



# LINDEMAN GREAT BARRIER REEF RESORT PROJECT ENVIRONMENTAL IMPACT STATEMENT

## APPENDIX A - TERMS OF REFERENCE

*Addendum: This EIS was initially prepared assuming that the safe harbour was to be part of the Lindeman Great Barrier Reef Resort Project. With the commencement of the Great Barrier Reef Marine Park Authority's (GBRMPA) Dredging Coral Reef Habitat Policy (2016), further impacts on Great Barrier Reef coral reef habitats from yet more bleaching, and the recent impacts from Tropical Cyclone Debbie, the proponent no longer seeks assessment and approval to construct a safe harbour at Lindeman Island. Instead the proponent seeks assessment and approval for upgrades to the existing jetty and additional moorings in sheltered locations around the island to enable the resort's marine craft to obtain safe shelter under a range of wind and wave conditions. Accordingly, remaining references to, and images of, a safe harbour on various figures and maps in the EIS are no longer current.*

# **Terms of reference for an environmental impact statement**

**Lindeman Great Barrier Reef Resort project**

**August 2015**

**The Department of State Development is responsible for driving Queensland's economic prosperity and championing the interests of business and industry.**

## Copyright

This publication is protected by the *Copyright Act 1968*.

## Licence



This work is licensed to the Department of State Development under a Creative Commons Attribution (CC BY) 3.0 Australia licence. To view a copy of this licence, visit:  
<http://www.creativecommons.org/licenses/by/3.0/au/>

**You are free to copy, communicate and adapt this publication, as long as you attribute it as follows:**

© State of Queensland, Department of State Development, August 2015.



The Queensland Government is committed to providing accessible services to Queenslanders of all cultural and linguistic backgrounds. If you have difficulty understanding this publication and need a translator, please call the Translating and Interpreting Service (TIS National) on telephone 131 450 and ask them to contact the Queensland Department of State Development on (07) 3452 7009.

## Disclaimer

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within. To the best of our knowledge, the content was correct at the time of publishing.

Any references to legislation are not an interpretation of the law. They are to be used as a guide only. The information in this publication is general and does not take into account individual circumstances or situations. Where appropriate, independent legal advice should be sought.

Copies of this publication are available on our website at [www.statedevelopment.qld.gov.au](http://www.statedevelopment.qld.gov.au) and further copies are available upon request to:

Department of State Development  
PO Box 15009 City East, Queensland 4002.  
100 George Street Brisbane Qld 4000 (Australia)

Phone: 13QGOV (137468)  
Fax: 07 3405 1122  
Email: [info@dsd.qld.gov.au](mailto:info@dsd.qld.gov.au)  
Web: [www.statedevelopment.qld.gov.au](http://www.statedevelopment.qld.gov.au)



# Contents

<b>Part A. About these terms of reference</b>	<b>2</b>
1. Statutory basis .....	2
2. Accredited process for controlled actions under Commonwealth legislation .....	2
3. Deemed Application under the Great Barrier Reef Marine Park Act 1975.....	2
4. EIS guidelines .....	3
5. More information .....	3
<b>Part B. Content of the EIS</b>	<b>3</b>
6. General approach .....	3
7. Mandatory requirements of an EIS .....	3
8. Further requirements of an EIS .....	4
9. Executive summary .....	5
10. Introduction .....	5
Project proponent.....	5
The environmental impact assessment process .....	5
Project approvals process .....	6
11. Project description.....	6
Proposed development .....	6
Site description.....	7
Climate.....	8
Proposed construction and operations .....	8
12. Assessment of critical matters .....	9
Tenure and land use .....	9
Coastal and marine environment.....	11
Flora and fauna .....	13
Hazards, health and safety.....	14
13. Assessment of routine matters .....	16
Air .....	16
Social and economic .....	17
Noise and vibration.....	18
Water quality .....	19
Water resources.....	20
Biosecurity .....	22
Waste management .....	22
Cultural heritage.....	23
Infrastructure .....	23
Transport.....	24
14. Content of the EIS for matters of national environmental significance .....	24
Background and description of the action.....	26
World Heritage properties.....	27
Great Barrier Reef Marine Park.....	27
National Heritage places .....	28
Listed threatened species and communities .....	29
Conclusion .....	30
15. Appendices to the EIS.....	30
<b>Acronyms and abbreviations</b>	<b>31</b>

## Part A. About these terms of reference

### 1. Statutory basis

- 1.1. The Coordinator-General has declared the Lindeman Great Barrier Reef Resort project to be a 'coordinated project for which an environmental impact statement (EIS) is required' under section 26(1)(a) of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). This declaration initiates the statutory environmental impact assessment procedure of Part 4 of the SDPWO Act, which requires a proponent to prepare an EIS for the project.
- 1.2. These terms of reference (TOR) set out the matters the proponent must address in an EIS for the project and must be approved by the Coordinator-General under section 30 of the SDPWO Act.

### 2. Accredited process for controlled actions under Commonwealth legislation

- 2.1. On 7 May 2015, the Commonwealth Minister for the Environment determined the Lindeman Island Great Barrier Reef Resort project a 'controlled action' under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act), due to the potential impacts on matters of national environmental significance (MNES) (reference number EPBC2015/7461).
- 2.2. The EIS process has been accredited under the Bilateral Agreement for the assessment of the project under the EPBC Act, hence the EIS must state the controlling provisions for the project and describe the particular aspects of the environment that led to the controlled action decision.
- 2.3. The MNES assessment must be described and illustrated in a stand-alone report in the EIS that fully addresses the matters relevant to the controlling provisions. Requirements for MNES are set out on pages 24–30 of this TOR.

### 3. Deemed application under the *Great Barrier Reef Marine Park Act 1975*

- 3.1. As a component of the project involves an activity that requires a permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) and Great Barrier Reef Marine Park Regulations 1983 (Cwlth) (GBRMP Regulations), the referral under the EPBC Act is taken to be an application under the GBRMP Regulations.
- 3.2. If the Commonwealth Minister makes a decision to approve the action in the referral under the EPBC Act, the Great Barrier Reef Marine Park Authority will make a decision in relation to the deemed application.
- 3.3. For information about permit applications under the GBRMP Act, visit <http://www.gbrmpa.gov.au/zoning-permits-and-plans/environmental-assessment-management/environmental-impact-assessment-process>

## 4. EIS guidelines

- 4.1. These TOR should be read in conjunction with *Preparing an environmental impact statement: Guideline for proponents*, which explains the following:
- participants in the EIS process
  - consultation requirements
  - EIS format and copying requirements.
- 4.2. In addition, subject-specific policies and guidelines are referenced throughout this TOR; refer to Appendix 1 for a list of these policies and guidelines.

## 5. More information

- 5.1. For information about the project or the EIS process conducted under the SDPWO Act, visit [www.statedevelopment.qld.gov.au/lindeman](http://www.statedevelopment.qld.gov.au/lindeman)

# Part B. Content of the EIS

## 6. General approach

- 6.1. For the purposes of the EIS process, 'environment' is defined in Schedule 2 of the SDPWO Act and includes social and economic matters. For the purposes of the GBRMPA Act application, 'environment' has the meaning as in Section 528 of the EPBC Act.
- 6.2. The EIS should give priority to the critical matters associated with the project (specified in section 12 of this TOR).
- 6.3. The detail at which the EIS deals with matters relevant to the project should be proportional to the scale of the impacts on environmental values. When determining the scale of an impact, consider its intensity, duration, cumulative effect, irreversibility, the risk of environmental harm, management strategies and offsets provisions. The level of detail should also be targeted at the subsequent approvals sought as a direct result of the EIS.

## 7. Mandatory requirements of an EIS

- 7.1. For all the relevant matters, the EIS must identify and describe the environmental values that must be protected including economic and social values. Environmental values are specified in the *Environmental Protection Act 1994* (EP Act), the *Environmental Protection Regulation 2008* (EP Regulation), environmental protection policies (EPPs) and relevant guidelines.
- 7.2. The assessment of impacts on environmental values should cover both the short and long terms and state whether any relevant impacts are likely to be irreversible.
- 7.3. Provide all available baseline information including seasonal variation relevant to the assessment of the EIS. Provide details about the quality of the information provided, in particular: the source of the information; how recent the information is; how the reliability of the information was tested; and any uncertainties in the information. Identify information gaps and additional baseline information required to address these information gaps.

- 7.4. Provide detailed strategies on all critical matters for the protection, or enhancement of all relevant environmental values in terms of outcomes and possible conditions that can be measured and audited. In general, the preferred hierarchy for managing likely impacts is: (a) to avoid; (b) to minimise/mitigate; and (c) if necessary and possible, to offset.
- 7.5. Impact minimisation measures should include ongoing monitoring and proposals for an adaptive management approach, as relevant, based on monitoring. The proposed measures should give confidence that, based on current technologies, the impacts can be effectively avoided or minimised to an acceptable level.
- 7.6. Each matter assessed in the EIS (as described in sections 12, 13 and 14 of this TOR) should include a concise summary of the potential impacts of the project and the measures proposed by the proponent to avoid, minimise, mitigate and/or offset those impacts.
- 7.7. Present feasible alternatives of the project's configuration (including individual elements), location and tenure arrangements that may improve environmental outcomes. Discuss the reasons for selecting the preferred option/s and rejecting alternatives. Discuss the consequences of not proceeding with the project or individual elements.
- 7.8. Assess the extent to which the construction and operation of the project meets all policy, statutory and regulatory requirements of Commonwealth, State and Local government. Demonstrate that the project and its predicted outcomes are consistent with all legislation, government plans, strategies, policies and guidelines that apply up to and until the time that the final EIS is accepted by the Coordinator-General. Subsequently, the Coordinator-General's assessment and conditions will address all government policies and regulatory frameworks applicable at that time.
- 7.9. Assess the project against the principles of ecological sustainable development as specified in applicable legislation. For the purposes of the assessment under the GBRMP Act, address the principles of ecologically sustainable use and address the assessment requirements of the GBRMP Regulations 88Q and 88R, relevant policies and guidelines.
- 7.10. An appropriate public consultation program is essential to the impact assessment process. The proponent should consult with Local, State and Commonwealth government agencies, and potentially affected local communities and stakeholders.
- 7.11. The EIS should describe the consultation that has taken place and adequately address comments from the community and agencies. Describe how the comments from the community and agencies have been incorporated into the design and outcomes of the project.
- 7.12. Include, as an appendix, a public consultation report detailing how the public consultation plan was implemented, and the results.

## **8. Further requirements of an EIS**

- 8.1. The assessment and supporting information should be sufficient for the administering authorities to decide whether an approval should be granted. Where applicable, sufficient information should be included to enable approval conditions to be decided.

- 8.2. To the extent of the information available, the assessment should predict the cumulative impact<sup>1</sup> of the project on environmental values over time, including direct, indirect and consequential impacts. The EIS should also outline ways in which the cumulative impact assessment and management could subsequently be progressed further on a collective basis. This will inform the Coordinator-General's assessment and decision on the EIS and the setting of conditions.
- 8.3. Include a consolidated description of all the proponent's commitments to implement management measures (including monitoring programs). Should the project proceed, these should be able to be carried over into the approval conditions as relevant.
- 8.4. Provide all geographical coordinates throughout the EIS in latitude and longitude against the Geocentric Datum of Australia 1994 (GDA94).

## 9. Executive summary

- 9.1. The executive summary should describe the project, the most important and preferred aspects and environmental management options relating to the project in a concise and readable form. It should use plain English, avoid jargon, be written as a stand-alone document and be structured to follow the EIS. It should be easy to reproduce and distribute on request to those who may not wish to read or purchase the whole EIS.

## 10. Introduction

- 10.1. Clearly explain the function of the EIS, why it has been prepared and what it sets out to achieve. Include an overview of the structure of the document.

### Project proponent

- 10.2. Describe the following:
  - (a) the designated proponent's full name, postal address and ABN, if relevant (including details of any joint venture partners)
  - (b) the nature and extent of business activities
  - (c) proponent's experience and capacity to satisfactorily develop and manage the project
  - (d) proponent's environmental record, including a list of any breach of relevant environmental laws during the previous ten years
  - (e) proponent's environmental, health, safety and community policies.

### The environmental impact assessment process

- 10.3. The EIS must provide an outline of the environmental impact assessment process, including the role of the EIS in the Coordinator-General, Commonwealth Minister for the Environment and Great Barrier Reef Marine Park Authority decision making processes. The information in this section is required to ensure readers are informed of the process to be followed and are aware of any opportunities for input and participation.

---

<sup>1</sup> Cumulative impact is defined as 'combined impacts from all relevant sources (developments and other activities in the area)'.



- 10.4. The EIS should inform the reader how and when properly made public submissions on the EIS will be addressed and taken into account in the decision-making process.

## Project approvals process

- 10.5. Provide an outline of the approvals required to enable the project to be constructed and operated. Explain how the environmental impact assessment process (and the EIS itself) informs the issue of the leases/licences/permits/consents required by the proponent before construction can commence. Provide a flow chart indicating the key approvals and opportunities for public comment.
- 10.6. The State Development Assessment Provisions (SDAP) prescribed in the Sustainable Planning Regulation 2009 set out the matters of interest to the State for development assessment where the chief executive of the *Sustainable Planning Act 2009* (SPA) is the assessment manager for development applications. If the proponent intends to satisfy the information requirements of future development assessment decisions under SDAP for any component of the project during this coordinated project EIS process, the material provided in accordance with sections 12–14 of this TOR should be sufficient to permit those assessments to be completed for that project component. Further information on SDAP requirements can be accessed from [www.statedevelopment.qld.gov.au/development-applications/sdap.html](http://www.statedevelopment.qld.gov.au/development-applications/sdap.html)
- 10.7. In deciding whether or not to grant a permission in relation to an application under the GBRMP Act, the Great Barrier Reef Marine Park Authority will consider regulation 88Q and 88R of the GBRMP Regulations. The proponent must address these assessment requirements within the EIS.

## 11. Project description

### Proposed development

- 11.1. The EIS must describe and illustrate at least the following specific information about the proposed project:
- (a) project title
  - (b) project description, including all project components and activities that are to be assessed as part of the EIS process
  - (c) project objectives
  - (d) expected capital expenditure
  - (e) rationale for the project
  - (f) regional and local context of the project's footprint and impact area (with maps at suitable scales)
  - (g) relationship to other major projects and/or developments (of which the proponent should reasonably be aware)
  - (h) workforce numbers to be employed by the project during its various phases
  - (i) where personnel would be accommodated and how they would be transported
  - (j) proposed construction staging and likely schedule of works.

## Site description

- 11.2. Provide real property descriptions of the project land and adjacent properties; any easements; any tenures; and identification number of any lease for the project land that is subject to the application. Key transport, state-controlled roads, rail, air, port/sea and other infrastructure or services in the region and to the site should be described and mapped.
- 11.3. Describe and illustrate the topography of the project site and surrounding area, and highlight any significant features shown on the maps. Include and name lakes, dams, creeks, beaches, islands and any other named features. Maps should include a scale, and have contours at suitable increments relevant to the scale, location, potential impacts and type of project, shown with respect to Australian Height Datum (AHD).
- 11.4. Describe and illustrate specific information about the project including the precise location of the proposed development in relation to designated and protected areas such as erosion prone areas, the coastal management district, Marine Park boundaries, fish habitat areas, World Heritage Area, Lindeman Islands National Park (National Park), and the Whitsundays Plan of Management (2008) planning area.
- 11.5. Maps at suitable scales must be provided showing the location of the project footprint and impact areas, and in particular:
  - (a) the location and boundaries of established and proposed land tenures, to which the project area is and would be subject to, including adjoining land tenure and legislative boundaries such as the Great Barrier Reef World Heritage Area boundary, Great Barrier Reef Marine Park (Commonwealth) boundary, Great Barrier Reef Coast Marine Park boundary (State) and National Park boundary
  - (b) illustrate the existing environment in relation to the location of the proposed marina
  - (c) the location of the Highest Astronomical Tide, Mean High Water Spring, Mean Low Water, and the Lowest Astronomical Tide
  - (d) the location of existing infrastructure on the site
  - (e) the location of existing Marine Park infrastructure, such as existing moorings, reef protection markers and public jetty
  - (f) existing facilities and infrastructure in the National Park such as walking trails, campgrounds, day use areas, toilets and lookouts
  - (g) the location of development necessarily occurring as a consequence of approval of the project, including excavations, dredging, stockpiles, areas of fill, including all services infrastructure, plant locations, water storages, buildings, bridges and culverts
  - (h) fire prone areas of the project area and adjacent National Park
  - (i) the location of any proposed buffers surrounding the working areas; and lands identified for conservation, either through retention in their current natural state or to be rehabilitated.

- 11.6. Where relevant, describe and map in plan and cross-sections the geology and landforms, including catchments, of the project area. Show geological structures, such as aquifers, faults and economic resources (such as agricultural products) that could have an influence on, or be influenced by, the project's activities.
- 11.7. Where relevant, describe, map and illustrate soil types and profiles of the project area at a scale relevant to the proposed project. Identify soils that would require particular management due to wetness, erosivity, depth, acidity, salinity or other features.
- 11.8. Provide all spatial data presented in the EIS in appropriate electronic form such as shape files.
- 11.9. Plans and drawings provided must be detailed enough to enable the Coordinator-General and advisory agencies to adequately assess the EIS.

## **Climate**

- 11.10. Describe the site's climate patterns that are relevant to the environmental assessment, with particular regard to discharges to water and air and the propagation of noise. Climate information should be presented in a statistical form including long-term averages and extreme values, as necessary.

## **Proposed construction and operations**

- 11.11. Describe the following information about the proposal for both land and marine based activities:
  - (a) all demolition and other pre-construction activities (e.g. marine intakes or outfalls, vegetation clearing, dredging, site access, interference with watercourses and floodplain areas, including wetlands)
  - (b) the proposed demolition and construction methods, associated equipment and techniques and storage locations
  - (c) location, concept designs and capacity of water supply, telecommunications, power generation and transmission infrastructure
  - (d) hours of operation for proposed construction works, including night-time works
  - (e) the sequencing and staging of activities
  - (f) the capacity of high-impact plant and equipment, their chemical and physical processes, and chemicals or hazardous materials to be used
  - (g) the known locations of new or altered works and structures and infrastructure necessary to enable the construction and operation of the development
  - (h) materials, methods and timing for marina construction
  - (i) any activity that is a prescribed environmentally relevant activity
  - (j) location of quarry operations the project may source materials from
  - (k) the range of land uses and site layout
  - (l) built form and design specifics
  - (m) operation detail (e.g. hours of operation for project components), including an outline of recreational and commercial tourism activities that will be offered to

- resort guests, including boats, vessels, guided tours, reef appreciation activities, activities in the National Park
- (n) the vegetation clearing footprint of the development
- (o) the commissioning process including landscaping and the rehabilitation of affected areas after construction
- (p) management structure of final development (e.g. body corporate)
- (q) infrastructure requirements (e.g. ports, navigation channels, roads, electricity, telecommunications, sewerage)
- (r) location and scale of parking requirements
- (s) expected increases in marine vessel traffic, anchoring and mooring.

## 12. Assessment of critical matters

- 12.1. This section sets out the scope of critical matters that should be given detailed treatment in the EIS. A critical matter is an aspect of the proposal that is reasonably expected to have one or more of the following characteristics:
- (a) a high or medium probability of causing serious or material environmental harm or a high probability of causing an environmental nuisance
  - (b) considered contentious in the public domain, for example, has been the subject of extensive media coverage and/or there is a public perception that an activity has the potential to cause serious or material environmental harm or an environmental nuisance (regardless of the likelihood of occurrence).
- 12.2. The final scope of critical matters will be determined by the Coordinator-General when finalising the TOR. In the course of preparing the EIS, information may become available that warrants a change of scope.

## Tenure and land use

### Objectives

Development should be designed and operated to:

- (a) improve environmental outcomes
- (b) contribute to community wellbeing
- (c) contribute to social, economic and environmental sustainability.

### Tenure

- 12.3. Detail the proposed tenure change arrangements for the project lease area, the National Park and Great Barrier Reef Coast Marine Park.
- 12.4. Provide sufficient information to demonstrate and support the need for the proposed revocation of part of the National Park, which is subject to the *Nature Conservation Act 1992* (NC Act) statutory provisions.



- 12.5. Detail the net overall conservation benefit to the Queensland Parks and Wildlife Service (QPWS) managed protected area as a result of the proposed revocation, which may include conservation values, management of National Park and proposed compensation (e.g. cash payment, land exchange or a combination of the two) for the loss of National Park as outlined in the *Operational procedure for Revocation of QPWS managed areas*.
- 12.6. Detail the proposed surrender of perpetual lease areas for dedication as National Park (as part of a compensation package proposal), provide details of the type and condition of environmental values and describe any proposed revegetation works to further enhance values within the perpetual lease areas to be surrendered.
- 12.7. Provide sufficient information to demonstrate and support the need for the proposed marina.
- 12.8. Provide sufficient information to meet the permission requirements for the proposed marina under the *Queensland Marine Parks Act 2004*, including section 10 and 11 of the Marine Parks Regulation 2006.
- 12.9. Demonstrate that the marina and any other relevant elements of the proposal are consistent with the objectives of the Conservation Park Zone under the Great Barrier Reef Marine Park Zoning Plan 2003.
- 12.10. If consistency cannot be demonstrated, provide an assessment of options to address any identified marine park management limitations (e.g. redesign, revocation, zoning amendment) and provide sufficient information to demonstrate the appropriateness of any preferred option.
- 12.11. Identify Native Title rights and interests and the process for addressing Native Title rights and interests
- 12.12. Provide sufficient information to assist an assessment under the *Land Act 1994* (Land Act), to support the proposed tenure arrangements on the island and for structures in the Marine Park, which should include:
  - (a) an assessment of the proposal's consistency with the objectives of the Land Act
  - (b) information to enable the minister administering the Land Act to assess and decide the most appropriate use, tenure, management of State land.
- 12.13. a clear statement defining any proposed local government or State agency responsibility in the continuing maintenance related to infrastructure (for example the existing jetty) or activities (for example activities within the National Park or on the beaches near the resort) established within or outside the proposed lease areas. Provide information to demonstrate how the project will maintain or enhance general public access to or along the foreshore, the Marine Park and to the National Park.
- 12.14. Provide sufficient survey data to define accurately (0.5 metre) the location of the lease boundaries and the development area or areas set aside for conservation purposes, and to allow correction of the Digital Cadastre Database (DCDB) if required.
- 12.15. Identify any proposed lease conditions for the proposed lease areas.

## Land use

- 12.16. Explain how the proposal is consistent with or varies from the following plans and policies:
- (a) State Planning Policy (SPP)
  - (b) Mackay, Isaac and Whitsunday statutory regional plan
  - (c) Mackay City Planning Scheme
  - (d) Draft Mackay Region Planning Scheme.
- 12.17. Discuss the compatibility of the project with the existing and proposed land uses in the surrounding area and the regions of Mackay and the Whitsundays.

## Coastal and marine environment

### Objective

Development should be designed, constructed and operated to protect, conserve and promote sustainable management of the coastal zone and coastal resources.

### Information requirements

- 12.18. Describe the existing coastal resources (including coastal waters) which may be affected by the project in the context of *Coastal Protection and Management Act 1995* (CPM Act), *the Fisheries Act 1959* and the State Planning Policy – Coastal Environment. Describe the environmental values as defined by the EP Act and environmental protection policies.
- 12.19. Detail the potential changes to the coastal resources within the coastal zone and identify appropriate coastal management objectives for the coastal resources, where relevant to the project.
- 12.20. Demonstrate that the proposal would avoid or minimise any impacts on coastal processes in the area. In particular, the EIS should examine options that avoid or minimise disturbing the seabed. Where unavoidable impacts are predicted, describe proposed mitigation measures.
- 12.21. Assess the project's consistency with relevant coastal plans and policies including the Reef 2050 Long-Term Sustainability Plan. In particular, assess how the project will deliver a net benefit in accordance with the net benefit policy and related actions contained within the Reef 2050 Long-Term Sustainability Plan.

### Hydrodynamics and sedimentation

- 12.22. Describe the oceanic conditions related to the project including waves, tides, currents and other sediment transport processes, water salinity, clarity, temperature and depths. Discuss seasonal variation and storms, cyclones, storm tide and other severe weather events under current and projected climate change scenarios. Discuss the frequency and severity of weather conditions such as storms and cyclones, for two, ten and 100 year conditions. Describe the impact of the development on coastal processes and their relationship with the assimilation and transport of pollutants entering marine waters from the project.

- 12.23. Describe the physical integrity and morphology of landforms created or modified by coastal processes, where relevant to the project.
- 12.24. Describe the tidal hydrodynamics of the project area and the adjoining tidal waterways in terms of water levels, velocities and directions at different tidal states for existing and developed scenarios. Calibrated and validated two and/or three-dimensional modelling should be undertaken.
- 12.25. Detail the potential changes to the hydrodynamic processes and local sedimentation resulting from the construction and operation of the project, including:
  - (a) impacts on tidal flows and water levels
  - (b) changes to sediment transport patterns, including the potential of the project to affect nearby beaches or fringing coral reefs

### Sediment quality and dredging

- 12.26. Describe the marine sediments, identifying the physical and chemical properties of the sediment in the area likely to be disturbed by construction activities or vessel movements consistent with the National Assessment Guidelines for Dredging 2009 and guidance material published by the Department of Environment and Heritage Protection (DEHP). Provide a map of sediment types based on their physical and chemical properties and include depth profiles.
- 12.27. Describe the proposed capital and maintenance dredging works, including quantities of materials to be removed, and proposed dredge material beneficial use or disposal site.
- 12.28. Provide three-dimensional hydrodynamic numerical modelling of sediment plumes predicted from dredging activities for the proposed marina. Modelling is to be undertaken in accordance with the Great Barrier Reef Marine Park Authority's Guideline on The Use of Hydrodynamic Numerical Modelling for Dredging Projects in the Great Barrier Reef Marine Park.
- 12.29. Detail specific measures to maintain sediment quality to nominated quantitative standards within the project and surrounding areas, particularly where future maintenance dredging may be required.
- 12.30. If relevant, discuss the proposed dredge material disposal in relation to coastal management outcomes, having regard to the nature of the material, cost of alternatives and potential impacts on coastal resources and their values.

### Water quality

- 12.31. Detail the chemical and physical characteristics of coastal waters that may be affected by the project. Include a description of water quality variability associated with climatic and seasonal factors, variability of freshwater flows and extreme events.
- 12.32. Discuss the interaction of freshwater flows including surface and groundwater flows and submarine groundwater discharge with coastal waters.

- 12.33. Describe the potential impacts of the project including potential impacts to the water quality and sediment quality of the coastal environment affected by the project. Identify the quantity, quality and location of all release of contaminants by the project, whether as point sources or diffuse sources, particularly from construction of the marine infrastructure and including management of acid sulfate soils. The description of potential impacts should include the operation of the marina, including measures to avoid and manage release of contaminants such as fuel or sullage.
- 12.34. Identify water quality objectives and how the objectives will be maintained or enhanced (refer to Schedule 1 of the Environmental Protection (Water) Policy 2009 (EPP (Water) 2009) - Proserpine River, Whitsunday Island and O'Connell River Basins Environmental Values and Water Quality Objectives and the associated Mackay Whitsunday Coastal Waters plan. Where the EPP (Water) 2009 does not address a given issue, the Queensland Water Quality Guidelines (DEHP 2013) and the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ 2000) should be consulted, where relevant). Also reference the Water Quality Guidelines for the Great Barrier Reef Marine Park 2010.
- 12.35. Outline practicable measures for protecting, mitigating or enhancing coastal waters, including how nominated quantitative standards and indicators may be achieved, and how the achievement of the water quality objectives will be monitored, audited and managed.

## Flora and fauna

### Objective

Matters of environmental significance are valued and appropriately safeguarded to support healthy and resilient ecosystems and ensure the sustainable, long-term conservation of biodiversity and the social, economic, cultural and environmental benefits it provides.

### Information requirements

- 12.36. Describe the likely impacts on the biodiversity and natural environmental values of affected terrestrial and aquatic areas arising from the construction and operation of the project. Take into account any proposed avoidance and/or mitigation measures. The assessment should include, but not be limited to, the following key elements:
- (a) matters of state environmental significance and national environmental significance
  - (b) terrestrial and aquatic ecosystems and their interaction including the quality and extent of existing coral and the importance of the coral in a regional context
  - (c) biological diversity including listed flora and fauna species and regional ecosystems
  - (d) the existing integrity of ecological processes, including habitats of threatened, near-threatened or special least-concern species
  - (e) the integrity of landscapes and places, including wilderness and similar natural places



- (f) actions of the project that require an authority under the NC Act (for example taking a protected plant) and *Water Act 2000* (for example, riverine protection permits) and/or would be assessable development for the purposes of the *Vegetation Management Act 1999* (VMA), the *Fisheries Act 1994*, the CPM Act, the *Marine Parks Act 2004*, the *Environmental Offsets Act 2014* or the EP Act
  - (g) acute or chronic, low-level exposure to contaminants, or the bio-accumulation of contaminants
  - (h) impacts on native fauna due to proximity to the site, including marine wildlife strandings or vessel strike
  - (i) long-term potential impacts to existing benthic communities from changes to the hydrodynamic processes and local sedimentation, for example through shallowing, deepening or changing in sediment composition from barge operations
  - (j) construction and operational impacts (e.g. lighting, noise, waste, increased visitation).
- 12.37. Propose practicable measures for protecting or enhancing natural values, (including coral and other fauna) and assess how the nominated quantitative indicators and standards may be achieved for nature conservation management. In particular, address measures to protect or preserve any threatened or near-threatened species. Discuss the proposed coral planting program, including species, source of the coral to be planted, and responsibilities for monitoring and maintenance.
- 12.38. Describe strategies for protecting Ramsar wetlands; and discuss any obligations imposed by state or Commonwealth legislation or policy, or international treaty obligations (that is, Japan–Australia Migratory Birds Agreement (JAMBA), China–Australia Migratory Birds Agreement (CAMBA) and Republic Of Korea–Australia Migratory Birds Agreement (ROKAMBA)).
- 12.39. Assess the need for buffer zones and the retention, rehabilitation or planting of movement corridors, and propose measures that would avoid the need for waterway barriers, or propose measures to mitigate the impacts of their construction and operation.
- 12.40. Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.
- 12.41. Where Queensland legislation or policy requires an offset for a significant residual impact on a particular environmental value, an offset assessment shall be presented in a form consistent with relevant legislation and policy.

## Hazards, health and safety

### Objectives

- (a) The risk of, and the adverse impacts from, natural hazards are avoided, minimised or mitigated to protect people and property and enhance the community's resilience to natural hazards.
- (b) Developments are to be appropriately located, designed, constructed and operated to minimise health and safety risks to communities and individuals and adverse effects on

the environment.

## Information requirements

### General

- 12.42. Describe the potential risks to people and property that may be associated with the project in the form of a preliminary risk assessment for all components of the project and in accordance with relevant standards. The assessment should include:
- (a) potential hazards, accidents, spillages (including spills from marine vessels onto the Great Barrier Reef), fire and abnormal events that may occur during all stages of the project, including estimated probabilities of occurrence
  - (b) identifying all hazardous substances to be used, stored, processed or produced and the rate of usage
  - (c) potential wildlife hazards, natural events (for example, cyclone, storm tide inundation, flooding, bushfire, landslide, shoreline erosion) and implications related to climate change
  - (d) how the project may potentially affect hazards away from the project site.
- 12.43. Outline measures required to ensure that the proposed project avoids the release of hazardous materials.
- 12.44. Provide details on the safeguards that would reduce the likelihood and severity of hazards, consequences and risks to persons, within and adjacent to the project area(s). Identify the residual risk following application of mitigation measures. Present an assessment of the overall acceptability of the impacts of the project in light of the residual uncertainties and risk profile.
- 12.45. Provide an outline of the proposed integrated emergency management planning procedures (including evacuation plans and safe refuges) for the range of situations identified in the risk assessment developed in this section.
- 12.46. Outline any consultation undertaken with the relevant emergency management authorities, including the Local Disaster Management Group.

### Erosion prone areas

- 12.47. If the project proposes permanent buildings or structures in a coastal management district, detail how development avoids erosion prone areas (taking into account sea level rise factor by 2100) or demonstrate that the development cannot be feasibly located elsewhere or that it is coastal dependant development. Detail how coastal erosion risks are avoided or mitigated and identify any development free buffers (refer to SPP *natural hazards, risk and resilience – erosion prone areas*).

### Storm tide inundation

- 12.48. Describe storm tide inundation risk for a range of annual exceedance probabilities for the site. Take into consideration potential sea-level rise scenarios.
- 12.49. The assessment should consider all infrastructure associated with the project and all proposed measures to avoid or minimise risks to life, property, community (including damage to other properties) and the environment during storm tide events.

## Maritime safety

- 12.50. Describe and address any increased impacts/risks on maritime safety in relation to the project's operation in Queensland waters. Address mitigation strategies including impacts from materials transportation and operation of the marina.
- 12.51. The assessment should consider the information requirements set out in the Maritime Safety Queensland Guideline for major development proposals.

## 13. Assessment of routine matters

- 13.1. The following subsections list the routine matters for coordinated projects, with (where applicable) a reference to the relevant objectives. In some cases, not all the matters may be relevant, while in others the list may not be exhaustive.
- 13.2. For each routine matter identified below, the level of detail should be proportional to the risk or magnitude of impacts. As a minimum, the proponent should supply sufficient information that confirms the risks/impacts are not significant.

## Air

### Objective

Development is planned, designed, constructed and operated to protect the environmental values of air.

### Information requirements

- 13.3. Fully describe the characteristics of any contaminants or materials released that may be released as a result of the construction or operations of the proposal, including point source and fugitive emissions. Emissions (point source and fugitive) during construction, commissioning, operations and upset conditions should be described.
- 13.4. Predict the impacts of the releases from the activity on environmental values of the receiving environment using recognised quality assured methods. The description of impacts should take into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts. The impact prediction must:
  - (a) address residual impacts on the environmental values (including appropriate indicators and air quality objectives) of the air receiving environment, with reference to sensitive receptors<sup>2</sup>. This should include all relevant values potentially impacted by the activity, under the EP Act, EP Regulation and Environmental Protection (Air) Policy 2008 (EPP (Air))
  - (b) address the cumulative impact of the release with other known releases of contaminants, materials or wastes associated with existing development and possible future development (as described by approved plans and existing project approvals)

<sup>2</sup> For example, the locations of existing residences, places of work, schools, etc., agricultural or ecologically significant areas/species that could be impacted.

- (c) quantify the human health risk and amenity impacts associated with emissions from the project for all contaminants whether or not they are covered by the National Environmental Protection (Ambient Air Quality) Measure or the EPP (Air).
- 13.5. Describe the proposed mitigation measures and how the proposed activity will be consistent with best practice environmental management. Where a government plan is relevant to the activity or site where the activity is proposed, describe the activity's consistency with that plan.
- 13.6. Describe how the achievement of the objectives would be monitored, audited and reported, and how corrective actions would be managed.

## Social and economic

### Objectives

The construction and operation of the project should aim to:

- (a) avoid or mitigate adverse social and economic impacts arising from the project
- (b) capitalise on opportunities potentially available for capable local industries and communities
- (c) demonstrate a net economic benefit to the region and State.

### Information requirements

- 13.7. In accordance with the Coordinator-General's *Social impact assessment guideline*, describe the likely social impacts (positive and negative) on affected communities, taking into account proposed mitigation measures.
- 13.8. Identify and describe the existing community benefits as per the values listed in the *Great Barrier Reef Region Strategic Assessment 2014*. Discuss how these community benefits may be impacted.
- 13.9. Demonstrate how the workforce arrangements comply with the Coordinator-General's workforce management principles listed below:
  - (a) anyone must be able to apply for a job, regardless of where they live
  - (b) provided they can meet the requirements of the job, people must have choice where they live and be able to apply for jobs related to the project
  - (c) the percentage of fly in, fly out workers must be less than 100 per cent
  - (d) a thorough audit of existing housing capacity must be undertaken before the project starts. To support those who wish to live locally, the proponent will ensure availability of accommodation that is fit for purpose and will make optimal use of existing housing capacity
  - (e) the proponent must thoroughly assess workforce requirements and plan to accommodate the likely number of workers who may live locally
  - (f) social impacts associated with the local workforce, in relation to local housing, services and infrastructure must be identified and mitigated in consultation with relevant local and state government service providers



- (g) the proponent's social impact mitigation measures should support regional towns in pursuing opportunities to ensure communities are strong and sustainable and they are attractive places to live and work.

The workforce management principles will be reviewed after the Queensland Government has considered the recommendations of the Queensland Parliamentary Committee's Fly in, Fly out and other long distance commuting work practices in regional Queensland; and the Queensland Government's panel on Fly in, Fly Out Review.

- 13.10. Describe the local and regional economies likely to be impacted by the project and identify the relevant stakeholders.
- 13.11. Proponents should use a robust methodology to quantify the direct and indirect economic impacts on local, regional and State economies arising from each stage of the project, and estimate the changes in key indicators including:
  - (a) gross regional product (GRP)
  - (b) gross state product (GSP)
  - (c) employment outcomes
  - (d) value added to the economy by the project by sector or industry.
- 13.12. The economic impact analysis should consider but not be limited to potential impacts the project may have on:
  - (a) labour demand, including the ability for labour to be drawn from the existing local workforce, and the potential effects this may have on local businesses.
  - (b) transport and infrastructure networks along with other essential services and facilities
  - (c) relevant local and regional prices including wages, housing market costs, project input costs and household goods and services.
  - (d) local business and supply chain opportunities.
- 13.13. Identify the significant economic benefits and costs arising from the all stages of the project, or different project options if applicable. Potential benefits and costs along with any relevant positive or negative externalities should be valued where reasonable, otherwise they should be described using quantitative and qualitative information. The results of this assessment should be presented as the net present value of the project.

## Noise and vibration

### Objective

Development is planned, designed, constructed and operated to protect the environmental values of the acoustic environment.

## Information requirements

- 13.14. Fully describe the characteristics of the noise and vibration sources that would be emitted when carrying out the activity (point source and general emissions). Describe noise and vibration emissions in both air and water (including fugitive sources) that may occur during construction, commissioning, upset conditions and operation.
- 13.15. Predict the impacts of the noise emissions in both air and water from the construction and operation of the project on the environmental values of the receiving environment, with reference to sensitive receptors, using the Queensland EPP (Noise) and recognised quality assured methods. Discuss separately the key project components likely to present an impact on noise and vibration for the construction and operation phases of the project.
- 13.16. Taking into account the practices and procedures that would be used to avoid or minimise impacts, the impact prediction must address the:
- (a) activity's consistency with the objectives
  - (b) cumulative impact of the noise with other known emissions of noise associated with existing development and possible future development (as described by approved plans)
  - (c) potential impacts of any low-frequency (<200 Hz) noise emissions.
- 13.17. Describe how the proposed activity, and in particular, the key project components described above, would be managed to be consistent with best practice environmental management for the activity. Where a government plan is relevant to the activity, or the site where the activity is proposed, describe the activity's consistency with that plan.
- 13.18. Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.

## Water quality

### Objective

Development is planned, designed, constructed and operated to protect environmental values of Queensland waters and supports the achievement of water quality objectives.

## Information requirements

- 13.19. Describe the hydrology within the study area in terms of water levels, discharges and freshwater flows. Detail the interaction of freshwater flows with different tidal states.
- 13.20. Detail the chemical and physical characteristics of surface waters and groundwater within the area that may be affected by the project. Include a description of water quality variability associated with climatic and seasonal factors, variability of freshwater flows and extreme events.

- 13.21. Identify the quantity, quality and location of all potential discharges of water and contaminants by the project, whether as point sources (such as controlled discharges) or diffuse sources (such as irrigation to land of treated sewage effluent). Provide relevant information on existing and proposed sewage infrastructure (related to ERA 63). Detail how proposed sewage treatment (ERA 63) will comply with the relevant requirements of the Environmental Protection Regulation 2008.
- 13.22. Describe the proposed management of existing and/or constructed waterbodies on the project site to maintain water quality, including any proposed exchange of tidal water.
- 13.23. Describe how the high ecological value freshwaters in the land subject to revocation will be maintained during the construction and operational phases of the project. Reference should be made to meeting water quality objectives scheduled under the EPP (Water) 2009 - Proserpine River, Whitsunday Island and O'Connell River Basins Environmental Values and Water Quality Objectives that are relevant to the potential impacts.
- 13.24. Assess the potential impacts of any discharges on the quality and quantity of receiving waters and the practices and procedures that would be used to avoid or minimise impacts.
- 13.25. Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed. Describe mitigation strategies and contingency plans for:
  - (a) potential accidental discharges of contaminants and sediments during construction and operation
  - (b) stormwater run-off from the project facilities and associated infrastructure
  - (c) the effects of tropical cyclones and other extreme events
  - (d) management of acid sulfate soils
  - (e) conveyance, treatment, reuse and management of sewage effluents
  - (f) potential contamination of groundwater (such as by addition of nutrients and pesticides to the golf course or leakage of fuels from storage tanks and pipelines).

## Water resources

### Objectives

The construction and operation of the project should aim to meet the following objectives:

- (a) equitable, sustainable and efficient use of water resources
- (b) environmental flows, water quality, in-stream habitat diversity, and naturally occurring inputs from riparian zones support the long-term maintenance of the ecology of aquatic biotic communities
- (c) the condition and natural functions of water bodies, lakes, springs and watercourses are maintained—including the stability of beds and banks of watercourses
- (d) volumes and quality of groundwater are maintained and current lawful users of water (such as entitlement holders and stock and domestic users) and other beneficial uses of water (such as spring flows and groundwater-dependent ecosystems) are not

adversely impacted by the development.

### Information requirements

- 13.26. Provide details of any proposed impoundment, extraction, discharge, injection, use or loss of surface water or groundwater. Identify any approval or allocation that would be needed under the *Water Act 2000*.
- 13.27. Detail any significant diversion or interception of overland flow. Include maps of suitable scale showing the location of diversions and other water-related infrastructure.
- 13.28. Develop hydrological models as necessary to describe the inputs, movements, seepage paths, infiltration rates, exchanges and outputs of all significant quantities of water, dissolved nutrients and contaminants in the resources of surface water and groundwater that may be affected by the project. The models should address the range of climatic conditions that may be experienced at the site, and adequately assess the potential impacts of the project on water resources. The models should deliver a site water balance and accompanying contaminant load mass balance. This should enable a description of the project's impacts at the local scale and in a regional context including proposed:
  - (a) changes in flow regimes from structures and water take
  - (b) alterations to riparian vegetation and bank and channel morphology
  - (c) direct and indirect impacts on the island and in reef waters arising from the development.
- 13.29. Provide information on the proposed water usage by the project, including details about:
  - (a) the ultimate supply required to meet the demand for full occupancy of the development, including timing of demands
  - (b) the quality and quantity of all water supplied to the site during the construction and operational phases based on minimum yield scenarios for water re-use, rainwater re-use and any bore water volumes
  - (c) a water balance analysis
  - (d) a site plan outlining actions to be taken in the event of failure of the main water supply.
- 13.30. Describe proposed sources of water supply given the implication of any approvals required under the *Water Act 2000*. Estimated rates of supply from each source (average and maximum rates) must be given and proposed water conservation and management measures must be described.
- 13.31. Determine potable water demand for the project, including the temporary demands during the construction period. Include details of any existing town water supply to meet such requirements. Detail should also be provided to describe any proposed on-site water storage and treatment for use by the site workforce during construction and operational phases. Describe monitoring/sampling for storage and reticulation of water.



- 13.32. Provide designs for all infrastructure utilised in the treatment of on-site water including how any on-site water supplies are to be treated, contaminated water is to be disposed, and any decommissioning requirements and timing of temporary water supply/treatment infrastructure is to occur.

## Biosecurity

### Objectives

The construction and operation of the project should aim to ensure:

- (a) the spread of weeds and pest animals is minimised
- (b) existing weeds and pests are controlled.

### Information requirements

- 13.33. Identify the presence of existing pests and weeds on Lindeman Island and in the Marine Park. Propose detailed measures to control and limit the introduction or spread of pests (including possible disease vectors) and weeds on the project site and adjacent areas. This includes declared plants under the *Plant Protection Act 1989* and the Land Protection (Pest and Stock Route Management) Regulation 2003, weeds of national significance, and designated pests under the *Public Health Act 2005*.

## Waste management

### Objective

Any waste transported, generated, or received as part of carrying out the activity is managed in a way that protects all environmental values.

### Information requirements

- 13.34. Describe and provide estimated quantities of all the expected significant waste streams from the proposed project activities during the construction and operational phases of the project.
- 13.35. Define and describe the principles, objectives and practicable measures for protecting or enhancing environmental values from impacts by wastes. Take into account best practice waste management strategies and the *Waste Reduction and Recycling Act 2011*, Waste Reduction and Recycling Regulation 2011, the Queensland Waste Avoidance and Resource Productivity Strategy (2014-2024) and the Environmental Protection (Water) Policy 2009.
- 13.36. Assess the proposed management measures against the preferred waste management hierarchy, namely: avoid waste generation; cleaner production; recycle; re-use; reprocess and reclaim; waste to energy; treatment; disposal. This includes the generation and storage of waste.
- 13.37. Describe how nominated quantitative standards and indicators may be achieved for waste management, and how the achievement of the objectives would be monitored, audited and managed.

- 13.38. Provide details on natural resource-use efficiency (such as energy and water), integrated processing design and by-product re-use as shown in a material/energy flow analysis.
- 13.39. Detail any known or potential sources of contaminated land, the location of the development in relation to contaminated land and necessary management measures. Describe how any proposed activity may result in land becoming contaminated and measures to prevent and manage any soil contamination.

## Cultural heritage

### Objective

The construction and operation of the project should aim to ensure that the nature and scale of the project does not compromise the cultural heritage significance of a heritage place or heritage area.

### Information requirements

- 13.40. Unless section 86 of the *Aboriginal Cultural Heritage Act 2003* applies, the proponent must develop a Cultural Heritage Management Plan in accordance with the requirements of Part 7 of the ACH Act. Incorporate the Indigenous heritage values listed in the Great Barrier Reef Region Strategic Assessment 2014. Discuss how these Indigenous heritage values may be impacted.
- 13.41. For non-Indigenous cultural heritage, undertake a study of, and describe, the known and potential historical cultural and landscape heritage values of the area potentially affected by the project, including the values described in the *Great Barrier Reef Region Strategic Assessment 2014*. Any such study should be conducted by an appropriately qualified cultural heritage practitioner. Provide strategies to mitigate and manage any negative impacts on non-Indigenous cultural heritage values and enhance any positive impacts.

## Infrastructure

### Objectives

The project should provide necessary infrastructure to service the development that:

- (a) maintains or enhances services to existing users
- (b) ensures any required works are compatible with existing infrastructure
- (c) is designed and operated to be efficient and sustainable.

- 13.42. Detail, with concept and layout plans, requirements for new infrastructure, or the upgrading and/or relocating of existing infrastructure to service the project. Infrastructure to be considered should include water supply, energy supply, telecommunications, stormwater, marine water infrastructure, such as intake and outlet pipes and vessel refuelling stations, waste disposal and sewerage.
- 13.43. Describe the typical service corridors or clearances for sewerage and recycled water mains in relation to other services.

- 13.44. Assess and identify any infrastructure external to the project, existing or proposed, that would be impacted by the development, including National Park and Marine Park infrastructure, and describe any upgrading that may be required to cater for the development. Consider likely peak utilisation of energy supply, water and wastewater facilities, demand management strategies and when/if additional capacity is required.

## Transport

### Objectives

The construction and operation of the project should aim to:

- (a) maintain the safety and efficiency of all affected transport modes for the project workforce and other transport system users
- (b) avoid or mitigate impacts on the condition of transport infrastructure
- (c) ensure any required works are compatible with existing infrastructure and future transport corridors.

### Information requirements

- 13.45. Include a clear summary of the total transport task for the project, including workforce, inputs and outputs during the construction and operational phases.
- 13.46. Present the transport assessment in separate sections for each project-affected mode (road, rail, air and sea) as appropriate for each phase of the project.
- 13.47. Provide sufficient information to allow an assessment of how existing transport infrastructure will be affected by project transport at the local and regional level (for example, airports, local roads and state-controlled roads).
- 13.48. Include details of the adopted assessment methodology for impacts on roads within the road impact assessment report in accordance with the Guidelines for Assessment of Road Impacts of Development.
- 13.49. Discuss and recommend how identified impacts will be mitigated. Mitigation strategies and are to be prepared in close consultation with relevant transport authorities (including local government).

## 14. Content of the EIS for matters of national environmental significance

- 14.1. The Commonwealth Minister for the Environment has determined the project a controlled action and has set the following controlling provisions under the EPBC Act:
- World Heritage properties (sections 12 and 15A)
  - National Heritage places (sections 15B and 15C)
  - Great Barrier Reef Marine Park (sections 24B and 24C)
  - listed threatened species and communities (sections 18 and 18A)
  - listed migratory species (sections 20 and 20A).

- 14.2. The EIS must be prepared pursuant to the bilateral agreement between the Commonwealth of Australia and the State of Queensland. This will enable the EIS to meet the impact assessment requirements under both Commonwealth and Queensland legislation. The project will require approval from the responsible Commonwealth Minister under Part 9 of the EPBC Act before it can proceed.
- 14.3. The EIS should provide a stand-alone report that exclusively and fully addresses the issues relevant to the MNES that were identified in the 'controlling provisions' when the project was declared a controlled action under Part 3, Division 1 of the EPBC Act.
- 14.4. Once the EIS has been prepared to the satisfaction of the Coordinator-General and the Great Barrier Reef Marine Park Authority, and MNES addressed to the satisfaction of the Australian Government Department of the Environment (DE), the draft EIS will be made available for public comment.
- 14.5. The proponent may be required by the Coordinator-General, the Great Barrier Reef Marine Park Authority or DE to provide additional material to address matters raised in submissions on the draft EIS.
- 14.6. At the conclusion of the environmental assessment process, the Coordinator-General will provide a copy of the report to the Commonwealth Minister for the Environment, in accordance with Part 13, section 36(2) of the State Development and Public Works Organisation Regulation 2010 (Qld).
- 14.7. After receiving the evaluation report and sufficient information about the relevant impacts of the action, the Commonwealth Minister for the Environment has 30 business days to consider whether the impacts of the proposal are acceptable, or not, and to decide whether or not to approve each controlling provision.
- 14.8. The Minister's decision is separate to the approval decisions made by Queensland State agencies and other agencies with jurisdiction on State matters.
- 14.9. Consideration should be given to any relevant policy statements available from **[www.environment.gov.au](http://www.environment.gov.au)**, including but not limited to:
- *Significant impact guidelines 1.1 - Matters of National Environmental Significance*
  - *Environment Protection and Biodiversity Conservation Act 1999 environmental offsets policy (2012).*
- 14.10. In accordance with Section 3.1 (Class 2) of Schedule 1 of the bilateral agreement, the EIS must:
- assess all the relevant impacts that the action has, will or is likely to have, including direct, indirect, facilitated and cumulative impacts
  - provide enough information about the action and its relevant impacts to allow the Commonwealth Minister for the Environment to make an informed decision whether or not to approve the action
  - address the matters set out in Schedule 4 as required by Division 5.2 of the Environment Protection and Biodiversity Conservation Regulations 2000 (Cwlth) (EPBC Regulations).
- 14.11. For controlled actions assessment under the bilateral agreement the EIS must address the matters mentioned in Schedule 1 of the State Development and Public Works Regulation 2010.

- 14.12. The project should initially be assessed in its own right followed by an assessment of the cumulative impacts related to all known proposed developments in the region with respect to each controlling provision and all identified consequential actions. Where potential cumulative impacts are identified, a risk assessment of the impact must be conducted and documented. The risk assessment must include known potential future expansions or developments by the proponent and other proponents in the vicinity. Cumulative impacts not solely related to the project development should also be assessed.
- 14.13. Predictions of the extent of threat (risk), impact and the benefits of any mitigation measures proposed, should be based on sound science and quantified where possible. Reference all sources of information relied upon and provide an estimate of the reliability of predictions. Also identify and evaluate any positive impacts.
- 14.14. The extent of any new field work, modelling or testing should be commensurate with risk and should be such that when used in conjunction with existing information, provides sufficient confidence in predictions that well-informed decisions can be made.
- 14.15. Project alternatives must be discussed in accordance with Schedule 4, section 2.01(g) of the EPBC Regulations.
- 14.16. The information provided must include 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, details of the corporation's environmental policy and planning framework must also be included.
- 14.17. The following content requirements are based on the matters above and considerations, with the addition of directions specific to the proposed action and the receiving environment.

## **Background and description of the action**

- 14.18. The EIS must provide background to the action and describe in detail all components of the action for example (but not limited to), the construction, operational and (if relevant) decommissioning components of the action. This must include the precise location of all works to be undertaken (including the marina, associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on MNES.
- 14.19. The description of the action must also include details on how the works are to be undertaken (including stages of development and their timing) and design parameters for those aspects of the structures or elements of the action that may have relevant impacts.

- 14.20. The EIS must include 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. The EIS must also provide details on the current status of the action as well as the consequences of not proceeding with the action.
- 14.21. The EIS must include a detailed discussion of all measures proposed to avoid and mitigate the impacts of the project on MNES and, where there is a residual impact after avoidance mitigation, how the proponent proposes to offset these residual impacts.

## World Heritage properties

### Great Barrier Reef World Heritage Area

- 14.22. Identify and describe the World Heritage Values of the Great Barrier Reef World Heritage Area that are likely to be impacted by the project. World Heritage Values are those described in the *Statement of outstanding universal value for the Great Barrier Reef World Heritage Area* (<http://whc.unesco.org/en/list/154/>).
- 14.23. Provide an assessment of the relevant impacts of the proposed development on the values and/or integrity of the Great Barrier Reef World Heritage Area, including, but not limited to, impacts as a result of changes to coastal processes and water quality, and visual amenity impacts.
- 14.24. Assess the impacts of the proposed development against relevant reports and documents published as part of the Great Barrier Reef Region and *Great Barrier Reef Coast Strategic Assessments Reports*.
- 14.25. Demonstrate how the proposed action contributes to an overall or 'net' improvement to ecosystem health and the condition of the affected values, consistent with *The Reef 2050 Long-Term Sustainability Plan*.
- 14.26. Describe the residual impacts of the proposed development after all proposed avoidance and mitigation measures are taken into account. Where residual significant impacts to the attributes and/or integrity of the Great Barrier Reef World Heritage Area are determined likely, include proposed offsets consistent with the *EPBC Act environmental offsets policy* (2012).
- 14.27. Demonstrate that the project will not be inconsistent with:
- (a) Australia's obligations under the World Heritage Convention; or
  - (b) the Australian World Heritage management principles; or
  - (c) a plan that has been prepared for the management of a declared World Heritage property under section 316 or as described in section 321 of the EPBC Act.

### Great Barrier Reef Marine Park

- 14.28. Identify and describe the aspects of the environment, social, cultural and heritage values in the Great Barrier Reef Marine Park that are likely to be impacted by the project.



- 
- 14.29. Provide an assessment of the relevant impacts of the proposed development on the environment, social, cultural and heritage values in the Great Barrier Reef Marine Park with regard to: the object of the EPBC Act; the object of the GBRMP Act; and the GBRMP Regulations.
  - 14.30. Demonstrate that the project will not be inconsistent with the objectives of the zone as set out in the Great Barrier Reef Marine Park Zoning Plan 2003.
  - 14.31. Provide three-dimensional hydrodynamic numerical modelling of sediment plumes predicted from dredging activities for the marina. Modelling to be undertaken in accordance with the Great Barrier Reef Marine Park Authority *Guideline on The use of Hydrodynamic Numerical Modelling for Dredging projects in the Great Barrier Reef Marine Park*.
  - 14.32. Provide an assessment of the relevant impacts of the proposed development on the environment of the Great Barrier Reef Marine Park. This must reference the key values and attributes outlined in the Great Barrier Reef Outlook Report 2014 (Great Barrier Reef Marine Park Authority) that may be impacted by the proposed development.
  - 14.33. Describe the residual impacts of the proposed development after all proposed avoidance and mitigation measures are taken into account. Where residual significant impacts to the environment in the Great Barrier Reef Marine Park are determined likely, include proposed offsets consistent with the *EPBC Act environmental offsets policy (2012)*.

## National Heritage places

### Great Barrier Reef National Heritage Place

- 14.34. Identify and describe the characteristics and values of the Great Barrier Reef National Heritage Place likely to be impacted by the project.
- 14.35. Provide an assessment of the relevant impacts of the proposed development on the expression of the values and how this in turn impacts on the overall values of the Great Barrier Reef National Heritage Place.
- 14.36. Describe the residual impacts of the proposed development after all proposed avoidance and mitigation measures are taken into account. Where residual significant impacts to the national heritage values of the Great Barrier Reef National Heritage Place are determined likely, include proposed offsets consistent with the *EPBC Act environmental offsets policy (2012)*.
- 14.37. Demonstrate that the project will not be inconsistent with:
  - (a) the National Heritage management principles, or
  - (b) an agreement to which the Commonwealth is party in relation to a National Heritage place, or
  - (c) a plan that has been prepared for the management of a National Heritage place under section 324S or as described in section 324X of the EPBC Act.

## Listed threatened species and communities

- 14.38. Describe the listed threatened species and ecological communities likely to be impacted by the project (including EPBC Act status, distribution, life history and habitat).
- 14.39. Provide details of the scope, timing/effort (survey season/s) and methodology for studies or surveys used to provide information on the listed species/community/habitat at the site (and in areas which may be impacted by the proposed development). Include details of:
- (a) the application of best practice survey guidelines
  - (b) how studies or surveys are consistent with (or a justification for divergence from) published Australian Government guidelines and policy statements.
- 14.40. Provide an assessment of the relevant impacts to the listed threatened species and ecological communities that are found to be or may potentially be present in areas that may be impacted by the project, or for which suitable habitat is likely to be impacted. Identify which component of the project is of relevance to each listed threatened species or ecological community or if the threat of impact relates to consequential actions.
- 14.41. Describe the residual impacts of the proposed development after all proposed avoidance and mitigation measures are taken into account. Where residual significant impacts to listed threatened species and ecological communities are determined likely, include proposed offsets consistent with the *EPBC Act environmental offsets policy (2012)*, including detailed justification of any proposed offsets using the *Offsets assessment guide* accompanying the *EPBC Act environmental offsets policy (2012)* (available at: <http://www.environment.gov.au/resource/epbc-act-environmental-offsets-policy>)
- 14.42. Where relevant, demonstrate that the project will not be inconsistent with:
- (a) Australia's obligations under:
    - (i) the Biodiversity Convention, or
    - (ii) the Apia Convention, or
    - (iii) the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), or
  - (b) a recovery plan or threat abatement plan.
- 14.43. Discuss how the project has had regard to approved conservation advice for the listed threatened species or community.

## Impact on a listed migratory species

- 14.44. Describe the listed migratory species identified likely to be impacted by the project (including EPBC Act status, distribution, life history, and habitat).
- 14.45. Provide details of the scope, timing/effort (survey season/s) and methodology for studies or surveys used to provide information on the listed species/community/habitat at the site (and in areas which may be impacted by the proposed development). Include details of:
- (a) the application of best practice survey guidelines

- (b) how studies or surveys are consistent with (or a justification for divergence from) published Australian Government guidelines and policy statements.
- 14.46. Provide an assessment of the relevant impacts to the listed migratory species identified (and any species that would potentially be present), or to suitable habitat for listed migratory species in areas that may be impacted by the project. Identify which component of the project is of relevance to each species or if the threat of impact relates to consequential actions.
- 14.47. Describe the residual impacts of the proposed development after all proposed avoidance and mitigation measures are taken into account. Where residual significant impacts to listed migratory species are determined likely, include proposed offsets consistent with the *EPBC Act environmental offsets policy (2012)*.
- 14.48. Demonstrate that the project will not be inconsistent with:
  - (a) the Bonn Convention
  - (b) CAMBA
  - (c) JAMBA
  - (d) an international agreement approved under subsection 209(4) of the EPBC Act.

## Conclusion

- 14.49. Include an overall conclusion as to the environmental acceptability of the proposal on each MNES, including:
  - (a) a discussion on the consideration with the requirements of the EPBC Act, including the objects of the EPBC Act, the principles of ecologically sustainable development and the precautionary principle
  - (b) reasons justifying undertaking the proposal in the manner proposed, including the acceptability of the avoidance and mitigation measures
  - (c) if relevant, a discussion of residual impacts and any offsets and compensatory measures proposed or required for residual significant impacts on MNES, and the relative degree of compensation and acceptability.

## 15. Appendices to the EIS

- 15.1. Appendices should provide the complete technical evidence used to develop assertions and findings in the main text of the EIS.
- 15.2. No significant issue or matter should be mentioned for the first time in an appendix—it must be addressed in the main text of the EIS.
- 15.3. Include a table listing the section of the EIS where each requirement of the TOR is addressed.
- 15.4. Include a glossary of terms and a list of acronyms and abbreviations.

## Acronyms and abbreviations

The following acronyms and abbreviations have been used in this document.

<b>Acronym/abbreviation</b>	<b>Definition</b>
AHD	Australian Height Datum
CAMBA	China-Australia Migratory Birds Agreement
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Cwlth	Commonwealth
DE	Department of Environment (Australian Government)
DEHP	Department of Environment and Heritage Protection
EIS	environmental impact statement
EP Act	<i>Environmental Protection Act 1994</i>
EP Regulation	Environmental Protection Regulation 2008
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)
EPBC Regulations	Environment Protection and Biodiversity Conservation Regulations 2000 (Cwlth)
EPP	Environmental Protection Policy (under the EP Act)
ERA	Environmentally Relevant Activity
GBRMPA	Great Barrier Reef Marine Park Authority
GBRMP Act	Great Barrier Reef Marine Park Act 1975
GBRMP Regulations	Great Barrier Reef Marine Park Regulations 1983
GDA94	Geocentric Datum of Australia 1994
JAMBA	Japan – Australia Migratory Birds Agreement
Marine Park	Great Barrier Reef Coast Marine Park and Great Barrier Reef Marine Park, unless otherwise noted
MNES	matters of national environmental significance (under the EPBC Act)
National Park	Lindeman Islands National Park
NC Act	<i>Nature Conservation Act 1992</i>
QPWS	Queensland Parks and Wildlife Service
ROKAMBA	Republic of Korea – Australia Migratory Birds Agreement
SDAP	State Development Assessment Provisions prescribed in the Sustainable Planning Regulation 2009
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
SPA	<i>Sustainable Planning Act 2009</i>

---

TOR

Terms of Reference

VMA

*Vegetation Management Act 1999*

## Appendix 1. Policies and guidelines

Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand 2000, *The Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian Water Association (Artarmon) and NZ Water and Wastes Association (Auckland), viewed 20 July 2015,

[www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html](http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html)

The Coordinator-General 2013, *Preparing an environmental impact statement: Guideline for proponents*, Department of State Development, Infrastructure and Planning, Brisbane, viewed 20 July 2015, <http://www.statedevelopment.qld.gov.au/fact-sheets-and-guidelines/coordinated-projects.html>

The Coordinator-General 2013, *Social impact assessment guideline*, Department of State Development, Infrastructure and Planning, Brisbane, viewed 20 July 2015, <http://www.statedevelopment.qld.gov.au/resources/guideline/social-impact-assessment-guideline.pdf>

Commonwealth of Australia 2012, *Environment Protection and Biodiversity Conservation Act Environmental Offsets Policy 2012* Canberra, viewed 6 August 2015, <http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy>

Commonwealth of Australia 2015, *Reef 2050 Long-Term Sustainability Plan*, Canberra, viewed 3 August 2015, <http://www.environment.gov.au/marine/gbr/publications/reef-2050-long-term-sustainability-plan>

Commonwealth of Australia, Department of the Environment, Water, Heritage and the Arts 2009, *National Assessment Guidelines for Dredging 2009*, Canberra, viewed 20 July 2015, <http://www.environment.gov.au/marine/publications/national-assessment-guidelines-dredging-2009>

Commonwealth of Australia 2013, *Matters of National Environmental Significance: Significant impact guidelines*, Canberra, viewed 6 August 2015, <http://www.environment.gov.au/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance>

Department of Environment and Heritage Protection 2009, *Environmental Protection (Water) Policy 2009 Proserpine River, Whitsunday Island and O'Connell River Basins Environmental Values and Water Quality Objectives*, Brisbane, viewed 20 July 2015, <http://www.ehp.qld.gov.au/water/policy/schedule1/mackay-whitsunday-scheduled-evs-wqos.html>

Department of Environment and Heritage Protection 2014, *Queensland Waste Avoidance and Resource Production Strategy 2014* Brisbane, viewed 6 August 2015 <http://www.ehp.qld.gov.au/waste/qld-waste-strategy.html>

Department of Environment and Heritage Protection 2013, *Queensland Water Quality Guidelines* 2009, Brisbane, viewed 20 July 2015, [www.ehp.qld.gov.au/water/guidelines](http://www.ehp.qld.gov.au/water/guidelines)

Department of National Parks, Recreation, Sport and Racing 2014, *Operational procedure Revocation of QPWS managed areas*, Brisbane.

Department of Main Roads, *Guidelines for Assessment of Road Impacts of Development*, Brisbane, 2006, viewed 20 July, 2015, [www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Guidelines-for-assessment-of-road-impacts-of-development.aspx](http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Guidelines-for-assessment-of-road-impacts-of-development.aspx)

Department of Natural Resources and Mines 2014, *Preparing an environmental impact statement*, viewed 20 July 2015, [www.dnrm.qld.gov.au/our-department/corporate-publications/preparing-an-environmental-impact-statement](http://www.dnrm.qld.gov.au/our-department/corporate-publications/preparing-an-environmental-impact-statement)

Department of State Development, Infrastructure and Planning, 2013, *State Development Assessment Provisions*, viewed 20 July 2015, <http://www.statedevelopment.qld.gov.au/development-applications/sdap.html>

Department of State Development, Infrastructure and Planning 2014, *State Planning Policy* July 2014, viewed 20 July 2015, <http://www.statedevelopment.qld.gov.au/resources/policy/state-planning/state-planning-policy-jul-2014.pdf>



---

Department of Transport and Main Roads, Maritime Safety Queensland August 2015, *Guidelines for major development proposals*, viewed 20 July 2015,

**<http://www.msq.qld.gov.au/Waterways/Majordevelopment-proposals.aspx>**

Great Barrier Reef Marine Park Authority 2014, *Great Barrier Reef Outlook Report 2014*, viewed 3 August 2015, **<http://elibrary.gbrmpa.gov.au/jspui/handle/11017/2855>**

Great Barrier Reef Marine Park Authority 2014, *Great Barrier Reef Strategic Assessment: Strategic assessment report* Townsville, viewed 3 August 2015,

**<http://elibrary.gbrmpa.gov.au/jspui/handle/11017/2861>**

Great Barrier Reef Marine Park Authority, 2012, *The use of Hydrodynamic Numerical Modelling for Dredging Projects in the Great Barrier Reef Marine Park*, viewed 20 July 2015

**[http://www.gbrmpa.gov.au/\\_\\_data/assets/pdf\\_file/0018/26532/Guidelines-on-Hydrodynamics-Modelling-15-Aug-2012.pdf](http://www.gbrmpa.gov.au/__data/assets/pdf_file/0018/26532/Guidelines-on-Hydrodynamics-Modelling-15-Aug-2012.pdf)**

Great Barrier Reef Marine Park Authority, 2010, *Water Quality Guidelines for the Great Barrier Reef Marine Park*, Great Barrier Reef Marine Park Authority, viewed 20 July 2015,

**<http://www.gbrmpa.gov.au/managing-the-reef/how-the-reefs-managed/water-quality-in-the-great-barrier-reef/water-quality-guidelines-for-the-great-barrier-reef>**



---

**The Coordinator-General**  
PO Box 15517, City East Qld 4002  
**tel** 13 QGOV (13 74 68)  
**fax** +61 7 3225 8282  
**info@dsd.qld.gov.au**  
**[www.statedevelopment.qld.gov.au](http://www.statedevelopment.qld.gov.au)**