



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Proposed Approval

SOUTH OF EMBLEY BAUXITE MINE AND PORT DEVELOPMENT (EPBC 2010/5642)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action

person to whom the approval is granted RTA Weipa Pty Ltd

proponent's ABN 54 137 266 285

proposed action South of Embley Bauxite Mine and Port Development, Cape York Queensland (See EPBC Act referral 2010/5642)

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Commonwealth marine areas (sections 23 & 24A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved

conditions of approval This approval is subject to the conditions specified below.

expiry date of approval This approval has effect until 21 May 2063.

Decision-maker

name and position The Hon Tony Burke MP, Minister for Sustainability, Environment, Water, Population and Communities.

signature



date of decision 14 May 2013

Conditions

Temporary Barge Plan

1. Unless agreed to by the **Minister** in writing, the approval holder must submit a Temporary Barge Plan to the **Minister** to manage, avoid and mitigate negative **impacts to listed turtle species**, including their breeding and foraging habitat, from the **construction, operation** and decommissioning of the temporary barge facility near Pera Head.
2. The Temporary Barge Plan must include surveying to ascertain whether active, or potentially active, nests for the **listed turtle species** are present in the area to be **impacted** by the temporary barge facility.
3. The Temporary Barge Plan must include adaptive management and mitigation measures to benefit **listed turtle species**, including as identified in the Final Environmental Impact Statement. The Temporary Barge Plan must include and address effective management strategies to mitigate each potential **impact to listed turtle species**, desired outcomes, benchmarks, performance indicators and goals, timeframes for reporting and implementation, corrective actions and contingency measures, and responsibility for implementing actions.
4. The Temporary Barge Plan must be submitted to the **Minister** for approval. Commencement of the temporary barge facility must not occur until the **Minister** has approved the Temporary Barge Plan. The approved Temporary Barge Plan must be implemented.

Marine and Shipping Management Plan

5. The person taking the action must submit a Marine and Shipping Management Plan, covering all facets of the **construction and operation** of all marine related precincts for the South of Embley project including, but not limited to, the Boyd Port development, shipping activities, barge and ferry terminals, recreational use of beaches on Mining Lease (ML) 7024 by project workforce and the marine environment, anchoring, and underwater noise (excluding dredge management plans at condition 14 and condition 16) for the **Minister's** approval and must effectively define, avoid, manage and mitigate against **impacts** to the following **matters of national environmental significance**:
 - a. the outstanding universal value of the Great Barrier Reef World Heritage Property;
 - b. Great Barrier Reef National Heritage Place;
 - c. Great Barrier Reef Marine Park;
 - d. **Listed turtle species**;
 - e. **Listed dolphin species**; and,
 - f. Dugong (*Dugong dugon*) and Bryde's Whale (*Balaenoptera edeni*).
6. The Marine and Shipping Management Plan must incorporate avoidance and mitigation mechanisms for **impacts** to the outstanding universal value of the Great Barrier Reef World Heritage Property; Great Barrier Reef National Heritage Place; Great Barrier Reef Marine Park; **Listed turtle species**; **Listed dolphin species**; Dugong (*Dugong dugon*) and Bryde's Whale (*Balaenoptera edeni*), including but not limited to:

- a. **impacts** to the marine environment that supports the above listed species traversing, foraging and/or breeding habitat including, seagrass, reefs and corals, **listed turtle species** nesting and/or foraging habitat;
- b. **impacts** from changes to coastal processes, including beach and/or shore erosion from the Boyd Port development, barge facilities and/or ferry facilities and ensure the action does not alter the beach gradients to such an extent that **listed turtle species** are prevented from and/or impeded in accessing the beach foreshore to nest or **listed turtle species** hatchlings are prevented and/or impeded from entering the marine environment;
- c. artificial light related **impacts** on **listed turtle species** (including hatchlings) nesting beaches and adjacent marine environment including, but not limited to, lighting from Boyd Port construction and operation, shipping, temporary passenger landing and barge facility between Pera Head and Boyd Bay, and anchored/moored vessels (but excludes operations within the Hey and Embley Rivers);
- d. measures to ensure shipping activities are undertaken in accordance with the *Great Barrier Reef Marine Park Zoning Plan (2003)*, or its most current version;
- e. mechanisms to implement best practice mitigation and management measures for ship loading and unloading, and all other aspects of shipping activities to minimise **impacts** on the marine environment (including bauxite and/or other contamination spills);
- f. **impacts** from vessel strike to **listed turtle species**, **listed dolphin species** or Dugongs including, but not limited to, restricting vessel speed limits to 6 knots in water depths of 2.5 metres or less; and, implementation of a transit lane in the Hey River and Embley River that follows the greatest water depths;
- g. **impacts** from underwater noise including, but not limited to, pile driving activities at Condition 12 and shipping;
- h. measures that minimise the risk of introduced marine pest species over the life of the project, including ballast water management. The marine pest monitoring program must be consistent with the Department of Agriculture, Fisheries and Forestry's *Australian Marine Pest Monitoring Manual (version 2.0)*, or its most current version;
- i. **impacts** associated with recreational use by project employees of **listed turtle species** nesting habitat (including, but not limited to, implementation of a permit access system for the employees);
- j. if agreed by the **department** in writing, requirements of condition 1 to condition 4 may be incorporated into the Marine and Shipping Management Plan;
- k. **impacts** identified in the Environmental Management Plan Outlines at Appendix 7-E (Threatened estuarine and Marine species); Appendix 9-A (Non-avian Migratory Species); Appendix 11-A (Great Barrier Reef Marine Park, World Heritage Area and National Heritage Place); and, Appendix 10- A (Commonwealth Marine Area) in the **Final Environmental Impact Statement**; and,
- l. mechanisms to notify the **department** in writing within five (5) business days of any confirmed or suspected sighting/s and/or observation/s in the marine environment in and/or around the project area of the Dwarf Sawfish (*Pristis clavata*); Green Sawfish (*Pristis zijsron*); Freshwater Sawfish (*Pristis microdon*); or the Speartooth Shark (*Glyphis sp. A*).

7. The Marine and Shipping Management Plan must also include adaptive management strategies to benefit the outstanding universal value of the Great Barrier Reef World Heritage Property; Great Barrier Reef National Heritage Place; Great Barrier Reef Marine Park; **listed turtle species, listed dolphin species**, Dugong and Bryde's Whale. The Marine and Shipping Management Plan must include and address effective management strategies to mitigate each potential **impact**, desired outcomes, benchmarks, readily measureable performance indicators and goals, timeframes for reporting and implementation, corrective actions and contingency measures, and specify the persons/ roles with responsibility for implementing actions. The Marine and Shipping Management Plan must provide information detailing Traditional Owner opportunities for employment, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of this Plan (consistent with condition 42).
8. The Marine and Shipping Management Plan may be submitted to the **Minister** in the following stages, but the respective stages must not commence until the **Minister** has approved each respective version of the plan:
 - i. an initial plan related to **impacts** associated with **construction** activities, other than **Preliminary Works** and the pile driving operations carried out in accordance with condition 12 to condition 13;
 - ii. a subsequent plan to also reflect **impacts** associated with **operations** on the outstanding universal value of the Great Barrier Reef World Heritage Property; Great Barrier Reef National Heritage Place and Great Barrier Reef Marine Park; and,
 - iii. subsequent revisions in accordance with condition 10.
9. The subsequent Marine and Shipping Management Plan at condition 5 must be developed in consultation with relevant Commonwealth agencies, including the Australian Maritime Safety Authority and the Great Barrier Reef Marine Park Authority, and state agencies, including Maritime Safety Queensland.
10. Within two (2) years of **operations** commencing, the Marine and Shipping Management Plan must be reviewed, revised and submitted to the **Minister** for approval. The Marine and Shipping Management Plan must be reviewed, revised and submitted to the **Minister** for approval every three (3) years for the next nine (9) years and, unless otherwise agreed by the **Minister** in writing every five (5) years thereafter for the life of the project.
11. The approved Marine and Shipping Management Plan/s must be implemented.

Pile Driving

12. The approval holder must ensure that the following measures related to any pile driving operations are implemented to minimise the **impacts** of underwater noise and disturbance on the following listed threatened species and/or listed migratory species:
 - iv. **Listed turtle species;**
 - v. **Listed dolphin species;** and
 - vi. Dugong (*Dugong dugon*) and Bryde's Whale (*Balaenoptera edeni*). Those measures must include:

- a. pile driving operations must implement **soft start procedures**. The soft start procedures must not commence until the above listed species are observed to leave the **exclusion zone/s** or are not observed in the **exclusion zone/s** for at least 30 minutes;
 - b. observations for the above listed species must be undertaken over the **observation zone** by a suitably qualified marine observer, for at least 30 minutes before the commencement of pile driving operations, and during pile driving operations;
 - c. the **exclusion zone** must be no less than 100 metres from the pile driving operations and be implemented so as to ensure that the above listed species are not exposed to sound exposure levels of greater than or equal to 183 dB re 1µ Pa².s;
 - d. pile driving operations must cease if the species listed above are observed within the **exclusion zone**, and action to cease all pile driving operations within the **exclusion zone** must be taken within two minutes of the observation, or as soon as possible, if it is unsafe to cease pile driving operations within two minutes. Every 30 days during periods when pile driving operations are occurring, the approval holder must report the number of incidents where pile driving operations did not cease within two minutes;
 - e. pile driving operations must not recommence until the species listed above observed within the **exclusion zone** are observed to leave the **exclusion zone** or are not observed to leave the **exclusion zone** for at least 30 minutes; and,
 - f. only pile driving operations which have commenced prior to sunset or prior to a **period of low visibility** can continue between the hours of sunset and sunrise, unless pile driving operations are suspended for more than 15 minutes.
13. The criteria for a suitably qualified marine observer at condition 12b must be submitted to the **Minister** for approval and records must be kept of marine observers subsequently engaged. Pile driving operations cannot commence until the criteria has been approved.

Port and River Dredge Management Plans

14. The approval holder must submit to the **Minister** for approval a Capital Dredging Management Plan/s for capital dredging activities associated with the South of Embley project. The Capital Dredging Management Plan/s must be prepared in accordance with the *Australian Government National Assessment Guidelines for Dredging (2009)*, or their most current versions, to avoid and mitigate **impacts** on:
- i. Commonwealth Marine Area;
 - ii. **Listed turtle species**;
 - iii. **Listed dolphin species**; and,
 - iv. Dugong (*Dugong dugon*) and Bryde's Whale (*Balaenoptera edeni*).
15. Capital dredging activities cannot commence until the Capital Dredging Management Plan at condition 14 has been approved.

16. The approval holder must submit to the **Minister** for approval a Maintenance Dredging Management Plan/s for all maintenance dredging activities associated with the South of Embley Project. The Maintenance Dredging Management Plan/s must be prepared in accordance with the *Australian Government National Assessment Guidelines for Dredging (2009)* and the **department's Long Term Monitoring and Management Plan Requirements for 10 year Permits to Dump Maintenance Dredge Material at Sea (July 2012)**, or their most current versions, to avoid and mitigate **impacts** for the **matters of national environmental significance** listed at condition 14.
17. Maintenance dredging activities cannot commence until the Maintenance Dredging Management Plan at condition 16 has been approved.
18. The approved Plans at condition 14 and condition 16, and/or their subsequent revisions, must be implemented.
19. The approval holder must comply with the requirements of any permit/s obtained under the *Environment Protection (Sea Dumping) Act 1981*, including any conditions attached to the permit/s.

Vegetation Clearing

20. The approval holder must not **clear vegetation** or remove more than 29,658 hectares of vegetation over the life of the project. The maximum **clearing of vegetation for mining areas and infrastructure** that can occur in any 12 month period is 4,000 hectares.
21. To mitigate **impacts** on Red Goshawk (*Erythrorhynchus radiates*) and Masked Owl (*Tyto novaehollandiae kimberli*), **Listed flora species** and **Listed migratory species** the approval holder must provide vegetation buffer zones from **mining area/s** (in addition, to buffer zones required under state regulations) for the Environmental Features (as defined in the Queensland Department of Natural Resources and Mines *Regional Vegetation Management Code for Western Bioregions* (version 2.1, 30 November 2012)) described in following table. The vegetation buffer zones exclude areas of **infrastructure**.

Environmental feature	Vegetation buffer zones
Stream order one or two	100m to 200m ^{***} from edge of riparian vegetation
Stream order three or four	100m to 200m ^{**} from edge of riparian vegetation
Stream order five and above	200m from edge of riparian vegetation
Natural wetland	200m from edge of wetland vegetation
Natural significant wetland	200m from edge of wetland vegetation
Tidal areas and marine plants ^{***}	200m from boundary of feature
Vine forest, coastal vegetation on sand, estuaries	200m from edge of relevant vegetation type

^{**} Set based on site specific factors following field survey.

^{***} Category B Environmentally Sensitive area as defined by the *Environmental Protection Regulation 2008 (Qld)*.

Pre-disturbance Program

22. Prior to any **clearing of vegetation** (including for **Preliminary Works**), surveying must be undertaken to ascertain whether active, or potentially active, nests for the Red Goshawk (*Erythrorhynchus radiates*) and/or Masked Owl (*Tyto novaehollandiae kimberli*) are present in the area to be cleared. Surveying must be undertaken for the:

- a. Red Goshawk – in areas located within one (1) kilometre of permanent water supporting riparian gallery forest or Paperback wetland; seasonally inundated coastal wetlands and seasonal water courses supporting riparian gallery forest, or an estuary; and,
 - b. Masked Owl – in areas within 200 metres of permanent water supporting riparian gallery forest of paperbark wetland, seasonally inundated Paperbark wetlands, seasonal watercourses supporting riparian gallery forest or an estuary.
23. The Pre-disturbance Program must include avoidance, mitigation or management measures (and may include measures in the **Final Environmental Impact Statement**) if active, or potentially active, nests for the Red Goshawk or Masked Owl are found during surveying, including a 200 metre buffer zone around nest trees. The nest tree and buffer zone cannot be cleared or disturbed until the end of the breeding season (being until fledglings no longer use the nest for habitat).
24. Information obtained during the Pre-disturbance Program must be used to inform the Terrestrial Management Plan at condition 25.

Terrestrial Management Plan

25. The approval holder must submit a Terrestrial Management Plan covering all of the land based activities associated with the **construction** and **operation** of the project for the **Minister's** approval to effectively define, avoid, adaptively manage and mitigate negative **impacts** to the following **matters of national environmental significance**:
- i. Red Goshawk(*Erythrorhynchus radiates*); Masked Owl (*Tyto novaehollandiae kimberli*); and Bare-rumped Sheath-tail Bat (*Saccolaimus saccolaimus nudiclunatus*)
 - ii. **Listed migratory bird species**; and,
 - iii. **Listed flora species**.
26. The Terrestrial Management Plan must incorporate avoidance and mitigation measures for each **impact** associated with the project including, but not limited to:
- a. measures for water related **impacts** including, but not limited to, erosion, construction and operation of the dam; stormwater runoff, flood events, hydrocarbon spills, sewage, crude or process water, runoff from ore stockpiles, and downstream **impacts** on watercourses, streams and marine environment (including estuaries);
 - b. measures for pests and weed management, dust management, and fire management;
 - c. implementing the vegetation buffers zones at condition 21; and,
 - d. measures identified in the Environmental Management Plan Outlines at Appendix 5-A (Threatened Flora Species); Appendix 6-C (Threatened fauna species); Appendix 8-A (Avian Migratory Species); and, Appendix 16-B (Water Monitoring and Management Conditions) in the **Final Environment Impact Statement**.

27. The Terrestrial Management Plan must also include adaptive management strategies to benefit the species listed at condition 25. The Terrestrial Management Plan must include and address effective management strategies to mitigate each potential **impact**, desired outcomes, benchmarks, readily measureable performance indicators and goals, timeframes for reporting and implementation, corrective actions and contingency measures, and, specify the person/s roles with responsibility for implementing actions. The Terrestrial Management Plan must provide information detailing Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of this Plan (consistent with condition 42).
28. The Terrestrial Management Plan must be informed by the most current information available to avoid, manage or mitigate **impact** associated with the project (including, but not limited to *National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000) or most current version/s of these guidelines.
29. The Terrestrial Management Plan must be submitted to the **Minister** for approval within 18 months of the date of this approval. The approved Terrestrial Management Plan must be implemented.
30. Within 60 days of the first anniversary of **operations** commencing, a revised Terrestrial Management Plan must be submitted to the **Minister** for approval. The Terrestrial Management Plan must be reviewed, revised and submitted to the **Minister** for approval every five (5) years (unless otherwise agreed by the **Minister** in writing) thereafter for the life of the project. The approved Terrestrial Management Plans, as revised, must be implemented.

Bare rumped Sheathtail Bat

31. For the Bare-rumped Sheathtail Bat (*Saccolaimus saccolaimus nudicluniatatus*) the approval holder must:
- a. undertake a targeted Bare-rumped Sheathtail Bat survey in the project area, using broad spectrum acoustic monitoring prior to the **commencement of the action**. The survey must cover, as a minimum, the area that was subjected to netting as part of the **Final Environmental Impact Statement**;
 - b. support a research program being conducted by the Australian Bat Society which will aim to improve the quality of the reference call library for microbats of the Cape York region;
 - c. utilise the reference calls acquired by the research program to analyse the targeted survey results for the Bare-rumped Sheathtail Bat (at minimum for those reference calls collected as part of the **Final Environmental Impact Survey**) and further define habitat preferences for the species; and,
 - d. if the Bare-rumped Sheathtail Bat is identified, adaptive management measures to avoid and mitigate impacts from the project must be implemented in the Terrestrial Management Plan at condition 25 within six (6) months of the identification of the species.
32. The approval holder must notify the department in writing within five (5) business days of any confirmed or suspected observation/s (including for condition 31) in the project area of Bare-rumped Sheathtail Bat.

Rehabilitation Strategy

33. The approval holder must submit an adaptive Rehabilitation Strategy, covering the **construction** and **operation** of the project to ensure the rehabilitated areas are functionally equivalent to the pre-disturbance habitat, to enable similar land use to that of the pre-disturbance habitat, by the following **matters of national environmental significance**:
- i. Red Goshawk (*Erythrorhynchus radiatus*);
 - ii. Masked Owl (*Tyto novaehollandiae kimberli*);
 - iii. Rainbow Bee-eater (*Merops ornatus*);
 - iv. Oriental Cuckoo (*Cuculus saturatus*);
 - v. Barn Swallow (*Hirundo rustica*); and,
 - vi. if identified at condition 31(c) or condition 32, the Bare-rumped Shearwater (*Saccolaimus saccolaimus nudicollis*).
34. The land area to be progressively rehabilitated over the life of the project must be no less than 28,880 hectares. Unless otherwise specified in the approved Rehabilitation Strategy at condition 33, rehabilitation works must commence within two (2) years:
- i. following mining in the area/s where it has been completed; or,
 - ii. following decommissioning and removal of any infrastructure, in each area where that infrastructure will not be retained at the end of the project.
35. The Rehabilitation Strategy must include adaptive management strategies to benefit the species listed at condition 33. The Rehabilitation Strategy must include measures outlined in the **Final Environment Impact Statement** and address effective management strategies to identify desired outcomes, benchmarks, readily measurable performance indicators and goals, timeframes for reporting and implementation, corrective actions and contingency measures, and, specify the person/s roles with responsibility for implementing actions. The Rehabilitation Strategy must provide information detailing Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of this Strategy (consistent with condition 42).
36. The Rehabilitation Strategy must be submitted to the **Minister** for approval within 3 years of the commencement of **operations**. The approved Rehabilitation Strategy must be implemented.
37. Unless otherwise agreed to by the **Minister** in writing, every five (5) years from the first anniversary of the approval of the Rehabilitation Strategy at condition 33 a reviewed Rehabilitation Strategy must be submitted to the **Minister**. The approved Rehabilitation Strategy must be implemented.
38. If the rehabilitation objectives identified for species identified at condition 33 do not meet any of the success criteria for any of these species as described in the approved Rehabilitation Strategy at condition 33 after 10 years of rehabilitation commencing, or as otherwise agreed in the approved Rehabilitation Strategy, the approval holder must notify the **Minister** in writing within 20 business days of the area (hectares) over which the rehabilitation objectives and success criteria were not met.

39. Within six (6) months of notifying the **Minister** at Condition 38, the approval holder must submit to the **Minister** for approval an Offset Strategy outlining the offset to be provided for the **matters of national environmental significance** identified at condition 33. The related offset must be in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999 Environmental Offset Policy (October 2012)*, or its most current version.
40. An approved Offset Strategy must be implemented.

Indigenous consultation

41. The approval holder must consult with Indigenous people in accordance with the process under the Indigenous Land Use Agreement (known as the Western Cape Communities Coexistence Agreement) during preparation of management plans and strategies specified in this approval.
42. The approval holder must identify employment opportunities (e.g. under an Indigenous Land and Sea Program or seed collection associated with rehabilitation activities) for Indigenous persons to facilitate the implementation of the conditions specified in this approval.

Feral Pig Management Offset Strategy

43. The approval holder must implement an adaptive Feral Pig Management Offset Strategy to reduce the annual level of feral predation on **listed turtle species** nests for the period of this approval.
44. The Feral Pig Management Offset Strategy must be implemented at a minimum, in the project area as described in Figure 7-23 of the **Final Environmental Impact Statement**.
45. The Feral Pig Management Offset Strategy must include surveying to develop significantly robust baseline data for **listed turtle species** nesting in the project area and desired outcomes, benchmarks, readily measureable performance indicators and goals, timeframes for reporting and implementation, corrective actions and contingency measures, and, specify the person/s roles with responsibility for implementing actions. The Feral Pig Management Offset Strategy must provide information detailing Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of this Strategy (consistent with condition 42).
46. The Feral Pig Management Offset Strategy must adhere to the **department's** *Threat Abatement Plan for Predation, Habitat Degradation, Competition And Disease Transmission By Feral Pigs*, or its most current version. The Feral Pig Management Offset Strategy must also adhere to the *Humane Pest Animal Control: Code of Practice And Standard Operating Procedures* (that is currently being updated), or its most current version.
47. The findings from the Feral Pig Management Offset Strategy must be used to inform the Marine and Shipping Management Plan at condition 5 on an ongoing basis.
48. The Feral Pig Management Offset Strategy must be submitted, within 12 months of the date of this approval, to the **Minister** for approval. The approved Feral Pig Management Offset Strategy must be implemented.

Inshore Dolphin Offset Strategy

49. The approval holder must implement an Inshore Dolphin Offset Strategy to inform knowledge about the distribution and abundance of local and regional populations of **listed dolphin species** in the Western Cape York area, and identification of habitat utilised by **listed dolphin species**.
50. The Inshore Dolphin Offset Strategy must be implemented at a minimum, in the marine environment between latitude 12.60°S and latitude 13.35°S and must include provision for the Inshore Dolphin Offset Strategy actions to be undertaken prior to **construction**, during **construction** and periodically after **construction** (for a minimum period of 13 years following the commencement of **construction**, but not necessarily every year) of the Boyd Port and river facilities.
51. The Inshore Dolphin Offset Strategy must contribute to independent research on **listed dolphin species**, and specify targeted outcomes, benchmarks, readily measureable performance indicators and goals, timeframes for reporting and implementation, and the person/s roles with responsibility for implementing actions. The Inshore Dolphin Offset Strategy must provide information detailing Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of this Strategy (consistent with condition 42).
52. The Inshore Dolphin Offset Strategy must be developed in consultation with the **department**.
53. The approval holder must fund the Inshore Dolphin Offset Strategy to a minimum of \$800,000 (GST exclusive) and a maximum of \$1,200,000 (GST exclusive).
54. The findings from the Inshore Dolphin Offset Strategy, including corrective actions and contingency measures relating to **operations**, must be used to inform the Marine and Shipping Management Plan at condition 5 on an ongoing basis.
55. The Inshore Dolphin Offset Strategy must be submitted, within 12 months of the date of this approval, to the **Minister** for approval. The approved Inshore Dolphin Offset Strategy must be implemented.

Publication Requirements

56. All **survey data** and methodology collected for the project must be recorded in accordance with approved management plans. When requested by the **department**, the approval holder must provide to the **department** survey data and information related to **matters of national environmental significance**. This information must be provided within 30 business days of request, or in a timeframe agreed to by the **department** in writing. The **department** may use the survey data for other purposes. The approval holder must also provide the **survey data** and methodology, within 30 business days, to anyone who requests the **survey data** and methodology in writing. Notification of the availability of the **survey data** and methodology must be provided on the approval holder's website for the duration of this approval.
57. Every 12 months after the **commencement of the action**, unless otherwise agreed to in writing by the **Minister**, the approval holder must **publish** on their website, for the duration of the project (including decommissioning), all the survey methodology, reports and related analysis of **survey data** for current program/s, plan/s, strategies or other conditions specified in this approval for each individual **matter of national environmental significance**. The **department** must be notified within ten (10) business days of publication.

58. Within five (5) business days from this approval, the approval holder must publish the **Final Environmental Impact Statement** on their website for the duration of the project, including decommissioning.
59. Unless otherwise agreed to in writing by the **Minister** the approval holder must publish, for the life of the project including decommissioning, all current approved programs/s, plan/s, review/s (including the Independent Peer Reviews) or strategies referred to in these conditions of approval on their website. Each of the approved program/s, plan/s or strategies (including revised versions) must be published on the approval holder's website within one (1) month of approval.

Independent Review Requirements

60. Unless otherwise agreed in writing by the **Minister**, each program/s, plan/s, or strategies specified in the conditions must be **independently peer reviewed** prior to submission to the **Minister** for approval. The approval holder must nominate an **Independent Peer Reviewer** to the **Minister**. The person/organisation/technical committee conducting the **independent peer review** must be approved by the **Minister**, prior to the commencement of the review. The **independent peer review** criteria must be agreed to by the **Minister** and any reviews undertaken must address the criteria to the satisfaction of the **Minister**.
61. The reviews undertaken for condition 60 must include an analysis of the effectiveness of the avoidance and mitigation measures in meeting the objectives, targets or management measures identified in the program/s, plan/s or strategies being reviewed.
62. Unless otherwise specified in these conditions or notified in writing by the **Minister**, the approval holder must provide to the **Minister**, a copy of all advice and recommendations made by the **Independent Peer Reviewer** for program/s, plan/s, or strategies, and an explanation of how the advice and recommendations will be implemented, or an explanation of why the approval holder does not propose to implement certain recommendations.

Minimum timeframe for consideration

63. If the **Minister** is not satisfied that the final revised version of the plan/s, program/s or strategies specified in this approval adequately addresses the condition/s specified in the approval, the approval holder will be notified in writing by the **Minister** that they must update a plan/s, program/s or strategies to meet the condition/s that have not been adequately addressed.
64. For any plan/s and/or strategy specified in this approval that is to be approved by the **Minister**, the approval holder must ensure the **Minister** is provided at least 60 business days for review and consideration of the programs/s, plan/s, or strategies specified in this approval, unless otherwise agreed in writing by the **Minister**. This does not apply to urgent changes required to protect the environment or repair or mitigate any damage that may or will be, or has been, caused by the action to any matter protected by Part 3 of the EPBC Act for which the approval has effect.
65. To avoid duplication, the approval holder may provide the **Minister** with any plan/s, program/s or strategies prepared for the State provided the plan/s, program/s or strategies meets the conditions specified in this approval. The plan/s, program/s or strategies must include a cross reference table that clearly identifies:
- a. the condition specified in this approval for which the plan/s, strategy or program/s is being provided; and

- b. the relevant folder, chapter, section number and page number in the plan/s, program/s or strategies where the condition has been addressed.

General

- 66. Within ten (10) days after the commencement of **preliminary works, construction, operation and/or commencement of the action**, the approval holder must advise the **Minister** in writing of the actual date of commencement.
- 67. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plan/s or strategies as specified in these conditions and make them available upon request to the **department**. Such records may be subject to audit by the **department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **department's** website. The results of audits may also be published through the general media.
- 68. Within three (3) months of every 12 month anniversary of **commencement of the action**, the approval holder must **publish** a report on their website, for the duration of the project including decommissioning, addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plan/s or strategies as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the **department** at the same time as the compliance report is **published**. Within five (5) days after publication, the person taking the action must provide the **Minister** with a copy of the report/s.
- 69. Every three years from the date of this approval, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.
- 70. For the purposes of reporting at Condition 68, where material required under condition 41 and Condition 42 is culturally sensitive and cannot be disclosed at the explicit and written consent of the relevant Indigenous people with rights, claims or interests in the area, the approval holder must advise the **department** of the extent to which it cannot comply with condition 41 and Condition 42 or that reason.
- 71. Where the conditions require the approval holder to submit a program/s, plan/s or strategies for the **Minister's** approval, the approval holder must maintain a register recording:
 - a. the date on which each plan was approved by the **Minister**;
 - b. if a plan has not been approved, the date on which it was, or is expected to be, submitted to the **Minister**;
 - c. the dates on which reports on the outcomes of reviews have been approved by the **Minister**; and,
 - d. the **dates** on which the subsequent reviews are due.

The register must be submitted to the **department**, at the time the annual compliance report is **published**, but does not form part of the report.

72. If the approval holder wishes to carry out any activity otherwise than in accordance with a programs/s, plan/s or strategies as specified in the conditions, the approval holder must submit to the **department** for the **Minister's** written approval a revised version of that programs/s, plan/s or strategies. The varied activity must not commence until the **Minister** has approved the varied programs/s, plan/s or strategies writing. The **Minister** will not approve a varied programs/s, plan/s or strategies unless the revised programs/s, plan/s or strategies would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised programs/s, plan/s or strategies they must be implemented in place of the plan/s or strategies originally approved.
73. If, at any time after the first five (5) year anniversary of the date of this approval, the approval holder has not **commenced the action**, then the approval holder must not **commence the action** without the written agreement of the **Minister**.
74. The financial cost of adhering to the conditions specified in this approval will be borne by the approval holder.
75. If the **Minister** believes that it is necessary or convenient for the better protection of World Heritage properties (sections 12 & 15A), National Heritage Place (section 15B & 15C), Listed threatened species and communities (sections 18 & 18A), Listed Migratory Species (section 20 & 20A), Commonwealth Marine Area (sections 23 & 24a) and Great Barrier Reef Marine Park (sections 24B and 24C) to do so, the **Minister** may request that the approval holder make specified revisions to the programs/s, plan/s or strategies specified in the conditions and submit the revised programs/s, plan/s or strategies for the **Minister's** written approval. The approval holder must comply with any such request. The revised approved programs/s, plan/s or strategies must be implemented. Unless the **Minister** has approved the programs/s, plan/s or strategies then the approval holder must continue to implement the programs/s, plan/s or strategies originally approved, as specified in the conditions.
76. The approval holder must undertake the action in accordance with, and ensure persons that are under the direction or control of the approval holder for the South of Embley Bauxite Mine and Port Development project comply with, the approved plan/s, program/s or strategies to avoid, mitigate, manage and offset **impacts** to outstanding universal value of the World Heritage properties (sections 12 & 15A), National Heritage Place (section 15B & 15C), Listed threatened species and communities (sections 18 & 18A), Listed Migratory Species (section 20 & 20A), Commonwealth Marine Area (sections 23 & 24a) and Great Barrier Reef Marine Park (sections 24B and 24C).

Definitions

- a) **Capital Dredging** – as defined in the *Australian Government National Assessment Guidelines for Dredging (2009)* being 'dredging for navigation, to enlarge or deepen existing channel and port areas or to create new ones. Dredging for engineering purposes, to create trenches for pipes, cables, immersed tube tunnels, to remove material unsuitable for foundations and to remove overburden for aggregate extraction, etc'.
- b) **Commencement of the action / commenced the action** – any works that are required to be undertaken for **construction** (except exploration, site investigation and **preliminary works**).
- c) **Clearing of vegetation / clear vegetation** – the clearing or inundation by water of vegetation, for pest and weed control, or construction of any **infrastructure**.
- d) **Construction** – any works that are required to be undertaken for the project including the beneficiation plant (including tailings storage facility); Boyd Port facility, and Hey and Embley River facilities; dam construction; **clearing of vegetation**; and infrastructure facilities (including power station, roads, and fuels storage). Excludes **preliminary works**.
- e) **Department** – the Australian Government department administering the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.
- f) **Exclusion zone** – a radius around pile driving operations of no less than 100 metres which must be visually observed at all times during pile driving operations.
- g) **Final Environmental Impact Statement** – comprises the South of Embley Project Final Environmental Impact Statement (March 2013).
- h) **Infrastructure** – operations or activities that are ancillary to **mining**, such as haul and access roads, conveyors, bridges, tailings storage facilities, loading ramps, pumps, pipelines and water management infrastructure, energy generation and transmission, exploration, Boyd Port, beneficiation plant, stockpiles, and the barge and ferry terminals.
- i) **Impact/s / impacted** – as defined in section 527E of the EPBC Act.
- j) **Independent/ly Peer reviewed/ Independent Peer Reviewer** – assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodologies, performance goals and performance criteria, and conclusions pertaining to the management plans/strategies/programs by a person/organisation/technical committee, independent of the approval holder and/or employed in any subsidiary company of the approval holder. This person/organisation/technical committee must have demonstrated expertise in the **matter of national environmental significance** being reviewed and be approved by the **Minister** prior to commencement of the review.
- k) **Listed dolphin species** – listed migratory species under the EPBC Act, specifically Australian Snubfin Dolphin (*Orcaella heinsohni*); and, Indo-Pacific Humpback Dolphin (*Sousa chinensis*).
- l) **Listed flora species** – listed vulnerable threatened species under the EPBC Act, specifically Cooktown Orchid (*Dendrobium bigibbum*); Chocolate Tea Tree Orchid (*Dendrobium johannis* (*Cepobaculum johannis*)); and Beach nightshade (*Solanum dunalianum*).

- m) **Listed migratory birds species** – listed migratory species under the EPBC Act, specifically as identified in Annexure A.
- n) **Listed turtle species** – listed threatened species and/or listed migratory species under the EPBC Act, specifically Green Turtle (*Chelonia mydas*), Hawksbill Turtle (*Eretmochelys imbricate*); Flatback Turtle (*Natator depressus*); Loggerhead Turtle (*Caretta caretta*); Olive Ridley Turtle (*Lepidochelys olivacea*); and Leatherback Turtle (*Dermochelys coriacea*);
- o) **Maintenance Dredging** – as defined in the *Australian Government National Assessment Guidelines for Dredging (2009)* being 'dredging to ensure that channels, berths or other port areas are maintained at their designed dimensions'.
- p) **Matter of national environmental significance** – those matters protected under the EPBC Act: World Heritage properties, National Heritage places, wetlands of international importance (Ramsar wetlands), listed threatened species and communities, listed migratory species, Commonwealth marine areas, Great Barrier Reef Marine Park, the environment where nuclear actions are involved (including uranium mines).
- q) **Mining / Mining area/s**- operations or activities connected with the extraction of bauxite ore (excluding **infrastructure**) or the location where operations or activities connected with the extraction of bauxite ore occur.
- r) **Minister** – the **Minister** administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the **Minister**.
- s) **Observation Zone** – a radius around pile driving operations (unless otherwise agreed to by the **department** in writing), as detailed in Annexure B and must be no less than the **exclusion zone**) which must be visually observed at all times during pile driving operations.
- t) **Operation/s** – commencement of activities associated with bauxite **mining** and production, including shipping activities from the Boyd Port and facilitates in the Hey and Embley Rivers. This does not include activities associated with **construction** or **preliminary works**.
- u) **Period of low visibility** – where continuous visual observations to a distance of 300 metres or the observation distance relevant for the diameter of the pile as identified in Annexure B, whichever is greater from the pile driving operations for the Boyd Port development, Humbug Terminal, Hornibrook ferry/tug terminal, Hey River terminal or for navigation aids, is not possible for a time period of greater than one hour.

Preliminary Works – includes activities associated with the upgrade of Beagle Camp and Pera Head Access Roads; establishment of exploration drill and seismic lines; **vegetation clearing** and construction of the mine access road (between Hey River terminal and Boyd mine infrastructure area); terrestrial **vegetation clearing** associated with temporary barge landing area near Pera Head; construction and operation of barge landing area located on Hey River; preparation of laydown areas at Humbug and Hornibrook terminals (existing disturbed areas); construction (including **vegetation clearing** of up to 30 hectares) and operation of a temporary accommodation camp (up to 200 persons) in the project area; installation and operation of ancillary infrastructure (including diesel fuelled power generation, laydown areas, package sewage treatment plants, waste storage and disposal facilities, fuel storage, offices and cribs, and access roads); construction and operation of an artesian bore including associated storage and treatment facilities and pipelines; and, installation of communications infrastructure.

- v) **Publish/ed** – documentation available on the approval holder's website for the duration of the action (including decommissioning).
- w) **Soft start procedures** – initiated at commencement of all marine piling activities by piling at low energy levels and then build up to full impact force. The first five **impacts** from the piling operation must be at no more than 50% of full hammer weight (e.g. a hammer with an adjustable stroke height of 1.2 metres should drop from a height of 0.6 metres at least 5 times during a 'soft start' procedure), to encourage animals to move away from the area of piling activities.
- x) **Survey Data** - information obtained from monitoring and survey activities associated with plan/s and/or strategies specified by these conditions and where relevant must include, at minimum, the name of species (common and scientific), time and day of survey, GPS location, number of individuals located, age class (if known), habitat type, and EPBC Act listing status.

ANNEXURE A: Listed Migratory Bird species for the South of Embley project (EPBC 2010/5642)

Migratory Avian Group	Species	Migratory Avian Group	Species
International Migratory Shorebirds	<i>Actitis hypoleucos</i> Common Sandpiper		<i>Plegadis falcinellus</i> Glossy Ibis
	<i>Calidris acuminata</i> Sharp-tailed Sandpiper	Seabirds	<i>Fregata minor</i> Great Frigatebird
	<i>Calidris canutus</i> Red Knot		<i>Fregata ariel</i> Lesser Frigatebird
	<i>Calidris ferruginea</i> Curlew Sandpiper		<i>Sterna albifrons</i> Little Tern
	<i>Calidris ruficollis</i> Red-necked Stint	Raptors	<i>Haliaeetus leucogaster</i> White-bellied Sea-eagle
	<i>Calidris tenuirostris</i> Great Knot		<i>Pandion cristatus</i> Eastern Osprey
	<i>Charadrius leschenaultii</i> Greater Sand Plover		
	<i>Charadrius mongolus</i> Lesser Sand Plover	Woodland Birds	<i>Cuculus saturatus</i> Oriental Cuckoo
	<i>Charadrius veredus</i> Oriental Plover		<i>Merops ornatus</i> Rainbow Bee-eater
	<i>Gallinago hardwickii</i> Latham's Snipe, Japanese Snipe		<i>Mylagra cyanoleuca</i> Satin Flycatcher
	<i>Heteroscelus brevipes</i> Grey-tailed Tattler		<i>Rhipidura rufifrons</i> Rufous Fantail
	<i>Limnodromus semipalmatus</i> Asian Dowitcher		<i>Monarcha melanopsis</i> Black-faced Monarch
	<i>Limosa lapponica</i> Bar-tailed Godwit	Barn Swallow	<i>Hirundo rustica</i> Barn Swallow
	<i>Limosa limosa</i> Black-tailed Godwit		
	<i>Numenius madagascariensis</i> Eastern Curlew	Aerial Species	<i>Apus pacificus</i> Fork-tailed Swift
	<i>Numenius minutus</i> Little Curlew, Little Whimbrel		<i>Hirundapus caudacutus</i>
	<i>Numenius phaeopus</i> Whimbrel		White-throated Needletail
	<i>Pluvialis fulva</i> Pacific Golden Plover		
	<i>Pluvialis squatarola</i> Grey Plover		
	<i>Tringa nebularia</i> Common Greenshank		
	<i>Tringa stagnatilis</i> Marsh Sandpiper		
	<i>Xenus cinereus</i> Terek Sandpiper		
Waterbirds	<i>Acrocephalus stentoreus</i> Clamorous Reed-Warbler		
	<i>Ardea alba</i> Great Egret, White Egret		
	<i>Egretta sacra</i> Eastern Reef Egret		
	<i>Grus Antigone</i> Sarus Crane		

ANNEXURE B: Pile Driving Observation Zones for the South of Embley project (EPBC 2010/5642)

Port Development

Species		Pipe pile diameters					
		1500mm	1200mm	1050mm	750mm	355.6mm	1 x 1500mm and 2 x 1050mm
		Minimum observation Distance (metres)					
Bryde's Whale		ESL	ESL	ESL	ESL	570	ESL
		1330	1210	930	790	570	1580
Dolphins and Dugong		400	360	270	230	170	500
Marine Turtle		470	430	350	280	210	630

Note: ESL = Extends to shoreline from the end of the Stage 1 wharf; n.r.= not relevant

Humbug terminal

Species		Sheet Pile	Pipe Piles			
		600mm width	1,050mm	900mm	750mm	600mm
		Minimum observation Distance (metres)				
Dolphins and Dugong		<10	170	160	140	130
Marine Turtles		60	210	200	180	160

Note: The distances here have their maximum values in a westerly direction.

Hornibrook ferry/tug terminal

Species		Pipe Piles			
		1,050mm	900mm	750mm	600mm
		Minimum observation Distance (metres)			
Dolphins and Dugong		250	230	210	190
Marine Turtles		340	310	280	240

Note: The distances here have their maximum values in the south-easterly to south-westerly directions.

Hey River terminal

Species		Sheet Piles	Pipe Piles			
		600mm width	1,050mm	900mm	750mm	600mm
		Minimum observation Distance (metres)				
Dolphins and Dugong		<10	380	360	330	300
Marine Turtles		110	470	440	400	370

Note: The distances here have their maximum values in Northerly and Southerly directions.

Navigation Aids

Species		Pipe Pile - 1050mm diameter
		Minimum observation Distance (metres)
Dolphins and Dugong		280
Marine Turtles		360

Note: The distances are equal in all directions