and will be described within the Dredge Management Plan. If monitoring determines that there are unacceptable impacts to Nine Mile Reef due to the turbidity plume associated with the spoil ground, then appropriate management measures would be developed and implemented in consultation with DSEWPac. If the model is validated, then no further turbidity monitoring would be proposed at Nine Mile Reef.</p> <p>It should be noted that the submission comment in relation to loss of habitat relates to a small area of inshore soft coral adjacent to the proposed dredging operations and does not relate Nine Mile Reef.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.3	Port/shipping	6.9.4.3 and 6.6.5	<p>The conclusion of importance of Olive Ridley Turtles within the vicinity of the project area is scientifically incorrect, negligent or ignorant given the nesting population on the Western Cape York Peninsula have been proven to be a uniquely discreet population currently headed for extinction due to wide spread predation of nesting sites by both introduced and endemic species. The statement also completely understates the importance of the species and its future management on Western Cape York given the rare incidence of young females joining the breeding population. The SOE project has the capacity to impact significantly and therefore suitable and substantial environmental offsets would apply. Barrow Island is an example of appropriate levels.</p> <p>April is not the season peak for Olive Ridley nesting on Western Cape York. There are three species of marine turtles nesting on Western Cape York and within the project site, one endangered and two vulnerable (Flatback, Hawksbill and Olive Ridley). There is one species (Green) observed foraging on off shore reefs.</p> <p>Given the errant conclusions assumptions and the incomplete data recorded in Table 6-37, serious doubts must be raised about the validity of the research undertaken for the EIS.</p> <p>Suggest that:</p> <ol style="list-style-type: none"> 1. A survey by suitably skilled persons during the August-September peak will provide more substantive data. 2. Engagement with the relevant expertise in relation to biology, habitat and current research of marine turtles on Western Cape York is crucial. 	<p>Results of three turtle nesting surveys (carried out in August 2003, May-July 2007 and April 2008) are provided in Section 6.6.5 of the EIS. Uncertainty exists over the peak timing of nesting of the Olive Ridley turtle in the Project area. The timing of the third survey (April) was chosen by the consultant marine ecologists as a survey month to complement previous studies and the methodology was developed based on advice from Dr. Colin Limpus (Chief Scientist, Freshwater and Marine Services, DERM).</p> <p>Olive Ridley turtle nests were identified in a survey of the area in August 2003 (Section 6.6.5, page 6-116 of the EIS). The turtle nests identified during the 2007 and 2008 surveys were not confirmed as Olive Ridley turtle nests. However, the EIS acknowledges that the unidentified nests could have been Olive Ridley turtle nests and for the purposes of the impact assessment, RTA assumed that this species still utilises the Port area (refer to Table 6-35) of the EIS and therefore further survey is not required. Mitigation measures for these species are proposed in Section 6.9.4.3 of the EIS.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.4	Port/shipping	6.9.4.3 and 6.6.5	<p>From experience it would seem highly unlikely that an effective lighting strategy for minimising impacts on turtles which maintains safety of employees and is composed with scientific endorsement exists in any other port project globally.</p> <p>An explanation of the proposed “adaptive approach to work with Traditional Owners” to minimise impacts needs a full explanation. In its current form it reads as well intentioned ‘mother hood’ statement without any detail.</p> <p>Suggest that:</p> <ol style="list-style-type: none"> 1. Specific detail of a proposed ‘lighting plan’ with scientific endorsement would need to be ratified prior to construction. 2. A plan outlining the suggested “adaptive approach to work with Traditional Owners” to minimise impacts to turtles needs explanation and scientific endorsement. 3. State Planning Policy and related Environmental Offsets Policy will need to acknowledge significant impact to nesting populations of marine turtles. 	<p>The EIS concludes that an altered above-water night-time light regime without mitigation is anticipated to cause the largest single potential threat to marine turtles. In addition to the lighting plan presented in Table 6-50 of the EIS, a feral pig control program has been proposed to reduce nest predation and enhance turtle population survivorship in the vicinity of the Port. It is considered that this measure would produce an overall increase in hatching numbers and therefore there would not be an overall significant adverse impact on threatened marine turtles (refer Section 6.9.4.3, page 6–168 of the EIS and Section 6.3.2 of this Supplementary report).</p> <p>“Adaptive management” refers to the process of review and adaptation of management measures based on monitoring results. The adaptive proposed adaptive management measures are described in Section 6.9.4.3 of the EIS. The feral pig control programme would be developed with Traditional Owners under the auspices of the Communities, Heritage and Environment Management Plan (CHEMP, refer Section 16.3.2 of the EIS).</p>
9	Western Cape York Turtle Conservation Project	9.5	Port/shipping	6.1.2, 14.4.7	<p>A factor that is not explored anywhere in the EIS are the changes to the shoreline due to major ‘ship loader spills’ that continue to occur (largely unreported) at the current Lorim Point facility and will no doubt be continued at a potentially new facility. Spills at the new facility will be significantly larger and the result will be much quicker impact on the shoreline as evidenced at Lorim Point (see comparative photos provided).</p>	<p>Geochemical analysis demonstrates that bauxite ore is not hazardous (refer Section 13.3.4 of the EIS). Bauxite plateaus form an extensive proportion of the catchment of the Embley River (and other rivers in the region) and bauxite outcrops occur naturally on the banks of the river. Although bauxite presents minimal environmental hazard, action would be taken to minimise spills. The areas where spillage risk has been identified are due to the design of the facility rather than the rate of loading. A number of actions have been taken and further action is planned to reduce spillage.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.5	Port/shipping	6.1.2, 14.4.7	<p>Suggest that:</p> <ol style="list-style-type: none"> The EIS needs to significantly address and provide scientific opinion, underpinned by appropriate modelling, to confirm the coastal processes and shoreline impacts of ship loading spills at the SOE site, including impacts on Marine turtle nesting. Rio Tinto need to demonstrate a significant shift from their current policy in relation to major spills during ship loading at the Lorim Point facility. DERM staff need to observe the current loading protocols at Lorim Point to better understand the company policy and model potential environmental impacts of the proposed SOE loading facility. 	<p>The original Lorim Point shiploader was constructed in the 1960's. The design criteria that will be used at the SoE Port would address product spillage. RTA has proposed the following controls to reduce the risk of spillage at the SoE Port including (refer Section 14.4.7 of the EIS):</p> <ul style="list-style-type: none"> a catch tray under the tripper to catch spillage from the inclined section of belt. The material collected from the tripper catch tray would be directed to the head-end sump and then pumped onshore to a sediment holding pond; Three-stage belt scraping with water sprays would be positioned at the conveyor head pulley to clean the belt. The scrapings and the water used for belt cleaning would be directed into the head end sump for pumping onshore into sedimentation ponds; The wharf conveyor would be designed with variable speed drives to provide controlled belt starting, thereby minimising the potential for bauxite spillage; Belt drift switches would be installed on the wharf and ship loading conveyor that shuts down the conveyor drives if a belt moves from the designed position. Training idlers that track the belts would also be installed; When loading ships, the product reclaimers would be stopped, and the conveyor allowed to empty, before the ship loading boom travels between hatches to prevent bauxite spillage onto the deck of the ship, and A sealed maintenance area would be provided at the end of the wharf so the ship loading boom can be serviced and cleaned within a bunded area. Runoff from this sealed maintenance area would be directed to the head end sump for pumping back to shore). <p>Impact on marine turtle nesting from product spills is considered unlikely, however the proposed turtle nesting monitoring program would identify changes to turtle nesting activity and behaviour (refer page 6–171 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.6	Socio-economic	6.7.3	<p>It is noted that Rio Tinto management have subsequently issued formal advice that the “9% of tourists who visit Weipa do so primarily to fish” referred to in the current document should have read 90%. Given the importance of sport fishing tourism to the town of Weipa, how such an error was not picked up in proofing the document remains unanswered.</p> <p>The figure 68% for tourists - fishing was gleaned from a Tourism Queensland survey in 2002.</p> <p>Suggested that:</p> <ul style="list-style-type: none"> – It is noted that there is a paucity of available data however this was presented in the EIS as there was no information on the recreational catch and distribution of fishing effort in the project area. – It has become evident here in Weipa that the initial EIS consultation in relation to recreational fishing in the project area was far from adequate. This needs to be addressed as a priority, with Queensland Fisheries, Sunfish and AFTA playing key roles in follow-up consultation/discussion. 	<p>Page 6-127 of the EIS contains a typographical error. It should read “It is estimated that 90% of tourists who visit Weipa do so primarily to fish (GHD 2005).” The Social Impact Assessment fully acknowledges the concerns of the Tourism (Charter) Fishing Business Owners: “The charter fishers felt strongly that mining south of the Embley River was going to have significant negative impact on their businesses. They indicated that at least 60% of their business was based on tourists who wished to walk on a pristine beach in an area “untouched” by industrialisation and that a new port would intrude on that experience. The charter fishing groups who felt that they would suffer the most impact from the Project include fly fishermen.” (refer page 16-48 of the EIS). The consultation process undertaken prior to public exhibition of the EIS is presented in Section 15 of the EIS. In 2008 and 2009, RTA Weipa met with the Weipa Sportsfishing Club to provide briefings on the SoE Project and to discuss potential impacts and any concerns. The full breadth and depth of consultation undertaken prior to public exhibition of the EIS is presented in Section 15 of the EIS. In 2008 and 2009, RTA Weipa met with the Weipa Sportsfishing Club to provide briefings on the SoE Project and to discuss potential impacts and any concerns. At one of these briefings, the President of the Club (who also was a RTA Weipa employee and long term resident of Weipa) offered to provide a range of GPS points for regularly used fishing areas located close to the location of the project. The Club Members agreed that this would be useful information to provide to RTA Weipa to assist in understanding the potential impacts of the Project. These fishing locations were presented in Figure 6-57 of the EIS and are presented with the proposed realignment of the Port in Fig. 6-57(sup.) of this Supplementary report. Additional meetings and public forums were held throughout the public exhibition period (refer to Appendix 6 of this Supplementary report). RTA has committed to preparation of a Stakeholder Engagement Plan as part of the Social Impact Management Plan (refer Appendix 7 of this Supplementary report) for ongoing engagement on this issue. The Local and Indigenous Sourcing Action Plan (also detailed in Appendix 6 of this Supplementary report) would also assist in addressing the issue raised. RTA proposes to support the establishment of a local recreational fishing reference group to provide a forum to develop and help implement the establishment of artificial reefs. The reference group would comprise representatives from charter operators and the Weipa Sportsfishing Club (refer Response 11.3). Available catch data for fishing charter operators and commercial licence holders is presented Section 6.4 of this Supplementary report. DEEDI Fisheries Queensland have not reported a new recreational catch estimate since an estimate of 44 tonnes of reef fish was made for the whole Gulf of Carpentaria fishery in 2005.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.7	Socio-economic	Figure 6-55	<p>It should be noted that the area of the port and spoil ground have historically been high yield areas for the Northern Prawn Fishery, 2006 figures indicate an area of highest yield at the project site for the whole of the GOC.</p> <p>This further reinforces the importance of the habitat adjacent to the Three Mile and Nine Mile reef systems.</p>	<p>The EIS identifies the importance of the Weipa area and specifically the Project area to the Northern Prawn Fishery (NPF) in Section 6.7.1 as follows, “The banana prawn season extends from April to June, with the Weipa statistical area being a significant area of production (refer Figure 6-55). Banana prawns are targeted in waters less than 20m deep. Areas adjacent to the proposed port site between Pera Head and Boyd Point and the potential spoil ground location are important areas within the Weipa statistical area for catching banana prawns (refer Figure 6-56).” The area of the proposed spoil ground represents much less than 0.1% of the NPF Weipa Statistical Area and such an area would represent 0.02% of the annual Gross Value of Production of the NPF. Further information is presented in Section 6.4.1 of this Supplementary report.</p>
9	Western Cape York Turtle Conservation Project	9.8	Ferry/Barge	6.9.4.1	<p>Rio Tinto should as part of a response from Government advise that threats to dugong are unacceptable and may be substantially mitigated by engaging with Aluminium Boats Australia (Queensland manufacturer of environmentally friendly vessels – Premiers announcement in Gladstone refers) with a view to design and construct suitable vessels.</p>	<p>Potential impacts on Dugongs from boat strike were identified in Section 6.9.4 of the EIS. The EIS states that the operation of the ferry is predicted to pose a moderate risk to Dugong in the Embley estuary where seagrass beds are present. Transit lanes would be defined to reduce the overall area of disturbance from vessel activities. Where possible, these transit lanes would follow greatest water depths to avoid significant meadows of seagrasses. Any incidents involving Dugong strike would be reported to the Department of Environment and Resource Management (DERM).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.9	Port/shipping	6.9.4.3, 7.10.2	<p>The Land Protection (Pest and Stock Route Management) Act 2002 is referenced to identify the obligation of Rio Tinto to control Feral Pigs as Class 2 pest.</p> <p>Following surveys adjacent to the lease Rio Tinto were advised that feral pigs were taking refuge within their lease and were responsible for predation of nests on most beaches at levels near 100%. No action was taken by the company at the time.</p> <p>The control program proposed has been a responsibility of the company under the Act since 2002 and no action to date has been taken.</p> <p>Suggest that:</p> <ol style="list-style-type: none"> 1. Rio Tinto as a matter of urgency implement pest management across site. To not only include feral animal control but also board scale weed control. 2. The feral pig program outlined in little detail needs to be fully implemented along the coastline adjoining mining lease immediately. DERM, Bio-Security, AQIS, other agencies, Cape York Sustainable Futures, Indigenous Land & Sea Centres and tertiary institutions need to partner Rio Tinto to formulate broad scale remedial operations regionally. 3. Rio Tinto should play a key role in regional solution to feral pig control on marine turtle nesting beaches. 4. The SOE project should be a catalyst for Rio Tinto to come to terms with their obligation as a regional 'leader' in environmentally sustainable practices. 	<p>Feral pigs are widespread on Cape York. RTA Weipa has contributed to broader feral pig control programs and under the Environmental Authority MIN100939109, pest management procedures will be formalised through a Land Use Management Plan which is required to be submitted to the Department of Environment and Resource Management (DERM). This feral pig control procedure would apply to the whole of Mining Leases 7024 and 6024. The proposed targeted feral pig control program for the SoE Project (refer Section 6.9.4.3 and Section 7.10.2 of the EIS and Section 6.3.2 of this Supplementary report) is designed to target the impact of this key threatening process on turtles nesting in the vicinity of the proposed Port.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
9	Western Cape York Turtle Conservation Project	9.10	Rehabilitation	3.7.2	<p>The report "Assessing the Success of Vegetation Development on Tropical Rehabilitated Landscapes Following Mining" 2006 is cited as an independent assessment of the current regeneration North of the Embley (NOE).</p> <p>With regards to rehabilitation at the North of Embley site and approval of SoE project,</p> <p>Suggest that:</p> <p>The completion criteria according to the Environmental Protection Agency state that rehabilitated sites should be safe to humans and wildlife, non-polluting, stable and have self-sustaining ecosystems (Environmental Protection Agency Queensland, 2007). Thus, the different goals of rehabilitation at Weipa are to ensure:</p> <ul style="list-style-type: none"> – Soil support vegetation establishment – Native vegetation establishment on site – Vegetation structural characteristics developing – Nutrient cycling processes evident – Fauna begin to use rehabilitated sites <p>Given the Assessment provided in the reference indicating a total failure by Rio Tinto to meet completion criteria as set out above, the government should be left with no alternative but to indicate to the company that any expansion into SOE will be contingent upon a sound, proven regime for regeneration NOE. This will require a total commitment from the company to fire management and soil preparation NOE. It would not be in the best interests of the government to allow Rio Tinto to continue with a 'failed' regeneration regime over SOE. A decision to do otherwise would be contradictory and not comply with provisions of the relevant Indigenous Land Use Agreement (Western Cape Communities Coexistence Agreement).</p> <p>Scientific opinion would need to confirm time frames for 'proving' viable completion criteria NOE.</p>	<p>Refer to responses to 1.10, 1.11, 1.12 and 1.14. RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques required to routinely achieve this. Fire management and soil preparation are addressed in current practices. Specific completion criteria for the various post-mining domains at the existing operations are being developed in accordance with the requirements of the recently issued Environmental Authority for existing operations. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Management conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
10	Cape York Sustainable Futures	10.1	Socio-economic	15	<p>CYSF is currently running a number of environmental and economic development programs that have relevance to the South of Embley project area, yet we were not actively consulted in this process nor were we considered to be a key stakeholder as other groups were. CYSF is currently:</p> <ul style="list-style-type: none"> – Providing representations to government on the construction of an all-weather sealed road to Weipa to facilitate community development; – Delivering a Sea Turtle Conservation Project to address critical threats to endangered populations on Western Cape York in partnership with local indigenous communities and key scientific and government representatives; – Providing best practice fire management planning advice to local pastoral land owners and indigenous communities within or adjoining the project area; and – delivering real time satellite based bushfire tracking and history information relevant to biodiversity and weed management issues. <p>We would seek an ongoing opportunity to be involved in providing advice and input into the development and implementation of this important and significant project.</p>	RTA Weipa would be happy to meet with CYSF to understand the work undertaken in these areas, however RTA Weipa is committed to working collaboratively with Traditional Owners across these areas on the mining lease and any discussions or potential collaboration with external groups on this work should involve representatives of the relevant WCCCA Sub-Committees and Coordinating Committee.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.1	Socio-economic	16.3.2; Figures 6-17; 6-38, 6-57.	<p>Failure to identify importance of area known as "The Three Mile" for commercial line and charter fishing. Detailed perusal of fishery log book data would have established the importance of this sector. The area known as The Three Mile is clearly shown on Figure 6-57 but no actual mention is made of its presence in Section 6. There were limited and possibly no surveys of Three Mile Reef Area.</p>	<p>Both Three Mile and Nine Mile reefs were recognised as areas of interest to the fishermen (these and other locations are shown on Figure 6-57(sup.) of this Supplementary report). Specifically, page 16-52 of the EIS states:</p> <p>During the consultation process a number of key locations of interest were identified by local recreational fishermen. These included the shoals off Boyd Point (Three Mile), and the areas of reef located north of Boyd Point and around Pera Head. The group requested that RTA map popular recreational fishing areas (derived from GPS points provided by the group) and compare these areas to proposed shipping routes, anchorage areas and spoil grounds. The suggestion was made by sportsfishing and commercial fishing interests that an artificial reef should be considered to mitigate any potential impacts from the dumping of spoil, particularly in sensitive fishing spots such as the 'Nine Mile' area.</p> <p>Since 2008, direct engagement and consultation has been undertaken with charter fishing guides, commercial fishing representative bodies, and the Weipa Sportsfishing Club. Invitations to attend these sessions were provided to all businesses and members of these groups. In addition to these sessions, presentations and regular updates on the project have been provided to the Western Cape Chamber of Commerce (of which Charter Fishing Guides are members) and also to the broader Weipa community (at least 4 forums specifically dedicated to discussing the SoE Project). These sessions also allowed members of the broader community who have a specific interest in recreational fishing to attend, learn about the Project, ask questions and voice any concerns. The details of these sessions and the summary of issues raised have been included in Section 15 (Consultation) of the EIS. These concerns and proposed mitigation strategies are expanded upon in Section 16 (Social Impact Assessment) of the EIS. Targeted drop camera and towed sled surveys were carried out in the proposed dredge area where bathymetric survey indicated that there was potential for reefs to occur (refer Section 6.3.1.2 and Figure 6-17 of the EIS). These surveys identified open benthic habitat in the berth and channel areas and included a survey point in the area identified as a recreational fishing area immediately adjacent to the dredge channel in Figure 6-57 of the EIS (now updated with a label indicating the "Three Mile" area and showing the proposed realignment of the Port in Figure 6-57(sup.) of this Supplementary report). Available catch data for commercial line and charter fishing operators is presented in Table 6-B of Section 6.4.2 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.2	Port/shipping	Sections 16.3.2; 6.7.2; 6.7.3; 6.9.6	<p>The EIS acknowledges that the port development poses a 'moderate local risk of impact' to recreational and guided fishers. This then places a responsibility on RTA to provide measures that will ensure that any impacts are offset by the creation of alternative fishing areas. Three recommendations are made (see items 11.2, 11.3 and 11.4)</p> <p>Recommendation 1. Shipping channel be realigned by minimum of 10 degrees.</p>	<p>RTA engaged GHD to collect wave, current and tide data over two separate campaigns (July 2006 – May 2007, November 2007 – May 2008). The alignment of the wharf and associated channel was selected for optimal ship behaviour while in the Port berths, due to predominant wave direction. It is also the shortest distance to deep water. There is only minor scope to realign the jetty and wharf without compromising ship safety in Port. Following more recent studies, a small two (2) degree alignment change to the south has been adopted (refer Figure 2-6(sup.) and Section 2.6 of this Supplementary report). This realignment has the effect of reducing, but not eliminating, disturbance to the Three Mile fishing area.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.3	Port/shipping	Sections 16.3.2; 6.9.4.5; 6.7.3; 6.7.2; 6.5.1; 6.9.6	<p>The EIS acknowledges that the port development poses a 'moderate local risk of impact' to recreational and guided fishers.</p> <p>Recommendation 2. Establishment of series of artificial reef structure to offset the loss of marine and reef habitat caused by dredging.</p> <p>(It is proposed that: The spoil from the CSD dredge should be placed in 1 or 2 enclosed areas approximately 1 km long by 300m wide running east west on the 20m line in the vicinity of S12.51, E141.36. This/these area(s) to be bordered by a rectangular retaining structure composed of large rocks/cement blocks/pipes or similar materials. The spoil to be dumped in 2or 3 large mounds that when finished are topped with suitable reef structure. This artificial area would be used once for the heavier initial spoil. Further artificial reefs could incorporate confiscated Indonesian vessels or older ships.</p> <p>Acknowledgment of the draft EIS that jetty piles will act as fish assemblages (Section 6.9.4.5), supports an enhancement project based on placing further fish supporting structures around the existing piles in areas that could be made accessible to fishers.)</p>	<p>RTA recognised that the Three Mile area was a popular fishing area (refer page 16-52 of the EIS). The EIS acknowledges that there would be a temporary impact on fish assemblages in the vicinity of the Port and spoil ground due to turbidity generated by dredging and disposal of sediment, however following dredging, the impacts are anticipated to be minor (refer Section 6.9.4.5 of the EIS). The proposed departure channel is relatively narrow (182m wide) and the proposed 2 degree realignment would reduce the impact on this area. It should also be noted that the shipping channel at the mouth of the Embley River has been reported as an attractive fishing area (http://www.fishingearth.com/fishing-articles-detail.asp?ArticleID=54&FishingTypeID=-1&btID=-1&bgID=3). It is considered unlikely that the dredge channel would significantly impact fishing in this area.</p> <p>Charter fishing boat operators have suggested that the establishment of artificial reef structures, as an enhancement measure, would assist to mitigate loss of habitat due to dredging. Section 6.9.4.5 of the EIS notes that the jetty and wharf piles themselves would act as de facto artificial reefs and are, in effect, an enhancement measure. Fishing near the jetty would be possible and RTA would designate a safe passage underneath the proposed jetty for small recreational and charter boat users to prevent the need to travel around the jetty and wharf (which would have a safety exclusion zone of 50m) and in accordance with any Maritime Safety Queensland requirements (refer Section 16.3.2 of the EIS). RTA recognises that the establishment of artificial reef structures, separate to the jetty, would be of benefit to charter operators and recreational fishers and would provide community fisheries benefits. A suggestion has been made to RTA that the spoil ground could be capped in part to form a reef structure. However, this is not considered feasible (the spoil ground would continue to receive maintenance dredging). It is considered more feasible to establish structures using steel or concrete for example, possibly using suitable surplus materials from Weipa. RTA proposes to support the establishment of a local recreational fishing reference group to provide a forum to develop and help implement the establishment of artificial reefs. The reference group would comprise representatives from charter operators and the Weipa Sportsfishing Club. RTA would cover the costs of materials, transport and placement at sea. The artificial reefs would also serve as an offset for fish habitat loss in the due to marine works in the Hey and Embley Rivers (see Section 7.4.5 of this Supplementary report). RTA also proposes that any SoE construction workers in the SoE camp seeking to go fishing by boat in their recreation time can only use local authorised charter fishing operators.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.4	Socio-economic	Sections 16.3.2; 6.7.3; 6.7.2; 6.5.1; 6.9.6	<p>The EIS acknowledges that the port development poses a 'moderate local risk of impact' to recreational and guided fishers. A Strategic Plan for Recreational Sportsfishing Development in the Weipa Western Cape Area estimated that that commercial fishing tour operators contributed \$4.4 million in 2006 to the Weipa economy.</p> <p>Recommendation 3. Compensation of effected charter and commercial fishers for loss of income/product due to the loss/damage of their major Albatross Bay fishing ground.</p>	<p>DEEDI (Fisheries Queensland) have indicated to RTA that they are developing a compensation model for commercial fishing operators for use in circumstances where there is a demonstrated economic impact attributable to a development project. RTA does not have access to this model. RTA will continue to consult with DEEDI (Fisheries Queensland) regarding their policies regarding threshold of impact for potential compensation and quantification of potential compensation. Information on the Gross Value of Production of commercial licence holders operating in relevant Gulf of Carpentaria fisheries is presented in Sections 6.41 and 6.4.2 of this Supplementary report, along with catch data for commercial and charter fishing operators.</p> <p>The Strategic Plan for Recreational Sportfishing Development in the Weipa Western Cape Area (Barradave Sportsfishing Services 2011) was released after the SoE Project EIS was submitted to government for approval to release publicly. Unfortunately, even though the Strategic Plan identifies RTA as a key stakeholder, no formal consultation was carried out with RTA during the development of this plan. Key issues, relevant to the SoE Project, from the Strategic Plan are summarised in Section 16.4 of this Supplementary report, and responses provided. The Strategic Plan estimated charter operator gross revenue was \$2,386,000 in 2006, assuming 87.5% average hire rate over 30 weeks for 14 charter boats, 3 mother ships and 2 houseboats.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.5	Port/shipping	6.9.4.5	<p>The area between Boyd Point and Pera Head and out to Three Mile Reef perennially host the largest aggregations of bait in Albatross Bay.</p> <p>These huge masses of small forage fish species that usually move into that area from March until December were not identified in the EIS. They are extremely important to the Marine Food chain attracting larger pelagic and demersal fish, dolphins, pilot whales, turtles, manta rays and sharks.</p> <p>Initial and continued dredging and increased ship traffic may cause moderate to severe disruption of this annual aggregation. Investigation of this phenomenon has never been properly undertaken but is thought to involve the interaction of current with coastal and bathymetric features. This is a major component of the marine environment that has been overlooked.</p>	<p>RTA acknowledges that suitable habitat for baitfish is present within various parts of Albatross Bay, including reefal areas and locations with underwater structure such as mangrove-lined river and creeks. Generally, the abundance of baitfish is closely related to the availability of food (i.e. phytoplankton and zooplankton) which in turn is dependent on oceanographic and climatic variations (e.g. rainfall and ENSO systems). While baitfish were not specifically named in the EIS, they are included in the assessment of impact on “fish assemblages” (Section 6.9.4.5 of the EIS). The EIS acknowledges that there would be a temporary impact on fish assemblages in the vicinity of the Port and spoil ground due to turbidity generated by dredging and disposal of sediment. However, as fish are mobile and exhibit avoidance behaviour, it is very unlikely that long term impacts would occur. With regard to pilot whales, the DSEWPac Species Profile and Threats database indicates that the distribution of pilot whales does not extend into the Gulf of Carpentaria. The DSEWPac National Whale and Dolphin Sighting and Stranding Database (http://data.aad.gov.au/aadc/whales/) shows only one sighting of a long-finned pilot whale off the western coast of Cape York of an unknown year. The status of threatened and migratory marine species in the vicinity of the Project are identified in Table 6-35 of the EIS.</p>
11	Western Cape Chamber of Commerce	11.6	Socio-economic	6.7.3	<p>Tourism Queensland survey completed in October 2003 estimated that 68% of visitors driving to the cape go fishing. This was based on four studies. The amount of readily accessible information obviously available, the question arises as to how such a ludicrous figure (9%) was arrived at. There has been suggestion of a typographical error involved but this raises further issues are the quality of the proof reading.</p> <p>Not included in these figures were fly-in visitors (recent figures show up to 60 per week) of which approximately 90% are recreational fishers, the majority of whom fish with charter operators.</p>	<p>Page 6-127 of the EIS contains a typographical error. It should read “it is estimated that 90% of tourists who visit Weipa do so primarily to fish (GHD 2005).” The Social Impact assessment fully acknowledges the concerns of the Tourism (Charter) Fishing Business Owners: “The charter fishers felt strongly that mining south of the Embley River was going to have significant negative impact on their businesses. They indicated that at least 60% of their business was based on tourists who wished to walk on a pristine beach in an area “untouched” by industrialisation and that a new port would intrude on that experience. The charter fishing groups who felt that they would suffer the most impact from the Project include fly fishermen.” (refer page 16-48 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.7	Socio-economic	Sections 6.9.3.2	<p>Suggest that:</p> <p>In conjunction with an offset to mangrove clearing and dredging in the Embley and Hey River sites, long term funding of a fish stocking facility in the Weipa area.</p> <p>Such a facility would have to operate for the life of the SOE mining operation and concentrate on the propagation and release of local species including barramundi, mangrove jack, black jewfish, grunter etc.</p> <p>The facility could involve local indigenous people as staff or in a voluntary capacity. Local fishers would also be encouraged to become involved a volunteers.</p>	RTA will provide a compensatory measure for the removal of about 400m2 of mangroves as required by DEEDI (refer Section 6.9.3.2 of the EIS). RTA does not consider that the long-term funding of a fish stocking facility is a suitable compensatory measure for the removal of the small area of mangroves.
11	Western Cape Chamber of Commerce	11.8	Socio-economic	Sections 16.3.2; 6.7.3; 6.9.6	<p>The assessment of recreational fishery, an important economic activity, is limited to only two paragraphs that contain very questionable statistics. As recreational fishing is the major recreational activity impacted by the new port development, a comprehensive assessment would have been expected.</p> <p>Weipa has the highest per capita boat ownership in Queensland.</p> <p>Prevailing weather conditions (predominantly winds) limits most boat traffic to the southern part of Albatross Bay, the majority travelling from Boyd Bay to Thud Point.</p> <p>It is identified that recent research has not been consulted.</p> <p>The Port Development threatens to impact severely on the substantial bookings/revenue of the charter fishers.</p> <ul style="list-style-type: none"> – Removal by dredging of their most visited and productive fishing area – Damage to nearby beaches and reefs via siltation, ore spillage, ship pollution, and ship traffic – Boats will be forced to go further afield, increased fuel and maintenance costs and raising significant safety issues – Loss of booking due to uncertainty of future fishery status – Major loss of revenue from the time dredging commences – Threatens the potential of indigenous charter fishing ventures 	<p>Recreational fishing, including Charter Fishing, is addressed in Section 16.3.2 of the EIS.</p> <p>Modelling indicates that there would be minimal impact in the area north of Boyd Point (refer Figure 6-60a of the EIS). The beaches of Boyd Bay and the coastline north of Boyd Bay would not be impacted during dredging. These areas are closer to Weipa than the beach between Boyd Point and Pera Head and would therefore remain suitable for charter fishing during the dredging period. Following dredging, the beach between Boyd Point and Pera Head would be accessible.</p> <p>The fish assemblage is exposed to periodic but significant physical disturbance and elevated turbidity during extreme weather events. Fish species are also mobile and as such can move away from any local areas that are affected by a disturbance (e.g. dredging and dredge spoil deposition). Physical disturbance to the dredged site, deposition of spoil, and the re-suspension of disturbed and deposited sediment are anticipated to have minor impacts on the fish assemblages at the proposed Port facility and the proposed new spoil ground (refer Section 6.9.4.5 of the EIS).</p> <p>Assessment of marine impacts (including beaches and reefs) and proposed mitigation measures are provided in Section 6 of the EIS. Assessment of impacts relating to sea port facilities are provided in Section 14.4 of the EIS. Mitigation measures to minimise risks related to product spillage, ship pollution and ship traffic are addressed in Section 14.4.7 of the EIS. The establishment of artificial reefs is proposed (refer to response to 11.3). More detail on the catch from charter operators and the commercial licence holders is presented in Section 6.4.2 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.9	Socio-economic	Sections 16.3.2; 6.7.2	<p>The significance of the Weipa commercial fishery and in particular Sector AB8, which includes the Three Mile Reef, to the Commercial Line Fishers L4 is understated.</p> <p>The sector represents less than 2% of the Qld Gulf of Carpentaria area but contributes 12% of the line caught Narrow Barred Spanish Mackerel.</p> <p>In 1992 the sector produced 22.5 tonnes of fillet (15% of the total GOC catch), and in 2002 it produced 28.6 tonnes.</p> <p>The Gulf of Carpentaria Commercial Fishermen Association indicated the whole of Boyd Bay/Albatross Bay area was used intensively for three to five months a year by about 20 to 30 boats. The following issues were raised:</p> <ul style="list-style-type: none"> – potential discharge of contaminants and water; – the effect of project on their traditional anchorage in Boyd Bay; and – the proposed wharf would go through the inner reef and Spanish mackerel area. 	<p>The feedback received from commercial, charter and recreational fishers through consultation is summarised in Section 15.2.5 of the EIS. Section 16.3.2 of the EIS details the concerns of the Gulf of Carpentaria Commercial Fishermen Association. The EIS concludes "Overall dredging activities are anticipated to have a low risk of adverse impact on fisheries" (refer page 16-54).</p> <p>The importance of the AB8 sector is acknowledged in Section 6.7.2 of the EIS. The AB8 sector produced 15% of the total Spanish mackerel fishery catch in 2008 but this declined to 3% in 2009, indicating the variable nature of the catch (Annual Status Report 2010 Gulf of Queensland Line Fishery, DEEDI) .</p> <p>Refer also to responses to 11.2, 11.3 and 11.4 and Section 6.4 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.10	Port/shipping	6.6.5	<p>The information regarding marine turtles is poorly researched and therefore comes to some very dubious conclusions.</p> <ul style="list-style-type: none"> - The surveys listed are all short term with daylight surveys in April appearing to be too early in the season. - Given the now 'critically endangered' status of the Olive Ridley Turtle, there is a lack of investigative depth regarding this species. An intense co-ordinated observation of the entire beach for the full nesting season should have been carried out so that precise information was included. - The first identification of the Green Turtle is questionable as this species usually nests only on islands. - Indigenous rangers gave been trained to identify nesting turtle species by their tracks left. Why were the investigators not able to do likewise. - Page 6-116 <i>The proposed location of the port is not considered a high density nesting beach. The April 2008 survey of the proposed port area found that 0.1 tracks per kilometre per day...</i> Casual Observations on Saturday 20/08/2011 found 12 sets of tracks (old and new) in 500 meters within the immediate vicinity of the wharf site. This would seem to contradict those findings. 	<p>Results of three turtle nesting surveys (carried out in August 2003, May-July 2007 and April 2008) are provided in Section 6.6.5 of the EIS. Flatback turtle nesting occurs all year round, peaking in May to September. Uncertainty exists over the peak timing of nesting of the other species in the Project area. The timing of the third survey (April) was chosen by the consultant marine ecologists as a survey month to complement previous studies and the methodology was developed based on advice from Dr. Colin Limpus (Chief Scientist, Freshwater and Marine Services, DERM).</p> <p>Olive Ridley turtle nests were identified in a survey of the area in August 2003 (Section 6.6.5, page 6-116 of the EIS). The turtle nests identified during the 2007 and 2008 surveys were not confirmed as Olive Ridley turtle nests. However, the EIS acknowledges that the unidentified nests could have been Olive Ridley turtle nests and for the purposes of the impact assessment, RTA assumed that this species still utilises the Port area (refer to Table 6-35 of the EIS and Table 6-35(sup.) in this Supplementary report). Mitigation measures for these species are proposed in Section 6.9.4.3 of the EIS and summarised in Section 6.3.2 of this Supplementary report.</p> <p>The Green Turtle was identified in a survey carried out in 2007 by GHD for the Aurukun Bauxite Project. Indigenous representatives accompanied all three surveys. It is not always possible to identify tracks due to disturbance by wind action, or damage by feral pigs.</p> <p>The 12 sets of tracks identified by the author does not provide a rate per unit time measure so it is not possible to compare this to the surveys that have been previously undertaken. The three surveys reported in the EIS found:</p> <ul style="list-style-type: none"> - 2003: 41 Flatback Turtle nests and two Olive Ridley/Hawksbill Turtle nests over a four day survey in August to September 2003 along 38km of beach from Boyd Point south to False Pera Head. This equates to 0.3 turtle tracks per kilometre per day. - 2007: 15 nesting events (majority Flatback turtles, with Olive Ridley or Hawksbill turtles nest identified and 1 Green turtle nest) during three separate daily survey periods between May and July 2007 along a 10km stretch of foreshore between Boyd Point and Pera Head. This equates to 0.6 turtle tracks per kilometre per day. - 2008: seven Flatback turtles, one Hawksbill turtle and two unidentified nests during a three day survey over 27km of beach between Norman Creek and 5km north of Boyd Point. This equates to 0.1 turtle tracks per kilometre per day.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.11	Port/shipping	6.6.5	<ul style="list-style-type: none"> Information on sand colour affecting turtle hatchling sex was incomplete. Silt deposition on the beach also has a potentially lethal effect on turtle eggs. The proposed light regime is also of questionable benefit. The example posed on page 6-120 of Hummock Hill Island Turtles raises serious doubt that any regime could be properly effective 	<p>Section 6.6.5 of the EIS discusses the dependency on the temperature of incubation and the function of sand colour in determining the sex ratio of turtle hatchlings. For Flatback turtles, the darker coloured beaches on western Cape York, such as those in the area of the proposed development, have been shown to produce predominantly female offspring whilst Crab Island produces mostly male offspring. The inshore sediment deposition modelling is presented in Section 6.9.2.5 of the EIS. The results indicate that it would be highly unlikely that dredging would cause sufficient deposition to change the colour of the sand. As turtles nest above Highest Astronomical Tide, sediment of any type would not be deposited in nests.</p> <p>The EIS concludes that an altered above-water night-time light regime without mitigation is anticipated to cause the largest single potential threat to marine turtles. In addition to the lighting plan presented in Table 6-50 of the EIS, a feral pig control program would be implemented between Pera Head and Boyd Point to reduce nest predation and enhance turtle population survivorship. It is considered that this measure would produce an overall increase in hatchling numbers and therefore there would not be an overall significant adverse impact on threatened marine turtles (refer Section 6.9.4.3, page 6-168 of the EIS and Section 6.3.2 of this Supplementary report).</p>
11	Western Cape Chamber of Commerce	11.12	Port/shipping	6.6.5	<p>In regards to impacts on Marine Turtles,</p> <p>Suggest that:</p> <ol style="list-style-type: none"> Move ore overland and upgrade the existing port in the Embley River Instigate a long term turtle management plan for a minimum of one turtle generation, that would include: <ul style="list-style-type: none"> daily monitoring of beaches from the Embley River mouth to the Archer River the collection, incubation, hatching and releasing of all eggs away from lighted areas monitoring of silt and bauxite spill on local beaches this plan to be co-ordinated with other turtle management plans on the Western Cape. <p>These measures are an extrapolation of those suggested on page 6-171 and would require a funding commitment from RTA. Cape York Sustainable Futures estimates that the above turtle monitoring program would cost approximately \$300,000 per season to operate.</p>	<ol style="list-style-type: none"> Detail on Project alternatives is provided in Section 1.6 of the EIS. The use of existing Port facilities was evaluated and found not to be feasible due to the long ore haulage distances involved, the need to cross the 3.5km wide Embley River Estuary with major infrastructure (refer Section 1.6.2 of the EIS), the capacity limitations of the existing port, the very significant port upgrading works required to meet the Project needs of volume and ship size. The EIS concludes that, with mitigation measures, the Project is not expected to have a significant impact on marine turtles. RTA has proposed management measures for turtles in the vicinity of the Port in Section 6.9.4.3 of the EIS and Section 6.3.2 of this Supplementary report, which includes feral pig control and removal of ghost nests, plus a monitoring program developed in conjunction with Traditional Owners and the Department of Environment and Resource Management (DERM) with consideration of turtle nesting activities (number, type, predation, success), behaviour (hatchling activity) and incident reporting.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.13	Port/shipping	6.5.1	<p>Regarding the proposed dredging and spoil disposal requirements for the Port Area:</p> <ul style="list-style-type: none"> Initial dredging period from May 2012 to January 2013 will take place and suspended sediment concentrations will be highest during the peak rec fishing/charter tourism season. Suspended sediment concentrations will be highest during the peak fishing periods of May/June/July and September/October Locations adjacent to Pera Head are expected to experience the highest deposition rates and these are predicted to occur during periods 2 and 3. (May to August) Therefore the total rate of deposition during Period 2 may represent a potential risk to mortality of coral reefs (Pera Head) Periods of calm sea conditions over reef habitats during dredging may provide an increased risk to reef communities as identified in an incident from Townsville. Dredging impacts on reefs and corals are identified and manipulation of dredging plans are suggested if coral stress problems become apparent but is this enough? 	<p>The EIS summarises modelling that has been carried out to predict impacts relating to dredging and disposal of sediment from the Port area. Section 6.9.2.1 of the EIS demonstrates that the median plume concentrations from all periods remain below event based ambient ranges reported from near Boyd Point and Pera Head (e.g. during wet season storms). Modelling predicts that the turbidity plume generated at the spoil ground would not impact Nine Mile Reef.</p> <p>Section 6.10 of the EIS provides a commitment to develop and the outline of a Dredge Management Plan (DMP). A draft Dredge Management Plan for the Port area is provided in Appendix 5 of this Supplementary report. Core operational objectives of the DMP for the Project include:</p> <ul style="list-style-type: none"> Providing a platform for delivering legislated approval conditions for the development as evidenced by practical and achievable action plans; Implementation of an adaptive management and monitoring strategy which provides data for management at suitable spatial and temporal scales to enable effective environmental management outcomes; Delivering monitoring systems to overcome site based logistical and safety constraints, whilst maintaining rigour of design, and applicability to decision processes; Establishment of an agreed framework for the management of dredging and dredged material disposal which is transparent to stakeholders; and Provision of guidance to RTA and its contractors with regards to dredging and disposal activities, including the process of environmental management triggers and response requirements.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.14	Port/shipping	6.9.2.9	<p>The existing Lorim Point shiploader is not operated to minimise dust generation and spillage to the surrounding environment.</p> <ul style="list-style-type: none"> – As the before and after photos demonstrate, the white sand beaches existing before bauxite shipping began are now heavily coated with a layer of bauxite up to 2 kilometres from the existing ship loader with recent spillages (as recent as August 2011) occurring. – It is believed that increased production and operational conditions at the Lorim point facility are leading to increased events of bauxite spillage in harbour waters. – An overhaul of Lorim Point operational procedures and modification of the spillage recovery is required. – The greater wave action at the SOE port site will lead to any spillage being pushed on to the beaches more quickly and to a greater degree than the Embley River site. <p>Suggest that::</p> <ol style="list-style-type: none"> 1. Rio Tinto Weipa be required to update its Lorim Point loading facilities to stop further spillage of bauxite. That this facility be subject to independent video monitoring to ensure further spillage does not occur. 2. That construction of the loading facilities at the new port be subject to RTA Weipa complying with the above requirements 3. That the new port facility be independently monitoring by video to ensure spillage does not occur. That measures be instigated that would halt loading immediately if spillage does occur. 4. That beaches in the immediate vicinity of the new port be constantly monitored for bauxite spillage aggregation. 	Refer to response to 9.4.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.15	Port/shipping	4.2	<p>The south west swell events that can happen regularly during winter are not mentioned as significant. These may not be recorded as severe on the current wave recorder buoy because of its location.</p> <p>Tugs and line boats have no safe rough weather moorings at the new port. The safe operation of the proposed port facility may not be possible. Operational costs may be higher than anticipated. If vessel is washed ashore in incident, retrieval from the beach would be much more difficult than the Embley River.</p> <p>These major economic and safety issues may lead to RTA wanting to establish a safe harbour in the Boyd Bay area in the near future. This is not addressed in the EIS document.</p> <p>Suggest that:</p> <ul style="list-style-type: none"> - A formal agreement that RTA will not require the establishment of a harbour facility in the immediate area of the port development (Boyd Bay/Pera Head), is called for. - If this agreement cannot be negotiated then an offset arrangement be negotiated for possible future development including the provision of use of such a facility by non RTA vessels. - A compensation or fine arrangement be negotiated for any marine incidents involving vessels using the port facilities. 	<p>A significant amount of modelling has been carried out to assess extreme weather conditions at the Port site and the results are summarised in Section 4.2.1 of the EIS. The SoE wharf has been designed to withstand a 1:500 year average recurrence interval storm (refer to Table 4-5 of the EIS).</p> <p>The Port would include a fair-weather mooring point along the jetty for tugs. Tugs would return to Weipa in bad weather to protected moorings to be constructed alongside the existing Lorim Point east wharf (refer Section 2.3.1 of the EIS and further detail in Figure 2-4(sup.) and Section 2.7.3 of this Supplementary report). No line boats are proposed.</p> <p>Operational safety risks would be controlled through RTA's safety management system. RTA has worked with the Rio Tinto specialist marine group. Rio Tinto currently operates several terminals at the Dampier Port as well as the Weipa Port. RTA has undertaken ship handling simulation for berthing and removing vessels from the proposed SoE Port to identify hazards and incorporated changes to design where required. RTA is also engaging with Smart Ship Australia (owned by Maritime Safety Queensland (MSQ)) to undertake further ship handling simulation in conjunction with the Regional Harbour Master.</p> <p>It is identified in 16.3.2 of the EIS that access to moorings at Boyd Bay would not be restricted. RTA would have limited need to use Boyd Bay during construction and operations.</p> <p>Marine incidents are regulated by the Department of Environment and Resource Management (DERM) and MSQ.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.16	Ferry/Barge	2.7.2	<p>The establishment of the Humbug Barge Terminal by RTA would seem to be the ideal opportunity to establish a larger marine complex. Such a facility should incorporate RTA, private business and public facilities.</p> <p>Currently the Embley River port facilities have serious problems and are lacking in marine service facilities.</p> <ul style="list-style-type: none"> – Insufficient and dangerous moorings currently exist, particularly larger vessels and cyclone conditions – Wharfing and fuelling facilities are minimal and heavily used. Increased usage during SoE development will overtax these facilities. – Significant extra boat traffic during SoE operation will require extra mooring, fuelling, slipping and maintenance facilities. – Vessels are currently being slipped on beaches, not in compliance with EPA processes. – No facility for pumping of sewage from vessels – No travel lift facilities – No ULP fuel pumping facilities – Suggested that: <ul style="list-style-type: none"> – RTA and Ports Corp begin immediate negotiations to establish a multi-purpose marina area that could be used by RTA, other commercial private business and public users. This could be possibly achieved through the Regional Partnership Agreement or other suitable co-ordinating body. – Establishment of a new 4 lane public boat ramp, wash down area and parking area within these facilities. – Incorporating recreationally fishing friendly structures in any seawall construction as well as providing safe access. 	<p>North Queensland Bulk Ports are responsible for safe operations of public facilities within the Port of Weipa. RTA does not propose to build a public marina facility as part of the SoE Project.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
11	Western Cape Chamber of Commerce	11.17	Rehabilitation	3.7.2	<p>The report "Assessing the Success of Vegetation Development on Tropical Rehabilitated Landscapes Following Mining" 2006 is cited as a reference as an independent assessment of the current regeneration North of the Embley (NOE).</p> <p>With regards to rehabilitation at the North of Embley site and approval of SoE project,</p> <p>Suggest that:</p> <p>The completion criteria according to the Environmental Protection Agency state that rehabilitated sites should be safe to humans and wildlife, non-polluting, stable and have self-sustaining ecosystems (Environmental Protection Agency Queensland, 2007). Thus, the different goals of rehabilitation at Weipa are to ensure:</p> <ul style="list-style-type: none"> – Soil support vegetation establishment – Native vegetation establishment on site – Vegetation structural characteristics developing – Nutrient cycling processes evident – Fauna begin to use rehabilitated sites <p>Given the Assessment provided in the reference indicating a total failure by Rio Tinto to meet completion criteria as set out above, the government should be left with no alternative but to indicate to the company that any expansion into SOE will be contingent upon a sound, proven regime for regeneration NOE. This will require a total commitment from the company to fire management and soil preparation NOE. It would not be in the best interests of the government to allow Rio Tinto to continue with a 'failed' regeneration regime over SOE. A decision to do otherwise would be contradictory and not comply with provisions of the relevant Indigenous Land Use Agreement (Western Cape Communities Coexistence Agreement).</p> <p>Scientific opinion would need to confirm time frames for 'proving' viable completion criteria NOE.</p>	<p>Refer to responses to 1.10, 1.11, 1.12 and 1.14. RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques required to routinely achieve this. Fire management and soil preparation are addressed in current practices. Specific completion criteria for the various post-mining domains at the existing operations are being developed in accordance with the requirements of the recently issued Environmental Authority for existing operations. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
12	Private submitter 12	12.1	Socio-economic	6.9.3.1	<p>The severe lack of fisheries related data relevant to the project area available to inform the EIS is clearly evident. The importance of the Three Mile Reef and the importance of recreational fishing is understated throughout the EIS.</p> <p>The Three Mile supports a significant recreational (and sports fishing charter) fishery for between 6-7 months of the year. Extensive bait schools migrate to the waters adjacent to the Three mile (and Nine Mile) reef from April to October each year; attracting vast schools of pelagic and demersal species. This is an annual occurrence that commercial fishers have valued for over 30 years, well before the sport fishing charter operators established bases here in the late 1990s. No other areas of Albatross Bay has these unique reef assemblages or 'bait holding' features.</p> <p>The conclusion in the EIS that the risk to the overall line fishery in the Gulf of Carpentaria is minor is erroneous; as any impact to the Three Mile or Nine Mile reef systems will have deleterious affect to both the recreational and commercial fishery.</p> <p>There must be 'zero' impact to both the Three Mile and Nine Mile as a consequence of the SOE project.</p> <p>The EIS contains a 'paucity of information' and research that has been conducted in relation to recreational fishing in the Gulf of Carpentaria.</p> <p>Initial EIS consultation in relation to recreational fishing in the project area was far from adequate. This needs to be addressed as an immediate priority. Relevant agencies need to be included as part of this consultation. Appropriate research needs to be undertaken.</p>	Refer to responses to 9.1, 11.3 and 11.4, and Section 6.4 of this Supplementary report.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
12	Private submitter 12	12.2	Socio-economic	6.9.3.1	<p>With regards to the impacts to Three Mile Reef and the recreational fishery in Albatross Bay.</p> <p>Suggest that:</p> <p>The Three Mile Reef area is a critical habitat underpinning the recreational and sport fishing charter fisheries of this town (and this business among others). The Three Mile (and Nine Mile) Reef areas need to be sustainably managed and not destroyed. We have heard of the precautionary principle; this is a case where it must be implemented until adequate research is completed.</p> <p>It would therefore follow that as a priority, a major research project (prior to any project and/or dredging approvals) funded by Rio Tinto will need to be undertaken to firstly ascertain the value of the Three Mile and Nine Mile reef areas from both a fisheries and overall economic perspective, ascertain potential impacts to the relevant fisheries by habitat loss due to proposed dredging and the effects on bait school migration.</p>	<p>RTA recognised that the Three Mile area was a popular fishing area (page 16-52 of the EIS). The EIS acknowledges that there would be a temporary impact on fish assemblages in the vicinity of the Port and spoil ground due to turbidity generated by dredging and disposal of sediment, however following dredging, the impacts are anticipated to be minor (refer Section 6.9.4.5 of the EIS). The proposed departure channel is 182m wide. This is narrow relative to the “wide area” of Three Mile Reef mentioned above. It should also be noted that the shipping channel at the mouth of the Embley River has been reported as an attractive fishing area (http://www.fishingearth.com/fishing-articles-detail.asp?ArticleID=54&FishingTypeID=-1&btmID=-1&bgID=3). It is considered unlikely that the dredge channel would significantly impact fishing in this area.</p> <p>The EIS concluded that the turbidity plume generated by the spoil ground would not impact Nine Mile Reef (refer Section 6.9.2.3 and Section 6.9.2.4 of the EIS).</p> <p>The fish assemblage is exposed to periodic but significant physical disturbance and elevated turbidity during extreme weather events. Fish species are mobile and as such can move away from any local areas that are affected by a disturbance (e.g. dredging and dredge spoil deposition). Physical disturbance to the dredged site, deposition of spoil, and the re-suspension of disturbed and deposited sediment probably are anticipated to have minor impacts on the fish assemblages at the proposed port facility and the proposed new spoil ground (refer Section 6.9.4. of the EIS).</p> <p>The EIS concludes that physical disturbance to the dredged site, deposition of spoil, and the re-suspension of disturbed and deposited sediment are anticipated to have minor impacts on the fish assemblages (Refer Section 6.9.4.5 of the EIS) and therefore a fisheries research project is not proposed. Refer also to responses to 11.2, 11.3 and 11.4 and Section 6.4.2 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
12	Private submitter 12	12.3	Port/shipping	6.7.3	<p>The EIS data outlining “minimal impact” to the Nine Mile Reef is less than convincing when the following statement has been included in the document:</p> <ul style="list-style-type: none"> – If monitoring determines that there are unacceptable impacts to Nine Mile Reef due to the turbidity plume associated with the spoil ground, then appropriate management measures would be developed and implemented in consultation with DSEWPac (6-162) <p>The statement above clearly brings into question any modelling that has been done for the EIS affording the Nine Mile protection.</p>	<p>The statement provided from page 6-162 of the EIS is taken out of context. The full statement reads “Although the modelling predicts that the turbidity plume generated by the spoil ground would not impact Nine Mile Reef (refer Section 6.9.2.3 and Section 6.9.2.4), turbidity plume monitoring would be undertaken for the purposes of model validation of spoil disposal and will be described within the Dredge Management Plan. If monitoring determines that there are unacceptable impacts to Nine Mile Reef due to the turbidity plume associated with the spoil ground, then appropriate management measures would be developed and implemented in consultation with DSEWPac. If the model is identified as validated, then no further turbidity monitoring would be proposed at Nine Mile Reef.”.</p> <p>Refer to response to 11.6.</p>
12	Private submitter 12	12.4	Socio-economic	6.7.3	<p>Recreational fishing is the ‘life-blood’ of the town of Weipa, providing significant eco-tourism opportunities for further business development by both indigenous and non-Indigenous operators.</p> <p>The figure of 9% grossly underestimates the extent of the fishery. 90%-95% would be more accurate.</p>	
13	Gulf Alumina	13.1	Water supply	5.4.2	<p>Gulf Alumina submitted an application for an artesian groundwater supply for Gulf Alumina endorses the artesian groundwater modelling approach adopted in the EIS and is willing to cooperate further with any modelling studies to ensure that RTA Weipa and Gulf Alumina’s access to an artesian supply are secure and that they are sustainable with respect to environmental and social considerations.</p>	Noted.
13	Gulf Alumina	13.2	Water supply	5.4.2	<p>Gulf Alumina has applied for 1.8GL/a for the Skardon River Bauxite Project on a seasonal cycle at project startup with the intention to use less water over time. The combined extraction by RTA Weipa and Gulf Alumina would be less than the amount in RTA’s 18GL/a modelling scenario. Gulf Alumina wishes to draw attention to the fact that, despite the higher operational drawdown predicted in the modelling for scenario 2 (18GL/a) by 2053 the modelling indicates that there is little difference in recovery times and long term drawdown at Art8, Art15 or Bramwell Station. Recommend that this conclusion be confirmed.</p>	Noted. RTA proposes to abstract an average of 12GL per annum of artesian water (although both 12 GL p.a. and 18 GL p.a. scenarios were modelled for the EIS).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
14	Private submitter 14	14.1 to 14.18	Socio-economic		Issues identified in 11.1 to 11.17	Refer to response to 11.1 to 11.17.
14	Private submitter 14	14.19	Socio-economic	6.9.6	<p>Based upon our experience operating in Albatross Bay it is considered that data contained in the environmental impact study presented by Rio Tinto is not only incorrect but if allowed to proceed will destroy a major commercial and recreational fishing area.</p> <p>This in turn will destroy my business which operates 4 charter fishing boats mainly for Fly and Sportsfisher persons from April - November and is based on offering to the angler a pristine and remote fishing experience walking beaches and blue water fishing around Boyd Point to Pera Head. Between myself and my other guides we do 150 - 180 days each per year walking beaches and fishing in the Albatross Bay proposed development area and although we are not scientists or biologists have possibly spent more time in the area than anyone do have some idea of what goes on there.</p> <p>This project both during construction and when completed WILL have major detrimental impact on my business.</p> <p>I am aware that as Australia's economy possibly needs this project to proceed and I am aware also that incidental destruction of my business that I have worked hard for 12 years to build is of no concern to Rio Tinto.</p> <p>Suggest that:</p> <p>I believe that this EIS should not be approved as is until further unbiased study has been undertaken on the marine ecology of this fragile marine habitat.</p> <p>Compensation should be offered to business people like myself who will be severely effected by the port development.</p>	Refer to responses to 9.6, 11.2, 11.3 and 11.4 and Section 6.4 of this Supplementary report.
14	Private submitter 14	14.20	Port/shipping	6.9.2.3, 6.9.2.4	<p>As present current in Albatross Bay is running @ approx. 1 - 1.5 knots to the north which it does for significant part of the year and there was also no mention of silting of beaches due to westerly winds which blow for a significant part of the dry season. The conclusion that sediment plume transport will be predominantly to the south with no effect on fishing at Nine Mile or Three Mile Reef is questioned.</p> <p>A sensitivity analysis has been undertaken to compare the fate of suspended sediment plumes between wet and dry season. The assessment demonstrated that the seasonal wind conditions have only a small influence on the fate of suspended sediment concentrations and deposition resulting from dredge activity.</p> <p>Therefore it is unlikely that the turbidity plume generated by the spoil ground would affect Nine Mile Reef if undertaken in wet or dry season. Turbidity plume monitoring would be undertaken for the purposes of model validation of spoil disposal and is described in the draft Dredge Management Plan (refer Appendix 4 of this Supplementary report).</p>	

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
14	Private submitter 14	14.21	Socio-economic		The EIS statement that the total turnover of ALL charter operations in Weipa totals \$367,000 is contested given that my turnover alone well exceeds that figure let alone the other 5 operators in the area. The quoted turnover is no more than an educated guess or a figure that was pulled out of the air to show minimal impact on the towns tourism. A Strategic Plan for Recreational Sportfishing Development in the Weipa Western Cape Area states that commercial fishing tour operators contributed \$4.4 million in 2006.	The statement provided in the submission is taken out of context. The full EIS statement reads (page 6-27): "It is estimated there are eight guided fishing businesses in Weipa with a combined income of \$396,000 (Fenton and Marshall 2001). Anecdotal information suggests the current income of the charter vessel fishery based in Weipa has increased substantially since 2001." The Strategic Plan for Recreational Sportfishing Development in the Weipa Western Cape Area (Barradave Sportsfishing Services 2011) was released after the SoE Project EIS was submitted to government for approval to release publicly. Unfortunately, even though the Strategic Plan identifies RTA as a key stakeholder, no formal consultation was carried out with RTA during the development of this plan. The Strategic Plan estimated charter operator gross revenue was \$2,386,000 in 2006, assuming 87.5% average hire rate over 30 weeks for 14 charter boats, 3 mother ships and 2 houseboats. Key issues, relevant to the SoE Project, from the Strategic Plan are summarised in Section 16.4 of this Supplementary report, and responses provided.
14	Private submitter 14	14.22			The establishment of a Humbug Barge Terminal by RTA would seem to be the ideal opportunity to establish a larger marine complex. Such a facility should incorporate RTA, private business and public facilities. Currently the Embley river port facilities have serious problems and are lacking in marine service facilities. Insufficient and dangerous moorings. Current wharfing and fuelling facilities at Humbug Point and Evans Landing are minimal and heavily used. Increased boat traffic during the SoE development will overtax these facilities leading to increased disruption to vessels of lower priority. Significant extra boat traffic resulting once the SoE project is established. Difficulty of accessing larger vessels. There needs to be improved and safer means of boarding wharfed and moored vessels. Vessels are being slipped on beaches due to the lack of slipping facilities	Not part of the SoE EIS Project.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
14	Private submitter 14	14.23			<p>The object of the rehabilitation at Weipa is to re-establish a self-sustaining native ecosystem. The completion criteria developed and the results from the monitoring helped to identify which sites are successful. Indeed of the thirty-three sites assessed, only one site (Trout 12) meets the current interim criteria. This suggests that there is a large amount of reworking required to reach the objectives of rehabilitation at Weipa and meet criteria determined with this study. Four transects showed Leucaena or gamba grass present, 848ha requires at least weed eradication. With a great invasion rate, these two weeds are a threat to vegetation development in the regenerated areas and to surround forest. RTA is aware of this issue and a program is underway but just for Gamba grass? it will be important to define a global weed management program in the near future to avoid a greater invasion.</p>	<p>RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques required to routinely achieve this.</p> <p>RTA has been undertaking a range of consultation work and research projects to develop completion criteria for mined land. The study referred to (Pascoe, 2008), was supported by RTA and was preliminary research testing a rehabilitation objective and "interim criteria" that were proposed by the researchers. The tested objective and criteria had not been agreed to by the company, stakeholders or the government. It is important to note that "interim criteria" for measurement of rehabilitation progress are not the same as "completion criteria". The results are also taken out of context. The report states "A comparison of the data collected in the rehabilitation to the interim criteria (Table 5) found that only four sites (Enna 15, Trout 12, Herring 16 and Mackerel 3) have the required number of eucalypts. However, nearly half the sites reached the requirements for foliage cover of re-seeding species and the majority of sites had adequate levels of ground cover and no evidence of Leucaena or Gamba grass. Only one site, Trout 12, achieved all the criteria." A key finding of this work highlighted that it is inappropriate to apply a broad objective to rehabilitation that reflects a variety of standards largely influenced by the differing objectives and/or techniques of the era in which they were established. It also showed that objectives that do not acknowledge the limitations of the post-mining landscape will likely not be met. RTA continues to work with various consultants, researchers, stakeholders and regulators on developing criteria for existing and future rehabilitation. RTA has a weed management program for the existing operations and a preventative program for the SoE Project area is proposed in Section 7.10.2 of the EIS.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities - Property Portfolio	15.1	Mining	9, 10	<p>The Department of Communities manages a number of property assets in the Napranum and Aurukun Township that are used in the provision of government services to these communities. Although it is noted that section ES-18 Noise/ Vibration – states that ‘it is unlikely there would be significant impacts to sensitive human receptors from these activities due to the distance of these activities from residential receptors. For example, Napranum, Nanum and Weipa are approximately 4km from the closest mining area and 40km from the Boyd infrastructure area and proposed port; Aurukun is approximately 15km from the closest mining area and 35km from the Norman Creek infrastructure area.’ The department requests that the proponent be cognisant of the potential impacts the project may have on the recipients, including air, water, and noise pollution (including dust and soil erosion).</p> <p>It is considered that the EIS and Environmental Management Plan should be revised to ensure that any potential health impacts the project may have on local communities are identified and that appropriate mitigation measures are in place so as to protect the nearby communities.</p>	<p>The potential for air emissions and impact on community health, and impact mitigation measures, are addressed in Section 9 of the EIS. The dust concentration levels at sensitive receptors in Weipa, Napranum and Aurukun are expected to readily comply with all the Department of Environment and Resource Management’s (DERM) guidelines. There would be no planned discharges from the Project which could impact on public health values in the short or long-term.</p> <p>An assessment of noise impacts from construction and operation of the Project is presented in Section 10 of the EIS. The impact of noise and vibration on sensitive receptors during the construction and operational phases of the Project is considered to be low.</p> <p>Most activities proposed for the Project are similar to those currently carried out by the existing RTA operations north of the Embley River and therefore the health and safety risks remain the same.</p> <p>The Environmental Management Plan (refer Appendix 3 of this Supplementary report) describes proposed environmental authority conditions, performance criteria, implementation strategies and monitoring programs to protect and manage environmental values affected by SoE mining and mining-related activities, including air (Environmental Management Plan Section 3.3) and noise (Environmental Management Plan Section 3.6).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities - Housing and Homelessness Services, Private Housing Programs	15.2	Socio-economic	16.3, 16.4, 20.15	<p>The approach to house the entire operational workforce within the existing Weipa housing market could significantly impact on an already tight housing market, including impacting on house and rental prices and subsequently placing further cost-pressure impacts on the high number of low socio-economic groups in the region. It is acknowledged that currently there is sufficient land available to house the operational workforce in Weipa, however it is considered that the EIS and Social Impact Management Plan should address the potential for this to change if the project operates at full capacity and/or the cumulative impacts of current and future mining projects are not properly managed.</p> <p>The EIS and Social Impact Management Plan (SIMP) should be revised to ensure a comprehensive assessment is undertaken to identify and mitigate the potential impacts the project may have on housing availability and affordability in Weipa when at low, medium and full production capacity.</p> <p>To achieve this the department suggests that the proponent:</p> <ul style="list-style-type: none"> Address how the approach for housing operational staff within the existing Weipa community will impact on the availability and affordability of housing in the area, including how impacts on the community will be minimised and how any negative impacts will be managed. 	<p>Potential impacts on housing availability and affordability and impact mitigation measures are described in Section 16.3.11 of the EIS, which states: "The impact of the Project on property values and rents would be determined by the factors of supply and demand. If supply of land and houses is able to match demand then it is unlikely that property values and rents would significantly change as a result of the Project... Based on the projected population, there should be sufficient housing supply to meet demand under the 15Mdtpa and 30Mdtpa production scenarios. Significant population increases are not projected to occur until production increases to between 30Mdtpa and 50Mdtpa....Such a population increase would increase demand for local housing which would require more residential development....RTA would seek approval for adjustment of the town boundary and development of additional housing when required." In terms of mitigation strategies, Section 16.4.1 of the EIS states "RTA would assist with the planning and implementation of mitigation measures associated with Project capacity expansions above 30Mdtpa with relevant stakeholders as required." Stakeholder identification and RTA's consultation program are described in Section 15 of the EIS. Furthermore, a Housing & Accommodation Action Plan is included in the Social Impact Management Plan (Appendix 6 of this Supplementary Report).</p>
15	Department of Communities - Housing and Homelessness Services, Private Housing Programs	15.3	Socio-economic	16.4	<p>Outline how workers will be supported to permanently relocate to the local area; including strategies to support workers to find and secure appropriate housing.</p>	<p>RTA has a Relocation Policy that describes support for permanent RTA employees relocating to a new area. In these instances, RTA provides for these employees to move with their families to Weipa, including personal effects, flights, vehicles and transit accommodation. As part of the relocation process, new employees are assisted by employee support officer in providing a smooth transition. This includes identification and securing of long term accommodation as required.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.4	Socio-economic	16.4, 15	<ul style="list-style-type: none"> Provide further information on how the existing housing market will be monitored to ensure sufficient land and housing will be available for the operational staff should the project reach full capacity. 	As stated in Section 16.4.1 of the EIS "RTA would assist with the planning and implementation of mitigation measures associated with Project capacity expansions above 30Mdp/tpa with relevant stakeholders as required." Stakeholder identification and RTA's consultation program are described in Section 15 of the EIS. RTA Weipa is continually recruiting employees and has a good knowledge of the market. RTA will build on current processes to review both short and long term housing and accommodation strategies in response to changing demand over the life of the operation. A Housing and Accommodation Action Plan has been identified in the Social Impact Management Plan (Appendix 6 of this Supplementary Report). This action plan includes the development and implementation of a Long Term Housing and Accommodation Master Plan.
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.5	Socio-economic	16.4, 20.15	<ul style="list-style-type: none"> Provide more detail on how the proponent proposes to consult with relevant government agencies and other stakeholders to address cumulative impacts of the project and other mining operations in the area on housing affordability and availability. This should include strategies and procedures for monitoring changes in key local conditions (e.g. housing stress) and methods to ensure that the role that cumulative impacts are playing in these changes as they arise are addressed. 	Refer to response 15.4. RTA has committed to preparation of a Stakeholder Engagement Plan as part of the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.6	Socio-economic	16.3	<p>While the preference for housing the construction staff in workers accommodation is noted, has consideration been given to any workers who may prefer to move permanently to the local area with their families? The proponent has not provided any detail as to how construction workers who do not reside in accommodation camps will be supported.</p> <p>The SIMP should include an outline of how the numbers of staff requiring non-Single Person Quarters (SPQ) accommodation will be accommodated and what will be done to assist these families find appropriate accommodation in a tight housing market.</p>	The Project construction workforce would be a "single status" workforce and accommodated in temporary construction camps on that basis (refer Section 2.7.1 of the EIS). RTA does not provide relocation assistance or rental subsidy to contractors. The FIFO arrangement during construction is considered to have the advantage of avoiding pressure on limited accommodation in Weipa (refer Section 16.3.8 of the EIS). The daily operational workforce would continue to reside predominantly in Weipa (refer Section 6.3.11 of the EIS). All new RTA employees are provided housing assistance through the provision of the Weipa Accommodation Benefit, including those new employees who have moved to Weipa from other local communities. A Housing and Accommodation Action Plan and a Stakeholder Engagement Plan have been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.7	Socio-economic	16	<p>The description of the potential (social) impact only identifies Weipa.</p> <p>Include the Weipa, Napranum, Mapoon and Aurukun in the description.</p>	<p>As stated in Section 16.1 of the EIS: For the purposes of this Social Impact Assessment (SIA) the local community area of the Western Cape region includes the Aurukun, Mapoon, Napranum and Weipa communities and all lands between Aurukun in the south and Mapoon in the north, extending from the coastline to the eastern boundaries of the Deed of Grant in Trust (DOGIT) and Aurukun Shire lands. The local community area was identified through consultation with the DLGP Social Impact Unit as described in Table 15-2 of the EIS. A Housing and Accommodation Action Plan and Community Health & Wellbeing Action Plan have been identified in the Social Impact Management Plan (Appendix 6 of this Supplementary Report). Also see response above to 15.6.</p>
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.8	Socio-economic	16.3.9	<p>The proposed Mitigation and Management Measures for “Demographic Changes” are considered inadequate. The document states that RTA would assist with the planning and implementation of mitigation measures associated with production capacity expansions above 30Mdppta. This statement is vague and provides no suggestion as to how the potential impact of population influx will be mitigated when production capacity expands above 30Mdppta.</p> <p>The proponent should clearly articulate proposed mechanisms for mitigating potential impacts of population influx when production capacity exceeds 30Mdppta. It should not be assumed that solutions will be identified when market forces dictate than an increase in production capacity is warranted. The Mitigation and Management Measures should also address the impact of population influx on essential community services and infrastructure within the communities.</p>	<p>RTA acknowledges that social impacts associated with population increases, such as demand for community services, housing and infrastructure, would change when Project capacity expands above 30Mdppta. RTA have committed to assisting with the planning and implementation of mitigation measures associated with Project capacity expansions above 30Mdppta with relevant stakeholders as required (refer Section 16.4.1 of the EIS). Mitigation measures would be developed in consultation with the relevant stakeholders. An extensive program of community consultation and stakeholder engagement has already been undertaken to assist in the preparation of the EIS and included members of the general public and the organisations (including government, industry, service providers, regional landholders and community groups) likely to be adversely or positively affected by the Project. RTA have committed to a program of ongoing consultation to address community issues as the Project progresses. Interaction with stakeholders who have already been consulted as part of the Project planning phase would continue over the remainder of the EIS process and throughout the construction and operational phases of the Project (refer Section 15.4 of the EIS). In the past, RTA have worked closely with various Government agencies to improve and expand regional services, including Regional Integrated Health Facility development and education infrastructure (including new school boarding hostel facility development). It is noted that the population projection for Weipa when SoE production is at 50Mdppta is only 10% higher than the 2007-2008 population (refer Table 16-3 of the EIS). These issues are addressed further in the Social Impact Management Plan in Appendix 6 of this Supplementary report, including the need for a Stakeholder Engagement Plan, and a Community Health & Wellbeing Action Plan.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.9	Socio-economic	Table 16-22	<p>In Table 16-22, the information provided under the heading “Responsibility and Proposed Timeframe” is insufficient. The “Residual Impact Significance” of “Low” is considered inaccurate. The Performance Indicators “Workforce Numbers” and “Weipa population” are considered inaccurate. The monitoring, reporting and/or verification methodology is not adequate.</p> <p>The statement should clearly identify the relevant government agencies that will be informed of the expansion, how they will be advised and at what time prior to the expansion the notification must occur. It must be recognised that timeframes for planning, funding, constructing and implementing community services and infrastructure can be very lengthy. Substantial advanced notification of expansion of production capacity is essential. The residual impact of poorly managed and mitigated population influx (and potentially out flux) into communities can be “High”. Performance Indicators should be included for Weipa, Napranum, Mapoon and Aurukun. The scope of indicators should include population, housing stock assessment and community service and infrastructure assessments. A broader scope of data collection, analysis and reporting should be proposed.</p>	<p>The SoE SIMP in Appendix 6 of this supplementary report provides a number of action plans for key mitigations. Many of these action plans are relevant to the work required to mitigate potential social issues across the Western Cape region, including the communities of Aurukun, Napranum, Mapoon and Weipa. These include local and Indigenous employment and training, local and Indigenous sourcing, stakeholder engagement, Indigenous education, and community health and wellbeing.</p>
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.10	Socio-economic	Table 16-22	<p>The Performance Indicator states “ABS economic indicators for Cook Shire Council”. Section 17.3 of the EIS states that the impacts to the local economy take into account the four statistical local areas and the Cook Shire Local Government Area. Amend the performance indicator to include the Weipa, Napranum, Mapoon and Aurukun Local Government Areas.</p>	<p>The ABS data for Napranum, Mapoon and Aurukun lacks reliability due to small samples sizes. The Social Impact Management Plan includes regular baseline surveys which would be undertaken in consultation with relevant agencies to ensure appropriate data is collected (refer Appendix 6 of this Supplementary report).</p>
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.11	Socio-economic	16.4.4	<p>The SIMP states that reporting to the Department of Infrastructure and Planning Social Impact Assessment Unit will be undertaken:</p> <ul style="list-style-type: none"> • Prior to the commencement of construction; • Prior to the commencement of production; and • 3-yearly during operations. <p>It is recommended that a reporting requirement should be included prior to the expansion of production capacity above 30 Mdtpa.</p>	<p>Reporting prior to major expansions in production would be captured as part of the three yearly reporting requirement. However, an additional specific reporting requirement prior to expansion above 30 Mdtpa has been incorporated into the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.12	Socio-economic	16	<p>The SIMP fails to specifically address the impact of the proposal on human services and social infrastructure within each community.</p> <p>Section 20.15 notes that the anticipated population rise associated with a 50 Mdppta would require provision of expanded government services. No consideration is given to the impact on the provision of services by non-government organisations.</p> <p>The document also fails to address the cumulative impacts on community and human services and social infrastructure within each community.</p> <p>The document should include:</p> <ul style="list-style-type: none"> • Descriptions of how community services and infrastructure are currently functioning; • Identify barriers to effective service delivery; • Identify the current gaps in human and community services within the local community area; • Identify impacts will the proposal may on community and human services (government and non-government); • Identify cumulative impacts on community services and infrastructure (government and non-government); • Provide measures and strategies to address gaps/impacts in community services and infrastructure resulting from the proposal. 	<p>The Social Impact Management Plan has been developed further in consultation with DEEDI and DoC (refer to Appendix 6 of this Supplementary report). RTA will continue to liaise directly with the SIAU with regards to availability of reliable and accurate community baseline data. Also see comments at 15.10 regular community baseline assessments.</p>
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.13	Socio-economic	16	<p>The report states that a stakeholder engagement strategy would be developed prior to commencement of construction. It also states that a program of consultation would be undertaken by RTA to address community issues as the project progresses through the EIS process and throughout the construction and operational phases. The SIMP should include a stakeholder engagement strategy rather than inferring that one will be developed in the future.</p>	<p>A Stakeholder Engagement Strategy has been included in the Social Impact Management Plan (refer to Appendix 6 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
15	Department of Communities-Housing and Homelessness Services, Private Housing Programs	15.14	Socio-economic	16	<p>The Social Impact Assessment does not provide the full scope of information detailed in the Terms of Reference, Section 4, Social values and management of impacts.</p> <p>The EIS is not sufficiently detailed (particularly in relation to impacts of production capacity above 30 Mtpa) for the department to make informed decisions about how the project may affect the provision and funding of services and social infrastructure in the communities of Weipa, Napranum, Mapoon and Aurukun.</p> <p>Review the scope of the Social Impact Assessment and the Social Impact Management Plan and revise as necessary.</p>	The Social Impact Management Plan has been developed further in consultation with SIAU and other relevant Government agencies, including DEEDI and DoC (refer to Appendix 6 of this Supplementary report).
16	The Wilderness Society	16.1	Environmental impact		The Wilderness Society categorically opposes this mine. We call for the rejection of any approval under the EPBC Act based on the highly significant environmental threats the mine poses.	Noted.
16	The Wilderness Society	16.2	Environmental impact	3.10	<p>Given the removal of the deep permeable bauxite layer on which E. tetradonta woodland grows, and the altered drainage conditions caused by mining, restoration of vegetation in similar composition and structure to the pre-mining vegetation is not technically or economically feasible. Loss of the original ecosystem in the mined area will therefore be permanent.</p>	<p>The lowering of the landscape due to mining means that pre-existing land units, comprising ecosystems developing on specific soil and sub-soil conditions, cannot be readily replicated. The objective for the rehabilitation of areas disturbed by mining activities is to establish a self-sustaining vegetation community using appropriate local native tree, shrub and grass species (refer Section 3.10.1 of the EIS). The aim to establish a sustainable native ecosystems, that are similar to those existing in the regional landscape, while acknowledging the nature of the altered post-mining environment means that these ecosystems would not be replicas.</p>
16	The Wilderness Society	16.3	Rehabilitation	3.10	<p>Post mining rehabilitation at Weipa found that establishment rates of the four local native tree species that dominate the pre-mining vegetation are very low and that the composition of the plant community in post-mining rehabilitation areas is significantly different from pre-mining native forests, and the structure of the pre-mining native forest will never be restored (Gould 2010).</p>	<p>It has been found at Weipa (and other sites) that the current rehabilitation technique results in successful densities and proportions of target species including the dominant local overstorey tree species. Refer also to response 1.14.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.4	Environmental impact	7.10.2	The proposed actions to mitigate impacts of altered fire regimes do not provide any ecological basis for future burning practices, nor address monitoring of the impacts of fire.	Section 7.10.1 of the EIS discusses the current fire regime in the Project area (also shown in Figure 7-9 of the EIS). The proposed fire management program is discussed in Section 7.10.2 of the EIS and would aim to conserve fire sensitive flora and vegetation communities and promote overall vegetation diversity by reducing fire intensity and frequency and promoting a regime of early to mid season lower intensity burns with a lower frequency. A selective vegetation monitoring program is proposed in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would effectively monitor the impacts of fire.
16	The Wilderness Society	16.5	Environmental impact	7.6.4, 7.9.2	The proposed mining, and the associated infrastructure, especially tracks and drill lines will create many opportunities for the establishment of weedy species. A large number of highly invasive weed species is well established in the Weipa and Aurukun area and the project will exacerbate the problems of invasion of undisturbed areas and impact on wetlands.	Weeds are discussed in Section 7.6.4 of the EIS. A weed management program has been outlined in Section 7.10.2 of the EIS which focuses on early detection and control.
16	The Wilderness Society	16.6	Environmental impact	7.10.1	The EIS acknowledges that vertebrate pests have caused damage to virtually all vegetation types in the project area. This is indicative of the fact that Rio Tinto has not been a responsible land manager of the bauxite mine lease area.	Introduced fauna are discussed in Section 7.15.3 of the EIS. The species identified in the Project area occur widely across Western Cape York. Section 7.10.1 of the EIS discusses the existing impact in the Project area from feral pigs and Section 7.10.2 of the EIS describes the proposed feral animal management strategy for the Project.
16	The Wilderness Society	16.7	Water supply	5.2.3	The proposed dam on Norman Creek will have likely devastating impacts on this river system, which are grossly understated in the EIS. The periodic flushing of the river system, and the deposition of woody debris and other vital food and habitat will be severely hampered by the impoundment. The very high changes in flow (up to 50%) downstream of the impoundment will also effect the timing and duration of water available to downstream ecosystems and aquatic species.	The impact to flows in Norman Creek from the proposed water supply dam (Dam C), which is located on a tributary of Norman Creek, was modelled and described in Section 5.2.3 of the EIS. The effect of Dam C at 15Mldtpa, 30Mldtpa, and 50 Mldtpa would reduce mean annual flow immediately downstream in the Norman Creek tributary to 78.3%, 67.2% and 49.5% of original flow respectively. However considering the whole Norman Creek system catchment discharge (i.e. discharge into the estuary), the mean annual input into the estuary would be 93.5%, 90.2% and 84.9% of original flow respectively, which is within the range of normal year-to-year variation. The impact of the Dam C on aquatic ecology is assessed in Section 8.14.1.2 of the EIS. The EIS concludes that, as the timing and relative magnitude of the March peak flow event would be maintained and that mean monthly flows would generally be maintained above 80% of pre-dam flows for the core wet season period, impacts to fishery productivity are predicted to be small (refer page 8-80 of the EIS). RTA has also proposed controlled release of environmental flows to mitigate ecological impact in the tributary immediately downstream of Dam C (refer Section 8.14.2.2 of the EIS).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.8	Environmental impact	Table 7-10	The dam footprint will flood 8ha of evergreen notophyll vine forest - the largest patch in the project area. This patch is likely linked to other vine patches with species moving between. This vital ecological function in the landscape is ignored in the EIS.	<p>Regional Ecosystem (RE) 3.3.5 (evergreen notophyll vine forest) is a "least concern" RE under the Queensland <i>Vegetation Management Act, 1999</i>. However there is 22,498ha of this RE in the Weipa Plateau subregion and 54,065ha of this RE in the Cape York Bioregion. Therefore the clearing of this RE for the Project represents less than 0.04% and 0.015% of the remaining extent in these areas respectively.</p> <p>The alluvial vine forest patch (RE 3.3.5) in the footprint of Dam C comprises the only alluvial vine forest along this branch of Norman Creek but is loosely linked to vine forest on dunes near the mouth of Norman Creek. Habitat continuity around the dam impoundment would be provided by a minimum 200m environmental buffer from the full supply level of the impoundment. While the main gallery forest on this reach would be displaced by the impounded water, based on observations of a similar water supply dam in the Weipa area, some re-establishment of a riparian gallery is expected around the full supply level and would reinstate to some extent the displaced riparian corridor.</p>
16	The Wilderness Society	16.9	Water supply		The water extraction from Ward Creek is another area of major concern. The delivery of freshwater to downstream ecosystems, including wetlands, will be severed by the proposed direct extraction of water from this stream.	<p>The impact to flows in the Ward River from the proposed pumping of water once production rates exceed 30Mtpa have been modelled and are described in Section 5.2.3 of the EIS. The annual volume of water pumped from the Ward River would be capped at 1% of mean annual river flow at the pump station. In addition, no pumping would occur when the Ward River flow was less than 1,000L/s and rate of pumping at all times would be less than 20% of the flow rate. This level of extraction is considered to present no potential for observable impact to the Ward River estuary (refer Section 8.14.1.3 and 8.14.2.2 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.10	Rehabilitation	8.14.1.1	<p>Removal of the bauxite layer will permanently alter surface topography and thereby hydrology. The EIS falsely claims that the storage volume of rainfall will be unaffected by removal of the bauxite layer (section 8.14.1.1), however this assumes that the post-mining surface will have identical permeability and storage capacity to the pre-mining surface.</p> <p>This is a fundamentally flawed assumption, with no supporting evidence, particularly given the variability of permeability in the landscape, and the inability of Rio Tinto to effectively re-establish original vegetation cover and structure.</p>	<p>The reference in Section 8.14.1.1 of the EIS is to the storage volume of the shallow aquifer, noting that the shallow aquifer is hosted predominately in the kaolinite layer below the bauxite. Due to the flat topography and the very high infiltration rates of the soils and lateritic strata, the proportion of annual surface runoff is unusually small in the Project area (<1%) (refer Section 5.1.1 of the EIS). Mining areas are internally draining and the proportion of surface runoff changes very little as a consequence of mining. The AWBM rainfall-runoff model (refer Section 5.2.4 of the EIS) developed specifically for the SoE Project area was used to determine the water balance characteristics of the undisturbed catchment and open mining areas. The characteristics of the rehabilitation were interpolated between these two cases (refer Table 5-21 of the EIS). The model has a "surface storage capacity" which was reduced progressively for the mature rehabilitation, immature rehabilitation and open mine cases. The "surface storage capacity" represents the amount of moisture available for evapotranspiration. The surface store in mature rehabilitation is relatively close to that in the undisturbed situation (and much lower in the open mine case). This is consistent with the findings of Volker and Creese (1993) who found that in Weipa there were no long-term major changes to the recharge of the shallow aquifer once vegetation was fully established. Based on the area of disturbance, the change in discharge from the mined catchments was calculated at the point of maximum mining impact and after mine closure (refer Table 5-22 of the EIS). The change on overall catchment discharge after mining was modelled at < 2% in all cases.</p>
16	The Wilderness Society	16.11	Environmental impact	6	Direct and indirect impacts on feeding habitat, nesting habitat (turtles) and potential boat strike of dugongs, dolphins and several threatened species of marine turtles should not be underestimated.	Marine fauna impacts, including direct and indirect impacts to dugongs, dolphins and turtles, are discussed in detail in Section 6.9.4 of the EIS.
16	The Wilderness Society	16.12	Environmental impact	20.6	The EIS acknowledges that "Urquhart Point Mineral Sands Project may impact on beaches that contain marine turtle nesting habitat to the north of the SoE Project". We find it unacceptable to state that "The nature and significance of such impacts cannot yet be assessed due to a lack of available information on proposed infrastructure and activities associated with the Urquhart Point Mineral Sands Project." We strongly recommend that the details of infrastructure are supplied before an assessment is made.	Oresome Australia Pty Ltd is the proponent for the Urquhart Point Mineral Sands Project. This project is relatively new, having its draft Terms of Reference (ToR) of an EIS advertised in March 2011. It is not possible for RTA to provide impact assessment information on this project as the EIS has not been completed.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.13	Environmental impact	9.6.1	The calculations of project greenhouse gas emissions are misleading and appear not to be based on empirical data, which should be readily available to the proponent. The biomass carbon estimate presented for pre-mining vegetation appears to be low. An average growth of 1.07t carbon/ha/year was assumed for Weipa eucalypt tall open forest revegetation using default values from the National Carbon Accounting Toolbox and likely overstates the amount of carbon captured in rehabilitation vegetation. Shipping has not been included although it would be a major source of emissions. Downstream processing (refining and smelting) of the ore produced by this operation has not been included, although refining and smelting produces large GHG emissions. We strongly recommend that accurate estimates of biomass carbon are calculated using empirical vegetation data for both pre-mining forest and post-mining rehabilitation.	The methods and emission factors contained within the National Greenhouse Accounts (NGA) Factors (DCCEE 2010a) workbook were used to calculate GHG emissions from the Project. The NGA factors are designed to estimate greenhouse gas emissions for reporting under various government programs, including the National Greenhouse and Energy Reporting (NGER) scheme. An average growth rate of 1.07t carbon/ha/year was assumed for Weipa eucalypt tall open forest revegetation in the Project area, which has been derived for the area based on productivity rates in the Weipa region using default values from the National Carbon Accounting Toolbox (AGO 2005). Greenhouse gas emissions associated with shipping, refining and smelting have not been incorporated as downstream sources were not required to be included by the Queensland Government EIS Terms of Reference. GHG emissions from refineries and smelters located in Australia are calculated and reported for those facilities and to include them in the SoE Project EIS would be double-counting. GHG emissions from shipping activities are reported in accordance with NGER requirements by Rio Tinto.
16	The Wilderness Society	16.14	Cultural heritage	11	The impacts of the project, will be comprehensively destructive of the Indigenous cultural heritage of the area.	The Western Cape Communities Co-existence Agreement (WCCCA) provides for a system of cultural heritage management over the Project area. RTA has considerable experience working with Traditional Owners to manage cultural heritage at the existing Weipa operations. Section 11.1 of the EIS details the cultural heritage surveys that have been carried out with Traditional Owners and the cultural heritage management process. Most cultural heritage sites and artefacts that have been identified to date are outside the areas that would be cleared for infrastructure. Measures to mitigate impacts to those sites that would be disturbed would be developed in consultation with Traditional Owners through the WCCCA process.
16	The Wilderness Society	16.15	Environmental impact	Table 7-3, Figure 7-3	Table 7-3 shows extensive clustering of vegetation survey sites, leaving vast areas of the proposed mining operations and the overall project area unsurveyed. Therefore, lack of confirmation of several species of threatened flora must be interpreted with caution.	Refer to response to 23.27.
16	The Wilderness Society	16.16	Environmental impact	Table 7-7, Figure 7-7	Impacts are likely to <i>D. johannis</i> , which is a Vulnerable species.	The occurrence of <i>D. johannis</i> is described in Section 7.6.2 (page 7-38 of the EIS) and shown in Figs 7-7, 7-7a and 7-7b of the EIS. Potential impacts are described in Section 7.11.1 of the EIS.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.17	Environmental impact	7.13	Fauna surveys presented in the EIS are grossly inadequate, comprising only 9 “comprehensive” survey sites in 2008, 3 different sites in 2007 and scattered targeted surveys. Surveys at the 12 sites were only conducted in the month of May. Only 3 of the sites were in proposed mining areas. Therefore lack of confirmation of several species of terrestrial threatened fauna must be interpreted with extreme caution.	<p>A detailed description of the survey methodology used for threatened and migratory terrestrial fauna species is provided in Appendix 7E of the EIS. Preliminary surveys were undertaken in July 2006 and May 2007 with dedicated surveys for the EIS undertaken in December 2007, May 2008, December 2008 and May 2009. The spread of survey events provided survey effort over key seasons for detecting fauna variability within the Project area, namely late dry season (December) and late wet season (May). Extensive survey during the wet season was not possible due to the difficulty of access to and within the Project area with the presence of seasonal inundation. Nevertheless, the main late wet season survey in May 2008 and subsequent targeted surveys in May 2009 were conducted as soon as vehicle access to the Project area was possible, ensuring there was still a significant level of fauna activity. The main objectives of the fauna survey program were to characterise the fauna communities within the terrestrial habitats present and to provide substantial coverage of threatened and migratory species listed under the EPBC Act. Survey techniques were used that were specifically suited to the species and habitats likely to be present as well as providing an optimal balance of intensive site based data and more extensive data on threatened and migratory species. The adopted survey approach was to undertake a base level of site based surveys to characterise the fauna community with an extensive program of targeted traverses and survey activities undertaken for threatened species. The bias of survey site location within non-mining habitats was in response to the fact that:</p> <ul style="list-style-type: none"> – most threatened species potentially occurring in the Project area favoured non Darwin Stringybark habitats and that the greatest chance of detecting these species was to focus survey activities in these areas; and, – these non-mining habitats may potentially be impacted by mining activities. <p>The EIS adopts a precautionary approach when assessing the potential presence and potential impacts on species that were not actually detected during field surveys.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.18	Environmental impact		Specifically the EIS states that "There are currently no survey guidelines for the Northern Quoll". However, guidelines for surveying this Endangered species are available on the DSEWPoC website and these techniques could be deployed.	<p>Field work was undertaken prior to the 2011 release of formal guidelines for the survey of Northern Quoll. The Northern Quoll has not been located on Cape York since the 1980's and it appears that if the species does persist in the region it most likely currently occurs in association with optimal habitat areas. The Project area does not support any optimal habitat for the species, which is widely accepted to comprise rocky habitats such as rocky outcrops, hills, and gullies. The absence of this habitat within the 100,000ha Project area made it difficult to devise a targeted survey for the species as there were no habitat areas within the Project area that appeared more likely to support the species than any other. It is likely that in the past the Northern Quoll may have used all of the habitats within the Project area to some extent, but given the present apparent absence of the species from Cape York, none of the habitats present were standouts for a targeted survey of the species. Consequently the adopted survey approach for Northern Quoll was to rely on the overall fauna survey program to detect the species if present. Given the wide array of survey techniques included in the fauna survey program this was regarded as an appropriate survey approach rather than a speculative targeted survey.</p> <p>Survey activities that were regarded as appropriate for detecting the Northern Quoll comprised:</p> <ul style="list-style-type: none"> – Elliot traps (for smaller individuals); – Hair tube traps; – Cage traps (deployed during the preliminary survey events only); – Spotlight sessions; and, – Nocturnal vehicle traverses. <p>The detectability of Northern Quolls peaks in the lead up to the mating season when males are actively seeking females and typically are less wary of predators. All males die after mating leading to a significant temporary adult population reduction until young are born (mid dry season) and become independent from their mothers. The timing of surveys within the Project area (i.e. April-May and December) coincided with periods of the Northern Quoll lifecycle when a high adult population would be present (April-May) and when new recruits would be actively independent (December), and consequently surveys were well timed for maximum detectability of the species.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.19	Environmental impact		Table 7-15 indicates that 8 threatened fauna species have been "previously recorded", "found during surveys for the EIS", or "could potentially occur" in the Project area (p 7-80). However details of where EPBC listed species were found during surveys are not provided in this table, and appears to be lacking elsewhere in the report. Figure 7-11 shows only the sighting locations of seven species, none of which are listed as threatened under the EPBC Act; two are listed as migratory and two as marine. Curiously, as for plants, Figure 7-11 indicates that these records only occurred outside the proposed mining areas.	<p>Table 7-15 of the EIS provides an assessment of the potential occurrence of threatened fauna listed under the EPBC Act within the Project area based on existing knowledge of the species from within and surrounding the Project area including location records on government databases, general habitat preferences, existing familiarity of the study team with species in the wider Weipa region, and the results of the field surveys within the Project area. No EPBC Act listed fauna species were detected during field surveys and there are no previous records of these species for the Project area on government databases.</p> <p>However, as with threatened flora, in recognising the large size of the Project area and the possibility of threatened fauna going undetected due to survey limitations, seasonal variability in detectability or inter-annual presence/absence, the EIS adopts a precautionary approach when assessing the potential presence and potential impacts on species that were not actually detected during field surveys. Table 7-15 of the EIS concludes that 4 of the 8 potential EPBC Act listed species possibly occur in the Project area (despite not being located during field surveys), and these species are included in impact assessment for the Project, including significance of impact assessments under the EPBC Act.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.20	Environmental impact	Table 7-16,	<p>Although 19 (of a potential 44) listed migratory bird species were recorded during surveys within the Project area, they are not mapped in the report. Again, survey effort appears to have been grossly inadequate; only 2 surveys were conducted during the appropriate period for migratory birds in December 2007 and 2008. We strongly recommend that the list of Migratory species confirmed in the project area is not considered comprehensive.</p>	<p>Of the 44 migratory bird species identified as potential inhabitants of the Project area, 19 were confirmed as present during surveys, three species are assessed as likely to occur and 17 species as possible to occur within the Project area. Of the total 44 species only five are regarded as unlikely to occur in the Project area. Table 7-16 of the EIS lists each of the 39 confirmed, likely or possible species and indicates the habitat types and regional ecosystems each are likely to be encountered in based on field observations and known habitat preferences of each species. The distribution of each of these regional ecosystems within the Project area is provided in Figures 7-6 & 7-6a-d of the EIS (and updated in Figures 7-6(sup.) & 7-6a-d(sup.) in this Supplementary report) and provides an indication of the overall potential distribution of each of these highly mobile migratory species within the Project area. The potential distribution of each species was used when assessing impacts rather than discrete location records from the field surveys.</p> <p>Targeted surveys for trans-equatorial migratory waders were not undertaken following preliminary observations in likely coastal habitat locations that revealed a notable paucity of migratory shorebirds both in terms of species diversity and density of individuals. During field surveys only five species of migratory shorebird were recorded within the Project area with six Whimbrels comprising the largest group of shorebirds observed at any one time. The paucity of migratory shorebirds within the Project area is attributed to the lack of inter-tidal flat habitat, the dry nature of coastal wetlands during the late dry season until wet season rains occur, and a possible low productivity of inter-tidal benthic habitats potentially related to the very low sediment loads emanating from contributing spring fed drainages and the extraordinarily low mineral status of these waters.</p> <p>Survey effort for migratory species was concurrent with all survey activity conducted within the Project area with observations of migratory species recorded during both site based surveys and EVNT traverses. Field surveys within the Project area coincided with the typical departure period (April-May surveys 2008 & 2009) and the period following the initial arrival of trans-equatorial migratory shorebirds (December 2007 & 2008) and were thus appropriate for detecting migratory waders when they are most likely to be using habitats along the west coast of the Gulf of Carpentaria.</p> <p>Surveys conducted within the Project area that were applicable to migratory shorebirds totalled approximately 93 hours in duration comprising 53 hours of foot traverses, 24 hours of static coastal observations, 9.5 hours of ATV beach traverses, and 6.5 hours of boat traverse on Norman Creek. This survey effort was employed during four survey events comprising December 2007 and 2008, and April/May 2008 & 2009.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
16	The Wilderness Society	16.21	Environmental impact		Overall the range and scope inconsistencies in the EIS raise serious questions about the integrity and accuracy of the data supplied, and likely downplay the potential impacts on a number of species listed under the EPBC Act.	RTA disagrees with this statement. The EIS has been prepared with a level of integrity and accuracy which meets the requirements of the Queensland Terms of Reference and the Commonwealth Tailored EIS Guidelines.
16	The Wilderness Society	16.22	Environmental impact		An entirely new species of freshwater crab found during surveys for the EIS is only known from Winda Winda Creek catchment. The species is currently being assessed by international experts and we strongly recommend that mining activities are not allowed in the Winda Winda Creek catchment, as changes in hydrology and vegetation could potentially cause the extinction of this species before it has even been appropriately described by science and assessed for conservation listing.	The SoE Project does not threaten the freshwater crab which was found during EIS surveys and sent to the Queensland Museum for identification. Approximately 10.6% of the Winda Winda Creek catchment would be mined under the proposed mine plan and the creek itself would be protected from mining by an environmental buffer (refer Section 8.1 of this Supplementary report). Also refer to response to 23.33.
17	Cook Shire Council	17.1	Socio-economic	NA	Cook Shire Council fully supports the project on the basis of the benefits that will be delivered to the Western Cape and in particular the communities of Weipa, Napranum and Aurukun. Council is confident that Rio Tinto has the skills and capacity as well as a proven track record to carry out the activities involved in the SoE project in an environmentally responsible manner.	Noted.
18	Queensland Health	18.1	Infrastructure area	9, 10	<p>The EIS has not considered the accommodation/construction camp as a sensitive receiver. Workers' health has the potential to be impacted upon by environmental emissions from the project if exposure during and outside work hours is sufficient.</p> <p>For example, within S9.4.5 pages 9-14 to 9-25 the proponent identifies air quality predictions at sensitive receptors. However, the EIS did not predict air pollutant concentrations at the accommodation/construction camps. Similarly S10.4.2 (pages 10-11 to 10-19) did not provide any predictions of the impact of noise generated by the project at the accommodation/construction camps.</p> <p>It is recommended that any and all assessments of impacts on sensitive receptors include any accommodation/construction camps.</p>	<p>The construction camp would be established 2km north-east of the Boyd infrastructure area, away from any noise and dust arising from construction works (refer Section 2.7.1 of the EIS). Figure 9-5 of the EIS demonstrates that, even at a production level of 50Mtpa (which would be expected to have significantly higher dust emissions than construction activities), the area where the temporary construction camp is located (refer Figure 1-3(sup.) of Section 2.1 this Supplementary report) would still meet the proposed criteria for PM10 and PM2.5.</p> <p>Regarding noise impacts on the construction camp during construction, Section 10.4.1 of the EIS states "During the construction phase of the Project the most significant noise sources would be the construction of the proposed port and the ferry and barge terminals." The major noise generator during construction of the Port would be the pile-driving. The construction camp is approximately 3.4km from the top of the cliff where the closest piling would occur. Even with a conservative assumption of a 20 decibel reduction, the indoor noise levels from pile driving would be well below the objectives. The following summarises these results:</p> <ol style="list-style-type: none"> 1. $L_{Aeq, adj, 1hr}$ of 22 dB(A) – objective of 30 dB(A) 2. $L_{A10, adj, 1hr}$ of 25 dB(A) – objective of 35 dB(A) 3. $L_{A01, adj, 1hr}$ of 27 dB(A) – objective of 40 dB(A) <p>Health and safety aspects of the construction camp would be managed and monitored through the HSE Management System described in Section 18 of the EIS.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
18	Queensland Health	18.2	Socio-economic	15, 16	<p>Queensland Health notes that a risk assessment was conducted in relation to on-site health and safety considerations (Section 19.3). However, the proponent has not assessed what health services are currently offered within the immediate region, nor the impact of the proposed project on these services. The proponent has only mentioned liaising with the Health Department as part of an emergency plan.</p> <p>The proponent must assess the impacts of the project on existing regional health services during the construction and operational phases of the project and adopt any necessary management strategies. Any strategy should include consultation with the appropriate regional health services</p>	<p>Existing health and emergency services are described in Section 16.2.3 of the EIS. Section 16.4.1 of the EIS states "Employee numbers would remain relatively stable or slightly decrease in the initial production stage of the Project. The population of Weipa and other communities is therefore not expected to increase significantly until the Project exceeds 30Mtpa which would not occur until market conditions are suitable. Social impacts associated with population increases, such as demand for community services, housing and infrastructure, are not expected to change until this time. RTA would assist with the planning and implementation of mitigation measures associated with Project capacity expansions above 30Mtpa with relevant stakeholders as required".</p> <p>RTA has developed a Community Health and Wellbeing Action Plan to assist in addressing this issue (refer to the Social Impact Management Plan in Appendix 6 of this Supplementary report). In collaboration with the relevant Government agencies, RTA will assess the potential and ongoing impact on the demands on existing regional health services and provide ongoing monitoring of the impact of the SoE construction workforce.</p>
18	Queensland Health	18.3	Mining	10	<p>Queensland Health notes the proponent's statement within S10.2.4 (page 10-4) that it is difficult to model LA1 as there is no accurate calculation method. However, the proponent does not provide any assessment of the potential impacts from the project which may cause sleep disturbance at sensitive receivers.</p> <p>It is important that the proponent assess the project against the Environmental Protection (Noise) Policy 2008, LA1,adj, 1hr criterion and provides, if necessary, noise attenuation measures which will mitigate any adverse affect on human health.</p> <p>Queensland Health recommends the proponent assess the impact on human health at the sensitive receivers, which includes an assessment of sleep being disturbed by the project. If the sleep disturbance criteria highlighted in the Environmental Protection (Noise) Policy 2008 of, LA1,adj, 1hr, is found to be exceeded then appropriate mitigation measures must be recommended. It must be demonstrated that any proposed mitigation measure achieves a satisfactory internal noise level for the preservation of health and well-being identified within the Environmental Protection (Noise) Policy 2008. It is recommended that the proponent provides details of any proposed management options to be implemented if it is not possible to reduce noise emissions of sources sufficiently to ensure compliance with the Environmental Protection (Noise) Policy 2008, including the LA1,adj, 1hr criterion, at all sensitive receivers</p>	<p>The LA01 has only been included in the most recent Environment Protection Policy (EPP) (Noise) and there is currently no mathematical methodology to calculate the LA10 and the LA01 from various sources from the mine. The following are based on observations from monitoring at other mine sites:</p> <ul style="list-style-type: none"> LA10,adj,1 hr and LA1,adj,1 hr from the continuous operations (processing plant, conveyors, etc) are expected to be approximately 3dB(A) higher than the modelled LAeq. LA10,adj,1 hr from the mining operations (extracting bauxite by loaders and trucks) is expected to be approximately 3dB(A) higher than the modelled LAeq. LA01,adj,1 hr from the mining operations (extracting bauxite by loaders and trucks) is concerned it is expected to be less than 10 dB(A) higher than the modelled LAeq. <p>The EIS predicted a LAeq,adj, 1hr of 35 dB(A) at Napranum at night (refer Table 10-11 of the EIS). Thus the noise levels in Napranum during the night is predicted to be :</p> <ul style="list-style-type: none"> LA10,adj,1 hr of 38 dB(A) LA01,adj,1 hr of less than 45 dB(A). <p>This compares favourably with the goals of 55 dB(A) and 65 dB(A) of the LA10,adj,1 hr, and LA1,adj,1 hr respectively.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
19	Queensland Seafood Industry Association	19.1	Port/shipping	Executive Summary - Pp 12, 14, 15 Section 6.9.6	<p>The Queensland Seafood Industry Association (QSIA) recognises the significance of the South of Embley project and the Weipa region more broadly.</p> <p>There is recognition of impacts on the commercial fishing industry identified in the EIS, however these impacts are by-and-large dismissed.</p> <ul style="list-style-type: none"> - There is no monitoring process, mitigation or compensation process established that will recognise these impacts or loss of access both during construction and dredging phases of this development as well as permanent loss of access. <p>Impacts of concern include:</p> <ul style="list-style-type: none"> - Impacts from dredging activities proposed - Loss of access and increased competition, during construction (immediate) and permanent (long-term) - Habitat/ecosystem loss and degradation - Displaced effort - Local fishers will be forced to move to other fishing grounds. This movement will cause additional fishing effort in those locations and restrict the income of fishers as a result and may also cause conflict between sectors. - increased vessel traffic and anchorage/steaming areas - other impacts <p>Suggest that:</p> <ul style="list-style-type: none"> - The commercial seafood industry and associated businesses will need to be consulted with respect to: - Environmental Offsets; and/or - Compensation, structural adjustment and other possible mitigation - The establishment of a process to address displaced effort. - The future loss of access due to increased vessel traffic must also be considered as part of this process given the lengthy timeframes associated with this development. - A capping of any offshore disposal spoil grounds. (It is noted that the Xstrata Balaclava Island development at Port Alma is mandated to cap their offshore spoil ground. 	<p>DEEDI (Fisheries Queensland) have indicated to RTA that they are developing a compensation model for commercial fishing operators for use in circumstances where there is a demonstrated economic impact attributable to a development project. RTA does not have access to this model. RTA will continue to consult with DEEDI (Fisheries Queensland) regarding their policies regarding threshold of impact for potential compensation and quantification of potential compensation. Information on the Gross Value of Production of commercial licence holders operating in relevant Gulf of Carpentaria fisheries is presented in Section 6.4 of this Supplementary report, along with catch data for commercial and charter fishing operators. RTA has consulted with QSIA and GoCCFA after the publication of the EIS and is aware that there are different views concerning processes for determining potential compensation (if applicable) and different views concerning the nature of compensation (if applicable). RTA shall continue to consult with DEEDI (Fisheries Queensland), QSIA and CoCCFA regarding these matters.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
19	Queensland Seafood Industry Association	19.2	Socio-economic	Executive Summary - Pp 14	<p>The importance of the commercial fishing industry in Weipa as a stable employer and domestic seafood supplier is noted.</p> <p>Suggest that:</p> <ul style="list-style-type: none"> There must be recognition of the significance of the commercial fishing industry in Weipa. A strategic strategy must be formulated to maximise preservation of the commercial fishing industry and other associated business, in areas that development occurs. This strategy must analyse projects which cause loss and restricted access to areas of use by commercial fishing industry compensate accordingly. At Commonwealth level (EPBC Act), the socio-economic ramifications caused by projects are a focus for the reform of the EPBC Act. The Commonwealth Government's response to the Hawke Review will ensure future developments may have more stringent socio-economic conditions and approvals. 	Noted. The Commercial Fishing Industry is regulated by State and Commonwealth Governments and the EPBC Act is administered by DSEWPac.
19	Queensland Seafood Industry Association	19.3	Socio-economic	15.2.5	<p>This section highlights consultation meetings and community engagement activities undertaken by the proponent. QSIA is acknowledged as having provided some local commercial fishing contacts, however there has been no direct/formal consultation with QSIA. At no stage did any representative offer a formal consultation session.</p>	Section 15.2.5 of the EIS states "Northern Prawn Fishery Industries Pty Ltd and the Gulf of Carpentaria Commercial Fishermen Association (GCCFA), via Queensland Seafood Industry Association, were consulted regarding the potential impacts of the Project on commercial fishing activities conducted in the Western Cape region (Table 15-6 of the EIS)." The GCCFA was subsequently consulted during and after the EIS public comment period and they reiterated the points made in their written submission (refer to responses 22.1 to 22.5). Two meetings have been held with QSIA after the EIS public comment period.
20	Department of Employment, Economic Development and Innovation	20.1	Port, barge and ferry	1.9.16, 6.9.3.2, 6.9.3.3	<p>Disturbance of marine plants will require an IDAS approval from DEEDI. DEEDI encourages RTA to contact the Department well prior to lodging IDAS applications for marine plant disturbance so that offset packages to meet multiple state and Commonwealth offset requirements can be negotiated.</p>	Noted. Compensatory measures for the disturbance to marine plants and for loss of fish habitat are described in Section 7.5.4 of the Supplementary report.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.2	Dam C, infrastructure corridors	1.9, 1.9.16, 5.2.6	Due to the operation of the Mineral Resources Act 1989, a development approval may not be required for waterway barrier works within the mining leases. DEEDI requests the CG impose conditions relating to fish passage and fish access in consultation with DEEDI (Fisheries Queensland)(FQ) and nominates DEEDI (FQ) as the entity with jurisdiction for those conditions.	Noted. Designs for fish passage at locations where stream crossing infrastructure might have the potential to obstruct fish passage would be developed in consultation with DEEDI (Fisheries Queensland) through an agreed design process. The design process would determine the design objectives and criteria for each crossing based upon the site specific requirements. The design would aim to provide fish passage across a range of flows similar to the pre-existing flow regime at the site.
20	Department of Employment, Economic Development and Innovation	20.3	Humber Barge terminal, Hornbrook Ferry terminal	1.9	Waterway barrier works outside the mining lease will require approvals under the Fisheries Act 1994. Fisheries request early consultation regarding design requirements and processes for these works.	Noted. Should any stream crossing infrastructure work that has the potential to obstruct fish passage be required off the mining leases, RTA will consult with DEEDI regarding the design and obtain the relevant permit under the <i>Fisheries Act, 1994</i> .
20	Department of Employment, Economic Development and Innovation	20.4	Dam C	5.2.3, 8.16.2.1	The proponent should engage in discussions with DEEDI (FQ) regarding fishway design for Dam C. Provision should also be made for fish passage during non-spill periods whenever there is an environmental release from the dam. Fish will be attracted to environmental releases below the dam and will be vulnerable to entrapment, stranding, high levels of predation and harvest in this area. This would necessitate a (second) fishway that is operable over a range of headwater and tailwater conditions. The non-spill fishway would need to be easily maintained and operated.	Section 8.16.2.1 of the EIS discusses fish passage at Dam C and migratory species in Norman Creek. The fish passage design at Dam C would be developed in consultation with DEEDI (Fisheries Queensland) through the design process identified in Section 5.3 of this Supplementary report. Consultation with DEEDI (Fisheries Queensland) on the design of the Dam C fish passage has commenced. The proposed design process and assessment of fishway options are presented in Section 5.3 with further assessment of Dam C catchment fish community movement requirements provided in Section 8.2 of this Supplementary report.
20	Department of Employment, Economic Development and Innovation	20.5	Dam C	5.2.3	It is not clear whether the slope of the proposed spillway is 1 in 3 (Figure 5-10) or 3%.	The overall gradient from the top to the bottom of the spillway would have a gradient of <3% (refer Section 5.2.3 of the EIS). Figure 5-10 of the EIS is a cross section through the dam wall and does not show the proposed fish passage (which is shown in plan view in Figure 5-11 of the EIS).
20	Department of Employment, Economic Development and Innovation	20.6	Water supply	5.2.3	It is not clear whether the extraction of water from the Ward River has the potential to entrain and/or capture fish. Details of how fish would be excluded should be provided.	The proposed Ward River pump station layout is shown in Figures 5-19 and 5-20 of the EIS. Screens would be provided to exclude fish (refer Figure 5-20 of the EIS).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.7	Vegetation buffers	7.9.2	DEEDI supports RTA's site by site consideration of adequacy buffer width, particularly for low order, near-coastal streams where the minimum recommended buffer may not be adequate.	Noted.
20	Department of Employment, Economic Development and Innovation	20.8	Dam C	8.14.2.1	Supports monitoring and reporting on the impacts to catchment hydrology and the performance of hydrological mitigation measures at the site (including to DEEDI).	Noted.
20	Department of Employment, Economic Development and Innovation	20.9	Dam C	8	Requests further information on how the headwater is likely to fluctuate at the dam during operation and compare this with evaporation rates.	Further information on the fluctuation of the Dam C water level and the evaporation rate is provided in Section 5.3 of this Supplementary report.
20	Department of Employment, Economic Development and Innovation	20.10	Dam C	8.14.2, 21	DEEDI (FQ) does not support provisions for a low level only offtake works. Concern re water quality issues associated with organic matter during early years of establishment. Recommends that the offtake works should be built as variable level offtake works. Further information is requested on what basis the capacity of the outlet works was determined. Further information on the intended water quality monitoring (including parameters) at the outlet and also triggers to switch to surface level offtake.	RTA commits to building the offtake works as a variable level offtake. The environmental flow releases are related to the inflow to Dam C with 25% of inflow being released from August to October, and 5% of inflow at all other times (refer Section 8.14.2.1). A continuous streamflow gauging station would be installed upstream of Dam C. Up to 1000 L/s would be able to be released from the outlet if required for any reason (this exceeds the likely peak environmental flow requirement of 350 L/s). The water quality parameters to be monitored are presented in Table 5-31 of the EIS.
20	Department of Employment, Economic Development and Innovation	20.11	Dam C	8.14.2	On what basis was the environmental release volume (25% of inflows) calculated? Does this provide for equivalent continuity of fish passage below the dam as without the dam?	Existing fish passage in Norman Creek is discussed in Section 8.7.1 of the EIS. Facilitation of fish passage at Dam C is provided and assessed in Section 8.16.2.1 of the EIS. Modelling shows the dam would continually spill during the wet season. The 25% environmental flow release is proposed for the mid-to-late dry season (August to October) to mitigate against adverse impacts in downstream reaches before the creek typically starts to cease flowing. This is the maximum proportion that can reasonably be released without the need to increase the size of the dam.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.12	Dam C	8.17 Table 8-14	Further investigation of freshwater sawfish and spear-tooth shark's osmoregulatory capacities (including literature) is warranted before this hypothesis is proven. In the interim, management actions need to be developed because some of these species will move into fresh waters and the Norman Creek is within range of these fish (see Whitty, J.M., Morgan, D.L., Peverell, S.C., Thorburn, D.C. & Beatty, S.J. (2009). Ontogenetic depth partitioning by juvenile freshwater sawfish (Pristis microdon: Pristidae) in a riverine environment. Marine and Freshwater Research 60: 306-316).	<p>The reference to Whitty et. al. (2009) is noted.</p> <p>Although it is hypothesised in Section 8.17, Table 8-14 and Appendix 8C of the EIS, that the osmoregulatory capacity of the sawfish and spear-tooth shark present a constraint on these species occurring in freshwater reaches of Norman Creek, additional information regarding lack of suitable habitat and lack suitable prey species is also provided.</p> <p>This is provided to support the conclusion that these two species are unlikely to occur within the freshwater reaches of Norman Creek. The impact assessment and associated mitigation measures in Section 8 of the EIS are based on all habitat information, not just osmoregulation capacity.</p> <p>DSEWPac asked D Thorburn for comment and he concluded 'While this (osmoregulation) hypothesis is sound, the fact that no suitable habitat for <i>P. microdon</i> appears to exist and no suitable prey species were identified as occurring in waters above the proposed Dam C location, suggests it is unlikely to be extensively utilised by the species or represent significant habitat of the species'.</p> <p>It is considered that additional investigation of osmoregulatory capacities is not necessary to support the EIS conclusions.</p>
20	Department of Employment, Economic Development and Innovation	20.13	Dam C	Table 8-17, 20.4.3	Annual discharge is a gross measure of impact. A series of modelled (daily) flow duration curves (with and without the dam and water harvesting) would be more informative.	<p>Tables 5-17 to 5-19 of the EIS show mean monthly flows with and without Dam C. Figures 5-16 to 5-18 of the EIS show modelled daily flow with and without Dam C.</p>
20	Department of Employment, Economic Development and Innovation	20.14	Infrastructure corridors	8.16.2.1	The design of stream crossings that would be considered a waterway barrier under the Fisheries Act 1994 should be developed in consultation with and to the satisfaction of DEEDI (FQ). DEEDI can provide more recent technical advice than Cotterell 1998.	<p>Noted. Designs for fish passage at locations where stream crossing infrastructure might have the potential to obstruct fish passage would be developed in consultation with DEEDI (Fisheries Queensland) through an agreed design process. The design process would determine the design objectives and criteria for each crossing based upon the site specific requirements. The design would aim to provide fish passage across a range of flows similar to the pre-existing flow regime at the site.</p>

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20	Department of Employment, Economic Development and Innovation	20.15	Water supply	8.16.2.3	DEEDI supports the proposal for a long-term monitoring program of the responses of aquatic communities. DEEDI (FQ) should be consulted in the design of the monitoring program and results reported regularly to DEEDI(FQ). Monitoring of fish passage provisions should be considered separately in consultation with DEEDI (FQ), which would require more intensive monitoring initially following construction. As much additional baseline data on fish communities should be collected as soon as possible prior to the commencement of construction of the dam. DEEDI(FQ) supports an adaptive management approach, however the proponent should detail how adaptive management actions will be triggered and funded.	Noted. Consultation with DEEDI (Fisheries Queensland) on the design of the Dam C fish passage has commenced and RTA has committed to continue consultation through the design process identified in Section 5.3 of this Supplementary report. The process would determine a suitable monitoring and management program for the Fishway.
20	Department of Employment, Economic Development and Innovation	20.16	Dam C	8.4.1, 8.17 (page 8-96, 2 nd dot pt)	Clarify whether the dam site is at a perennial or ephemeral site on Norman Creek. If flows cease; for how long?	Modelled mean monthly flow at Dam C at the end of the dry season is only 10ML (1 L/s). In wetter than average years it may continue to flow until the end of the wet season and in dry years it ceases flowing. Tables 5-19 to 5-19 of the EIS show mean monthly flows with and without Dam C. Figures 5-16 to 5-18 of the EIS show modelled daily flow with and without Dam C.
20	Department of Employment, Economic Development and Innovation	20.17	Dam C	3.10.9, 8.17	Further information should be provided that demonstrates that the dam and associated fishways, if left in place after mining operations cease, will be properly operated and maintained and that there will be adequate resources to fund this for as long as the dam is a barrier to fish.	Decommissioning and closure is described in Section 3.10.9 of the EIS. A Final Rehabilitation Report would be prepared under the <i>Environmental Protection Act, 1994</i> prior to lease relinquishment. This would cover infrastructure such as the water storage dam. Subject to agreement with regulators and Traditional Owners some facilities such as the water storage dam may be left in place. The Final Rehabilitation Report would address any on-going maintenance, management and funding requirements and would be approved by the Department of Environment and Resource Management (DERM).
20	Department of Employment, Economic Development and Innovation	20.18	Dam C	20.8	A fourth potential aquatic ecosystem impact, that the system will move from riverine to lucustrine, needs to be included in Section 20.8.	Noted.

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20	Department of Employment, Economic Development and Innovation	20.19	Environmental impact	Appendix 8A	Insufficient detail on sampling effort. How was effort calculated (e.g. number of days/sampling runs, number of traps, number of nets per site). Is this summary sheet for each year or the total effort for both years? Given the low conductivity, were any fish caught using the electrofisher?	<p>Appendix 8A of the EIS shows the total effort combined from both sampling events and Section 8.3 of the EIS presents the detailed field methodology. Effort was determined by:</p> <ul style="list-style-type: none"> – the number of hours the stated area of gill net were set (generally 120m², smaller area indicated where only a subset of the full complement of five gill nets (described in Section 8.3 of the EIS) could be set at smaller sites) and fyke nets (1.2m diameter) were deployed; – the number of hours line fishing occurred; and – the number of hours crab and bait traps were set (five of each, therefore set time for each multiplied by trap number). Using a sufficiently high voltage ~900 volts a relatively full complement of small bodied fish species and macro crustacea were obtained. Some species i.e. swamp eel were predominantly only obtained using the electrofisher.
20	Department of Employment, Economic Development and Innovation	20.20	Port/shipping	6.9.6, 14.4.5, 16.3.2	DEEDI (FQ) recommends that where commercial fishing operators have a history of fishing in the area impacted by this development, and can demonstrate an economic impact attributable to the development, that they be considered for compensation. A compensation model for commercial fishing operations is currently being developed by DEEDI and may be adopted to determine what compensation should apply to fishing operators affected by the Project. If practicable, the range of developments attributable to the Project, which have a cumulative impact on commercial fishers, should be considered under the one process. It is recommended that all costs incurred by DEEDI that are associated with the administration of any compensation package should be paid by the proponents, subject to suitable arrangements with proponents.	<p>Noted. DEEDI (Fisheries Queensland) have indicated to RTA that they are developing a compensation model for commercial fishing operators for use in circumstances where there is a demonstrated economic impact attributable to a development project. RTA does not have access to this model. RTA will continue to consult with Fisheries Queensland regarding their policies regarding threshold of impact for potential compensation and quantification of potential compensation. Information on the Gross Value of Production of commercial licence holders operating in relevant Gulf of Carpentaria fisheries is presented in Section 6.4.1 and 6.4.2 of this Supplementary report, along with catch data for commercial and charter fishing operators. RTA has requested all six nautical mile square "site" data for Grids AB8, AB9, AC8 and AC9 from DEEDI (Fisheries Queensland) in order to gain a more complete understanding of the spatial and temporal variability in catches. RTA has consulted with QSIA and GoCCFA after the publication of the EIS and is aware that there are different views concerning processes for determining potential compensation (if applicable) and different views concerning the nature of compensation (if applicable). RTA shall continue to consult with DEEDI (Fisheries Queensland), QSIA and CoCCFA regarding these matters.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.21	Port/shipping	6.9.6.1	The EIS states "it is predicted that the area of the proposed spoil ground represents less than 1% of the available prawn trawl habitat in the Weipa area". The EIS fails to identify actual prawn catches in the spoil ground. Figure 6-55 identifies significantly higher catches in the vicinity of the spoil ground and port. Analysis of impact on this and other commercial fisheries is considered inadequate. The Supplementary EIS should include a detailed analysis of impacts on the Northern Prawn Fishery and Commercial Line Fishery.	The area of the proposed spoil ground presents much less than 0.1% of the Northern Prawn Fishery (NPF) Weipa Statistical Area (20,990km ²). Any reduction of catch due to disturbance to trawl habitat, were it to occur, would be of the order of 0.02% of the total annual NPF catch (i.e. about 1.3t). More detail is provided in Section 6.4.1 of this Supplementary report.
20	Department of Employment, Economic Development and Innovation	20.22	Socio-economic	16.3.4	The Western Cape Regional Partnership Agreement signatories are committed to a target of achieving 50 new local Indigenous employment outcomes each year over five years until the agreement expires in 2012. An opportunity exists for the signatories to re-negotiate taking into account the South of the Embley Project.	Noted. RTA is a signatory to and an active participant on the Regional Partnership Agreement (RPA) Steering Committee and Employment and Training Working Group. RTA would support the extension of the RPA post-2012 and discuss this further with the signatory parties. This is outside scope of the SoE Project EIS.
20	Department of Employment, Economic Development and Innovation	20.23	Socio-economic		The Project Manager - Construction committed to engage in formal discussions with local Indigenous civil construction companies regarding the supply of goods and services in the Construction phase of the project especially in relation to the construction of the road from the barge landing at Hey Point to the mine site at Boyd Point.	RTA has committed to a range of measures to support the development of Indigenous businesses in the Western Cape (refer Section 16.3.7 of the EIS). An overview of SoE works and the probable timing (subject to approvals) thereof was provided at a meeting of the Western Cape Regional Partnerships Agreement on 5 September 2011. RTA reconfirmed that a structure was in place that would support local and Indigenous employment. RTA advised that it was too early to discuss contractor selection but that meeting WCCCA obligations would be a part of the contractor selection process. The meeting also discussed the types of work that would best suit local and Indigenous workers; the emphasis at that meeting was employment rather than business development. The construction of the Mine Access road may be one of a number of activities that may be suitable to target for Indigenous business development, however no commitment has been made with regard to specific activities at this stage. However, formal discussions will be held following EIS approvals. A Local and Indigenous Sourcing Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).

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20	Department of Employment, Economic Development and Innovation	20.24	Socio-economic	16.3.7	<p>The SoE Project is a significant opportunity to deliver broad, long-term socio-economic opportunities for traditional owners and other interested Indigenous people during the Pre-construction, Mine Operations and Rehabilitation stages of the project. An area for inclusion in the supplementary EIS includes discussions with traditional owners regarding the clearing of relevant areas across the proposed mine site and all access areas focussing on potential employment and enterprise development opportunities centred around land clearing, tree felling, timber milling, native plant removal, restoration, seed collection, propagation and landscaping.</p>	<p>Section 16.3.7 of the EIS states: "Traditional Owners have identified potential opportunities related to land and coastal management, timber harvesting, civil construction, contract mining, transport services, eco-tourism services, training and development, seed collection and rehabilitation, cultural heritage management and general goods and services." RTA has committed to continue to work collaboratively with key regional stakeholders, including the WCCT, Western Cape Chamber of Commerce and the RPA Steering Committee to identify and support the ongoing development of Indigenous businesses through the region; examine applicable contracts for local and Indigenous business opportunities, including the break down of larger contracts into smaller jobs to increase the potential opportunities for awarding contracts to local providers of goods and services; and proactively consider tenders for Project contracts which involve local Indigenous people and/or local Indigenous enterprises. A number of Action Plans have been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report) which would assist in addressing these issues, including: the Local and Indigenous Sourcing Action Plan, the Local and Indigenous Employment and Training Action Plan, and the Land and Sea Management Action Plan.</p>

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20	Department of Employment, Economic Development and Innovation	20.25	Socio-economic	16.3.8	Whilst RTA makes extensive comment on and attention to the transportation of future workers who will reside in Weipa and travel to the South of Embley mine site via barge and road transport (bus) there is scant attention paid to the transportation needs and arrangements that could be implemented for future workers who may reside in Aurukun (and who are predominately traditional owners of the country being mined).	RTA has committed to facilitate the provision of access and transport for Traditional Owners living in Aurukun and working in the mine (Section 16.3.1 of the EIS). RTA will initiate a study of the options for providing access and transport, including consultation with relevant stakeholder groups and identification of the preferred option with the aim to implement these arrangements from the commencement of mine operations. The initial consultation feedback from Traditional Owners was that they wanted a commitment from RTA that access and transport would be provided for people living in Aurukun and working in the mine. The request that this must be a road was communicated later in the EIS process. RTA will examine options (including road access) to allow Wik and Wik Waya native title holders and other WCCCA stakeholders and residents of Aurukun to continue to reside in Aurukun and work at the mine. Consultation with relevant stakeholders on each option is required and final views of relevant parties reported in the final report. A Community Commute (Aurukun to the mine) Action plan is in the Social Impact Management Plan.
20	Department of Employment, Economic Development and Innovation	20.26	Socio-economic	16.2.5, 16.3.4	The proponent should address specific issues around the employment, training and enterprise development opportunities for traditional owners and other interested Indigenous people during the Pre-construction, Mine Operations and Rehabilitation stages of the project. RTA currently conducts an integrated capacity building model to engage traditional owners (especially those traditional owners from the Aurukun area) in employment opportunities especially in the Weipa mining operations in conjunction with Dugalunji Aboriginal Corporation (Camooweal) and DEEDI Employment & Indigenous Initiatives NQ region. It is envisaged that the proponent continue to engage with traditional owners within the affected area to build on the foundations that have been established to date especially as it relates to Indigenous employment, training, capacity building and enterprise development opportunities.	The 'Destinations' Program is described in Section 16.2.5 of the EIS. Section 16.3.4 of the EIS discusses RTA's ongoing commitment to Indigenous employment, education and training and Section 16.3.7 of the EIS discusses RTA's ongoing commitment to Indigenous business development and how these programs would be implemented during the SoE Project. Following the submission of the draft SoE EIS, RTA has co-developed a RTA Weipa Indigenous Employment and Training Strategy for the next three years. This strategy includes key objectives for company policies and procedures, school to work pathways, pre work development, direct employment, retention, and career development. The strategy is supported by a structured monitoring and reporting framework that requires RTA to report on employment and training outcomes to the WCCCA Sub-Committees and Coordinating Committees on a quarterly, annual and 3 yearly basis. The current strategy has an area dedicated to employment and training strategies for the construction period of the SoE Project. The strategy also identified the need to implement specific strategies for Aurukun such as the Destinations Program. RTA Weipa will continue to work with Traditional Owners, through the relevant WCCCA Sub-Committees to continue enhancing the effectiveness of these programs. A Local and Indigenous Employment and Training Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.27	Rehabilitation	3.7.1, 3.10.1	<p>It is strongly recommended that the Proponent consult with Traditional Owners in relation to developing a range of economic development opportunities and proven technologies including commercial forestry opportunities that may provide sustainable employment and business development opportunities post mining as part of its negotiations with Traditional Owners in developing rehabilitated land completion criteria. Further information should be provided on the details of this consultation and the outcomes.</p> <p>The Supplementary EIS should commit to a long term program of establishing commercial forestry plantations and trials of species on mined land.</p>	<p>Environmental Authority MIN100939109 requires all land subject to mining activities to be rehabilitated to meet the requirements of the Department of Environmental and Resource Management (DERM) Guidelines <i>Rehabilitation Requirements for Mining Projects</i>. These guidelines state that the administering authority will have regard to a hierarchy that considers "natural ecosystems" above developing alternative, higher economic value land uses. It is understood that DERM favours the establishment of a native species ecosystem over commercial forestry plantations. Under the WCCCA, RTA has commitments to consult Traditional Owner groups about rehabilitated land completion criteria. RTA would jointly develop a rehabilitation process with the Traditional Owners and relevant WCCCC sub-committee prior to the commencement of mining. At the request of the WCCCC, RTA may establish post-mining land use options other than those required by regulation, subject to obtaining all necessary government approvals (refer Section 3.10.1 of the EIS). Further information on the rehabilitation strategy and consultation with Traditional Owners is provided in Section 3 of this Supplementary report.</p>
20	Department of Employment, Economic Development and Innovation	20.28	Socio-economic	3.1.2, EMP Section 3.9.3.	<p>Whilst the EIS clearly states support for timber harvest operations it fails to articulate how it will facilitate this enterprise. The Supplementary EIS should make reference to measures that it will be put in place to support this potential enterprise. Particularly sufficient consideration and time needs to be provided to allow harvest operations to be undertaken prior to mining. DEEDI recommends that the Coordinator General takes appropriate measures to ensure that products of value are removed prior to mining. Whilst this is not the responsibility of the Proponent their cooperation is requested.</p> <p>Should Traditional Owners not establish timber harvesting operations prior to the mine construction phase, it is requested that conditions are developed in consultation with the proponent and DEEDI and imposed that will ensure that products of value are removed prior to mining.</p>	<p>RTA Weipa is supportive of timber harvest activities up to five years in advance of mining, and supports the government process of seeking public comment on the proposed Harvest Permit for areas SoE. This information will be included in the Supplementary report. RTA has committed to facilitating access for timber harvesting in Section 3.1.2 of the EIS. RTA would also work closely with the successful recipient to ensure appropriate health & safety, access, security, cultural heritage and environmental management etc associated with the coexistence of mining and timber harvesting. This process would be the similar to previous timber harvest operations at the existing Weipa operations. A Local and Indigenous Sourcing Action Plan and a Local and Indigenous Employment and Training Action Plan have been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.29	Socio-economic	16.3.7	The Supplementary EIS should further articulate indigenous employment, training and economic development opportunities and steps that RTA will take to support this (submission refers to Table 15-5)	<p>Following the submission of the draft SoE EIS, RTA has co-developed a RTA Weipa Indigenous Employment and Training Strategy for the next three years. This strategy includes key objectives for company policies and procedures, school to work pathways, pre work development, direct employment, retention, and career development. The strategy is supported by a structured monitoring and reporting framework that requires RTA Weipa to report on employment and training outcomes to the WCCCA Sub-Committees and Coordinating Committees on a quarterly, annual and 3 yearly basis.</p> <p>The current strategy has an area dedicated to employment and training strategies for the construction period of the SoE Project. The strategy also identified the need to implement specific strategies for Aurukun such as the Destinations Program. RTA Weipa will continue to work with Traditional Owners, through the relevant WCCCA Sub-Committees to continue enhancing the effectiveness of these programs.</p> <p>A Local and Indigenous Sourcing Action Plan and a Local and Indigenous Employment and Training Action Plan have been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.30	Rehabilitation	EM Plan Section 3.7.2	<p>The EMP states "RTA's objective for the rehabilitation of areas disturbed by SoE Project mining activities is to establish a self-sustaining vegetation community using appropriate local native tree, shrub and grass species (refer Section 3.10.1)". Objectives have not been achieved and 50 yrs of mining have passed. A recent external published paper "Assessing the success of vegetation development on tropical rehabilitated landscapes following mining" Alexandra Pasco, University of Queensland, 2008 shows that of 33 regeneration sites assessed only one site met the current criteria for success.</p> <p>Approval of rehabilitated land completion criteria needs to be adequately addressed by the Queensland Government. Suggest that the Supplementary EIS contain provision for RTA supporting the establishment of an independent external forestry unit to address the practical and research needs of rehabilitation for whatever tree related end point criteria are identified. Commercial forestry needs to be considered as part of the final rehabilitated land completion criteria. Forestry plantations have been identified by traditional owners as a desirable outcome yet nothing has developed past early research trials that have identified potential plantation species. It is suggested that the Proponent engage in discussions with Traditional owners and representatives of DEEDI to discuss possible rehabilitated land completion criteria prior to the release of the Supplementary EIS.</p> <p>The supplementary EIS should discuss the viability of the Proponent undertaking further large scale trials on improved pasture, forest plantation species and horticulture on mined land in conjunction with the Traditional Owners as well as the viability of planting agreed proven forest plantation species as part of its rehabilitated land completion criteria.</p>	<p>RTA has been undertaking a range of consultation work and research projects to develop completion criteria for mined land. Pascoe's (2008) study, supported by RTA, was preliminary work testing a rehabilitation objective and "interim criteria" that were proposed by the researchers. The tested objective and criteria had not been agreed to by the company, stakeholders or the government. It is important to note that "interim criteria" for measurement of rehabilitation progress are not the same as "completion criteria". The results are also taken out of context. The report states "A comparison of the data collected in the rehabilitation to the interim criteria (Table 5) found that only four sites (Enna 15, Trout 12, Herring 16 and Mackerel 3) have the required number of eucalypts. However, nearly half the sites reached the requirements for foliage cover of re-seeding species and the majority of sites had adequate levels of ground cover and no evidence of Leucaena or Gamba grass. Only one site, Trout 12, achieved all the criteria." A key finding of this work highlighted that it is inappropriate to apply a broad objective to rehabilitation that reflects a variety of standards largely influenced by the differing objectives and/or techniques of the era in which they were established. It also showed that objectives that do not acknowledge the limitations of the post-mining landscape will likely not be met. RTAW continues to work with various consultants, researchers, stakeholders and regulators on developing criteria for existing and future rehabilitation</p> <p>As for the response to 20.27, Environmental Authority MIN100939109 requires all land subject to mining activities to be rehabilitated to meet the requirements of the Department of Environment and Resource Management (DERM) <i>Rehabilitation Requirements for Mining Projects</i> guidelines. These guidelines state that the administering authority will have regard to a hierarchy that considers "natural ecosystems" above developing alternative, higher economic value land uses. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (Section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions outlined in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.31	Rehabilitation	EM Plan Section 3.8.3	Practically all plantings on mined sites have been affected or destroyed by fire. Trial forestry plantings have been burnt, and regeneration destroyed. The Supplementary EIS should give consideration to the impacts of fire on existing mined sites. A thorough fire management plan should be developed to ensure that this impact is minimised. Improved fire management will be required to that which already exists to ensure the success of regeneration and any potential commercial forestry plantations.	RTA does not agree with this statement. Section 7.10.2 of the EIS describes the proposed Fire Management program for the SoE Project. Figure 7-9 of the EIS demonstrates that fire frequency is far lower on the East Weipa peninsula where it is actively managed than in surrounding areas, including the SoE Project area.
20	Department of Employment, Economic Development and Innovation	20.32	Socio-economic		The Regional Partnership Agreement needs to be reviewed and strengthened to further address support for business development.	The Regional Partnership Agreement (RPA) was signed in 2007 and RTA is just one of the signatories – this matter would need to be considered by all signatories. Feedback from the WCCCA to date has indicated that Traditional Owners want the RPA signatories to focus predominantly on Indigenous employment.
20	Department of Employment, Economic Development and Innovation	20.33	Socio-economic	17.4.7	Strategies for local participation are considered inadequate. The Supplementary EIS should include reference to establishing a Supply Chain Initiative to maximise local content (both indigenous and non-indigenous as per the intention of the Local Industry Policy. Consideration should be given to formally engaging with the Industry Capability Network (ICN) to maximise local content in the development. This could include the sponsoring of an ICN employee within the project procurement arm.	Indigenous business development is discussed in Section 16.3.7 of the EIS. This work will be carried forward through the existing WCCCA Coordinating Committee and the WCCT. Section 17.4.7 of the EIS also discusses local sourcing strategies including: <ul style="list-style-type: none"> • proactive consideration of tenders which involve local Indigenous people and/or Indigenous enterprises; • examine applicable contracts for local and Indigenous business opportunities, including breakdown of large jobs into smaller jobs; and • inform the WCCT of all Project construction and operation tenders in advance of public notification. The reference to the Industry Capability Network is noted. A Local and Indigenous Sourcing Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary Report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.34	Socio-economic	17	<p>The Figures 17.2 to 17.6 indicating the Flow on effects to industries and employment locally, in FNQ, Qld and Australia for many industries that the immediate retail etc appear to be overestimates reflecting higher flow ons than can be achieved. The Figures 17.1 to 17.6 should be compared to the actual modelled data in Table 17.2. In the case of agriculture in relation to employment, it is likely that direct employment in agriculture will decline as skilled machinery operators seek jobs in the mine. Although the figures will be unlikely to affect the Total economic output of the mine, the impact may be negative on employment in some industries. Agriculture is already suffering a skilled labour shortage and for the Tablelands a shortage of labour for harvesting horticultural crops. The mine may force existing industries to seek more employment from backpackers or seek approval for workers under specific foreign workers visas. Further information is requested from the Proponent on how the project is likely to affect labour availability to other industries in the region.</p>	<p>Figures 17-2 to 17-6 of the EIS provide a percentage breakdown, rather than gross output. The flow-on effects, and disaggregation by industry were generated based on multipliers derived from local, regional, state and national input-output tables. SGS derived the input-output tables for the state, regional and local area using the national input-output table published by the ABS. These tables were developed using state accounts data and employment by industry data. For the operational impacts these tables were further augmented with company specific data derived from Rio Tinto on the transactions of future operations. This was done to provide the most accurate assessment of industry expenditure and the linkages between industries associated with the mining expansion.</p> <p>All of this information was used to assess the direct and flow-on impacts of the proposed mining expansion at SoE. They do not reflect the ceasing of current operations at Weipa, but merely quantify the impact of the proposed expansion on the economy based on the static linkages modelled by the input-output tables. It is important to note that the multipliers derived are linear in nature and therefore do not account for economies of scale. As such, given the inputs used on likely expenditure captured in the local, regional, state and national economies, the forecast indirect impacts reflect the direct expenditure into the economies of interest, and assume sufficient capacity in the economy to service this expansion. There are likely to be labour and resource constraints that would influence the ability for these impacts to be realised, but these cannot be quantified in input-output analysis. This is a standard method of assessment.</p> <p>It is uncertain the extent to which demand for workers at SoE would impact upon resultant availability of skilled agricultural labour in the region, if at all. Recent consultation with the Cairns Chamber of Commerce welcomed the economic opportunity presented by the Project, and there were no concerns raised with regard to a potential shortage of labour for harvesting horticultural crops.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.35	Socio-economic	17.4	The data presentation on Economic Modelling for the Local Economy does not differentiate between Weipa and the region's Indigenous communities of Mapoon, Napranum and Aurukun. The presentation of the data in this manner masks the level of estimated economic benefit to these Indigenous communities from the Project. Section 17.4 should present data on Potential Impacts for each of the Indigenous communities separately.	ABS place of work data used for input output modelling is not available for individual Indigenous communities. It is unlikely that this data is available, however if DEEDI is able to provide data at this scale then further assessment could be carried out. Indigenous employment programs are described in Section 16.3.4 of the EIS. Whilst RTA have committed to Indigenous employment programs, including programs specifically targeting Aurukun, it is not currently possible to predict employment at the scale suggested by DEEDI with the model. The Social Impact Management Plan includes regular baseline surveys which would be undertaken in consultation with relevant agencies to ensure appropriate data is collected (refer Appendix 6 of this Supplementary report).
20	Department of Employment, Economic Development and Innovation	20.36	Socio-economic	16	Mitigation Strategies relating to issues that involve or affect Indigenous people tend to contain broad statements, no commitment to additional activities and without quantifiable outcomes. Mitigation Strategies should contain: <ul style="list-style-type: none"> • commitments for activities in addition to those already being undertaken • quantifiable outcomes. 	Refer to response to 20.29. A Local and Indigenous Employment and Training Action Plan and a Local and Indigenous Sourcing Strategy has been identified in the Social Impact Management Plan (Appendix 6 of this Supplementary Report). These are supported by reporting structures and detailed scorecard reporting against specific performance indicators.
20	Department of Employment, Economic Development and Innovation	20.37	Socio-economic	16.2.4	RTA 's Local Aboriginal Traineeship Program (LATP) has had a 25% success rate (since commencement in 2002). RTA to qualify and quantify the reasons behind participant's exiting the Program prior to completion. The Mitigation Strategies need to be strengthened to include specific community based activities to address the reasons behind: a) the 75% early exit rate in its LATP, and b) local Aboriginal people not meeting the LATP entrance requirements (e.g. not having a drivers licence is a barrier to many LATP applicants and many Indigenous people on the Western Cape have difficulties building up sufficient 'log-book hours' to apply for a Provisional licence).	Refer to response to 20.29. A Local and Indigenous Employment and Training Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.38	Socio-economic	16.3.4, 16.4.2	<p>Throughout this section the Mitigation Strategies are predominately based on in-direct and non-specific actions (i.e. 'supporting a partnerships approach to.' and 'fostering a collaborative approach'). RTA doesn't commit to direct or additional approaches to assist Indigenous people within the region to overcome barriers to employment to gain employment with RTA. The Mitigation Strategies need to be strengthened to include forms of assistance that are:</p> <ul style="list-style-type: none"> • quantifiable • implementable through RTA's direct activities or sponsorship. 	Refer to response to 20.29. A Local and Indigenous Employment and Training Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).
20	Department of Employment, Economic Development and Innovation	20.39	Socio-economic		<p>In regard to RTA's school to work programs, the Mitigation Strategies don't have specific targets for supporting Indigenous youth. RTA recognise within the document that: a) the region's Indigenous population has a significantly lower rate with Tertiary qualifications, and b) Indigenous people are under-represented in management and senior positions within RTA . This section needs to be strengthened to include targets or a commitment to set targets in partnership with the WCCCC E&T Sub-Committee around:</p> <ul style="list-style-type: none"> • school based traineeships • work-experience placements • university scholarships • Indigenous workforce development strategies 	<p>In 2006, RTA Weipa and the Western Cape College established a forum with senior representation from the mine and the WCC. The Forum meets quarterly to discuss strategies to ensure effective school-to-work pathways; strategies to support Indigenous engagement; collaborative approaches to supporting the achievement of quality education outcomes for the region. This work has been recognised over the years for the achievements in terms of ongoing training and employment outcomes for students on the Western Cape and is monitored and reported against a quarterly scorecard with established targets across key areas. Activities have included school-based traineeships, work experience, curriculum support from the mine, career expos, University scholarships, sponsorship of academic awards, annual financial contributions towards school programs. The partnership has been previously recognised in Prime Minister Reconciliation Awards. A Local and Indigenous Employment and Training Action Plan and an Indigenous Education Action Plan have been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.40	Socio-economic		During the construction phase of the project there will be a need for extra workers and workers with different skill sets compared to the operations phase of the project. Opportunities to create employment and training for Indigenous people during the construction phase are not specifically addressed. The Mitigation Strategies need to be strengthened to include a commitment to develop a stand-alone Indigenous employment and training strategy and plan for the construction phase of the project and for it to be developed and implemented with sufficient lead time to maximise the opportunities created.	Refer to response to 20.29. A Local and Indigenous Employment and Training Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).
20	Department of Employment, Economic Development and Innovation	20.41	Socio-economic	16.3.1, 16.3.8, 16.4.2	<p>Despite the SoE operations being much closer to the Aurukun community than RTA's operations north of the Embley, residents in Aurukun will not be able to live in the community and work in the mine (due to travel distance). Aurukun residents will only have access to SoE operations via Weipa. Most indicators of social and economic disadvantage within Western Cape communities are at their worst levels in Aurukun (Weipa, Napranum and Mapoon), including labour force participation, weekly income and income support dependency. These indicators can be linked directly to the lack of employment opportunities and the SoE Project will have a negligible impact based on the Project as it is currently proposed. To address social and economic disadvantage within the community it is of significant importance that Aurukun residents have a viable opportunity to live in community and access employment created through the SoE project. The importance of the project in this regard is compounded by the development agreement between the Qld Gov. and Chalco not being renewed and the subsequent uncertainty around the development of that resource. The Mitigation Strategies need to be strengthened to:</p> <ul style="list-style-type: none"> • recognise the importance of Aurukun residents having viable opportunities to live in community and access employment through the SoE project • include at least one viable option, endorsed by the WCCCC E&T Sub-Committee, for Aurukun residents to live in community and work for RTA at its SoE operations, for both the construction and operations phases of the project. Or as a minimum, a commitment to create one at viable option, endorsed by the WCCCC E&T Sub-Committee, prior to the commencement of the mine's construction. 	RTA has committed to facilitate the provision of access and transport for Traditional Owners living in Aurukun and working in the mine (Section 16.3.1 of the EIS). RTA will initiate a study of the options for providing access and transport, including consultation with relevant stakeholder groups and identification of the preferred option with the aim to implement these arrangements from the commencement of mine operations. The initial consultation feedback from Traditional Owners was that they wanted a commitment from RTA that access and transport would be provided for people living in Aurukun and working in the mine. The request that this must be a road was communicated late in the EIS process. Transport would be provided to and from the construction camp during the construction phase, as for other construction works (at the beginning and end of rosters). The preferred option for access and transport on a daily basis for operations, is therefore not required until the operational phase. A Community Commute (Aurukun to the mine) Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
20	Department of Employment, Economic Development and Innovation	20.42	Socio-economic	16.3.7, 16.4.2	<p>RTA states that during the construction and operations phases of the Project there will be Indigenous business development opportunities. Throughout this section the Mitigation Strategies are predominately based on non-quantifiable actions (i.e. 'proactively considering tenders..' and 'continuing to work collaboratively'). RTA doesn't commit to direct or additional approaches to assist Indigenous business development or to create supply opportunities for Indigenous businesses. The Mitigation Strategies need to be strengthened to include a commitment to develop, within 6 months, a stand-alone Indigenous business supplier strategy and plan for the construction and operational phases of the Project. Such a document should capture the points contained in this section and in addition address:</p> <ul style="list-style-type: none"> • sponsoring business capacity building activities • implementing purchasing targets for goods and services from Indigenous businesses • having 'identified' supply opportunities for Indigenous businesses • endorsement of the strategy and plan by the Western Cape Communities Coordinating Committee's (WCCCC) Employment and Training (E&T) Sub-Committee. 	<p>RTA Weipa's obligations with regards to business development are described in the WCCCA. In addition to these obligations, RTA Weipa is in the process of initiating the development of a local sourcing strategy that will incorporate strategies to support capacity building, identify opportunities for supply of goods and services by local Indigenous and non-Indigenous businesses. Various stakeholders will be consulted in the development of the strategy, including Traditional Owners, existing local businesses, the Western Cape Chamber of Commerce, and Regional Partnership Agreement signatories (including relevant Government agencies). A Local and Indigenous Sourcing Action Plan has been identified in the Social Impact Management Plan (refer Appendix 6 of this Supplementary report).</p>
20	Department of Employment, Economic Development and Innovation	20.43	Socio-economic	16.3.2, 16.4.2, 3.8.3	<p>RTA proposes to develop a Communities, Heritage and Environment Management Plan (CHEMP). The CHEMP, as described in the document, will:</p> <ul style="list-style-type: none"> • cover many different areas of environmental management • cross jurisdictions/areas of responsibility of various stakeholders • depend on support and funding from various stakeholders • require on-going monitoring, evaluation and revision. <p>To ensure the beneficial outputs of the CHEMP are realised, RTA should include in the sections relevant to and describing the CHEMP a commit to:</p> <ul style="list-style-type: none"> • have all proposed activities within the CHEMP costed and with nominal funding commitments (from RTA and other stakeholders) • provide funding support to ensure the development and implementation of the Ranger Program and Permit System in recognition of its responsibilities to ensure the protection of the Project area's environmental and cultural values. • on-going monitoring, evaluation and revision of the CHEMP • periodic independent evaluation 	<p>RTA Weipa's obligations with regards to permit systems, ranger programs, cultural heritage management and environmental management are described in the WCCCA. The establishment of a Communities, Heritage and Environment Management Plan will result in the development of a work plan for the implementation of these related activities (refer Section 16.3.2 of the EIS). The plan will also define roles and responsibilities (including financial), monitoring and review processes and timeframes for the work. The Land and Sea Management Action Plan and the Communities, Heritage, and Environment Management Plan are discussed further in the Social Impact Management Plan (refer to Appendix 6 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
21	Queensland Police	21.1	Socio-economic	16	<p>Activity:</p> <ul style="list-style-type: none"> • Increase in Rio Tinto Alcan (RTA) workforce and contractor workforce as a result of the South of the Embley (SOE) project. • Increase in aircraft operations. • Expected Impacts: • General increase in calls for service relating to population growth. • Increase in traffic volume and necessity for enforcement. • Increase in calls for service relating to anti-social behaviour. • Calls for service relating to mining-related incidents. <p>Suggested solution:</p> <ol style="list-style-type: none"> 1. That RTA establish a code of conduct for after hours relating to the conduct of any of their employees, whether fly in fly out or permanent resident. 2. Weipa Police Division has identified the need for increased accommodation to allow an upgrade to a 24 hour operation, requiring an increase of staff from 9 to 18 uniform officers. This allocation should include a traffic office contingent of at least 2 officers. These additional resources have not yet been budgeted. 	<p>In relation to employee behaviour after hours, as stated in Section 16.3.5 of the EIS: "RTA would implement strict policies for employees and contractors in relation to fitness for work, including alcohol and other drugs, with strict pre employment medical programs and an ongoing random drug and alcohol testing regime.....RTA would continue to liaise with QPS and other Government agencies to develop strategies to ensure an effective response to incidents and to raise awareness of regional law and order and alcohol management initiatives. RTA would reinforce the required code of conduct for employees and contractors on the mining leases and emphasise need for appropriate behaviour at all times." RTA proposes to implement a number of measures to address concerns relating to employee and contractor behaviour including continuing to implement a complaints system and incident management process whereby any reported incidents of unacceptable behaviour are investigated, and proactive discussion and engagement with community stakeholders to establish a system to monitor and respond to issues, including the implementation of additional management measures where necessary (refer Section 16.3.8 of the EIS).</p> <p>In relation to population growth and associated social impacts Section 16.4.1 of the EIS states "Employee numbers would remain relatively stable or slightly decrease in the initial production stage of the Project. The population of Weipa and other communities is therefore not expected to increase significantly until the Project exceeds 30Mtpa which would not occur until market conditions are suitable. Social impacts associated with population increases, such as demand for community services, housing and infrastructure, are not expected to change until this time. RTA would assist with the planning and implementation of mitigation measures associated with Project capacity expansions above 30Mtpa with relevant stakeholders as required". The identification by the Weipa Police Divisions of the need for increased resources is noted. A Community Health & Wellbeing Action Plan is discussed further in the Social Impact Management Plan (refer to Appendix 6 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
21	Queensland Police	21.2	Socio-economic	16	<p>Activity:</p> <ul style="list-style-type: none"> Water-based activities including ferry transfers, ship loader construction and water based transport of equipment will increase significantly during the construction and operational phase of the SOE project. <p>Expected Impact:</p> <ul style="list-style-type: none"> Potential increase in search and rescue missions. An incident on water or land will require an adequate search and rescue response, which would be undertaken by the QPS. Weipa Station has minimal search and rescue capabilities. <p>Suggested solution:</p> <ol style="list-style-type: none"> That RTA ensure suitably trained rescue staff and resources are located in close proximity to any likely water-based operations. Weipa Police Division has identified the need for an upgrade of a four-officer Water Police section. These additional resources are not currently budgeted. 	<p>Details of the proposed emergency management plans (or 'Business Resilience Plans') for the Project are presented in Section 19.3 of the EIS. The proposed Port would have a rapidly deployable rescue boat and life saving apparatus, and each dolphin of the wharf would have a ladder that extends down to the water. The barge and ferry terminals would have fixed life saving apparatus and RTA would have a small shuttle boat that can be used for immediate response in the event of an incident. The Marine Rescue service, which is based in Weipa, would be utilised if necessary. This commitment is included in the Summary of Commitments (refer Appendix 2 of this Supplementary report).</p>
21	Queensland Police	21.3	Socio-economic	16	<p>Activity:</p> <ul style="list-style-type: none"> RTA employees and other personnel who will park vehicles at the ferry pick up point. Expected Issue: Potential increase in property-related crime, including wilful damage, theft from vehicles and unlawful use of vehicle. <ol style="list-style-type: none"> That RTA ensure adequate lighting, security fencing and CCTV monitoring around the car park area 	<p>As stated in Section 16.3.1 of the EIS: "RTA would provide secure parking facilities adjacent to the Hornibrook ferry terminal. This would include a fenced compound with appropriate security systems." Additionally the ferry terminal carpark would be monitored through a CCTV system. This commitment is included in the Summary of Commitments (refer Appendix 2 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
22	Gulf of Carpentaria Commercial Fishermen's Association	22.1	Socio-economic	6.7.2	<p>There are some serious concerns of impacts to the fishing industry such as the effects on nearby reefs including:</p> <ul style="list-style-type: none"> – by dredging and sediment flows and as annual maintenance dredging is part of this proposal this will be an ongoing issue. – The channel and wharf goes through very productive mackerel grounds and will have some effects to inshore catches in the L4 Gulf Line fishery. – The project will seriously limit netting in the N3 & N9 Gulf Net fishery both inshore and offshore in the areas near the wharf site, channel area & proposed spoil ground. 	<p>The EIS concludes "Overall dredging activities are anticipated to have a low risk of adverse impact on fisheries" (refer page 16-54 of the EIS), due to the relatively small proportion of the available fishing area that would be impacted.</p> <p>The potential for change to coastal processes has been assessed and is discussed in Section 6.9.1 of the EIS. It concluded that the proposed wharf jetty and berth pockets have a low potential to impact longshore transport of sediment.</p> <p>The importance of the AB8 grid is acknowledged in Section 6.7.2 of the EIS. The AB8 sector produced 15% of the total Spanish mackerel fishery catch in 2008 but this declined to 3% in 2009, indicating the variable nature of the catch (Annual Status Report 2010 Gulf of Queensland Line Fishery, DEEDI).</p> <p>The EIS acknowledges that there would be a temporary impact on fish assemblages in the vicinity of the Port and spoil ground due to turbidity generated by dredging and disposal of sediment, however following dredging, the impacts are anticipated to be minor (refer Section 6.9.4.5 of the EIS). The proposed departure channel is relatively narrow (182m wide). Information on the Gross Value of Production of commercial line (L4) and net (N3/N9) licence holders in the AB8 and AC8 grids is presented in Section 6.4.2 of this Supplementary report, along with available catch data for commercial line and net fishing operators. Also, refer to response to 22.10.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
22	Gulf of Carpentaria Commercial Fishermen's Association	22.2	Water supply	8.14.1.2	We also have concerns if creeks such as Norman Creek are dammed.	<p>Concerns of commercial and recreational fishermen are noted in feedback in Section 15.2.5 of the EIS. Section 16.3.6 of the EIS discusses in more detail concerns related to dams. Section 16.3.2 of the EIS identifies that despite the construction of the water supply dam (Dam C), the proportion of runoff water entering the Norman Creek estuary is estimated to be 84.9% (at 50Mdt/tpa) of the water entering without the dam. Environmental releases would occur from the dam (refer Section 5.2.3 of the EIS). It is not expected that there would be a significant impact on the downstream estuarine environment. Potential impacts on fisheries within Norman Creek are discussed further in Section 8.14.1.2 of the EIS and the EIS concludes:</p> <ul style="list-style-type: none"> Modified habitats would be expected to be healthy and functional and to fall thin the range of variability encountered in the existing estuarine habitat aggregation and to continue hosting the range of existing faunal communities albeit with some redistribution of their preferred habitat niches and a reduction within the affected reach of flow and freshwater associated communities under the 29GL dam scenario. Impacts to fishery productivity as a result of alteration of magnitude and timing of wet season flow to the Norman Creek estuary, if they occur, are predicted to be small and within the range of natural annual variation; however, these impacts would be directional over the longer term and are likely to be measurable under the 50Mdt/tpa development scenario. <p>The design of the spillway for the water storage dam would be at low overall gradient (<3%) and incorporate an allowance for fish passage (refer Section 5.2.3, Figure 5-11 of the EIS). The artificial habitat created by the water supply dam would be suitable for species such as Barramundi and the maintenance of fish passage access to this habitat would provide an opportunity to support fishery recruitment (helping to balance other potential impacts to fishery recruitment) and to maintain naturally structured prey communities.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
22	Gulf of Carpentaria Commercial Fishermen's Association	22.3	Socio-economic	16.3.2	The need to detour around the shipping area, along with effects on fisheries catch will come at a cost to the fishing industry. Any loss of access or productivity has a flow on effect to the Gulf community especially the towns.	RTA would designate a safe passage underneath the proposed jetty for small recreational and charter boat users to prevent the need to travel around the wharf and jetty (which would have a safety exclusion zone of 50m) and in accordance with any Maritime Safety Queensland requirements (refer Section 16.3.2 of the EIS). The jetty infrastructure would be approximately 18m above LAT (Figure 6-1 of the EIS) and the pile spacing's would be more than 20m apart.
22	Gulf of Carpentaria Commercial Fishermen's Association	22.4	Socio-economic		Boyd Bay and the adjacent Rockwall are valuable anchoring areas for fishing vessels especially in bad weather and any restriction to safe access must be avoided.	Access to moorings at Boyd Bay would not be restricted (see Section 16.3.2 of the EIS). RTA would have limited need to use Boyd Bay during construction and operations. Following discussions with the Harbour Master, the proposed new mooring area for bulk carriers has been removed. The Harbour Master has indicated that the preferred arrival and anchorage area for bulk carriers to the SoE Port would be the existing anchorage area for the Port of Weipa (see Figure 2-9(sup.) of Section 2.6 of the Supplementary report). Fishing vessels are permitted to operate within mooring areas. MSQ requires commercial fishing boats keep clear of anchored bulk carriers. This means a small proportion of available fishing ground would be temporarily unavailable while vessels are anchored in the area.
22	Gulf of Carpentaria Commercial Fishermen's Association	22.5	Socio-economic		If it is found that the South of Embley Projects impacts adversely on the Gulf fisheries, which at this stage we believe it will. Then the project should consider removing some of the fishing licences from the Gulf fishery as an act of good faith to prevent problems caused by the displacement of fishermen from the project to other areas. This reduction would go some way to keep the balance & maintain a sustainable & viable fishery for all Gulf Communities.	DEEDI (Fisheries Queensland) have indicated to RTA that they are developing a compensation model for commercial fishing operators for use in circumstances where there is a demonstrated economic impact attributable to a development project. RTA does not have access to this model. RTA will continue to consult with Fisheries Queensland regarding their policies regarding threshold of impact for potential compensation and quantification of potential compensation. Information on the Gross Value of Production of commercial licence holders operating in relevant Gulf of Carpentaria fisheries is presented in Section 6.4.1 and 6.4.2 of this Supplementary report, along with catch data for commercial and charter fishing operators. RTA has consulted with GoCCFA and QSIA after the publication of the EIS and is aware that there are different views concerning processes for determining potential compensation (if applicable) and different view concerning the nature of compensation (if applicable). RTA shall continue to consult with Fisheries Queensland, CoCCFA and QSIA regarding these matters.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.1	Ferry/Barge	Sections 1.9, 2.9	<p>Table 1-2 does not specify approvals are required for reclamation works at Humbug Barge Terminal and Hornbrook Ferry Terminal.</p> <p>Recommendation: Reword Table 1-2 to read "Required for operational work involving reclaiming land under tidal water and operational works in tidal areas of NQBP Strategic Port land (DERM is a concurrence agency for operational works in tidal waters)".</p>	Table 1-2(sup.) has been updated in this Supplementary report (Section 1.6) to incorporate suitable references to reclamation.
23	Department of Environment & Resource Management	23.2	Port/shipping	Sections 1.9 and 2.9	<p>Table 1-2 does not identify the need for approval for buoy moorings using pile driven into sea-bed, if proposed in Queensland State Waters outside of the mining lease area.</p> <p>Recommendation: Identify approvals that would be required for the proposed mooring area for the South of Embley Project.</p>	The Project does not propose to install buoy moorings. The proposed shipping activities, including mooring by anchor, are described in Section 2.6.2 of the EIS.
23	Department of Environment & Resource Management	23.3	Port/shipping/ Ferry/Barge	1.9.6	<p>In the EIS include the need to obtain the following for dredging works in areas outside the mining lease area i.e. port area, barge/ferry terminal:</p> <ul style="list-style-type: none"> – an approval for a material change of use environmentally relevant activity (ERA) 16 'Extraction Activities' in particular dredging under the <i>Environment Protection Regulation 2008</i> – registration certificate under the <i>Environmental Protection Act 1994</i> to undertake the environmentally relevant activity for extraction activities (dredging) 	Table 1-2(sup.) has been updated in this Supplementary report (Section 1.6) to incorporate suitable references to Queensland legislation relating to dredging.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.4	Port/shipping/ Ferry/Barge	1.9.7	<p>The trigger under the <i>Sustainable Planning Act 2009</i> for operational works is under the provisions of the <i>Coastal Protection and Management Act 1995</i> if outside the mining lease.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Change wording in section 1.9.7 to read "However, certain Project development activities regulated by the SP Act and other natural resource management legislation will be assessable development against Schedule 3 of the SP Regulation where works are outside of the mining lease areas. Change dot point 3 to "Operational works in tidal waters (Coastal Protection and Management Act 1995). 	Table 1-2(sup.) has been updated in this Supplementary report (Section 1.6) to incorporate suitable references to the <i>Sustainable Planning Act, 2009</i> and <i>Coastal Protection Act, 1995</i> for operational works.
23	Department of Environment & Resource Management	23.5	Port/shipping/ Ferry/Barge	2.3.1	<p>It is identified that the area outside of ML7024 is a State Resource for the purposes of item 6 of Schedule 14 of the <i>Sustainable Planning Regulation 2009</i>. Any development application required for activities to occur outside of ML7024 will require evidence of resource entitlement to be provided by the delegate administering the Land Act 1994.</p> <p>Recommendation:</p> <p>The requirements of applications for resource entitlement be included in the document at either 1.9 in Table 1-2 and further expanded at either 1.9.7 or 1.9.8.</p> <p>The EIS should acknowledge the need for resource entitlement where ever relevant and sufficient information should be provided to enable the Department of Environment and Resource Management (DERM) to determine if a resource entitlement can be granted.</p>	Table 1-2(sup.) has been updated in this Supplementary report (Section 1.6) to incorporate suitable references to resource entitlement .
23	Department of Environment & Resource Management	23.6	Port/shipping	2.6.2	<p>Limited information and details are provided on the proposed offshore mooring area and mooring design type for ships waiting to berth. Further reference is made to some ships being able to anchor in waters between 20 and 14m deep.</p> <p>Recommendation:</p> <p>Provide further information regarding the offshore mooring area and mooring design type and confirm if the area is to be located in Commonwealth or Queensland waters or both.</p>	Mooring of bulk carriers would be by anchor, rather than buoy moorings. Since the EIS was published, and following discussions with the Regional Harbour Master, the proposed mooring area has been removed. The Regional Harbour Master has indicated that the preferred arrival and anchorage area for bulk carriers to the SoE Port would be the existing anchorage area for the Port of Weipa (refer Figure 2-9(sup.) in Section 2.6 of the Supplementary report). The anchorage area is in Commonwealth waters outside of the Port of Weipa limits. The location of the anchorage areas is subject to the direction of the Harbour Master. A new departure area for Capesize vessels would be required in water with 20m draft directly seaward of the arrival area. The departure area is required to allow the pilot to disembark and anchorage is generally not required. Impacts of mooring areas are described in Section 6.9.6 of the EIS and assessment of the proposed change is provided in Section 14.2 of this Supplementary report.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.7	Port/shipping/ Ferry/Barge	Section 4.2 and Table 4-5	<p>(Section 4.2 Extreme Events, Storm Surge and Wave Height), Page 4-7 and Table 4-5</p> <p>Issue – Reference is made to the proposed designs for the port, Humbug terminal, Hornbrook ferry terminal and Hey River Barge /ferry terminal relating to storm surge and the EIS indicates climate change impacts have been considered. The Queensland Government has approved the making of the Queensland Coastal Plan due to commence later this year and identifies Coastal Hazard Areas in accordance with the methodology set out in the Queensland Coastal Hazards Guideline. There appears to be no mention of consideration of the assessment factors for coastal hazards in this EIS that are based on the Intergovernmental Panel on Climate Change Fourth Assessment Report in 2007. Consideration should be given to the Queensland Coastal Plan and Queensland Coastal Hazards Guideline for the proposed development.</p> <p>Recommendation: Consideration should be given to the Queensland Coastal Plan and Queensland Coastal Hazards Guideline for coastal hazard impacts on the proposed future development.</p>	<p>It is noted that the Queensland Coastal Hazards Guideline was released after the EIS was submitted to DEEDI for approval for public release. Impacts on the Project from climate change are considered within Section 4.3 of the EIS. Projections of a 0.79m sea level rise are presented within Section 4.3.3 of the EIS, based upon 'The Intergovernmental Panel on Climate Change Fourth Assessment Report in 2007'. This is considered consistent with the predictions of sea level rise of 0.8m as projected within the Queensland Coastal Plan which are based upon on 'the upper range of the projections of the Intergovernmental Panel on Climate Change Fourth Assessment Report in 2007'. The design levels for the Port, ferry and barge terminals are shown in Table 4-5 of the EIS. The proposed port is 5m above the predicted 1:100 year ARI maximum breaking wave height. The shore facilities and scour protection for the barge and ferry terminals are more than 0.4m above the 1:100 year ARI modelled design water level. This is consistent with the recommendations of the Queensland Coastal Plan.</p> <p>The Queensland Coastal Plan and the Queensland Coastal Hazards Guideline manages development within the coastal zone, including within coastal waters through the State Planning Policy for Coastal Protection. Development approvals for the off-lease Humbug Terminal and Hornbrook Terminal shall consider the requirements of the Queensland Coastal Plan and Queensland Coastal Hazards Guideline.</p>
23	Department of Environment & Resource Management	23.8	Environmental impact	5.1.4	<p>There appears to be sufficient water quality data to consider deriving draft locally relevant water quality objectives, which could then be supplemented with further data in the coming months. It would be useful to provide the data (and relevant percentiles, numbers etc) on a stream by stream basis (separated for estuarine/fresh), and where possible separate out the no flow and flow data. Draft WQOs would be useful to inform the process of deriving appropriate limits or triggers within the EA Conditions.</p> <p>Recommendation: – It is recommended that draft local water quality objectives are calculated and presented in the Supplementary EIS.</p>	<p>A revised approach to investigation triggers and new water quality objectives is presented in the revised Environmental Management Plan in Appendix 3 of this Supplementary report. These changes have been made to make them consistent with the triggers and objectives in the Environmental Authority for the existing operations issued on 30 August 2011. With respect to existing water quality data, the EIS presents freshwater stream data in Table 5-9, freshwater swamp data in Table 5-10 and estuarine and marine data in Table 5-11. Examination of the median values from individual freshwater streams indicates they are similar. More than 90% of freshwater samples are taken under flowing conditions.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.9	Environmental impact	Sections 5.2.5, 6.8 and throughout the EIS	<p>The waterways in this region appear to be relatively pristine, with little to no development or human-based alteration to riparian zones and stream hydrology. The only limited human influences appear to be local recreational or subsistence fishing, recreational boating and potentially a very minor component of mining exploration water use (limited in spatial extent) (see Section 5.1.2 of the EIS). In addition, Table 5-2 of the EIS outlines that the potentially impacted waterways support perennial ponds, swamps, lagoons etc. It is possible that certain areas are considered slightly modified while others are considered HEV. The ANZECC & ARMCANZ guidelines recommend stricter guidelines values be developed and a high degree of protection is afforded to HEV ecosystems. In essence, for HEV waterways, the basis for determining guidelines is “no change to natural values”. The proponent repeatedly refers to obtaining 80th percentiles of reference data to use as guideline values for water quality indicators, however, this methodology is based on the classification of the receiving waters as “Slightly disturbed ecosystems” (as per section 5.1.4 Surface Water Quality Impacts) but this would not apply in ecosystems considered of “High ecological value”, in which case the guideline intent would be “no change to natural values.”</p> <p>Recommendation:</p> <p>It is recommended that clear and thorough justification for the classification of the all local receiving waterways as representing “slightly disturbed” or “HEV” ecosystems is provided in the Supplementary EIS. It is very important to classify the level of value for aquatic ecosystems accurately, as this will influence the approach taken in deriving end of pipe and receiving waters quality/quantity limits or triggers. Further information relating to the process to follow when proposing discharges to Queensland waterways can be obtained from the DERM Operation Policy for Licensing Wastewater</p>	<p>The definition of slightly to moderately disturbed ecosystems from ANZECC is “ecosystems in which aquatic biological diversity may have been adversely affected to a relatively small but measurable degree by human activity. The biological communities remain in a healthy condition and ecosystem integrity is largely retained.”</p> <p>This definition is considered consistent with the existing anthropogenic ecosystem impacts, including altered fire regime and disturbance by feral pigs, identified in Section 7.10 of the EIS. The current fire regime within the Project area is one of extensive, high intensity, late dry season fires (caused primarily by anthropogenic causes) (refer Figure 7-9 of the EIS). Disturbance of vegetation by feral pigs is evident throughout the Project area in all vegetation types. Particularly coastal wetland areas - especially Bulkuru’ spike rush (<i>Eleocharis dulcis</i>) swamps have been extensively damaged and Melaleuca wetlands, riparian gallery forest, groundwater seepage areas, saltpan and coastal grasslands suffer appreciable damage by feral pigs.</p> <p>ANZECC (2000) provides that water quality trigger levels for investigation may be set in relation to relevant tabulated default guideline values (for 80, 90, 95 or 99 percent level of species protection) or in relation to the 80th percentile of background (baseline) concentrations. Default guideline values are typically used when there is an absence of suitable background data. The consideration of 80th percentile of background when setting investigation triggers is consistent with ANZECC (2000) and is independent of classifications such as “high ecological value” or “slightly to moderately disturbed” ecosystems. The proposed investigation triggers and water quality objectives are presented in the revised Environmental Management Plan in Appendix 3 of this Supplementary report. Changes to the Environmental Management Plan presented in the EIS have been made to make it consistent with the Environmental Authority for the existing operations issued on 30 August 2011.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.10	Water supply	5.3.2	<p>This section does not discuss any regulatory requirements for the drilling of sub-artesian bores or the authorities required for the take of sub-artesian water in the project area.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Reference should be made to requirements under schedule 11 of the Water Regulation 2002 and the Sustainable Planning Act 2009 for development permits to drill sub-artesian bores in sediments overlying the Great Artesian Basin. Information should be provided on any proposed take of sub-artesian water that (for any purpose other than stock or domestic use) would require authorisation under the Water Act 2000. 	<p>The Project does not propose to drill sub-artesian bores for the purposes of water supply to the Project. The Project's water supply sources are identified in Section 5.2.1 of the EIS.</p>
23	Department of Environment & Resource Management	23.11	Water supply	5.3.4	<p>The section discussing existing groundwater use acknowledges that there are other authorised users of artesian groundwater within the (extended) vicinity of both the existing and the proposed bore field. There is no discussion of the potential impact of pumping on the other users, in particular the existing flowing stock bore at Sudley Station.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Additional information should be provided regarding the potential impacts of long term pumping from the Gilbert River Formation artesian aquifer on existing authorised users of water from this system. Information should also be provided regarding any existing or proposed agreements with landholders to remediate or mitigate undesirable impacts such as lowered water levels or long term changes in water quality. 	<p>Further assessment of the potential impacts of long term pumping from the Gilbert River Formation artesian aquifer on existing authorised users of water has been completed in Section 5.4 of this Supplementary report. There are no existing or proposed agreements with landholders.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.12	Water supply	5.4.2	<p>There are no mitigating actions proposed should the predicted drawdown impacts on recharge and watercourse springs be exceeded.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Options should be provided to mitigate any risk that current Water Act 2000 license conditions may be breached in terms of the maximum permissible reductions in water levels at specified monitoring points. It would be preferred that the mitigating options include actions that might be taken if or when predictive modelling indicates unforeseen negative impacts occurring in the future. A trigger mechanism may, for instance, could be an agreed water level in the observation bore located on Sudley Station. 	<p>RTA will continue to comply with the 5m drawdown limits at the Bramwell Station, Batavia Downs and Weipa Crossroads monitoring bores, as well as undertaking predictive model validation. Drawdown limits were set within the licence taking into consideration the protection of existing bores and artesian intake areas to the north and east of Weipa. RTA has applied to increase the allocation of artesian groundwater from 9GL p.a. to 12 GL p.a. under the <i>Water Act, 2000</i>. The conditions relevant to the licence to take artesian water will be set through the <i>Water Act, 2000</i> licensing process. These conditions are expected to be very similar to the existing conditions which require annual assessment of the need or otherwise to adjust the groundwater model and any revised predictions based on an adjusted model. Reference to the predicted drawdown at the designated monitoring points is the mechanism by which predicted compliance with the drawdown limits shall be monitored. Should the predictive model indicate a future drawdown in excess of the 5m drawdown limit, mitigation measures could include changes to bore locations or moderation in abstraction.</p>
23	Department of Environment & Resource Management	23.13	Port/shipping	<p>Section 6.3.2</p> <p>Table 6-3</p> <p>Figures 6-18 & 6-19</p>	<p>Table 6-3 and Figure 6-18 indicate that soft corals are found adjacent and partly in the proposed dredge footprint area. However, Figure 6-19 indicates that these corals are hard corals and not soft corals.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Clarify if the corals are hard or soft coral assemblages adjacent to and partly within the proposed footprint area of the port facilities and dredge area. 	<p>Figure 6-18 of the EIS correctly shows this area as having soft coral-sponge assemblage. The reefs adjacent to and partly within the proposed dredge footprint area were incorrectly identified as hard corals and instead should have been identified as Sponge - Soft Coral habitat (refer also to response to 23.14). The information presented in Figure 6-19 of the EIS has been reviewed and was found to be inaccurate. The drop camera survey results have been reviewed and presented more accurately in Figure 6-19(sup.) in Section 6.1.1 of this Supplementary report.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.14	Port/shipping	Section 6.3.2, 6.9.2.5 Figures 6-18 & 6-19	<p>The impact of the project on the reef systems between Boyd Point and Thud Point is also unclear. Figure 2-6 and the text and figures in Chapter 6 are inconsistent in terms of dredging of the reef. It is noted that even if the coral is not to be dredged, it will be significantly affected by turbidity and smothering during the dredging operation due to its proximity to the activity.</p> <p>From the maps provided in the EIS it would appear that that there is an area slightly to the north of the preferred alignment of the jetty shown as being devoid of mapped coral assemblages. It is not clear why the jetty facility is not located in this area as it would minimise the direct and indirect impacts on the high value reefs in the area.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Clarification should be provided on the extent of dredging associated with the proposed port facility. If the proposed dredged areas shown in Figure 2 – 6 located north and south of jetty are correct, then the impacts of this activity should be fully described. In addition, if these areas have not been included in the modelling of the turbid plume generation in the EIS, the modelling should be revised taking these additional areas into account. Further information justifying the preferred location of the proposed port facilities should be provided, particularly in relation to identified impacts on high regional value coral assemblages and the apparent possibility of an alternative location which would have lesser impacts on the coral. 	<p>It should be noted that after further recent studies, RTA proposes to realign the jetty and wharf two (2) degrees south (refer to issue ref. no. 11.2 above). This change is presented in Figure 2-6(sup.) and described in Section 2.6 of this Supplementary report. The area shown on Figure 2-6(sup.) to be dredged north and south of the jetty would not be dredged in Stage 1 and may be only partially dredged in Stage 2 (which would be constructed later if market conditions allow). The EIS includes TSS and sediment deposition modelling for dredging associated with Stage 1 (6.5 million cubic metres) only, as this is a much greater dredge volume than would be required for Stage 2 (2.4 million cubic metres) and would result in lower impact. A separate Sea Dumping Permit would be required for the Stage 2 capital dredging, should it occur.</p> <p>Figure 6-19 of the EIS contains an error and has been amended to show that the habitat closest to the Port contains a soft coral-sponge assemblage (not hard coral) (refer Figure 6-19(sup.) and discussion in Section 6.1 of this Supplementary report). This area contains approximately 13.7ha of soft coral-sponge habitat with between 5 and 10% live cover. Section 6.9.2.5 and Figure 6-64 of the EIS indicate these areas would receive greater than 2.5mg/cm²/day during Periods 2 and 3 of the Stage 1 capital dredge program and some loss of habitat at these locations may be expected (refer to Section 6.9.2.5 of the EIS). Should Stage 2 of the Port be constructed (should market conditions allow), the portion of habitat closest to the Port (6ha habitat containing 5-10% live cover) may be dredged to provide a turning area for ships entering and exiting in berth closest to shore.</p> <p>The location of the Port was chosen based on the following considerations: optimal alignment of the wharf and associated channel to yield optimal ship behaviour while in the port berths (due to predominant wave direction); shortest route to deep water (to minimise dredging); physical infrastructure to remain within mining lease boundary; minimise impact on corals; and minimise impact on cultural heritage. The Port location is about equidistant between the hard coral reef assemblages at Boyd Point and Pera Head.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.15	Port/shipping	6.9	<p>Ceasing dredging based upon appropriate turbidity levels at relevant locations, should be considered as a mitigation measure to limit the impact of dredge plumes. Appropriate monitoring points, trigger levels and response mechanisms (that should include ceasing dredging) have not been described.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Provide details of appropriate turbidity monitoring locations and management procedures (including trigger levels for management actions, including ceasing operation) that would be used to ensure the turbidity generated by dredge plumes remain within the levels stated in the EIS. 	<p>Section 6.9.3.1 of the EIS states that for port area capital dredging, monitoring of turbidity, deposition and PAR is proposed to be undertaken at Boyd Point, Pera Head and Thud Point reef areas and at a control location outside the extent of the modelled dredge plume. Trigger levels would be developed for these water quality parameters primarily as alerts for coral health reactive monitoring. Section 6.9.3.1 of the EIS also commits that the final design of the reactive monitoring program and response protocol, including management triggers, would be prepared in consultation with the Department of Sustainability, Environment, Water, Populations and Communities (DSEWPac) and the Department of Environment and Resource Management (DERM). Draft Dredge Management Plans for the Port and river facilities are provided in Appendix 4 and 5 of this Supplementary report respectively.</p>
23	Department of Environment & Resource Management	23.16	Port/shipping	6.9.1	<p>No information has been provided to substantiate the statement that the proposed open piled wharf jetty and berth pockets have low potential to impact alongshore transport of sediment and a greater potential for impact to the longshore beach profile and cliffs due to the increased depth of the proposed berth and departure area.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Provide information that would support the claims made in the EIS regarding the nature and extent of impacts of the proposed jetty and berth pockets on coastal processes. This description should include an assessment of the risk to the proposed structures and the coastal morphology posed by the predicted impacts. The potential for corrective actions should be outlined should adverse impacts occur. 	<p>Results and findings of coastal process modelling has been included in Section 6.2 of this Supplementary report to substantiate the statements in Section 6.9.1 of the EIS. Further impact assessment on the proposed structures and the coastal morphology has also been included along with proposed mitigation measures of potential impacts.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.17	Port/shipping	6.9.2	<p>The dredge operation is proposed to be undertaken over a 36 week period starting at the beginning of the dry season (early May) and continuing until work is completed (January). A number of species of turtles are known to nest on the beaches in the vicinity of the project area and are likely to be adversely affected by the dredging operations.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Consideration should be given to avoiding dredging operations during identified turtle nesting periods. As the nesting periods vary between species, advice should be sought from Queensland Parks and Wildlife of the Department of Environment and Resource Management on the most appropriate times of the year to dredge to avoid the turtle nesting season. 	<p>Section 6.6.5 of the EIS identifies that three species of marine turtles – the Flatback Turtle (<i>Natator depressus</i>), the Olive Ridley Turtle (<i>Lepidochelys olivacea</i>), and the Hawksbill Turtle (<i>Eretmochelys imbricata</i>) – are known to nest on the beaches in the vicinity of the Project area. The Flatback Turtles nest all year round, peaking in May through to September. It is noted that uncertainty exists over the peak timing of nesting of the other species in the Project area.</p> <p>The EIS also notes that the proposed location of the port is not considered a high density turtle nesting beach. The nearest major rookery on Cape York is Crab Island (Limpus 2007). On Crab Island, Leis (2008) found an average of 30 nesting tracks per kilometre per day of beach surveyed during May 2008. This compares with Bell (2004) who found 0.3 turtle tracks per kilometre per day from False Pera Head to Boyd Bay and GHD (2007b) who found 0.6 tracks per kilometre per day in a similar area. The April 2008 survey of the proposed port area found 0.1 tracks per kilometre per day. The proposed port area can be considered to have a low to medium density nesting population.</p> <p>As nesting was identified to occur all year round for at least one species and the Project area is not considered a high density nesting site, alternate mitigations to altering the timing of dredge activities were proposed in Section 6.9.4.3 of the EIS. Mitigation measures include commitments to working with the Department of Environment and Resource Management (DERM) to reduce existing threats to marine turtles including reducing feral pig predation and reducing marine stranding associated with ghost nets (refer Section 6.6.5 of the EIS and Section 6.3.2 of this Supplementary report).</p> <p>Further clarification of nesting periods of potentially affected marine turtles will be undertaken with DERM's marine turtle specialists and incorporated into the proposed nesting monitoring program (refer to Section 6.9.4.3 of the EIS and Section 6.3.2 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.18	Environmental impact	Section 7 (General)	<p>The EIS does not clearly identify and describe (1) the ecological values of flora and fauna, (2) the impacts of the project on these values and (3) the measures that will be taken to minimise or mitigate these impacts. The EIS Should address these including the preparation of maps and tables.</p> <p>1. While the relevant Regional Ecosystems (REs) and listed species are identified in the EIS, there is no clear description of areas of high conservation significance in the project area. The identification of these areas and of significant flora species is also lacking.</p> <p>2. The proportion of areas of REs occurring within the project area that will be disturbed are identified (i.e. Table 7-10) but the actual area is not stated. Again, there is no clear map showing what vegetation, individual flora species and significant habitat areas will be disturbed.</p> <p>3. It is expected that the EIS would provide an integrated suite of measures that will be taken to minimise impacts and assist in retaining the identified flora and flora values of the project area. A number of measures are described, but it is unclear how they will interact and what they will achieve.</p>	<p>1. Sensitive environmental areas for flora, including areas of conservation significance, are clearly described in Section 7.7 and mapped on Figure 7-8 of the EIS. Threatened flora and fauna are identified in Table 7.7 and Table 7-17 of the EIS respectively.</p> <p>2. Table 7-10(sup.) in Section 7.1 of this Supplementary report provides an update of the conceptual mine plan and identifies the following information for all regional ecosystems to be disturbed:</p> <ul style="list-style-type: none"> – Approx. area to be disturbed (ha), including total disturbance and specific identification of disturbance by the following infrastructure, mining area, Dam C and Infrastructure. – Total mapped area in Project area (ha) and Proportion to be disturbed in Project area (%) – Area in Weipa Plateau subregion (ha) and Proportion of area in subregion to be disturbed (%) – Area in Cape York Bioregion (ha) and Proportion of area in bioregion to be disturbed (%) – Projected remnant extent in bioregion as proportion of current extent <p>The extent of disturbance of regional ecosystems which will be disturbed (based on the revised mine plan) are shown across the Project area within Figure 7-6(sup.), and Figures 7-6a(sup.) through to 7-6d(sup.) are provided at reduced scale to clearly show the extent of disturbance across the mining and infrastructure areas.</p> <p>Sensitive environmental areas for flora and proposed disturbance are shown on Figure 7-8 of the EIS. Section 7.7 of the EIS describes the significance of each of these sensitive areas, including habitat significance for threatened flora species. Figure 7-7, 7-7a and 7-7b of the EIS detail the location of individual threatened flora and fauna species recorded during field surveys and proposed disturbance.</p> <p>Mitigation measures and what they would achieve are described in Section 7.9, 7.10 and 7.11, 7.17, 7.18 and 7.19 of the EIS.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.19	Environmental impact	Section 7 (General)	<p>Areas of threatened regional ecosystems have not been identified in relation to proposed areas of disturbance.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Spatially identify the occurrence of regional ecosystems listed as threatened either by Vegetation Management Act 1999 (VMA) or Biodiversity status. <p>Areas of threatened regional ecosystems should also be shown in relation to proposed disturbed areas of the project. Disturbed areas would include mined areas, infrastructure, roads, dams, pipelines, power lines, etc.</p>	Threatened Regional Ecosystems (including "Of Concern" REs), and proposed disturbance areas (including mined areas, dams, and infrastructure corridors (including pipelines, power lines, access tracks) are shown on Figure 7-8 of the EIS. The disturbance of all RE's (based on the revised mine plan) is tabulated in Table 7-10.(sup.) in Section 7.1 of the Supplementary report. The only disturbance to an "of concern" RE is 0.3ha at the port site and <0.1ha at the temporary seaborne access (refer Section 7.1 of this Supplementary report). There are no endangered REs in the Project area (refer Section 7.5.3 of the EIS).
23	Department of Environment & Resource Management	23.20	Environmental impact	7.2.1	<p>Section 7.2.1 Lacks information on representation, comprehensiveness and adequacy of protected areas in the vicinity of the project.</p> <p>Recommendation – The EIS should be amended to include information on the following:</p> <ul style="list-style-type: none"> • Record that the Weipa Plateau subregion contains less than 10% of its area in protected areas (predominately Mungkan Kaanju NP); • Record that the Weipa Plateau subregion contains a high density of regional ecosystems with low representation in protected areas; • Record that study area contains a very high density of regional ecosystems which have low or no representation in protected areas; and • Provide a figure showing very high density of regional ecosystems which have low or no representation in protected areas. 	<p>Figure 7-1 of the EIS shows the National Parks/reserves on Cape York Bioregion.</p> <p>The level of representation of each RE within the Project area in National Parks/reserves in the Cape York Bioregion is described in terms of "low" "medium" and "high" in Table 7-5 of the EIS. Further information on the extent of representation (ha) in protected areas has been provided in Table 7-5(sup.) in Section 7.1 of this Supplementary report.</p> <p>The RE's within the Project area are mapped in Figure 7-6 and Figures 7-6a to 7-6d of the EIS and have been updated in Figure 7-6(sup.) and Figures 7-6a to 7-6d(sup.) in Section 7.1 of this Supplementary report, incorporating minor changes to infrastructure and the current mine plan.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.21	Environmental impact	7.2.2	<p>Recommendation:</p> <ul style="list-style-type: none"> – Provide a brief description of the significant values of Cape York Peninsula that would be considered to be of national and international significance, including, for example: <ul style="list-style-type: none"> • Willmott 2009, The Geological Story of Cape York Peninsula - described the extensive deep-weathering profile on the western side of the Peninsula around Weipa and Aurukun as a world-class example of a 'laterite' profile that has concentrated aluminium as well as iron in its upper layers. • Record and discuss other identified Conservation and Biodiversity areas within the study area include: <ul style="list-style-type: none"> – Directory of Important Wetlands area: Archer Bay Aggregation – Register of National Estate: Wik Region – Aurukun Place 4/06/270/0069 	<p>Conservation Areas and Sensitive Environmental Areas, including the Archer Bay Aggregation, are described in Section 8.2 and Figure 8-1 of the EIS. Other identified conservation and biodiversity areas are described in Section 7.2.2 of the EIS, including the "extensive and aesthetically prominent landscape, comprising cliffs of red bauxite overlying white kaolin" identified by Abrahams et al. (1995). The results of register searches for indigenous and non-indigenous sites within the Project area are presented in Section 11.1.2 and 11.2.3 of the EIS. The Wik Region – Aurukun Place (4/06/270/0069) is an "indicative place" on the National Heritage Register and encompasses Aurukun Shire and is outside the Project area.</p>
23	Department of Environment & Resource Management	23.22	Environmental impact	Section 7.3 and Figure 7-2	<p>The searches undertaken for Matters of National Environmental Significance and for HERBRECS and Wildlife Online were inadequate due to their restricted area. Current recommendations (DERM – Guidelines for Flora Assessment in Northern Queensland) suggest that a buffer area of 25 kilometres is appropriate for the Cape York Peninsula bioregion.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Undertake searches and report on the results (including any potential impacts) on species that are identified within 25 kilometre buffers around the project site. 	<p>A search of HERBRECS and Wildlife Online was carried out over an area including 25 km buffer around the Project area in November 2011. Only one additional EVNT species was identified, which is a record of <i>Paspalum multinodum</i> which was grown from seed collected from near Aurukun. This species was not found in surveys in the Project area. Appendix 7D of the EIS has been updated, provided to DERM, and is available from RTA on request.</p>
23	Department of Environment & Resource Management	23.23	Environmental impact	Table 7-3	<p>The report states that 134 secondary survey sites and 6 tertiary sites were studied. These were not identified or reported in an appendix.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Include completed site sheets in an Appendix. 	<p>Flora survey sites are shown on Figure 7-3 of the EIS. The provision of the survey sheets would add at least 140 pages to the EIS. The flora survey site sheets have been provided to the Department of Environment and Resource Management (DERM) and are available from RTA to those with a particular need.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.24	Environmental impact	7.4	<p>EIS does not provide detail on where and when the 12 survey days targeting threatened flora were spent.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Provide a map showing where and when the 12 survey days targeting threatened flora were spent. 	<p>Details of the locations of the targeted threatened flora surveys are provided on Figure 7-7(sup.) in Section 7.2 of this Supplementary report.</p>
23	Department of Environment & Resource Management	23.25	Environmental impact	7.4	<p>Survey timing – The report states that work in May 2007 and May 2008 represented late wet season surveys. This is unsupported by either rainfall records or recorded floristics. All of the community descriptions lack a range of ground layer species characteristic of the wet season.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Provide rainfall records and recorded floristics that demonstrate that the surveys undertaken adequately describe late wet season conditions. The description of the floristics should include ground layer species encountered. – If insufficient information is available from the surveys undertaken to date, a further survey in wet season should be done to adequately sample the full range of ephemeral plant species. 	<p>The 2007/2008 wet season had 1,756mm of rain with the last rainfall event on 6 April 2008. The 2008/2009 wet season had 1,521mm of rain with the last rainfall event on 15 May 2009. Section 7.4 of the EIS explains that “extensive survey during the wet season was not possible due to the difficulty of access to and within the Project area at this time of heavy rainfall when most track crossings of streams and low lying areas are impassable. Nevertheless, the late wet season surveys in May 2008 and May 2009 were conducted as soon as safe vehicle access to the Project area was possible and most of the wet season flora was still evident.” Detailed descriptions of the vegetation in the Project area is presented in Appendix 7B of the EIS, including ground cover species. Individual flora species, including ground cover species, are listed in Appendix 7B of the EIS. A revised Appendix 7B of the EIS has since been provided to the Department of Environment and Resource Management (DERM) and is available on request. Sufficient data has been collected to adequately describe the wet season floristics and to conclude that it is very unlikely that a listed species were missed due to the timing of the surveys.</p>
23	Department of Environment & Resource Management	23.26	Environmental impact	7.5	<p>The vegetation survey methodology is significantly flawed by its use of outdated work by Godwin and Gunness in the 1980s. This work has been superseded by the regional ecosystem framework which is used for environmental planning and assessment throughout Queensland. Continued use of this older work is inappropriate and is of little assistance for this project as none of their units have any bioregional assessment of conservation status. In the EIS the author/s attempt to use both approaches which is confusing and unnecessarily repetitive.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Remove reference to Godwin and Gunness and use regional ecosystem analysis throughout. 	<p>The publications <i>Land Units of the Weipa Region, Cape York Peninsula</i> (Queensland Parks and Wildlife Service) (Godwin 1985) and <i>Land Units of the Weipa Environs 1:24,000 Map and Explanatory Notes</i> (Gunness et al. 1987) are not outdated and are extremely relevant to Cape York. They provide a much higher resolution of vegetation classification and mapping than the current Regional Ecosystem (RE) classification. The EIS presents both the land unit classification (refer Section 7.5.1 of the EIS) and the RE classification (refer Section 7.5.2 of the EIS). Vegetation types that have particular management measures (such as environmental buffers, refer Table 7-11 of the EIS) are described throughout the EIS using both these classifications. The conservation status of RE's to be disturbed during the Project are presented in Table 7-10 of the EIS. There is no need to remove references to Godwin (1985) or Gunness et al. (1987).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.27	Environmental impact	7.5	<p>The EIS shows that no surveys have been undertaken:</p> <ul style="list-style-type: none"> • on the yet undescribed access roads to mining coupes. • in four of the proposed mining coupes (northern part of study area). • in large areas of the largest coupe. – Additionally, no 'secondary' sites were undertaken in the proposed dam area or the southern-most mining coupe, and in those coupes in which 'secondary' sites were undertaken, many were on the margins of the site only. Thus, no vegetation surveys have been undertaken in more than 1/3 of the area proposed to be mined. <p>Recommendation:</p> <ul style="list-style-type: none"> – Provide the results of survey information to fill the gaps on undescribed access roads to mining coupes, unsurveyed coupes, and missed areas of partly surveyed coupes. Additional surveys may be required. 	<p>Preliminary surveys were undertaken of vegetation communities and flora within the Project area in July 2006 and May 2007. Dedicated surveys of vegetation communities and flora within the Project area for the EIS were undertaken in December 2007, May 2008, December 2008 and May 2009 (refer Figure 7-3 of the EIS). The Darwin Stringybark open forest/woodland that would be disturbed by the Project has very low floristic and structural variability. Some clustering of vegetation survey sites occurred in areas where vehicle access was restricted by a lack of open tracks. In such cases, representative samples of the observed vegetation pattern were surveyed in close proximity to available tracks. This survey approach is widely accepted for large survey areas and is particularly appropriate for Darwin Stringybark open forest/woodland due to its uniformity.</p> <p>The 987 flora survey sites shown on Figure 7-3 of the EIS represent a considerable site-based survey effort. Overall survey effort, for potential threatened flora, also included extensive targeted searches and traverses in likely habitats over 12 days. Neither of the two threatened flora species recorded in the Project area, and none of the potentially occurring threatened flora species, are found in Darwin Stringybark open forest/woodland (refer Tables 7-7 and 7-8 of the EIS).</p> <p>Figure 7-3 of the EIS shows that quaternary surveys were conducted within the proposed dam area and the southern-most mining area. Quaternary surveys in these areas were considered appropriate to meet the objectives of the secondary survey effort, which was to characterise main vegetation types, together with extensive targeted survey traverses in likely habitats for threatened species. Threatened species identified within the proposed dam footprint are presented in Figures 7-7 and 7-8 of the EIS. There were no threatened flora species found within any proposed mining areas, including the southern most mining areas, nor within any Darwin Stringybark open forest/woodland in the Project area (including that which would be traversed by haul roads).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.28	Environmental impact	Table 7-7	Map "semi-permanent groundwater seepage rainforest patches" (Table 7-7) and model their likely occurrence across the rest of the site. This key environmental value may be affected by regolith removal.	The location of the 11 patches of semi-permanent groundwater spring/seepage areas (refer Table 7-9 of the EIS) associated with closed forest in the Project area are shown on Figure 7-8 of the EIS. These patches would be protected by environmental buffers (refer Section 7.9.2 of the EIS). The shallow aquifer is typically hosted in the kaolinitic layer below the bauxite, apart from at the peak of the wet season (refer Section 5.3.2 of the EIS) where occasionally the water table rises into the bauxite. The semi-permanent seepage areas are not fed from bauxite-hosted groundwater during the dry season and hence removal of the bauxite would be very unlikely to affect the groundwater supply to these areas (refer Section 7.10.1 of the EIS). The commitment for protection of semi-permanent springs has been reaffirmed in Section 8.1 of this Supplementary report.
23	Department of Environment & Resource Management	23.29	Environmental impact	7.8	<p>The EIS states that it will result in the clearing of at least 29,390 hectares of remnant vegetation (representing one of the major sources of disturbance in the Cape York Peninsula bioregion), without providing details. It is not clear from the EIS whether the area to be cleared includes tracks to all mining coupes, work areas and associated disturbances associated with the project.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Provide comprehensive details of areas to be cleared including tracks to all of the mining coupes, work areas and any associated disturbance associated with the project. 	Table 7-10(sup.) in Section 7.1 of this Supplementary report presents the approximate area that would be disturbed (ha) for each Regional Ecosystem (RE) in each of the categories of infrastructure, mining area and Dam C (revised for current infrastructure and mine plan). An allowance has been made for clearing for haul roads which has been included in the clearing areas for infrastructure and mining figures. A footnote has been added to Table 7-6(sup.) in Section 7.1 of this Supplementary report to clarify this. The extent of RE's which would be disturbed is shown for the Project area in Figure 7-6(sup.) and Figures 7-6a(sup.) to 7-6d(sup.) in Section 7.1 of this Supplementary report, presented at reduced scale to clearly show the extent of disturbance across the various mining and infrastructure areas.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.30	Environmental impact	7.9	<p>The EIS report proposes wetland buffers that are based on a DERM Guideline which is for clearing and agricultural use not complete removal of the regolith. It is noted that apparently undescribed species of crab and shrimp have been found in the freshwater streams on the mining lease. Proposed buffer widths should also be sufficient to protect the instream environment, particularly water quantity (if mining activity will affect groundwater and surface inflows to streams and creeks) and water quality (particularly sediment load). DERM is interested in ensuring that the habitat for these and other instream species is not significantly impacted by the mining activity.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Consideration should be given to: <ul style="list-style-type: none"> • Increase buffers by 100% for all categories on page 7-51 to minimise the risk of groundwater and sediment impacts on riparian areas and instream ecosystems (including drainage depressions, swamps and wetlands), • Reassess natural significant wetlands for their values and buffer accordingly, and • Provide details of and map the revised buffers for the vegetation units identified in Table 7-11. 	<p>The minimum environmental buffers proposed between mining areas and wetlands and watercourses in Section 7.9.2 of the EIS are based on the "requirements for clearing for an extractive industry", page 37 of Regional Vegetation Management Code for Western Bioregions -version 2 (DERM 2009) (referred to as the Code). They are also consistent with the requirements for a project, such as the SoE Project, that has been declared to be a significant project under the <i>State Development and Public Works Organisation Act, 1971</i> (page 21, the Code). The setting of buffer distances for particular areas should be based on information gained from field surveys. However, it is not practical or necessary to carry out such detailed field surveys of the whole Project area for the EIS. Therefore, surveys would be carried out progressively ahead of mine clearing to precisely define the boundaries of mapped sensitive vegetation types, including wetlands, to assess the stream order of watercourses and the presence or absence of significant ecological features such as seepage/springs, and threatened flora and fauna in and around the sensitive vegetation types (the commitment for pre-mining surveys is included in Section 7.9.2 of the EIS). Based on the results of the pre-mining surveys, the minimum environmental buffer distance may be increased above the 50, 100 or 200m categories outlined in the Code. Typically, a buffer distance up to 200m would be adopted for vine forest, wetlands, estuaries, coastal vegetation on sand, and riparian vegetation along watercourses of stream order three and above. Narrower buffer distances to a minimum of about 100m may be adopted for riparian vegetation along watercourses of stream order one and two, or where significant ecological attributes are absent and physical characteristics are such that a narrower buffer would still provide edge effect protection and filtering of surface runoff flows from disturbed areas (refer Section 7.9.2 of the EIS). "Natural significant wetlands" are listed in Table 13 of the Code and a minimum 200m environmental buffer between such wetlands and mining areas would be implemented, consistent with the Code.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
						<p>Potential impacts to vegetation communities associated with mining are discussed in Section 7.10.1 of the EIS and potential effects of hydrological changes on riparian and wetland ecosystems is provided in Section 8.14.1.1 of the EIS. Direct surface runoff from the bauxite plateau is a very small proportion of annual incident rainfall (<1%). Mined areas are internally draining and rainfall runoff with elevated suspended solids is retained in-pit. Modelling of the potential interaction of mining operations on surface and sub-surface hydrology as provided in Section 5.2.4 and Section 5.4 of the EIS respectively. The removal of bauxite would only have the potential to change discharge from the shallow aquifer in situations where the bauxite is an appreciable source of baseflow. Typically in the Project area, the water table is within the bauxite only at the height of the wet season, if at all. In the dry season the water table generally falls to between 4m and 8m below the base of the bauxite. Streamflow during the dry season tends to be maintained by baseflow originating predominantly from kaolinitic strata. The overall effect of mining on the baseflow and deep baseflow component of the water balance is therefore very small. Mitigation measures to minimise the potential impact of elevated sediment loads are outlined in Section 8.15.2 of the EIS, including:</p> <ul style="list-style-type: none"> – retention of effective buffer systems around and adjoining surface drainage lines and wetland features; – controlled drainage systems including the retention of overland flow primarily in mining pits, as well as sediment retention ponds and control traps; and – development cycle timing involving scheduling clearing and soil stripping in the dry season so that pit development is underway by the onset of the wet season, thus minimising the risk of runoff from disturbed areas entering creeks. <p>The measures proposed are considered sufficient to protect stream water quality and quantity, and instream biota (including the undescribed species of freshwater crab found in Winda Winda Creek). Note, the undescribed species of shrimp is a groundwater dwelling stygofauna species found in the lower Ward River catchment.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.31	Environmental impact	7.9	<p>The EIS contains inadequate monitoring of corrective actions provisions to protect groundwater sensitive ecosystems from changes in groundwater level associated with mining.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Provide details of monitoring wells adjacent to groundwater sensitive ecosystems to monitor changes in groundwater levels associated with mining and propose corrective actions in the event of changes in groundwater level. 	<p>Existing shallow groundwater monitoring locations are shown in Figure 5-22 of the EIS. Section 5.5.2 of the EIS notes that a network of shallow groundwater bores would be maintained and that exact locations would be determined once the detailed mine plan is developed (i.e. additions to, or deletions from, Figure 5-22 of the EIS may be warranted). The Environmental Management Plan (refer Appendix 3 of this Supplementary report) indicates the format in which these locations would be presented. The locations of proposed shallow monitoring wells adjacent to groundwater sensitive ecosystems have now been included in Table H12 of the revised Environmental Management Plan (refer Appendix 3 of this Supplementary report).</p>
23	Department of Environment & Resource Management	23.32	Environmental impact	8.4	<p>Wetlands in the project area have not been adequately described or discussed.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Identify and map all wetlands across the site using the Queensland Herbarium mapping as a starting point. The report should identify which of these have high regional and local significance. 	<p>Wetland habitats are described in detail in Section 8.4 (pages 8-7 to 8-15) of the EIS and corresponding Regional Ecosystems (RE's) are given in Table 8-3 of the EIS. Wetland ecosystems are also classified in Table 7-5 of the EIS in accordance with the Terms of Reference which requires that "wetlands were mapped, described and analysed in a similar manner to that of regional ecosystems." The wetland classification into RE's and categorisation in terms of fringing riverine, estuarine, palustrine and lacustrine wetlands is consistent with the Queensland EPA 2005/<i>Queensland Herbarium Mapping and Classification Methodology</i> (note, this methodology was not specified by the Terms of Reference).</p> <p>The lower freshwater and brackish reaches of the Ward River within the Project area overlaps the Archer Bay Aggregation which is a nationally significant wetland area listed in the <i>Directory of Important Wetlands in Australia</i> (refer Figure 8-1 of the EIS). There are two smaller wetland aggregations in similar "interface" positions in the lower Winda Winda - Triluck Creek and Lower Norman Creek (refer Section 8.12.1 of the EIS). It is proposed to pump up to 1% of mean annual flow from the Ward River (starting when the Norman Creek beneficiation plant is commissioned). This level of extraction is considered to present no potential for observable impact to the Ward River estuary (refer Section 8.14.1.3 and 8.14.2.2 of the EIS).</p> <p>All wetland RE's identified in Table 7-5 and Table 8-3 in the EIS are mapped in Figures 7-6(sup.) to 7-6d(sup.) in Section 7.1 of this Supplementary report. Only one wetland RE is classified as "of concern" (RE 3.2.3) and this RE would not be disturbed by the Project. Environmental buffers are proposed between all wetlands in the Project area and mining areas (refer Section 7.9.2 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.33	Environmental impact	8.4	<p>DERM notes that potentially new species of crab and shrimp have been found in Winda Winda Creek on the mining lease. Scientists who found the crab and shrimp are required to send it to the Queensland Museum. Whether the crab and shrimp are new species, and if so, if they are considered endangered, vulnerable, near threatened or least concern under Queensland legislation will take a number of years to establish.</p> <p>Habitat for the newly discovered crab (and other freshwater species including shrimp) should not be significantly affected by the proposed mining operation. DERM considers that the mining operation will need to provide the highest level of protection to the waters as they are relatively undisturbed and of high quality.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> - Additional specific information should be provided in the EIS on the projected impacts of the mining operation on the instream habitat for the undescribed crab and shrimp species found on the site. Any specific avoidance and mitigation measures that will be used to remove or minimise impacts should be specified, particularly those that would protect water quality and stream integrity. 	<p>Section 8.7.2 of the EIS provides details of an unidentified species of freshwater crab <i>Austrothelphusa</i> sp. being first recorded in 2008 from Winda Winda Creek (Site 9A, refer Figure 8-2 of the EIS). The crab was found during surveys undertaken for the EIS and sent to the Queensland Museum for identification. Assessment by the Queensland Museum identified that this possibly represents a new undescribed species (P. Davie Pers. Comm.). Further survey work in 2009 extended the species recorded range beyond the original record in Winda Winda Creek (to Sites 33 and 34, refer Figure 8-2 of the EIS) but not beyond the Winda Winda Creek catchment.</p> <p>Section 8.8.3 of the EIS provides details of the find of a Mysid (shrimp) Crustacean from a littoral grab sample in the upper Ward estuary which was tentatively identified by macroinvertebrate taxonomists, including the senior curator of Crustacea at the Queensland Museum, as belonging to the family Lepidomysidae. This Family is also generally known to be stygofauna (groundwater/cave dwelling organisms), although they can occur in brackish water away from caves. Its appearance in a grab sample may suggest the upper estuary sample site was in a groundwater upwelling location, as upwellings are common in the upper estuary, and such an upwelling would be a likely habitat for a stygobiont able to survive in open water.</p> <p>Specific assessment of potential impacts on instream habitats (including habitats utilised by <i>Austrothelphusa</i> sp.) and the shallow aquifer, along with mitigation measures, are presented in Section 8.14 of the EIS regarding potential alteration of catchment hydrology and Section 8.15 of the EIS regarding potential elevation of sediment loads in catchment runoff. Section 8.14.1 of the EIS assesses results of hydrological modelling (refer Section 5.2.4 of the EIS) and concludes that mining impacts to catchment surface and groundwater hydrology are unlikely to significantly alter catchment discharge volumes but may alter streamflow durations in either direction, depending on the partitioning of incident rainfall in each individual catchment or reach. Any such bias would be overlain on any natural patterns of variability in rainfall and flows. The net changes are anticipated to be relatively small and neutral in terms of ecological values at the catchment scale, although detectable changes may occur at the reach scale. While the changes may be directional over the life of the Project they are expected to occur at a rate within the range of the inter-decadal variability currently experienced by these systems and to largely rebound following the rehabilitation of mature vegetation cover post mining. Aquatic ecosystem impacts are expected to be neutral at a catchment scale.</p>

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						<p>Section 8.14.1 of the EIS discusses the groundwater bore monitoring results. These indicate that the potential for mining-related alteration of catchment hydrology within the Project area would be limited since fluctuations in groundwater levels, including rises through the wet season, only occasionally reach or exceed planned mine pit floor levels (refer Figure 5-26 to Figure 5-29, Table 5-23 of the EIS). Consequently, the removal of bauxite from the lateritic profile would have limited potential impact on the storage volume and residence time of the seasonal shallow groundwater aquifers that provide habitat for the shrimp species and contribute to stream base flow via discharge from the lateritic profile.</p> <p>See response to 23.30 in relation to sediment from runoff and protection of streams by use of environmental buffers. The impact mitigation measures proposed for the Project are expected to protect aquatic biota, including the unidentified species of freshwater crab and stygofauna. The Queensland Museum and RTA have agreed to undertake additional surveys at the end of the 2012 wet season for these species. This will involve revisiting the original locations and surveying additional locations in the Western Cape with similar features. Further detail on the proposed survey is provided in Section 8.1 of this Supplementary report.</p>
23	Department of Environment & Resource Management	23.34	Environmental impact	Appendix 7B	<p>Appendix 7B lacks details of the sites ('secondary or tertiary') undertaken for each vegetation type.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Appended details of the sites ('secondary or tertiary') to each vegetation type Appendix 7B. 	<p>Details of the survey sites undertaken for each vegetation type surveyed are provided in Appendix 7B of the EIS. RTA has provided the updated Appendix 7B to the Department of Environment and Resource Management (DERM).</p>
23	Department of Environment & Resource Management	23.35	Environmental impact	Appendix 7D	<p>Recommendation:</p> <ul style="list-style-type: none"> – Correct Appendix 7D (which is inadequate in its current form) to rectify: • Lack of concurrence between column headings and vegetation communities used in Appendix 7D. • Large number of records not attributed to any community • Large number of typographic errors and taxonomic errors. 	<p>Errors in Appendix 7D of the EIS will be corrected. RTA has provided the updated Appendix 7D to the Department of Environment and Resource Management (DERM).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.36	Environmental impact	Appendix 7D	<p>A number of species in Appendix 7D appear to be mistakes of identification. If not they should be identified as plant species of conservation significance due to their extraordinary disjunct distributions.</p> <p>Recommendation – Identify in Appendix 7D the following plant species as being of conservation significance:</p> <ul style="list-style-type: none"> • <i>Drymophila cyanea</i> (= <i>Drymophila cyanocarpa</i>) which has a previously unrecorded disjunct distribution with southern Victoria and Tasmania • <i>Alstonia muelleriana</i> which has previously unrecorded disjunct distribution with the Wet Tropics • <i>Parsonsia lanceolata</i> which has previously unrecorded disjunct distribution with the Wet Tropics • <i>Hardenbergia violacea</i> which has previously unrecorded disjunct distribution with Mount Spurgeon • <i>Acacia aulacocarpa</i> which has previously unrecorded disjunct distribution with the Wet Tropics • <i>Dischidia major</i> which is a rare west coast species • <i>Ptychosperma elegans</i> which is a rare west coast species • <i>Hoya australis</i> which is a rare west coast species • <i>Heterostemma acuminatum</i> which is a rare west coast species • <i>Blumea mollis</i> which is a rare west coast species • <i>Austrosteenisia blackii</i> which is a rare west coast species • <i>Sticherus flabellatus</i> which is a rare west coast species • <i>Hibbertia dealbata</i> which is a rare Queensland species • <i>Zanthoxylum rhetsa</i> which is a rare Queensland species • <i>Corymbia polycarpa</i> which is an important range extension. • <i>Stemodia</i> sp. which is a major extension of range. 	<p>Appendix 7D of the EIS included some provisional identification. An update of Appendix 7D has been provided to the Department of Environment and Resource Management (DERM). The following species have been removed from Appendix 7D:</p> <ul style="list-style-type: none"> – <i>Austrosteenisia blackii</i> appears to be an unconfirmed or misidentified record and has been removed. – <i>Hibbertia dealbata</i> was misidentified and has subsequently been confirmed as <i>H. candidans</i> by the Qld Herbarium. – <i>Zanthoxylum rhetsa</i> - this taxa was assumed from the Regional Ecosystem (RE) description, and is most likely a misidentification of <i>Z. parviflorum</i>. – <i>Corymbia polycarpa</i> was misidentified on the basis of matches with the RTA Herbarium and the repeated reference to this species as the characteristic tree of this vegetation community in historical references of the Weipa Region (Gunness, Godwin etc), all of which were undertaken prior to the taxonomic splitting of <i>C. polycarpa</i> with <i>C. clarksoniana</i>. Specimens from the Weipa area have subsequently been confirmed as <i>C. clarksoniana</i> by the Qld Herbarium. <p>The other species are awaiting confirmation from Qld Herbarium and these have been identified in the updated Appendix 7D provided to DERM.</p>

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23	Department of Environment & Resource Management	23.37	Environmental impact	Appendix 7D	<p>Inadequate consideration is given in the report of regional ecosystems with <i>Corymbia polycarpa</i>. <i>Corymbia polycarpa</i> has not been previously recorded in the Weipa area. Vegetation units with <i>Corymbia polycarpa</i> should be identified as high conservation significance as they are likely to be a new regional ecosystem.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Identify and map Vegetation units with <i>Corymbia polycarpa</i> as high conservation significance. 	<p><i>Corymbia polycarpa</i> was misidentified on the basis of matches with the RTA Herbarium and the repeated reference to this species as the characteristic tree of this vegetation community in historical references of the Weipa Region (Gunness, Godwin etc), all of which were undertaken prior to the taxonomic splitting of <i>C. polycarpa</i> with <i>C. clarksoniana</i>. Specimens from the Weipa area have subsequently been confirmed as <i>C. clarksoniana</i> by the Qld Herbarium. RTA has provided the updated Appendix 7D to the Department of Environmental and Resource Management (DERM).</p>
23	Department of Environment & Resource Management	23.38	Environmental impact	Appendix 7D	<p>The list of specimens identified by the Queensland Herbarium has not been included as a separate appendix (i.e. the letter from the Queensland Herbarium).</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Include the letter from the Queensland Herbarium with the list of specimens identified 	<p>Appendix 7D has been updated with the list of specimens identified by Qld Herbarium. RTA has provided the updated Appendix 7D to the Department of Environment and Resource Management (DERM).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.39	Environmental impact	9.1	<p>Uncertainty about the background concentrations with regards to:</p> <ul style="list-style-type: none"> – It is not clear why the adopted TSP annual average concentration (23 µg/m³) in Table 9-1 is less than the measured PM10 annual average concentration of 23.3 µg/m³. – It is also very unusual to adopt a 50th percentile (24-hour average) PM10 concentration as the background concentration for the estimation of cumulative effect. Most of the Australian guidelines recommend using a conservative approach for the selection of background values. <p>For example, the Vic EPA recommends to use a 70th percentile hourly concentration of one year observed ambient air quality data as a background value for the prediction of maximum value from model simulation to estimate to cumulative effect (Vic EPA SEPP - Air Quality Management, 2001). The NSW recommendations are different. A two level approach is specified in the NSW Approved Method for Modelling. For level 1 assessment, maximum background concentration can be added to the predicted 100th percentile concentration. For level 2 assessment, it is recommended to add the contemporaneous (hour by hour) data to determine the cumulative effect. As there are no such modelling guidelines for Queensland, one of the above recommend procedures could be adopted. Most of the consultants in Queensland have used 90th percentile of observed ambient air quality data and added to the predicted maximum concentration to determine the cumulative impact.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – The relevance of the use of 2004 data to set background levels for dust should be explained. – An appropriate background PM10 and TSP concentrations should be confirmed which are representative of the site and preferably are somewhat based on up to date data. – The background levels established should be robust enough to use these values for cumulative impact assessment. 	<p>The PAE (2004) data set for PM10 was obtained when a calcination plant, which was a significant dust source and has since been decommissioned, was operating. The data was therefore considered very conservative for use in setting the background.</p> <p>Monitoring data from 2009 indicates that the 90th percentile of PM10 (24-hour ave) is 40µg/m³. Based on this as the ambient concentration, the fifth highest maximum PM10 (24 hour) level at the maximum production rate of 50Mdtpa would be 45µg/m³, which is still well below the objective of 50µg/m³. The 2009 data also indicate that the 90th percentile TSP (annual average) level is 56.0µg/m³. Therefore the annual average TSP including the predicted Project impact at the maximum production rate of 50Mdtpa would be 56.0µg/m³, which would also easily meet the proposed TSP (annual average) criteria of 90µg/m³. Section 9.1 of this Supplementary report provides a summary of the 2009 PM10 and TSP monitoring data and a revised Table 9-7(sup.) to provide a revised predicted level. Use of the 90th percentile is considered very conservative as it is anticipated that mining operations at East Weipa would scale back or halt once mining commences within the SoE Project area.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.40	Environmental impact	9.1	<p>It is not clear that all sensitive receptors are included in Figure 9-1. The sensitive receptors may include any residential, commercial, industrial and agricultural developments believed to be sensitive to the effects of predicted emissions.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Specify the location of all sensitive receptors that may include any residential, industrial and agricultural developments believed to be sensitive to the effects of predicted emissions. 	<p>Section 9.1 of the EIS identifies all the sensitive receptors in the Project area with locations specified in Figure 9-1 of the EIS. The Project area is situated in a mostly undeveloped and remote part of Cape York. The nearest sensitive receptors are the townships of Weipa, Napranum and Aurukun, along with Sudley and Watson River Homesteads. Sudley and Watson River are cattle properties and no cropping takes place.</p>
23	Department of Environment & Resource Management	23.41	Environmental impact	9.3	<p>An alternative to burning some or all of the cleared vegetation is not discussed in the EIS.</p> <p>Recommendation:</p> <p>The EIS should discuss the practices for removing the vegetation from the site that include methods other than burning.</p>	<p>Sections 1.6.5 of the EIS states that biomass power generation was considered. However, it was concluded to be not technically viable for low base load demand situations (e.g. beneficiation plant not running, ship loaders not running).</p> <p>RTA supports the establishment of a timber harvest operation south of the Embley River that would harvest timber on areas of the mining lease proposed to be mined, or cleared for development of Project infrastructure, in a manner that does not impede development work. This may include joint venture arrangements that support the further creation of employment, training and business development opportunities for local Indigenous people, and in particular, for the Traditional Owners whose land is being proposed for development (refer Section 16.3.7 of the EIS).</p> <p>The stockpiling of cleared timber would require additional land to be cleared resulting in a greater area of vegetation disturbance. This is not considered to be a suitable alternative. A commitment to examine alternatives to burning, including part use of harvested timber for fauna refuge is included in Section 3.1.3 of this Supplementary report.</p>
23	Department of Environment & Resource Management	23.42	Other	9.4	<p>Insufficient detail provided about the Modelling Methodology with regards to model configuration of Grid Modes and innermost grid size.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Clarify how the TAPM model was configured and which method (Lagrangian/Eulerian) was used for the estimation GLC. Specify the dispersion model's innermost grid spacing and clarify the reason for the selection of this size. Also specify the best practice grid size for TAPM modelling. 	<p>The innermost meteorological grid was based on a 3km by 3km grid. This grid was selected since the domain was very large (about 90km by 90km) which did not allow a normal inner grid of 1km as it would have resulted in unreasonably long computer run times. However, the pollution grid was reduced to a 750m grid covering the entire innermost domain. It should be noted that the closest approach to any sensitive receptor was more than 5km.</p> <p>All modelling, for dust as well as SO_x NO_x, etc was carried out using volume sources. Lagrangian particle mode (LPM) is only relevant to point sources. Since the model doesn't have point sources it only uses the Eulerian grid mode.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.43	Infrastructure area	9.4.4	<p>The air pollutants mass emission rates (tonnes) from the power generation facility are provided in Table 9-6. However, the following information/requirements are not provided. This information is required for the licence conditions and for comparison against the best practice source emission standards.</p> <ul style="list-style-type: none"> - The pollutants concentration values (mg/Nm³) and oxygen reference levels. - The EIS should also provide information on the stack parameters such as stack height, exit velocity and gas volume flow rate. <p>Recommendation:</p> <ul style="list-style-type: none"> - The EIS should provide the following information for each point source: • The pollutants concentration in the stack (mg/Nm³) and their oxygen reference levels; • Stack height and gas exit velocity; • Volume flow rate based on exit velocity (actual and corrected to dry STP (Nm³/s); and • Compare the emission rates against the best practice source emission standards (e.g. NSW POEO Regulations). 	<p>The modelling exercise was carried out for the purposes of the EIS and without the benefit of knowing the exact generator sets that are to be purchased. Detailed emission data will be provided to the Department of Environment and Resource Management (DERM) in sufficient time to enable conditions relating to power station air emissions to be included in the Environmental Authority.</p>
23	Department of Environment & Resource Management	23.44	Environmental impact	9.4.4	<p>The EIS states that both power station and the mobile equipment are diesel powered. Please note that the diesel powered units are responsible for the emissions of fine particles such as PM2.5. The PM2.5 emissions from the above sources are not included in the emission inventory.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> - The EIS should provide the PM2.5 emissions from the diesel powered generator (power station) and the mobile equipment and estimate the cumulative impact from these sources on the receiving environment. 	<p>Mobile equipment exhaust emissions of PM2.5 are included in the emissions shown in Table 9-4 of the EIS (in accordance with the <i>Emission Estimation Technique Manual for Mining</i> (refer to note 1 under Table 4). PM2.5 emissions from the diesel powered generator/s are estimated to be approximately 35 tonnes per year at maximum production, these emissions would have negligible cumulative impact at Weipa, Napranum and Aurukun.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.45	Environmental impact	9.4.4	<p>Not all worst case emissions and their impact are estimated considering maximum daily production rate, the maximum daily haulage of the material and the worst case meteorological conditions.</p> <p>The burning of vegetation may be a short term issue but the dark smoke can generate nuisance and complaints from the community.</p> <p>It is not clear that the emissions of primary and secondary crusher at the beneficiation plant are included in the emission inventory.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Please calculate the worst case emissions based on <ul style="list-style-type: none"> a. the maximum daily production rate, b. the maximum daily haulage of material, c. the worst case meteorological conditions and d. burning of vegetation. <p>If these emissions are significantly higher than those for normal operations, it is necessary to evaluate the worst-case dust impact, as a separate exercise to determine whether the planned buffer distance(s) between the facility and neighbouring sensitive receptors will be adequate.</p>	<p>The worst case emissions have been based on the maximum production rate likely during the life of the mine. An hour-by-hour emission rate was then generated for each source based on normal dust controls that are to be adopted by the mine. However, to address the worst-case the effectiveness of the level of control is randomly varied throughout the year, from effective to not very effective control. This is particularly relevant to the watering of roads since it is possible watering is not applied as often as required for the heat load or truck usage rates. Hence the modelling incorporates a less than optimum dust control throughout the modelling period and in doing so it implies that worst-case emissions are also incorporated in the modelling. This is a realistic modelling of worst-case since mining would not take place without dust controls in place, as it is simply part of normal operations.</p> <p>Since the level of dust control varies randomly it is likely that realistic worst-case emissions would also occur during adverse meteorology leading to high downwind dust concentrations.</p> <p>It should be noted that burning of vegetation cleared for mining occurs in early dry season, which does not coincide with worst case meteorological conditions and therefore it is not appropriate to include these emissions in a worst case scenario. 2009 monitoring data indicate that background PM10 levels are higher in late dry season than early dry season.</p>
23	Department of Environment & Resource Management	23.46	Other	9.4.5	<p>No indication is given about the uncertainty of the modelling results and assumptions (e.g. selection of particle sizes) that were used in the modelling.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – The uncertainty of the results of the modelling should be described as well as the sensitivity of the predicted dust deposition levels to the assumptions made in the modelling. 	<p>Air quality modelling indicates the potential for dust related impacts is very low due to the distance between mining activities and offsite sensitive receptors. Modelling of complex physical systems is based on the use of numerical techniques to solve a set of governing equations. There are inherently a number of assumptions that are made based on observational data, laboratory experiments or professional experience. A 2006 paper by Nigel Holmes and Linda Morawski <i>A Review of Dispersion Modelling and its application to the dispersion of particles: An overview of different dispersion models available states:</i></p>

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						<p>"When compared with CALPUFF and AERMOD, TAPM performed as well and the agreement was even better when the observed winds were assimilated. The authors concluded that this showed that TAPM provides an accurate prediction of the local meteorology. From the results it was observed that TAPM tended to predict too low concentrations in night time, stable or neutral conditions and slightly too high concentrations during daytime convective or neutral conditions. Also locations of the maxima were slightly wrong during low wind events due to difficulties predicting the meandering of the flow They observed that TAPM tended to underpredict daily PM10 and PM2.5 concentrations averaged across all sites by about 13%. No correlation between hourly concentrations was made due to the fact that particle air quality standards were based on 24hr averages."</p> <p>The EIS adopted a Level 2 (NSW DEC) assessment using site specific data. The model considers mine operations for each hour over the modelling simulation period. For each hour the emission model determines operating equipment and the level of dust control. The emissions are varied on an hour-by-hour basis incorporating the effects of dust control and wind speed dependent emissions. By adopting this methodology the model incorporates periods when there are upset conditions that cause high emission rates.</p> <p>The following assumptions are included in the modelling for the SoE Project:</p> <ul style="list-style-type: none"> – Total TSP emissions are 0.32kg/tonne ore (note operations are less intensive than a coal mine); – The model also varies the overburden moisture levels depend in the season and moisture content following rain. During the dry months there is less moisture in the overburden leading to increased emissions. – Dust emissions from stockpiles were not made wind speed dependent, rather the default emission rate was applied whenever the wind speed exceeded a threshold, in this case 1m/s (particulate matter is normally generated in the range of 5 to 10m/s measured at 10m above ground level). By including wind erosion at very low wind speeds it is likely to increase the total dust. – Watering of haul roads was randomly varied to account for drying of roads etc. <p>The dust monitoring program proposed in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) would provide suitable validation for the modelling.</p>

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23	Department of Environment & Resource Management	23.47	Environmental impact	9.5	<p>The dust control measures are briefly discussed in Section 9.5.1. However, the EIS does not provide the dust management actions that will be employed for the mitigation of adverse air impacts under the worst meteorological conditions (e.g. use of wind breaks, increased use of dust control activities at wind speed above 5 m/s).</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Please provide the dust management actions that will be employed for the mitigation of adverse air impacts under the worst meteorological conditions and during the normal construction and operation activities. Process for managing any complaints regarding dust should also be outlined. 	<p>Section 9.5.1 of the EIS states that mitigation of adverse air impacts would include conventional haul road watering and water sprays on chutes where trucks dump crude ore at the beneficiation plant. These were incorporated into the modelling with results showing that dust concentration levels at sensitive receptors in Weipa, Napranum and Aurukun are expected to comply with all air quality objectives.</p> <p>The rate of haul road watering would be increased during dry weather conditions which might otherwise produce elevated dust levels.</p> <p>It is proposed (refer Appendix 3 of this Supplementary report) to extend the existing complaints procedure implemented for the existing Weipa operation to the SoE Project.</p>
23	Department of Environment & Resource Management	23.48	Infrastructure area	13.3.4	<p>DERM's waste and resource management hierarchy proposed in Queensland's Waste Reduction and Recycling Strategy 2010–2020 encourages reduction in the use of resources and reuse of waste as a better option than disposal. Backfilling of any voids, integration of mine waste facilities and beneficial use are some of the methods now used for tailings disposal. Backfilling any voids with mining wastes, preferably to the original ground level is generally considered more sustainable than placing waste material in purpose built containment structures with operational and residual risks to the environment.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – The EIS should include a comparison of alternative means of managing the tailings consistent with DERM's waste management strategy. Alternatives considered should include the use of tailings to backfill mined areas. 	<p>Section 13.3.4 of the EIS notes alternative methods of tailings disposal are assessed in Sections 1.6.6 and 1.6.7 of the EIS. The waste management hierarchy was considered throughout the assessment, including the following considerations.</p> <ul style="list-style-type: none"> – A dry screening process was considered, which would break up some ore into bauxite product but would not remove fine all material adhering to pisolites. A substantial quantity of pisolites would also remain trapped in the matrix material and be rejected as oversize material by a dry screening plant, increasing the quantity of waste produced and further eroding the value of the ore body. – Comalco (now RTA) has previously investigated mobile in-pit dry beneficiation but found the plant was burdened with many technical problems which could not be effectively solved. Wet beneficiation (the preferred method) is an efficient and reliable technology that has been proven throughout the world and it would be adopted for the Project.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
						<p>– A thickened tailings process was also evaluated but not adopted. The same amount of water is used within the bauxite processing circuit regardless of whether there is a thickened or an unthickened tailings system. With thickened tailings, water is removed from the tailings stream for recycling before tailings are pumped in paste form to the tailings storage facility. It is difficult to recover additional water reliably from such a facility. With unthickened tailings, all the recycled water is recovered from the tailings disposal facility. Thickened tailings also require the use of chemical flocculants to achieve a similar effective water recovery and greatly increases the energy needed to pump the thickened tailings.</p> <p>The use of tailings to backfill mined areas was considered in the EIS. This is neither technically nor economically feasible and does not result in a reduction of environmental impact. Key problems with this method include:</p> <ul style="list-style-type: none"> – Mining isn't localised in one "pit" but spread out across various mining faces to meet economic and grade blending requirements. This means that an extensive and mobile pipe network and energy intensive pumping system would be required to distribute tailings to "voids". – Mining "voids" don't enable water recovery back to the process, the shape and layout increases the risk of overflow of tailings slurry to adjacent active mining areas, or undisturbed areas. More water storage dams would need to be built to supply water. – Operational dust control and final rehabilitation of tailings storage areas is much simpler to manage with all fine tailings material located in one facility rather than spread out across many thousands of hectares (assuming an average void depth of 3m an area of about 8000ha would be required). – No mining "voids" exist for backfilling at the start of the mine, hence a "start-up" tailings storage facility would be required to manage at least the first years of production. The footprint of the start-up facility would need to approximate that of the proposed long-term facility.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.49	Infrastructure area	13.3.4	<p>The EIS contains hazard assessments for the dams (including the tailings dams) and have assigned hazard categories on the basis of loss of life and potential environmental harm. These hazard categories have been used in deciding design criteria for embankment construction, spillway design, storage capacity and drainage works. In the case of spillway capacity, the adopted AEP for "low hazard" structures is one percent. Given that the project life is over 30 years, there is a risk that the spillway capacity could be exceeded resulting in failure of the dams. Given that the water management structures are critical lifeline infrastructure, their collapse or failure could have a significant impact on operations. The AEP's recommended in guidelines are minimums and, given the small marginal cost in providing increased capacity for spillway, designing for lower AEP's should be considered.</p> <p>Recommendation:</p> <p>The EIS should include consideration of the risk to mine productivity and the period of exposure to risks in assigning hazard categories for determining design criteria for dams and other water management infrastructure.</p>	<p>The hazard category of dams has been assessed in accordance with the DERM draft <i>Manual for Assessing Hazard Categories and Hydraulic Performance of Dams</i> (December 2011). These have been included in Table 3-13 of the revised Environmental Management Plan (refer Appendix 3 of this Supplementary report). The hazard categories do not change from those presented in the EIS. The risk of economic loss, environmental damage and loss of life were each taken into account. Based upon the hazard assessment a significant hazard category applies to the tailings storage facilities and a low hazard category applies to all other dams. The DERM comment about the small marginal cost of lowering the adopted 0.01 AEP for spillways of "low hazard" structures is noted. RTA shall adopt a 0.002 AEP for the spillway of the process water dam.</p>
23	Department of Environment & Resource Management	23.50	Other	13.3.6	<p>The department considers that the location and design of the Evans Landing Landfill is not suitable to accommodate the disposal of waste over the life of the project which is expected to be up to 40 years.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Provide for a proposal on the establishment of an alternative site for the disposal of general waste generated by the project. 	<p>Section 13.3.6 of the EIS states that if a new facility is required in the future, RTA or their licensed waste contractor would seek approval to establish and operate such a facility. The anticipated life of the Evans Landing Landfill is approximately 20 years, with potential to extend this by implementing a waste management plan with continual improvement measures for waste management targeting minimisation of disposal of otherwise recyclable waste to the landfill. The Evans Landing Landfill receives half its waste from mining operations and half its waste from the Weipa and Napranum townships.</p> <p>RTA Weipa Operations are currently conducting a Landfill Options/Feasibility Study, in consultation with the Department of Environment and Resource Management (DERM), including the investigation of the long term strategic waste disposal direction for Weipa. Given the anticipated 20 year life of the Evans Landing Landfill, it is not necessary that an alternative site be selected now as part of the SoE Project. Potential future options that could be considered include the extension of the existing landfill site and/or the creation of a new landfill site, either north or south of the Embley River. The final solution would be required to meet the needs of the mining operations and Weipa and Napranum townships. The appropriate timing for the decision on future landfill options will be determined through the Landfill Options/Feasibility Study and will allow for all required approvals to be obtained and infrastructure established prior to the end of the operational life of the existing landfill.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.51	Other	Sections 13.3.7 and 2.9.2	<p>It is proposed that treated effluent generated during the construction phase will be irrigated however the location for irrigation of treated effluent is not clear.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Nominate a location for the irrigation of treated effluent. Provide a revised plan at an appropriate scale showing the proposed location of these and include in the Water Management System. 	<p>Potential uses of treated water are identified in Section 13.3.7 of the EIS. Treated effluent would be used in dust suppression and compaction during construction in the Boyd infrastructure area, the mine access road, the infrastructure corridor and Dam C as well as irrigation for gardens around the construction camp. The construction camp STP and irrigation is not shown on the water management system diagram as these diagrams indicate the operational phase, rather than the construction phase. The irrigation of treated effluent during construction has been described in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) with reference to diagrams showing the location of the areas proposed.</p>
23	Department of Environment & Resource Management	23.52	Environmental impact	Section 21 (General)	<p>The details covered in the EIS are not appropriately reflected in the draft environmental management plan and the conditions proposed do not accurately reflect the current conditions contained in the existing Level 1 Environmental Authority MIN100939109 (ML6024 & ML7024).</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The draft environmental management plan needs to appropriately reflect all the environmental values, potential impacts, mitigation measures, management strategies and commitments for the proposed development at the port /ship-loading and associated dredging (including port area and barge/ferry terminals). Review the existing Level 1 Environmental Authority for mining activities at Weipa and include all the relevant conditions (including site specific information) in the EM Plan for the project. 	<p>The Environmental Management Plan has been reviewed to incorporate port operations and ship-loading and proposed dredging at the Port and Hey River terminal (note that the Hornbrook and Humbug terminals are not on the mining leases). Environmental Authority MIN100939109 was approved on 30 August 2011, which was after the EIS public exhibition period commenced (1 August 2011). Environmental Authority MIN100939109 has been reviewed and the SoE Environmental Management Plan revised to include relevant amendments for the SoE Project (refer to Appendix 3 of this Supplementary report), including reference to the draft Dredge Management Plans (provided in Appendices 5 and 6 of this Supplementary report) and port operations.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.53	Environmental impact	Section 21 Section 2.9.2 Figure 6 & 7	<p>With regards to the Water Management System the following issues are raised:</p> <p>a. It is noted in section 3.9.3 (Commitments), page 79, under Excavated Material (line 6) that areas required for irrigation of sewage effluent, sludge drying ponds and bioremediation (landfarm areas) are proposed at locations at the Boyd and Norman Creek infrastructure areas however the location of these features is unknown and they have not been included in the Water Management System (Figure 6 & 7, pages 14 and 15 respectively).</p> <p>b. There appears to be release points for water from Sediment Ponds 2, 3 & 4 however these are not identified in Table C1 Release Points.</p> <p>c. It is noted that the Mine Industrial Area Drainage Slots (Figures 6 and 7 on pages 14 and 15 respectively) receive potentially significant volumes from sediment ponds, sumps wash bays etc however this has not been identified as a release point in Table C1 (page 42).</p> <p>d. There is inconsistency between Figure 6 & 7 and that of Table C1 (page 42) in terms of potential release points and the capacity of on site water storages.</p> <p>e. A figure showing the location of all release points has not been provided.</p> <p>f. On p16 it is stated that where post mine topography is not internally draining, storm water runoff will be directed via sediment ponds. The approach to determining the need for sediment ponds and where there is a need, the location of sediment dams is unknown.</p> <p>Recommendation:</p> <p>a. Provide a revised plan at an appropriate scale showing the proposed location of these and include in the Water Management System.</p> <p>b. Clearly identify all release points in Table C1.</p> <p>c. Review the capacity of the Mine Industrial Area Drainage Slots to hold potentially contaminated waters without the need for release.</p> <p>d. Provide a review of the Water Management System for all contaminant sources and water storages proposed on site including information on the capacity of these storages, inflows and outflows and expected release points.</p> <p>e. Provide a figure showing the location of all release points overlain with all other relevant information including but not limited to drainage/watercourses & catchments, topography, vegetation types.</p> <p>f. Provide details on the mechanism for determining the need for sediment dams and their appropriate location under these circumstances, i.e. topo surveys prior to onset of rains.</p>	<p>The Environmental Management Plan has been reviewed to address the following:</p> <ul style="list-style-type: none"> Figures 7 and 8 and Table H1 (previously C1) have been updated to show relevant release points (refer Appendix 3 of this Supplementary report). The capacity of the Mine Industrial Area drainage slots is shown on Figures 7 and 8 (refer Appendix 3 of this Supplementary report). Further information on the water management system, including contaminant sources, capacity, release points, surrounding topography and watercourses etc has been provided for the Boyd water management system (refer Appendix 3 of this Supplementary report). Given that the Norman Creek infrastructure area is proposed to be built some years in the future, detailed design for this area has not yet been carried out and hence the level of detail will not be commensurate with that for the Boyd water management system. Sediment dams would be installed at the lowest point of all permanent infrastructure areas. Further information on erosion and sediment control is provided in Table 3-2 of the EIS.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.54	Environmental impact	<p>Section 21</p> <p>Section 2.9.5</p>	<p>A list of Environmentally Relevant Activities has not been included.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Provide for list of Environmentally Relevant Activities e.g. power generation. 	<p>A table of ERAs was removed from Environmental Authority MIN100939109 as the activities were considered to be covered by the definition of "mining activity". It has been assumed that the same approach would be taken for the SoE Project. ERAs are identified in Section 1.9.6 of the EIS.</p>
23	Department of Environment & Resource Management	23.55	Environmental impact	<p>Section 21</p> <p>Section 3.3</p>	<p>The data from this monitoring program can be fed into the dust mitigation strategies of the mine to ensure the protection of environmental values. The EM Plan does not provide details of the air monitoring program.</p> <p>Recommendation:</p> <p>Provide the details of the ambient air monitoring program that will be employed for the mitigation of adverse air impacts. The air quality monitoring program must address at least the following:</p> <ul style="list-style-type: none"> a. sampling practices, procedures and parameters for contaminant testing; b. selection of sampling locations to demonstrate that samples collected will be representative of the air quality of the area; c. frequency of sampling to be undertaken at each location including the number of samples to be taken, sampling period/duration; continuous or semi-continuous sampling; and d. meteorological data collection including at least the wind speed and wind direction during the air quality monitoring program at the monitoring locations. 	<p>Air quality modelling indicates the potential for dust related impacts is very low due to the distance between mining activities and offsite sensitive receptors (refer Section 9.5 of the EIS). Weipa operations currently undertake a dust monitoring program and the recently approved Environmental Authority MIN100939109 includes a requirement to prepare a formal Ambient Air Quality Monitoring Program. It is anticipated that this would be developed prior to commencement of construction at SoE, therefore RTA has proposed retaining the existing conditions regarding ambient air quality monitoring from Environmental Authority MIN100939109 (refer Appendix 3 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.56	Environmental impact	Section 21 Section 3.5.4	Release Points, identifies a variety of storages, also depicted in Figures 6 & 7 – Water Management System that would not generally be expected to form a release point e.g. Process water ponds, recovery slots, sludge drying beds. Also, there appears to be the ability to pump water from the recovery slots to the process water pond and therefore the slots do not form a point of release to the receiving environment. In addition, stormwater runoff associated with the sludge drying beds is expected to contain levels of contaminants not suitable for release. This water must be managed in a manner to prevent the release of contaminants. Recommendation: – Review Table C1 in terms of the need for each release point considering a release point incorporates only a direct release to the receiving environment and not to another water storage.	The dam design criteria are specified in Section 3.5.3 of the Environmental Management Plan of the EIS. Releases would occur if an event exceeded the specified design criteria. The EIS concludes that, due to the non-hazardous nature of water contained within the process water ponds, the recovery slots and the sludge drying beds, releases from these containments during events that exceed the design criteria would not cause environmental harm. This is consistent with the way spillway overflows are addressed in Environmental Authority MIN100939109. The sludge drying beds would be covered and would therefore not release water to the environment; this has been specified in the revised Environmental Management Plan (refer Appendix 3 of this Supplementary report).
23	Department of Environment & Resource Management	23.57	Environmental impact	Section 21 Section 3.5.4	In Table C6 (page 44) a variety of parameters have been nominated for receiving water monitoring however corresponding contaminant trigger levels and limits have not been nominated for all of these in Table C7, C8 & C9. Recommendation: – Nominate trigger levels and contaminant limits for all relevant parameters identified in Table C6 (Note: refer to the existing Environmental Authority for ML7024 for appropriate trigger levels and contaminant limits and the methodology for determining these with reference to the ANZECC 2000 and the Queensland Water Quality Guidelines).	A revised approach to investigation triggers and new water quality objectives are presented in the revised Environmental Management Plan in Appendix 3 of this Supplementary report. These changes have been made to make them consistent with the triggers and objective in the Environmental Authority for the existing Weipa operations issued on 30 August 2011.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.58	Environmental impact	Section 21 Section 3.5.4	<p>Insufficient information relating to the proposed location, method and discharge regime for end of pipe mine water discharges listed in Table C1 (page 42 of the Draft Environmental Management Plan). Thirteen clearly defined discharge points are proposed in Table C1 of the Draft Environmental Management Plan (Section 3.5.4 Proposed Environmental Authority Conditions Schedule C – Water). This is the only mention of discharge of wastewater to the local environment in the entire EIS (and IAS). Details should be discussed in Sections 5.2.5 and other relevant sections of the EIS and EM Plan. Recommendation: Site-specific detailed information and discussion relating to the proposal for wastewater discharges should be provided within the relevant sections of the Supplementary EIS (e.g. Potential Impacts & Mitigation Measures and within the Environmental Management Plan). The types of information that will be critical to the assessment of such a proposal include, as a minimum:</p> <ul style="list-style-type: none"> • Chemical and physical properties of all proposed wastewater streams (incl. sewage outfall) (including concentrations of constituents, modelled or estimated if necessary) at the point of entering natural surface waters should be discussed along with toxicity and risks of effluent constituents to flora and fauna. Consideration should be given to impacts on downstream seawater quality due to discharge from the site. • Clear maps with stream course, stream names, discharge locations, upstream and downstream monitoring, flow gauging stations, estuarine vs. freshwater reaches and the locations of biological monitoring programs which have been undertaken and are continued to be planned. • Consideration of cumulative impacts. Given that most discharge points listed in Table C1 appear to be to Norman Ck the likely cumulative impacts for all discharge points needs to be assessed. The situation where many or all of these proposed release points would be discharging simultaneously into low or no flow receiving waters is undesirable. Especially given that flow to Norman Ck is likely to be reduced by the upstream dam proposed for the project (Dam C). • Discussion and proposal of clear discharge regime including consideration of triggers for discharge (e.g. natural creek flow), dilution/max daily discharge rate. It is also recommended that the types of discharge infrastructure (even if only early plans or short listed options) are presented within the Supplementary EIS 	<p>Releases to the environment from both point source and runoff are inherent in the description of the water management system provided in Section 5.2.2 of the EIS. As for the response to 23.53, further information on the water management system, including contaminant sources, capacity, release points, surrounding topography and watercourses etc has been provided for the infrastructure areas in Figure 4, Figure 5 and Figure 6 in the revised Environmental Management Plan in Appendix 3 of this Supplementary report. Given that the Norman Creek infrastructure area is proposed to be built some years in the future, detailed design for this area has not yet been carried out and hence the level of detail will not be commensurate with that for the Boyd water management system.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.59	Environmental impact	Section 21 Section 3.5	<p>Typically, EA conditions relating to discharge/s would include monitoring at the end of pipe, stipulated monitoring frequency and associated compliance limits. In addition to the receiving environment compliance limits currently proposed. It is advisable to consider monitoring during periods of discharge if possible, as this would provide useful information on the likelihood of impacts to receiving waters.</p> <p>Recommendation: It is recommended that end of pipe compliance limits and compliance monitoring regime are proposed and justified for consideration by DERM in the approval process.</p>	<p>A revised approach to investigation triggers and new water quality objectives are presented in the revised Environmental Management Plan in Appendix 3 of this Supplementary report. These changes have been made to make them consistent with the triggers and objective in the Environmental Authority for the existing Weipa operations issued on 30 August 2011.</p>
23	Department of Environment & Resource Management	23.60	Environmental impact	Section 21 Section 3.5.4 Condition C10 Condition C13	<p>Accepted practice is for a standardised monitoring program to be in place before mining commences. It is suggested that the network should, as nearly as possible, reflect the monitoring sites used to provide the data used in the EIS assessment.</p> <p>Recommendation: – The stream flow monitoring network bore locations should be specified, constructed and finalised prior to the commencement of mining. – The shallow groundwater monitoring network bore locations should be specified, constructed and finalised prior to the commencement of mining.</p>	<p>RTA has specified the following in the revised Environmental Management Plan (refer Appendix 3 of this Supplementary report):</p> <ul style="list-style-type: none"> – the streamflow monitoring network (with the exception of the Ward River) locations would be implemented prior to mining. The streamflow monitoring for Ward River would be implemented prior to pumping from the Ward River; and – the shallow groundwater monitoring bore network in the vicinity of the Boyd infrastructure areas and associated mining areas would be implemented prior to mining. The shallow groundwater network in the vicinity of the Norman Creek infrastructure area would be implemented prior to commissioning of the Norman Creek infrastructure area.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.61	Environmental impact	Section 21 Section 3.5.4 Condition C15	<p>C15 proposes that annual (shallow) groundwater monitoring reports must be prepared and submitted to the administering authority upon request. Term C13, Table 10, specifies the information to be collected and reported upon. This term is not consistent with existing reporting requirements for the artesian aquifer system.</p> <p>Recommendation – The revised term C13 should state: “An annual report that assesses the impacts of mining on shallow groundwater will be forwarded to the administering authority for each year. The annual period for the report shall be 1 July to 30 June and the report must be provided by 30 September following the closure of each annual period.”</p> <p>This report should include water level contours for end of dry and end of wet seasons (as per EIS figures 5.23 and 5.24) as well as graphs of water level elevation and volumes of outflow from the surface water gauges detailed in Term C10. This will allow assessment of any change or impact on surface – groundwater interactions.</p>	<p>The annual reporting requirements for the artesian aquifer are stipulated in the Water Licence issued under the <i>Water Act, 2000</i>. The wording of C15 (now H24 in revised Environmental Management Plan in Appendix 3 of this Supplementary report) refers to the shallow aquifer (which is not used as a water supply, unlike the artesian aquifer). The wording in H24 is identical to the wording in the existing Environmental Authority MIN100939109 issued on 30 August 2011, including the wording relating to the period for reporting to the administering authority. Reports submitted under H24 would include the information collected under Table 10, in particular the water levels at designated shallow aquifer monitoring bores.</p>
23	Department of Environment & Resource Management	23.62	Environmental impact	Section 21 Section 3.5.4	<p>There is no term (condition) that details mitigation measures to be undertaken should there be an adverse impact on existing groundwater users due to lowering of water levels.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – An additional term C16 should be drafted committing the proponent to undertake mitigation measures if a reduction in artesian water levels has an adverse impact upon existing water users. (Note: Existing water users at the time of approval should be detailed in a table attached to this clause.) 	<p>RTA will continue to comply with the 5m drawdown limits at the Bramwell Station, Batavia Downs and Weipa Crossroads monitoring bores, as well as undertaking predictive model validation. RTA has applied to increase the allocation of artesian groundwater from 9GL p.a. to 12 GL p.a. under the Water Act. The conditions relevant to the licence to take artesian water would be set through the <i>Water Act, 2000</i> licensing process. These conditions are expected to be very similar to the existing conditions which require annual assessment of the need or otherwise to adjust the groundwater model and any revised predictions based on an adjusted model. Reference to the predicted drawdown at the designated monitoring points is the mechanism by which predicted compliance with the drawdown limits would be monitored. Should the predictive model indicate a future drawdown in excess of the 5m drawdown limit, mitigation measures could include changes to bore locations or moderation in abstraction.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
23	Department of Environment & Resource Management	23.63	Environmental impact	<p>Section 21</p> <p>Section 3.5.6</p>	<p>It is stated on page 53 that the monitoring of treated effluent will only include sampling for E coli. It is expected that further monitoring will need to be undertaken for additional parameters relevant to a waste water release of this type.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Provide for the monitoring of treated effluent release to land that includes the parameters outlined in the table provided in the submission. 	RTA has revised the Environmental Management Plan to provide additional monitoring for treated effluent release to land (refer Appendix 3 of this Supplementary report).
23	Department of Environment & Resource Management	23.64	Environmental impact	<p>Section 21</p> <p>Section 3.9.3</p>	<p>Limited information has been provided on the approach to surface water management and the prevention of contaminant release at the bioremediation (landfarm) site.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> It is noted that the landfarm area will be bunded and water runoff collected in the Sites Water Management System however this feature has not been included in Figure 6. Provide details on the Site Water Management System in terms of the collection, storage and disposal of potentially contaminated water generated at the landfarm area. 	<p>The description of the Site Water Management System has been updated in the Environmental Management Plan to incorporate water collected from the bioremediation (landfarm) site (refer Appendix 3 of this Supplementary report).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.1	Rehabilitation	3.10, 3.7.2	<p>Generally, this submission is concerned with probable outcomes of the mining process, especially rehabilitation processes. Based on the current condition of mined lands in the Weipa area and on scientific research into various issues that confirm and explain the poor condition of “rehabilitated” lands, alternative clearing and rehabilitation practices are sought. Whilst there are respected studies dealing with many issues they have not in most cases been carried out in specific reference to the project area of the Weipa mined lands. A soundly based understanding can only be developed based on studies subject to South of Embley conditions. This submission proposes that a major research program be established within the project area to investigate the many methods by which the land could be more effectively rehabilitated. Given that the land will certainly be degraded by the mining operation (with fertility and biodiversity levels drastically reduced for many years to come and water-holding capacity severely damaged) it is appropriate that the research focus on the rehabilitation of the land in such a way as to provide future economic potential in the land for its Traditional Owners and other local Aboriginal people.</p>	<p>RTA has had a variety of post-mining rehabilitation objectives since mining commenced in the 1960's, including pasture, native and non-native forestry and native vegetation. RTA is now dedicated to returning a native rehabilitated ecosystem to the post mining landscape and continues to use trials and monitoring outcomes to improve the establishment and maintenance techniques required to routinely achieve this. Specific completion criteria for the various post-mining domains are being developed in accordance with the requirements of the recently issued Environmental Authority for existing operations. RTA has provided further information on the rehabilitation strategy for SoE with interim rehabilitation objectives (Section 3.1.2), indicators (Section 3.1.3) and completion criteria (section 3.1.4) summarised in Table 3-A of this Supplementary report and within proposed Environmental Authority conditions in the Environmental Management Plan (refer Appendix 3 of this Supplementary report) which would be confirmed following site specific trials and further stakeholder consultation. Under the WCCCA, and at the request of the Coordinating Committee, RTA may establish post mining land use options other than those required by regulation, subject to obtaining all regulatory approvals (refer Section 3.7.2 of the EIS). RTA has also committed to jointly developing a rehabilitation process with Traditional Owners and the relevant WCCCA sub-committee (refer Section 3.10.1 of the EIS) and to work with Traditional Owners on environmental surveys and monitoring programs, which would include rehabilitation trials, under the Communities, Heritage and Environment Management Plan (refer Section 16.3.2 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.2	Rehabilitation		<p>That there may be up to 7 endemic species of termite in the project area including <i>Coptotermes acinaciformis</i> and <i>Mastotermes darwiniensis</i>, both highly destructive of trees. Significant carbon credits can be earned in relation to the control of termites because of their high methane emissions. Methane is a powerful Greenhouse Gas.</p> <p>Research suggestion: The relative prevalence, distribution and effect of different termite species within the mined area, the project area and in surrounding bush. The effectiveness, cultural acceptability and economics of various forms of termite control. The economics and value to native tree forestry of termite control in rehabilitated land. The rate of carbon credit earnings from termite control within the mined area.</p>	Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.
24	Aurukun Shire Council	24.3	Rehabilitation		<p>It has been reported that termites are an important food source for a number of reptiles and marsupials and even one species of beetle. They form an important part of the diet for frill neck and other lizards, blind snakes, a number of small marsupials and echidnas.</p> <p>Research suggestion: The effect on termite predator populations of maintaining a neighbouring plantation of trees free from termite infestation.</p>	Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.
24	Aurukun Shire Council	24.4	Rehabilitation		<p>“It has been suggested that the topsoil in northern Australia is largely the result of several thousand years of termite activity. Constantly tunnelling through the earth, these busy insects condition the soil rather as earthworms do in moister areas, breaking up hard ground and moving organic materials up, down and sideways through it. Their tunnels can reach considerable depths and probably help water to penetrate. Plant roots sometimes follow the old tunnels through hard ground.”</p> <p>Research suggestion: The effect on topsoil of controlling termites, eliminating the tree-eating species from a forestry plantation area.</p>	Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.5	Rehabilitation		<p>That some of the tree-piping termites can radiate from a central nest for from 50 to 200 m and that this might make some forms of control (such as traps and baiting) quite economic to maintain in an area designated for forestry.</p> <p>Research suggestion: Whether the Traditional Owners agree to the planting and management of native commercial forest (including increased quantities of Ironwood) on a commercial basis (including termite management) for the benefit of local Aboriginal people.</p>	Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.
24	Aurukun Shire Council	24.6	Rehabilitation		<p>That as well as the dominant Darwin Stringybark (Eucalyptus tetradonta) and bloodwood (Corymbia clarksoniana) in the mined area there are some Ironwoods (Erythrophleum chlorostachys) . Ironwood is particularly resistant to termite attack and is a valued hardwood timber. However, that resistance is due to toxicity and there is anecdotal evidence of sawmill employees being affected when working with it.</p> <p>Research suggestion: The safety parameters for working with and living with Ironwood timber.</p>	Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.7	Rehabilitation		<p>That the “pipes” within termite infected mature trees contain “mudgut” material which comprises soil and termite faecal matter. This material has similarities with the material of termite mounds and could be used for similar purposes. We know that it contains plant nutrients in relatively high proportions.</p> <p>Research suggestion: We don’t know the relative proportions of earth and organic matter in the materials or their plant nutrient values.</p>	<p>Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.</p>
24	Aurukun Shire Council	24.8	Rehabilitation		<p>We know that a material like this is likely to be extremely valuable in activating a compost pile or amending topsoil but we don’t actually know exactly how valuable it would be.</p> <p>Research suggestion: We know surprisingly little about the relative benefits of different materials in compost in the project area. It is important to know the best way to compost specifically in this environment.</p>	<p>Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.9	Rehabilitation		<p>That other organic materials in the pre-cleared mining area (including termite hills, grass, leaves/stems, fruits, roots, chipped or decomposing timber, carveable or millable timber) will be valuable for:</p> <ul style="list-style-type: none"> • commercial sale - possibly orchids and cycads relocation (to other bush sites or for "nursery" • storage pending rehabilitation for re-location back to the area it came from - includes scar trees, hollow logs (as fauna habitat), orchids, cycads, pandanus, "bark" trees • relocation and release in another site to preserve biodiversity (insects, grubs, worms, reptiles and marsupials, dingo pups) • destroy feral cats and pigs • relocation for business development purposes - sugar bag nests • handcraft materials, medicine, food • compost or biochar including charcoal, activated biochar, biofuel., & • traditional pathways may be plotted and reinstated during rehabilitation. <p>Research suggestion: The relative value to the ecosystem and to local Aboriginal people of the different organic components (including scar trees, termite hills, mudgut, grass, leaves/stems, chipped or decomposing timbers, biochar (activated charcoal), ashes, hollow logs (as fauna habitat), orchids, cycads, pandanus, "bark" trees and even traditional pathways)</p> <p>The agricultural and/or market values of potential products from each of the original organic materials</p> <p>There are some who maintain that biofuel production from material like this is not yet economic in Australia – we don't know that – neither do we know the extent that these organic materials (plus the organic waste produced in Aurukun and in the construction/production workers camps) might contribute to co-generation of the mine's and/or Aurukun's power supplies.</p> <p>The most economic and fruitful organisational ways of implementing changes to this organic system including the most effective ways of providing for the on-going employment and sustenance of the local Aboriginal people.</p>	<p>Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process. Note that consideration was given to biomass as an alternate energy supply for the SoE Project, however it was found to be not technically viable for low base load demand situations (refer Section 1.6.5 of the EIS).</p>

Sub. No.	Submitter	Issue Ref. No.	Project Component	Relevant EIS Section	Issue Detail	RTA Response
24	Aurukun Shire Council	24.10	Rehabilitation		<p>That bacterial inoculation of soils proves to be of benefit to Japanese farmers and is practiced in relation to leguminous crops in Australia.</p> <p>Research suggestions: The value to agroforestry in the mined area of compost, soil and/or biochar inoculation.</p>	<p>Noted. This level of detail is not relevant for the EIS. However, RTA would be happy to consider these suggestions in future discussions with Traditional Owners regarding the rehabilitation process.</p>
24	Aurukun Shire Council	24.11	Rehabilitation		<p>That drilling has taken place over the entire proposed mine site and that this revealed bauxite deposits of an average of 3.4m depth but up to 13+m in depth.</p> <p>Research suggestion: Whether Rio Tinto Alcan can provide expected 'topographic' maps of the whole area-when-mined so that the feasibility of additional dams as water storages being provided for wildlife habitat, stock watering, irrigation or human consumption can be assessed. The potential additional dams within the mine area.</p>	<p>Bauxite mining takes place outside the drainage lines that would supply water to a water supply storage. Typically in the SoE Project area, the water table is within the bauxite only at the height of the wet season, if at all. In the dry season the water table generally falls to 4m to 8m below the base of the bauxite (refer Section 5.4.1 of the EIS). Hence, while there may be certain pits at certain locations that are prone to seasonal inundation, such mined out areas would not function as water storages. RTA can supply topographic maps of existing topography of particular areas to the Council if requested, however it should be noted there is no livestock or irrigation in the Project area.</p>
24	Aurukun Shire Council	24.12	Rehabilitation		<p>Appendix includes paper regarding further information on economic development potential, including pasture improvement, forestry, and biofuel production.</p>	<p>Refer to response to 24.1. RTA would be happy to discuss these suggestions further with Traditional Owners and Aurukun Shire Council.</p>

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