

## Appendix 2-A Tailored EIS Guidelines







**July 2012**



**Australian Government**

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**Department of Sustainability, Environment, Water, Population and Communities**

***Environment Protection and Biodiversity Conservation Act 1999***

**TAILORED GUIDELINES FOR A DRAFT ENVIRONMENTAL IMPACT STATEMENT  
SOUTH OF EMBLEY BAUXITE MINE AND PORT DEVELOPMENT CAPE YORK, QLD  
(EPBC 2010/5642)**

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# **1. Environmental Assessment and Approval Process**

## **1.1 Purpose of Guidelines**

This document is intended to set the scope of environmental, social, cultural, heritage and economic studies required in the EIS to allow for an assessment and decision whether to approve the construction and operation of the South of Embley Bauxite Mine and Port Development, including shipping activities through the Great Barrier Reef.

These Guidelines have been developed by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) to address assessment requirements specified in Section 102 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations) (refer Attachment 1).

The guidelines have also been drafted to enable the assessment of the sea dumping permit application for the project submitted under the *Environment Protection (Sea Dumping) Act 1981*.

## **2. Description of the Project**

RTA Weipa Pty Ltd (hereafter referred to as the proponent) proposes to expand its Weipa bauxite mining operations in an area south of the Embley River on mining leases ML 7024 and ML 6024. The project involves an open-cut bauxite mine, a beneficiation plant, new port and stockpile facilities near Boyd Point, barge and ferry facilities, and ancillary infrastructure and shipping activities (including from the proposed new port, around the top of Cape York to Gladstone on the east coast).

On 13 September 2010, the proposal was referred under the EPBC Act to then Minister for Sustainability, Environment, Water, Population and Communities. On 5 October 2010, an application for a sea dumping permit under the *Environment Protection (Sea Dumping) Act 1981* was also submitted by the proponent.

On 29 October 2010, a delegate of the Minister determined that the proposal was a controlled action under Chapter 4 of the EPBC Act for the following controlling provisions:

- listed threatened species and communities (sections 18 and 18A);
- listed migratory species (sections 20 and 20A); and
- Commonwealth marine areas (sections 23 and 24A).

On the same date, a delegate of the Environment Minister decided that the proposed action be assessed by Environmental Impact Statement (EIS) and Tailored Guidelines to develop a draft EIS were subsequently provided to the proponent on 10 December 2010.

From 1 August 2011 to 12 September 2011, the proponent published and made available for public consultation a draft Environmental Impact Statement.

In November 2011, the Environment Minister received a request to reconsider the referral decision of 29 October 2010 on the basis of new information presented in the draft EIS related to shipping activities through the Great Barrier Reef. This information was not provided by the proponent at the time of the referral decision.

On 15 March 2012, the Environment Minister revoked the original referral decision and substituted it with one that takes into account impacts on the Great Barrier Reef. In making his decision, the Minister considered advice from the DSEWPaC, the Great Barrier Reef Marine Park Authority, the proponent, and the submissions received during the public comment period (between 12 to 25 January 2012) on the reconsideration.

The project is a controlled action under the provisions of the EPBC Act for the following controlling provisions:

- World Heritage properties (sections 12 and 15A);
- National Heritage places (sections 15B and 15C);
- Listed threatened species and ecological communities (sections 18 and 18A);
- Listed migratory species (sections 20 and 20A);
- Commonwealth marine areas (sections 23 and 24A); and
- Great Barrier Reef Marine Park (sections 24B and 24C).

On 11 May 2012, the delegate to the Environment Minister approved the proponent's variation request to expressly incorporate shipping activities associated with the project as part of the action to be assessed under the provisions of the EPBC Act.

Following the new controlled action decision for the project, the Environment Minister has prepared new EIS Guidelines for the preparation of the EIS, to ensure that the impacts of the project on the additional controlling provisions are assessed.

### **3. Information and Advice Related to the Preparation of the Environmental Impact Statement**

#### ***3.1 The Objectives of an Environmental Impact Statement***

The EIS depends on adequately defining those elements of the environment that may be affected by a proposed development, and on identifying the significance, risks and consequences of the potential impacts of the proposal. The EIS will be a significant source of information on which the public and government decision makers will assess the potential environmental impacts of the proposal.

The nature and level of investigations must be related to the likely extent and gravity of the relevant impacts (likelihood, consequence, magnitude, extent and scale of impacts). All relevant impacts of the proposal on environmental, social, cultural, and heritage values relating to the controlling provisions are to be investigated and analysed, and commitments to avoid, mitigate and offset any adverse impacts are to be detailed in the EIS.

It is noted that in this case, the proponent has already undertaken some of this work in the preparation of its earlier draft EIS that, where appropriate, can be incorporated into this document. Additional ecological and socio-economic investigations may be required to be undertaken to provide sufficient information for the EIS.

This document provides Guidelines for the drafting of the EIS based on the formal requirements for the contents of an EIS provided in: Section 102 of the EPBC Act; Schedule 4 of the EPBC Regulations.

In preparing the EIS the proponent must consider the following aims of the EIS and public review process:

- to provide a source of information from which interested individuals and groups may gain an understanding of the proposal;
- the need for the proposal;
- the alternatives to the proposal;
- the matters of National Environmental Significance (NES) (listed as controlling provisions) which it could potentially affect;
- the impacts that may occur and the measures proposed to be taken to avoid or minimise these impacts;
- to provide a forum for public consultation and informed comment on the proposal; and
- to provide a framework in which decision-makers can consider the environmental aspects of the proposal (including biophysical, cultural, social, heritage, economic, technical and other factors).

NOTE - The definition for 'environment' is as stipulated under section 528 of the EPBC Act and should be considered when any reference to the environment is made in the EIS.

The proponent must ensure that the EIS discusses compliance with the objects of the EPBC Act and the principles of ecologically sustainable development and use, as set out in the EPBC Act ([Attachment 2](#)).

The draft EIS prepared by the proponent must be approved for publication by the Environment Minister prior to it being published in accordance with the EPBC Regulations. An invitation for anyone to provide comments relating to the draft EIS within the period specified must also be published.

After the period for comment, the proponent must take account of the comments received in finalising the EIS, which is then provided to the Environment Minister. A recommendation report for the controlled action is then prepared by DSEWPAC. Following this, in accordance with Part 9, Division 1 of the EPBC Act, the Environment Minister (or his delegate) will decide whether to approve the proposal and attach any conditions required.

It is the responsibility of RTA Weipa Pty Ltd to prepare the draft EIS to identify and address, as fully as possible, all matters relevant to this proposal and its relevant impacts on matters of NES.

The EIS must provide a description of the existing environment in the area affected by the proposal. All relevant impacts on matters of NES are to be investigated and analysed. The EIS must present an evaluation of the relevant environmental impacts using an accepted risk-based methodology to:

- describe proposed measures to avoid or minimise relevant impacts, and
- offset significant residual impacts.



Particular attention must be given to relevant impacts on the environment and listed values of the Great Barrier Reef World Heritage Area, National Heritage place and the Great Barrier Reef Marine Park, listed threatened species and ecological communities, listed migratory species and the Commonwealth marine environment under the EPBC Act.

These EIS Guidelines are not necessarily exhaustive and should not be interpreted as excluding from consideration currently unforeseen matters that emerge as important from environmental studies or otherwise during the course of the preparation of the EIS.

The specific requirements to be addressed in the EIS are provided in Section 4 (*Specific Content Requirements for the Preparation of a Draft EIS*). It is on these requirements that public comment is sought, with the earlier sections of this document providing the context.

### **3.2 General Advice**

The EIS must be a standalone document. It must contain sufficient information from any studies or investigations undertaken for assessment and, where appropriate, be supported by references to previous or supplementary reports.

The EIS must enable interested stakeholders and the assessing agencies to understand the environmental consequences of the proposed development. Information provided in the EIS must be objective, clear, succinct and, where appropriate, be supported by maps, plans, diagrams or other descriptive detail. **The rationale and supporting evidence for statements made about whether or not significant impacts will occur must also be provided.**

The body of the EIS is to be written in a style that is easily understood by the general reader. Technical jargon must be avoided wherever possible and a full glossary included. Cross-referencing can be used to avoid unnecessary duplication of text. The EIS must be written so that any conclusions reached can be independently assessed. To this end all sources must be appropriately referenced.

If it is necessary to make use of material that is considered to be of a confidential nature (such as culturally sensitive information) the proponent should consult with DSEWPaC on the preferred presentation of that material, before submitting it to the Environment Minister for approval for publication. Sufficient technical information, studies or investigations necessary to support the main text in respect of relevant impacts should be included as appendices issued with the EIS. Any additional supporting documentation and relevant studies, reports or literature not normally available to the public from which information has been extracted must be summarised and referenced.

An executive summary must be provided in the EIS and made available as a standalone document for public information.



The EIS must state the criteria adopted in assessing the proposal and its potential impacts, such as:

- 1) compliance with relevant legislation, policies, standards and best practice;
- 2) community views;
- 3) maximisation of environmental benefits (if any); and
- 4) minimisation of risks and harm.

Any and all unknown variables or assumptions made in the assessment must be clearly stated and qualified. The extent to which the limitations, if any, of available information may influence the conclusions of the environmental assessment must be discussed. A full description of actions taken to produce information for the EIS, such as species surveys, must be provided.

The proponent must ensure that the personnel providing information to address this EIS have the relevant qualifications and experience in relevant fields.

The EIS must comprise the following elements:

- 1) The executive summary;
- 2) The main text of the document, written in a clear and concise manner so as to be readily understood by general readers (with reference to relevant technical information available in the appendices);
- 3) Appendices containing:
  - a) a copy of these Guidelines;
  - b) detailed technical information;
  - c) Reference list (where technical information is not provided); and
  - d) Where appropriate, technical reports can be attached in an electronic format (such as CD).
- 4) Glossary

**Section 4 of these Guidelines details the Australian Government requirements for the EIS and has been set out in a manner that *may* be adopted as the format for the EIS.** This format need not be followed where the required information can be more effectively presented in an alternative way. However, all requirements set out in the EPBC Act and EPBC Regulations (as reflected by these guidelines) must still be addressed.

## **4. Specific Content Requirements for the Preparation of a Draft Environmental Impact Statement**

An extract of Schedule 4 of the EPBC Regulation which sets out the matters that must be addressed in an EIS, is provided at [Attachment 1](#).

The following content requirements are based on these matters and considerations, with the addition of directions specific to the proposed action and the receiving environment. Requirements on presentation and consultation, that have proven valuable in communicating with members of the public and specific interest groups, are also included.

### **4.1 Executive Summary**

An executive summary that outlines the key findings of the EIS must be provided in the EIS and made available as a standalone document for public information. The executive summary must briefly:

- a) State the background and the need for the proposal;
- b) Summarise alternatives and the reasons for selecting the preferred option;
- c) State the proposed schedule for each key component of the proposal, the expected duration of each stage and the proposal as a whole;
- d) Provide a summary overview of the existing regional and local environments, including the physical, biological, social, cultural and economic environment relating to the proposal and associated activities;
- e) Summarise stakeholder consultation undertaken in preparing the EIS;
- f) Summarise the relevant impacts of the proposal on matters of NES and the social, cultural and economic environment;
- g) Summarise the key measures to avoid relevant impacts, mitigate unavoidable relevant impacts, offset significant residual impacts and monitor the effects for the proposals on matters of NES; and
- h) Provide the environmental record of the proponent.

### **4.2 Objective**

The objectives of the EIS must be clearly stated and include specific reference to EPBC Act legislative requirements.

### **4.3 General Information**

Provide a description of the background of the action including:

- a) the title of the action;
- b) the full name and postal address of the designated proponent;
- c) a clear outline of the objective of the action;
- d) the location of the action, including shipping routes;
- e) the background to the development of the action;
- f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved or proposed in the region affected by the action;
- g) the current status of the action;
- h) the consequences of not proceeding with the action or components of the action and/or the consequences of other projects (that this action relies upon) not proceeding;
- i) legislative background for the proposal, including the NES matters protected under Part 3 of the EPBC Act, and any other requirements and approvals needed under the EPBC Act, including s.160 of the Act;
- j) legislative background for the proposal under the *Environment Protection (Sea Dumping) Act 1981*;
- k) key EPBC Act matters affected by the proposal; and
- l) a map(s) at an appropriate scale showing location of the actions, land tenure, the Commonwealth marine area and the Great Barrier Reef Marine Park in relation to the action.

### **4.4 Description of the action**

The Draft EIS must contain enough information about the action and its relevant impacts to allow the Environment Minister to make an informed decision whether or not to approve under Part 9 of the EPBC Act (for the purposes of each controlling provision) the taking of the action.

- a) Provide a description of the action, including:
  - i. all the components of the action, including shipping activities;
  - ii. the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts, including illustrations or maps;
  - iii. how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts;

- iv. any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action; and
  - v. to the extent reasonably practicable, any feasible alternatives to the action, including:
    - i. if relevant, the alternative of taking no action;
    - ii. a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action, including alternatives to ocean disposal of dredged material; and
    - iv. sufficient detail to make clear why any alternative is preferred to another.
    - v. decommissioning and environmental rehabilitation of the impact areas including rehabilitation objectives.
- b) any consultation about the action, including:
- i. any consultation that has already taken place;
  - ii. proposed consultation about relevant impacts of the action;
  - iii. if there has been consultation about the proposed action including any documented response to, or result of, the consultation or references to publicly available reports which provide additional detail;
  - vi. identification of potentially affected parties, including a discussion of any communities that may be affected and a description of their views, and

In relation to proposed shipping activities as a result of the action, details of the following must be discussed:

- a) describe vessel numbers prior to commencement of the action and type, their size and speed, as well as their routes, ports to be utilised, anchorages, access and navigational arrangements;
- b) describe projected total vessel movements at each stage of the project, (including barges if applicable) including both construction and operation. Include a comparison with total shipping movements through the Great Barrier Reef World Heritage Area, National Heritage place, and Great Barrier Reef Marine Park;
- c) potential alternative locations for shipping routes;
- d) typical shipping routes to be used by vessels beyond the port in Commonwealth marine waters. These must be indicated on a map in relationship to the Great Barrier Reef World Heritage area and National Heritage place, Great Barrier Reef Marine Park, new port development at South of Embley and to the main shipping channels and any other navigational arrangements; and



- e) the potential use of the Great Barrier Reef World Heritage Area, Commonwealth marine area and Great Barrier Reef Marine Park for the offshore anchorage of ships.

#### **4.5 MNES Impact Assessment and Mitigation Measures**

This section addresses the assessment of relevant impacts on the matters of NES identified as controlling provisions for this project. This assessment is set out in two parts (Part A and Part B) which collectively provide the assessment in respect of the entirety of the project against all matters of NES.

Part A of the EIS Guidelines identifies the issues that the Environment Minister requires the proponent to address in the EIS for the actions related to the bauxite mine, port development and associated infrastructure, which are generally consistent with the *Draft Tailored EIS Guidelines for the Preparation of Draft EIS* previously provided for this project in December 2010. Part A of the EIS Guideline includes the assessment requirements specified in Section 102 of the EPBC Act and Schedule 4 of the EPBC Regulations.

Part B sets out the assessment requirements the proponent must address in relation to the impacts of the project actions not already assessed in Part A. Specifically, those requirements comprise:

- the impact assessment of the shipping activities on all six controlling provisions; and
- the assessment of the impacts of the mine, port development and associated infrastructure on the three additional controlling provisions not addressed in Part A.

The assessment of impacts to individual matters of NES (whether from Part A or Part B of this section of the Guidelines) must be addressed in an integrated manner in the EIS. A table cross-referencing information required by the guidelines and the mandatory considerations of the EPBC Act must be provided identifying relevant text in the body of the EIS.

### **PART A**

The EPBC Act controlling provisions applicable for Part A are:

- Listed threatened species and communities (section 18 and 18A)
- Listed migratory species (sections 20 and 20A), and
- Commonwealth marine areas (sections 23 and 24A).

#### **A1 Matters of National Environmental Significance (NES)**

Identify EPBC Act listed threatened species and ecological communities, listed migratory species and components of the Commonwealth marine environment that are likely to or known to be impacted by the actions associated with the mine, port and associated infrastructure. For each of those species, communities or components of the marine environment the following information must be provided:

- a) information on the distribution (including maps), ecology, seasonality and habitat preferences of the species or community;

- b) a detailed discussion of known threats;
- c) information on the conservation value of each habitat type on the site from a local and regional perspective, including the percentage representation of each habitat type on site in relation to its local and regional extent;
- d) if a population is present in the areas likely to be impacted, its size and the importance of that population from a local and regional perspective;
- e) maps showing the location of known records from the areas likely to be impacted (including those from databases and all surveys previously conducted for the proposal);
- f) maps showing the potential habitat (including critical habitat, where relevant) within the areas likely to be impacted for each of those species identified. Maps must be provided that highlight habitat components important for each of those species, such as breeding habitat, wetlands, vine forests, rock outcrops, etc;
- g) maps showing the potential habitat within the region;
- h) maps detailing regional migration pathways;
- i) information on the survey methodology used, including any limitations of the methodology and data collected for each of those species, communities or components of the marine environment, as well as a justification for the survey methodology and survey sites employed;
- j) survey methodology must follow all relevant state and Commonwealth survey guidelines current at the time of survey (e.g. the Survey Guidelines for Australia's Threatened Birds (DSEWPaC)) and demonstrate how this has been achieved;
- k) information on the scientific reliability of survey investigations and conclusions, including any and all unknown variables (if any) of available information that may influence the conclusions of the environmental assessment. This must include any assumptions or limitations of any models used to make predictions; and
- l) for all listed threatened species, marine species or listed migratory species that are believed not likely to be impacted by the action, but for which suitable habitat is present and could be impacted by the action, sufficiently detailed information must be included to demonstrate that a likely impact on the species will not occur.

## **A2 Relevant impacts**

In relation to the each of those species, communities, or components of the marine environment described in A1, provide a description of the relevant impacts (as defined by section 82 of the EPBC Act) of the mine, port development and associated infrastructure, including:

- a) a detailed assessment of the nature and extent of the likely long-term and short-term relevant impacts (direct, indirect, cumulative and consequential impacts), must include;

- i. a summary detailing the amount of habitat to be disturbed for each of those species, communities or components of the marine environment;
  - ii. description of the risks and relevant impacts (acute and chronic) of bauxite release. This discussion must include but not be limited to air quality impacts from bauxite dust;
  - iii. description of the risks and relevant impacts of pile driving and the impacts of increased marine underwater noise on marine species including the impacts from noise at varying distances from each project component (considering the environmental variables e.g. depth, wave height, bottom profile);
  - iv. relevant air quality impacts of the proposed action which are likely to impact on each of those species, communities or components of the marine environment;
  - v. describe the potential for any interaction of extreme environmental events (e.g. cyclones, flood events) that may cause the proposed action to have a relevant impact on each of those species, communities or components of the marine environment;
  - vi. relevant water quality impacts of the proposed action which are likely to impact on each of those species, communities or components of the marine environment;
  - vii. description of the potential impacts of dredging and dredged material disposal (with the inclusion of relevant technical appendices supporting the impact assessment including but not limited to hydrodynamic, sediment transport and sedimentation models reports, SAPs and sediment characterisation reports), where relevant;
  - viii. relevant impacts of anticipated illumination on matters of NES, particularly seabirds, marine turtles and other migratory species, including impacts on nesting and disorientation; and
  - ix. relevant impacts to the sea floor through anchoring, dredging and/or the placement of material/infrastructure, and sediment disturbance.
- b) a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
  - c) analysis of the significance of the relevant impacts;
  - d) any technical data and other information used or needed to make a detailed assessment of the relevant impacts, including references to publicly available information; and
  - e) information on the scientific reliability of survey investigations and conclusions, including any and all unknown variables or assumptions, if any, of available information that may influence the conclusions of the environmental assessment must be discussed.

Consideration of impacts must address consequential impacts where relevant, including local, regional, state, and national (refer to section 527E of the EPBC Act for the meaning of impact).

Indirect impacts refers to impacts which are not a direct result of the project, and may include off-site or downstream impacts, such as impacts on migratory species from changes to the hydrology of wetlands or estuarine areas located off-site.

Cumulative impacts refers to the incremental impacts of the action when combined with other past, present and reasonably foreseeable future actions (both related and unrelated).

Consideration should also be given to definitions contained in the Significant Impact Guidelines for Matters of National Environmental Significance, available on the DSEWPaC website at:

[www.environment.gov.au/epbc/publications/neg-guidelines.html](http://www.environment.gov.au/epbc/publications/neg-guidelines.html).

### **A3 Proposed avoidance and mitigation measures**

In relation to the relevant impacts described in A2, provide a description of the proposed safeguards and mitigation measures to deal with relevant impacts of the mine, port development and associated infrastructure, including:

- a) a description, and an assessment of the expected or predicted effectiveness of, the mitigation measures;
- b) particular focus must be given to discussing the mitigation measures for relevant impacts of the proposed actions on each matter of national environmental significance:
  - i. determining factors in the planning of the proposal so as to avoid damage to the environment;
  - ii. measures to avoid or minimise disturbance to fauna and flora found around and within the proposed disturbance areas for matters of national environmental significance;
  - iii. management of the dredged material during the loading of the dredged material;
  - iv. management of the dredged material disposal area(s) during disposal operations;
  - v. description of adaptive management strategies for dredging, loading and disposal, this may include any proposed monitoring (including monitoring for water quality parameters that are likely to be impacted based on baseline water quality data, coral health, seagrass health and Benthic Primary Producer Habitat (BPPH) where relevant);
  - vi. the adaptive management strategies for dredging, loading and disposal should also include the proposed methodology to verify the impact prediction, where relevant;
  - vii. monitoring of water quality and operational performance monitoring; and
  - viii. staff training, including training in relation to environmental issues.
- c) any statutory or policy basis for the mitigation measures;
- d) the cost of the key mitigation measures;
- e) an outline of an environmental management plan (or plans) that set out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action (both on and off-site), including any provisions for independent environmental auditing;



- f) the plan(s) must allow for the collection of baseline environmental data, and ongoing monitoring, management and mitigation for the duration of the action and subsequent mine rehabilitation, so impacts on matters of NES can be adequately measured;
- g) the plan(s) must also detail how any management strategy or monitoring program would influence environmental practices on site, including trigger values and response measures where appropriate;
- h) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program; and
- i) a consolidated summary list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.

## **PART B**

Part B sets out the assessment requirements that the proponent must address in relation to the impacts of the entirety of the project action. Specifically, those requirements incorporate the assessment of the impacts of the mine, port development, associated infrastructure, and shipping activities, for all six of the controlling provisions for the project, to the extent those impacts are not addressed in Part A. The applicable controlling provisions are as follows:

- World Heritage properties (sections 12 and 15A);
- National Heritage places (sections 15B and 15C);
- Listed threatened species and ecological communities (sections 18 and 18A);
- Listed migratory species (sections 20 and 20A);
- Commonwealth marine areas (sections 23 and 24A); and
- Great Barrier Reef Marine Park (sections 24B and 24C).

### **B1 Matters of National Environmental Significance (NES)**

For each matter of NES for Part B that is likely or known to occur in areas that will be or are likely to be impacted by the proposed actions the following must be provided:

- a) A description of the Commonwealth marine environment and identification of those aspects of the Commonwealth marine area likely to be impacted by the proposal, including but not limited to information (and with regard to secondary source information) on listed threatened species and migratory species and any other component of the commonwealth marine environment that is likely to be impacted by the action;
- b) Description of biota/biotic habitats, including a map of marine/intertidal habitats(including information on seasonal fluctuations of seagrass prevalence) likely to be impacted by the action;

- c) Identify, describe and map reef communities in areas likely to be impacted by the action, including information on diversity (genus level or lowest taxonomic level identifiable) and abundance, and on those species supported by the reef communities;
- d) Identify, describe and map, where relevant, soft sediment fauna communities (e.g. infauna, benthic invertebrates) in areas likely to be significantly impacted by the proposed increase in shipping activities, including information on diversity (family level) and abundance; and
- e) A description of the Great Barrier Reef Marine Park, National Heritage Place and World Heritage Property values, and their location compared to action.

## **B2 Relevant impacts**

In relation to the matters described in B1, provide a description of the relevant impacts (as defined by section 82 of the EPBC Act), including:

- a) a description of the relevant impacts of the action including impacts of shipping activities on listed threatened species and listed migratory species from shipping transit to and from the proposed new port development (and associated infrastructure);
- b) a detailed assessment of the nature and extent of the likely short term and long term relevant impacts;
  - i. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
  - ii. analysis of the significance of the relevant impacts; and
  - iii. of shipping activities on matters of NES from shipping transit from the proposed new port development.
- c) any technical data and other information used or needed to make a detailed assessment of the relevant impacts, including references to publicly available information. In regard to increased shipping volumes (including barges and queuing vessels), relevant impacts of the following must be specifically addressed:
  - i. potential for introduction of marine invasive species from increased shipping rates;
  - ii. potential increase in ship groundings and related relevant impacts;
  - iii. potential increased risk of vessel collisions and related relevant impacts;
  - iv. potential for increased vessel strike to marine species;
  - v. ballast water management arrangements - including Australian Quarantine and Inspection Service (AQIS) mandatory arrangements and agency contingency planning;
  - vi. management of ship waste, in particular quarantine waste, domestic garbage, oil and sewage;

- vii. potential risk of marine pollutant spills and their management, and based on a risk assessment which identifies any considerable risk, the most likely scenarios (eg geographic areas, pollutant types and relative amounts) for a shipping incident and includes stochastic modelling for those areas including likely worst case scenario for each high risk geographic area,;
- viii. potential impacts on existing shipping activity;
- ix. impacts of increased marine underwater noise on marine species from shipping activities, including trans-shipping;
- x. description of the risks and relevant impacts (acute and chronic) from the release of cargo material (bauxite) from the proposed actions to the environment;
- xi. relevant impacts to the sea floor through anchoring and/or direct placement of material/infrastructure, sediment disturbance. If relevant, the GBRMP zone of likely seabed disturbance must be identified including impacts on other users of the Great Barrier Reef Marine Park; and
- xii. additional marine transport issues that must be considered include the potential of the proposal to impact on domestic commercial and recreational vessels.

*Cumulative impacts:*

In relation to cumulative impacts, the EIS must identify and address cumulative impacts (refer to section 527E of the EPBC Act for the meaning of impact), where relevant project impacts are in addition to existing impacts of other activities (including known current and proposed future shipping activities by the proponent and other proponents in the region and vicinity).

Shipping activities

The contribution of the proposed shipping activities by the proponent to the cumulative impact of shipping on matters of NES should be assessed in accordance with a risk based approach, based on a documented risk assessment. The risk assessment should include:

- a) known and proposed future shipping activities by the proponent, referencing the level of shipping activities by the proponent prior to and following commencement of the Project; and
- b) other proponents shipping activities and known impacts on ecosystem resilience and matters of NES.

In conducting the risk assessment, key information sources and indicators for assessing change and impact must be described. The assessment must include discussion and analysis of the cumulative impacts of shipping activities on the integrity and Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

The EIS must identify if existing impacts on the environment and matters of NES will be significantly amplified by the increase in shipping activities arising from the Project in combination with the impacts of other projects.

Where the risk assessment demonstrates that the Project's contribution to the cumulative impacts of shipping is significant, the EIS may also identify and address the cumulative effects the increase in shipping activities arising from the Project may have in the context of:

- a) existing or planned shipping activities, that will have or are likely to effect the same matters of NES; and
- b) other projects (including tourism and industrial related) both directly and indirectly related to the shipping activities in a regional context.

### *Consequential Impacts*

Consideration of impacts must address consequential impacts where relevant, including local, regional, state, and national (refer to section 527E of the EPBC Act for the meaning of impact). Where relevant, the EIS must address consequential impacts on:

- a) the World Heritage values of the Great Barrier Reef World Heritage property;
- b) the National Heritage values of the Great Barrier Reef National Heritage place;
- c) the environment and values of the Great Barrier Reef Marine Park;
- d) listed threatened species and ecological communities;
- e) listed migratory species; and
- f) the Commonwealth marine environment.

## **B3 Proposed avoidance and mitigation measures**

In relation to the relevant impacts described in B2, provide a description of the proposed safeguards and mitigation measures to deal with relevant impacts of the action on matters of NES, including:

- a) a description, and an assessment of the expected or predicted effectiveness of, the mitigation measures;
- b) any statutory or policy basis for the mitigation measures;
- c) the cost of the key mitigation measures;
- d) an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
- e) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program;
- f) a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent; and



- g) measures to avoid or minimise damage to the Great Barrier Reef World Heritage Area and (where applicable) the estuary environment, National Heritage Values of the Great Barrier Reef, the environment of the Great Barrier Reef Marine, and the Commonwealth marine area as a result of the proposed shipping activities.

#### **4.5 Other approvals and conditions**

Provide information on any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action. This must include:

- a) details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:
  - i. what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy; and
  - ii. how the scheme provides for the prevention, minimisation and management of any relevant impacts;
- b) a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions that apply to the action;
- c) a statement identifying any additional approval that is required; and
- d) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

#### **4.6 Proposed offset measures**

Environmental offsets broadly means measures to compensate for the adverse residual impacts of an action on the environment. More specifically, offsets are measures to compensate for significant environmental impacts that cannot be adequately reduced through avoidance or mitigation.

Offsets do not reduce the impacts of an action. Instead they provide an environmental counterbalance to the significant impacts that may remain after avoidance and mitigation measures has been undertaken. These remaining impacts are termed 'residual impacts'. Further information on offsets can be found in the Australian Government's framework on the use of environmental offsets ('offsets') under the EPBC Act, Titled "*Consultation Draft, Environmental Offsets Policy August 2011*".

The EIS must discuss in detail plans to offset any significant residual impacts of the proposal. The proposed offset strategy must address any significant residual impacts on each matter of national environmental significance individually, and:

- a) have regard to the scale and intensity of impact from the development on the site;
- b) demonstrate how the offset will achieve long-term conservation outcomes for matters of NES;

- c) contain long-term and certain conservation outcomes for matters of NES; and
- d) consider the approach of the relevant state or territory.

#### **4.7 Social and Economic Matters**

Section 136(1)(b) of the EPBC Act requires the Minister to consider economic and social matters when deciding whether to grant approval to the proposed action under Part 9 of the EPBC Act. The requirements under s136(1)(b) encompass a broader range of matters that may be considered than those addressed during the assessment of the potential impacts of a controlled action.

Accordingly, information must be provided in the EIS on the broad social and economic impacts (positive or negative) of the proposal for the purposes of the Part 9 decision on approval.

As the matters protected by the controlling provisions for this action include "the environment", there is the potential for an overlap between the information provided in response to this, and the information requested in the main body of the Guidelines in relation to social, economic and cultural aspects within the definition of the environment. The latter set of information need not be repeated if it will be contained in the body of the EIS.

The EIS must identify and describe the following uses that exist in areas likely to be impacted by the action and, assess any impacts on those users where the impacts are likely to be high, including:

- a) social, cultural and heritage uses during each stage of the proposal;
- b) current and projected commercial, recreational and scientific use, including any changes in visitation patterns;
- c) commercial and recreational fishing; and
- d) traditional use activities.

In relation to shipping activities describe local and regional economic, social and built context, including historical and future trends, (e.g. Australian Bureau of Statistics and Great Barrier Reef Outlook Report 2009) in which this project is proposed.

#### **4.8 Environmental record**

Provide details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- a) the person proposing to take the action; and
- b) for an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework.

Information relating to the persons environmental record may also include any accreditations (for example ISO 14001), environmental awards, and other recognition for environmental performance.

#### **4.9 Guidelines that must be utilised in the EIS**

The following guidelines must be utilised in the EIS:

- a) National Assessment Guidelines for Dredging 2009;
- b) Annex 2 1996 Protocol to the Convention on the prevention of marine pollution by dumping of wastes and other matter 1972 (the London Protocol); and
- c) Waste Specific Guidelines for Assessment of Dredged Material. International Maritime Organisation.

#### **4.10 Conclusion**

An overall conclusion as to the environmental acceptability of the proposal must be provided, including discussion on compliance with the objectives and requirements of the EPBC Act including the principles of ecological sustainable development (refer Attachment 2). A summary of reasons justifying undertaking the proposal in the manner proposed must also be outlined. The conclusion must highlight measures proposed or required to avoid, mitigate or offset any unavoidable significant impacts on matters of NES.

#### **4.11 Information sources**

For information given in the EIS, the EIS must state:

- a) the source of the information;
- b) how recent the information is;
- c) how the reliability of the information was tested;
- d) what uncertainties (if any) are in the information;
- e) the qualifications and experience of the study team and any specialist consultants; and
- f) the parts of the EIS each individual was responsible for, or had input into.

A copy of all data and the sampling methodologies must be made available to the DSEWPaC for the purpose of peer review on receipt of a written request from DSEWPaC. In making this statement, the sampling methodology (including time samples were collected, replication, size of samples, etc) should be specified in the relevant sections where data has been collected.

#### **4.12 Reference list**

The reference list provided in the EIS is to be accurate and concise and include the address and date accessed of any internet pages used as data sources.

#### **4.13 Appendices and Glossary**

Detailed technical information studies or investigations necessary to support the main text of the EIS in respect to relevant impacts, but not suitable for inclusion in the main text must be included as appendices; for example, detailed technical or statistical information, maps, risk assessment, baseline data, supplementary reports etc or other publicly available information referenced. Where appropriate, technical reports can be attached in an electronic format (such as CD).

A copy of the Guidelines must also be included.

A glossary defining technical terms and abbreviations used in the text must be included to assist the general reader.

## **ATTACHMENT 1:**

### **MATTERS THAT MUST BE ADDRESSED IN AN EIS (SCHEDULE 4 OF THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION REGULATIONS 2000)**

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#### **1. General information**

1.01 The background of the action including:

- (a) the title of the action;
- (b) the full name and postal address of the designated proponent;
- (c) a clear outline of the objective of the action;
- (d) the location of the action;
- (e) the background to the development of the action;
- (f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action;
- (g) the current status of the action; and
- (h) the consequences of not proceeding with the action.

#### **2. Description**

2.01 A description of the action, including:

- (a) all the components of the action;
- (b) the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;
- (c) how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts;
- (d) relevant impacts of the action;
- (e) proposed safeguards and mitigation measures to deal with relevant impacts of the action;
- (f) any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action;
- (g) to the extent reasonably practicable, any feasible alternatives to the action, including:
  - (i) if relevant, the alternative of taking no action;
  - (ii) a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action;
  - (iii) sufficient detail to make clear why any alternative is preferred to another;
- (h) any consultation about the action, including:
  - (i) any consultation that has already taken place;
  - (ii) proposed consultation about relevant impacts of the action;
  - (iii) if there has been consultation about the proposed action — any documented response to, or result of, the consultation;
- (i) identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.

### **3. Relevant impacts**

3.01 Information given under paragraph 2.01 (c) must include:

- (a) a description of the relevant impacts of the action;
- (b) a detailed assessment of the nature and extent of the likely short term and long term relevant impacts;
- (c) a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
- (d) analysis of the significance of the relevant impacts; and
- (e) any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

### **4. Proposed safeguards and mitigation measures**

4.01 Information given under paragraph 2.01 (d) must include:

- (a) a description, and an assessment of the expected or predicted effectiveness of, the mitigation measures;
- (b) any statutory or policy basis for the mitigation measures;
- (c) the cost of the mitigation measures;
- (d) an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
- (e) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program; and
- (f) a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.

### **5. Other Approvals and Conditions**

5.01 Information given under paragraph 2.01 (e) must include:

- (a) details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:
  - (i) what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy;
  - (ii) how the scheme provides for the prevention, minimisation and management of any relevant impacts;
- (b) a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the Act), including any conditions that apply to the action;
- (c) a statement identifying any additional approval that is required; and
- (d) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

## **6. Environmental record of person proposing to take the action**

6.01 Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- (a) the person proposing to take the action; and
- (b) for an action for which a person has applied for a permit, the person making the application.

6.02 If the person proposing to take the action is a corporation — details of the corporation's environmental policy and planning framework.

## **7. Information sources**

7.01 For information given the EIS must state:

- (a) the source of the information; and
- (b) how recent the information is; and
- (c) how the reliability of the information was tested; and
- (d) what uncertainties (if any) are in the information.

## **ATTACHMENT 2:**

### **OBJECTIVES OF THE *ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999***

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#### **3. Objects of the Act**

- (a) to provide for the protection of the environment, especially those aspects of the environment that are matters of National Environmental Significance
- (b) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources
- (c) to promote the conservation of biodiversity
- (d) to promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples
- (e) to assist in the co-operative implementation of Australia's international environmental responsibilities
- (f) to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- (g) to promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.

#### **3A. Principles of Ecologically Sustainable Development**

The following principles are principles of ecologically sustainable development:

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- (c) the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;
- (e) improved valuation, pricing and incentive mechanisms should be promoted.