

**Port of Gladstone
Gatcombe and Golding Cutting
Channel Duplication Project**

Environmental Impact Statement



Gladstone Ports Corporation
Growth, Prosperity, Community.

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**Appendix A4
Guidelines for an
EIS cross referencing table**

Department of the Environment and Energy

Guidelines for an Environmental Impact Statement for the Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project, in Port of Gladstone and Great Barrier Reef Marine Park, Queensland

Specific content requirements	Corresponding section in EIS
5 Specific content requirements	
5.1 Executive Summary	
An executive summary that outlines the key findings of the EIS must be provided. The executive summary must briefly:	Executive Summary
a) State the background and the need for the proposal;	Executive Summary; Section 1.4
b) Discuss alternatives and the reasons for selecting the preferred option and rejecting the alternatives;	Executive Summary; Section 1.6; Appendix B
c) Summarise the pre-construction, construction, operational activities and any decommissioning associated with putting the proposal into practice;	Executive Summary; Section 1.3; Chapter 2
d) State the proposed schedule for each key component of the proposal, the relationships and interdependencies between each stage, the expected duration of each stage and the proposal as a whole;	Executive Summary; Chapter 2
e) Provide an overview of the existing regional and local environments, summarising the features of the physical, biological, social, cultural and economic environment relating to the proposal and associated activities;	Executive Summary
f) Summarise stakeholder consultation undertaken in preparing the EIS;	Executive Summary; Section 1.8, Section 18.6; Appendix N
g) Describe the expected, likely and potential impacts of the proposal on matters of National Environmental Significance, the physical, biological, social, cultural and economic environment during pre-construction, construction, operational and post- operational phases;	Executive Summary
h) Summarise the environmental protection measures and safeguards, mitigation measures, offsets and monitoring to be implemented for the proposal; and	Executive Summary; Appendix Q
i) Provide an outline of the environmental record of the proponent.	Executive Summary
5.2 Objective	
The objectives of the EIS must be clearly stated and include specific reference to EPBC Act and GBRMP Act legislative requirements.	Section 1.7.2
5.3 General Information	
The EIS is to provide the background of the proposed development. This is to include:	Chapter 1
a) The title of the proposal;	Section 1.2
b) The full name and postal address of the designated proponent;	Section 1.2

Specific content requirements	Corresponding section in EIS
c) A clear outline of the proposal;	Section 1.3
d) The location of the proposal;	Section 1.2
e) The background to the development of the proposal;	Section 1.4
f) How the proposal relates to/relies on any other developments (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region;	Section 1.5
g) The current status of the proposal;	Section 1.4
h) Prudent and feasible alternatives to the proposed action, including scale, configuration and staging options;	Section 1.6
i) The consequences (to the proponent and the environment) of not proceeding with the proposal or components of the proposal and/or the consequences of other projects (that this action relies upon) not proceeding;	Section 1.4.5
j) A brief explanation of the scope, structure and legislative basis of the EIS;	Section 1.7
k) The specific EPBC Act and GBRMP Act matters affected by the proposal; and	Section 1.9.1
l) A description of government planning policies, statutory controls and agreements which will influence the proposal. All applicable jurisdictions and areas of responsible authorities within the area (both terrestrial and marine) must be listed and shown on maps at appropriate scales.	Section 1.9, Figure 1.11
5.4 The Proposal Description	
This section must describe the proposal in sufficient detail to allow an understanding of all stages (including interdependencies between stages) and components of the proposal, and determine potential environmental impacts associated with the proposal. Those elements with potential implications for matters protected under Part 3 of the EPBC Act must be highlighted.	Chapter 9 (relevant ecological impact sections) Sections 9.25 and 9.26 (summary of Project potential impacts on the World Heritage values of the Great Barrier Reef and MNES, respectively)
All pre-construction, construction, operational and decommissioning stages (short and long term) must be described in detail. This includes, but is not limited to, the date or time period over which construction will take place, details of the locations of each component of the proposal (i.e. the precise location (including GPS coordinates) of all works to be undertaken and/or the footprint area(s)), dimensions of structures/vessels to be built and materials, equipment to be used as well as construction access requirements, lay down/set down areas and elements of the action that may have impacts on matters of National Environmental Significance.	Chapter 2
A discussion of the assumptions underlying the predicted operation of the proposal and associated changes in the activities undertaken in the surrounding environment must be provided. Details of proposed preventative measures including monitoring and enforcement programs to help limit the impacts of the ongoing operations on matters of National Environmental Significance must also be addressed.	Section 1.4 (assumptions underlying the operation/need of the Project) Sections 2.3 to 2.8 (changes to activities) Section 2.10 and Appendices Q1 to Q4 (proposed mitigation measures, including measure to minimise Project impacts on MNES)

Specific content requirements	Corresponding section in EIS
5.5 Project Details	
In investigating options for the disposal of dredge spoil, the proponent must undertake detailed investigation into opportunities for re-use, recycling and onshore disposal, in order to prevent and eliminate pollution of the marine environment.	Chapter 2; Appendix B
The description of the proposal must cover:	Section 2.10; Appendices Q1, Q2 and Q3
a) The environmental principles on which the development will be managed;	
b) All the components of the proposal including:	Section 1.6
i) Site selection including the choice of region for the project and site within that region, an analysis of prudent and feasible alternative sites and why this site is likely to have the least impact on matters of National Environmental Significance;	
ii) Describe all feasible, environmental, economic alternative site options for the proposal (e.g. through a multi-criteria analysis);	Section 1.6; Appendices B1 and B2
iii) Development options, including an explanation of prudent and feasible alternatives;	Section 1.6; Appendices B1 and B2
iv) Associated permanent and temporary infrastructure, including transport networks/corridors (both land, estuarine and marine); anchoring and mooring structures, including any vessel cyclone moorings;	Section 2.4; Section 2.5; Section 2.6; Section 2.7
v) All construction activities, including dredging and dredged material disposal requirements and an explanation of required engineering processes;	Section 2.4; Section 2.5
vi) Any decommissioning activities, including an explanation of required engineering processes;	Section 2.8
vii) Operation, including details of the expected vessel numbers for each stage of the proposed development;	Section 2.11
viii) Related maintenance activities, both long and short term, including dredging and dredged material disposal requirements; and	Section 2.11.4
ix) Decommissioning.	Section 2.8
c) Describe the 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;	Section 1.4; Section 18.5
d) Consideration of the recommendations of the Independent Review of the Port of Gladstone, including Curtis Island;	Section 2.2.4; Appendix D
e) Future development areas that are currently “greenfield” in the region and the likely nature and timing of development, (including but not limited to strategic port development lands, state development areas);	Section 3.4.4 and 3.5
f) Describe the overall planning context in which the proponent’s decisions for this project have been made (including the overarching plan in which this project sits within);	Section 3.3
g) A detailed description of social and economic impacts and drivers for the proposal;	Section 1.4

Specific content requirements	Corresponding section in EIS
h) The precise location of works to be undertaken (including specific footprint area(s)), structures to be built or other elements of the proposal that may have impacts on the environment. Aerial photographs, maps, figures and diagrams must be incorporated where appropriate;	Section 2.4; Section 2.5; Section 2.6; Section 2.7
i) A general location map that includes the location of other known or potential future developments occurring in and around the Port of Gladstone;	Figures 2.1 and 2.2
j) The following maps and figures must be provided in relation to the Great Barrier Reef Marine Park and Great Barrier Reef World Heritage Area:	
i) A detailed map showing the boundary of the Great Barrier Reef Marine Park and Great Barrier Reef Coast Marine Park, including the Great Barrier Reef Zoning for Capricorn Zoning Map MPZ 17 in relation to the proposed development footprint of the project, including the dredge footprint, offshore dredged material disposal ground, reclamation area, and other components of the project. This map or figure must include an explanation of the basis for the zoning in this area;	Appendix I1; Figure 1.4; Figure 1.5
ii) Detailed maps showing Fish Habitat Areas, areas described in the Queensland Coastal Plan 2012, seagrass areas, acid sulphate soil areas, storm surge and tidal inundation areas;	Figure 9.42 (declared FHAs) Chapter 9; Appendix I1 (areas described in Queensland Coastal Plan 2012) Section 9.8.2; Figure 9.17a; Figure 19.17b; Figure 19.18 (seagrass areas) Figure 5.5; Figure 5.6; Figure 5.7 (acid sulphate soil areas) 9.12.2.2; Section 9.8.2.2; Figure 20.2 (storm tide inundation zones)
iii) Detailed maps showing wetlands, including wetlands of national importance;	Section 9.5, Figure 9.11 Appendix I1
iv) Detailed maps showing the presence of any at-risk habitats, species and groups of species as identified in the Draft Great Barrier Reef Biodiversity Conservation Strategy 2012;	Appendix I1
v) A map showing the location of the proposal in relation to the Great Barrier Reef World Heritage Area and National Heritage place;	Figure 2.3
vi) A map showing shipping lanes within the Great Barrier Reef Marine Park and Great Barrier Reef World Heritage Area in relation to the project footprint as described in (i); and	Appendix I1
vii) Simulated viewfields of the proposal (including operations within the GBRMP) showing its visual impact from various aspects including the adjacent coastline, nearby inhabited islands, and offshore.	Sections 4.5 and 4.6
k) Reference must be made to detailed technical information in appendices where relevant;	Appendix A to Appendix Q

Specific content requirements	Corresponding section in EIS
l) How the works are to be undertaken and design parameters for all aspects of the structures or elements of the proposal. This must include:	Chapter 2
i) An explanation of the anticipated timetable for pre-construction activities, construction, operation and any decommissioning;	Section 2.4
ii) Details of construction and operational equipment to be used;	Section 2.5; Section 2.6
iii) Details of the environmental parameters (incorporating predictions of climate change and 'worst case scenarios') the structures are designed to withstand, based on the expected life of assets; and	Section 2.10; Section 11.7
iv) A summary of the design aspects that will be employed to minimise impacts on environmental, social, cultural and heritage values.	Section 2.10; Appendices Q1, Q2 and Q3
5.6 Matters of National Environmental Significance	Chapter 9; Appendix I
In relation to matters of National Environmental Significance listed as controlling provisions for the proposal, an inventory of surveys, whether office-based or field-based, must be provided. These may be provided as appendices, but must at least be fully referenced and must be made publicly available. Any anticipated future surveys to be conducted in relation to matters of National Environmental Significance, whether office-based or field-based, must also be discussed.	Section 9.26 (summary) Chapter 9; Appendix I1 (detailed information and references) Chapter 24 (references)
Output from the protected matters search tool (accessible from DSEWPac's website) must be also included as an appendix. The results, indicating the presence of matters of National Environmental Significance, must also be provided. Any species or values considered likely or known to occur in areas impacted by the controlled action must be addressed. The description of matters of National Environmental Significance must focus on, but not be limited to the following controlling provisions:	Appendix I1, Appendix A (PMST) Appendix I1, Appendix B (likelihood assessment)
a) World Heritage Properties (sections 12 & 15A);	Section 9.25; Appendix I1 (Section 6 and Sections 3 to 16 and Appendices A and B)
a) National Heritage Places (sections 15B & 15C);	Section 9.25; Appendix I1 (Section 6 and Sections 3 to 16 and Appendices A and B)
b) Listed threatened species and ecological communities (sections 18 & 18A);	Section 9.26; Appendix I1 (Sections 3, 4, 7, 9, 10, 12 to 15)
c) Listed migratory species (sections 20 & 20A);	Section 9.26; Appendix I1 (Sections 9, 10, 12, 14 and 15)
d) Commonwealth marine areas (sections 23 & 24A); and	Section 9.26; Commonwealth marine areas are situated more than 9km from the closest Project direct impact area
e) Great Barrier Reef Marine Park (sections 24B & 24C).	Section 9.25; GBRMP boundary situated more than 2km from the closest Project direct impact area

Specific content requirements	Corresponding section in EIS
5.7 Alternatives to the Proposal	
This section must describe, to the extent reasonably practicable, any prudent and feasible alternatives to the proposal. For each alternative listed the proponent should provide the project details, impacts (positive and negative), location, scale, configuration and staging options.	Section 1.6; Appendices B1 and B2
Sufficient detail must be provided to make clear why any alternative is preferred to another. This section must describe, but not be limited to the following:	Section 1.6; Appendices B1 and B2
a) The alternative of taking no action or not proceeding with components of the proposal;	Section 1.6; Appendices B1 and B2
a) Potential alternative locations for all components of the proposal, as well as different components of the proposal;	Section 1.6; Appendices B1 and B2
b) Potential alternative configuration or scale options for key components of the proposal;	Section 1.6; Appendices B1 and B2
c) Describe options for integrating operations with existing infrastructure where they exist to mitigate impacts on the general environment, ecosystems and matters of National Environmental Significance;	Section 1.6; Appendices B1 and B2
d) A comparative description of the adverse and beneficial impacts of the development as a whole, each component of the development, and location on the matters protected by the controlling provisions for the proposal;	Section 1.6; Appendices B1 and B2
e) A description of how each stage would be affected if one or more of the stages does not occur or is significantly modified;	Section 1.6; Appendices B1 and B2
f) A description of how each component would be affected if one or more of the components does not occur or is significantly modified;	Section 1.6; Appendices B1 and B2
g) The reasons for choosing the preferred location and option for the development as a whole, and each key component of the proposal, must be explained. The explanation must include a comparison of the adverse and beneficial effects used for selecting the preferred location and option, and compliance with the objectives of the EPBC Act and GBRMP Act (including the principles of ecologically sustainable development and use);	Section 1.6; Appendices B1 and B2
h) The advantages and disadvantages of alternatives when considered against relevant matters protected under the EPBC Act and GBRMP Act, including critical issues identified in the Great Barrier Reef Outlook Report 2009, must be specifically addressed; and	Section 1.6; Appendices B1 and B2
i) Short, medium and long-term advantages and disadvantages of the options must be considered.	Section 1.6; Appendices B1 and B2
5.8 Consultation	
The proponent is required to consult with all stakeholders including Traditional Owners, with a particular focus on individuals/sectors that may be affected by the proposal (affected parties), as part of the EIS process. Details of any consultation about the action must be provided. This is to include:	Section 1.8; Section 16.4; Appendix N2
a) Any consultation that has already taken place including details on the frequency, forum and timeframes provided for consultation;	Section 1.8; Appendix N2
b) Identification of affected parties, including a statement mentioning any individuals/sectors/ communities that may be affected and a summary of their views;	Section 1.8; Appendix N2

Specific content requirements	Corresponding section in EIS
c) Proposed consultation about relevant impacts of the action;	Section 1.8; Appendix N2
d) If there has been consultation about the proposed action, details of the issues discussed, including the views of the affected parties and any documented response to, or result of, the consultation;	Section 1.8; Appendix N2
e) Details on how affected parties comments received during consultations have been addressed in the EIS; and	Section 1.8; Appendix N2
f) Any further proposed consultation about potential impacts of the action.	Section 1.8; Appendix N2
5.9 The Existing Environment	
This section must provide a description of the project area including baseline condition and trends of coastal, terrestrial and marine environments, including hydrology, sediment characteristics, sediment flows, geography, flora and fauna, cultural and heritage values, and all relevant socio-economic considerations. This section must link to the proposal description, potential impacts, and proposed avoidance, mitigation, adaptive management framework and/or offset measures throughout the life of the project including pre-construction, construction, operation, and any decommissioning. This section is to also identify and reference any relevant (published and unpublished) studies undertaken in the area which will assist in describing patterns and trends in the environment.	Chapters 3 to 21
The section must include a description of the environment of the proposal site and the surrounding areas that may be affected by the action. This must include the following information:	Chapters 3 to 21
a) Any listed threatened and/or migratory species and ecological communities that are likely to be present in the vicinity of the site (including but not limited to sawfish, marine turtles, inshore dolphins (including Australian Snubfin Dolphin, Orcaella heinsohni), cetaceans, dugong, migratory birds and shore birds, Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland, and Littoral Rainforest and Coastal Vine Thickets of Eastern Australia);	Sections 9.4 to 9.21; Appendix I1
b) At a minimum the following details must be included:	
i) Details of the scope, timing (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 that may be impacted by the project); and	Sections 9.4 to 9.21; Appendix I1
ii) Include a summary of the location, size and breeding status of threatened and migratory species listed under the EPBC Act which are likely to occur in the area affected by the proposal.	Sections 9.4 to 9.21; Appendix I1
c) Information on listed ecological communities, threatened and migratory species, including foraging, roosting, resting and nesting habitats, must include but not be limited to:	Sections 9.4 to 9.21; Appendix I1
i) Describe and map critical habitat for threatened species, ecological communities and migratory species;	Sections 9.4 to 9.21; Appendix I1
ii) The importance of habitat (including habitat utilisation) in a local, regional, national and international context;	Sections 9.4 to 9.21; Appendix I1
iii) The status of the population (e.g. abundance) in the area likely to be affected by the proposed development relative to other areas outside the area likely to be affected;	Sections 9.4 to 9.21; Appendix I1
iv) Genetic diversity;	Sections 9.4 to 9.21; Appendix I1
v) The viability of the local, regional and overall populations;	Sections 9.4 to 9.21; Appendix I1

Specific content requirements	Corresponding section in EIS
vi) Local and regional representation;	Sections 9.4 to 9.21; Appendix I1
vii) Conservation and biodiversity values;	Sections 9.4 to 9.21; Appendix I1
viii) Economic, social and cultural values of species;	Section 9.12.2.5 (commercial, recreational and traditional fisheries) Section 16.5 (Aboriginal cultural heritage) Section 18.5.4; Section 18.6 (social) Section 19.4.7; Section 19.5.5 (economic)
ix) The extent (in hectares) of any areas of important or unique habitat; and	Sections 9.4 to 9.21; Appendix I1
x) Seasonal influences.	Sections 9.4 to 9.21; Appendix I1
d) Identify the desired conservation outcomes that the project has for matters of National Environmental Significance;	Section 9.24
e) Describe the biophysical/regional conditions that are required for matters of National Environmental Significance to be maintained and that are required to reach articulated conservation objectives for matters of National Environmental Significance;	Section 9.24
f) Identify factors that influence matters of National Environmental Significance including human-induced and natural factors (e.g. climate change, cyclones, flooding);	Section 11.5; Appendix G, Section 3.2
g) Describe and quantify natural variability of matters of National Environmental Significance where adequate data is available or can be sourced;	Section 9.24; Appendix I1
h) Describe the extent to which the general environment, ecosystems and matters of National Environmental Significance are already stressed by natural and anthropogenic effects;	Section 9.24; Appendix I1
i) A description of the World Heritage and National Heritage values of the Great Barrier Reef World Heritage Area and National Heritage place relevant to the action;	Section 9.23
j) A description of the Commonwealth marine environment and identification of those aspects of the Commonwealth marine area potentially affected by the proposal, including but not limited to baseline data on listed threatened species, migratory species and marine species and any other species of conservation significance, including cetaceans;	Sections 9.4 to 9.21; Appendix I1
k) Description of biota/biotic habitats, including a map of marine/intertidal habitats (including information on seasonal fluctuations e.g. seagrass prevalence), likely to be affected by the proposed development;	Sections 9.4 to 9.21; Appendix I1
l) A description of important wetlands in the area, particularly Wetlands of National Importance;	Section 9.4 and 9.5
m) A description of the at-risk species, groups of species and/or habitats as identified by the Draft Great Barrier Reef Biodiversity Conservation Strategy 2012 that are likely to be affected by the proposed development;	Sections 9.4 to 9.21; Appendix I1

Specific content requirements	Corresponding section in EIS
n) Identify, describe and map environments important to the health of the Great Barrier Reef Marine Park, including terrestrial and intertidal habitats (including but not limited to interesting habitat of marine turtles and habitat for inshore dolphin species) that are likely to be affected by the proposed development;	Sections 9.4 to 9.21; Appendix 11
o) Identify, describe and map reef communities and those species supported by the reef communities in areas likely to be affected by the proposed development, including information on species diversity and abundance;	Sections 9.8 and 9.9
p) Identify, describe and map seagrass communities in areas likely to be affected by the proposed development, including information on species diversity, seasonality and abundance;	Sections 9.6 and 9.7
q) Identify, describe and map soft sediment fauna communities (e.g. infauna, benthic invertebrates) in areas likely to be affected by the proposed development, including information on species diversity, seasonality and abundance;	Section 9.12 and 9.13
r) Describe oceanographic conditions in the region, especially those which may have a bearing on the proposal. Include information on seasonal variation, waves, tides, currents, water salinity, clarity, temperature and depths. Discuss the frequency and severity of weather conditions such as storms and cyclones, for two, ten and 100 year conditions; and	Chapters 7 and 11; Appendix G
s) Identify and describe the existing uses of the area and nearby areas that may be affected by the proposed action (e.g. tourism, commercial and recreational fishing, research and traditional use activities), including any amenity issues.	Section 3.4
All habitat maps must be produced at a sufficiently fine scale and as accurately as possible, considering their primary purpose and end use. (For example; to evaluate habitat loss and inform locations of monitoring and reference sites).	Sections 9.4 to 9.21; Appendix 11
5.9.2 Socio-Economic and Cultural Environment	
Discussion of the socio-economic and cultural environment must provide (however should not be limited to):	
a) Baseline demographic information of the affected communities (e.g. from Australian Bureau of Statistics, Queensland Office of Economic and Statistical Research, Bureau of Rural Sciences) and a detailed description of all stakeholders, together with key social, economic and cultural issues related to the proposal (from community and stakeholder perspectives);	Section 18.5; Section 18.6
b) A description of all historical, current and projected types of use and users, including patterns and trends in use, of the development area and Great Barrier Reef Marine Park zones. Include a discussion of scientific research, commercial and non-commercial tourism, commercial, traditional and recreational fishing activities as well as non-fishing recreational activities;	Section 3.4; Sections 9.10 and 9.11; Section 19.4
c) A description of local, State and Australian Government planning policies and statutory controls which will influence the project, surrounding areas of future, planned and current use. All applicable jurisdictions and areas of responsible authorities within the area must be listed and shown on maps at appropriate scales;	Section 1.9; Section 3.3; Section 9.3
d) A description of any places with known or anticipated heritage, social or cultural values (including any Traditional Use of Marine Resource Agreements), such that they have been recognised with listing or recording under relevant State or Commonwealth legislation or are anticipated to be listed under such legislation;	Sections 16.4, 16.5 and 16.6; Section 17.5
e) Information on the location (past and present considering sea level rise) and importance of sites and features of cultural significance, including anthropological and archaeological sites or features of significance to the Traditional Owners in of the area. A description of how these sites and features were identified must be provided; and	Sections 16.4, 16.5 and 16.6; Section 17.5

Specific content requirements	Corresponding section in EIS
f) A description of the Native Title status of the area in relation to the land and surrounding waters.	Section 16.3
5.10 Relevant Impacts of the Proposed Action	
The EIS must include a description of all of the relevant impacts of the action. Relevant impacts (both direct and indirect) are impacts that the action will have or is likely to have on a matter protected by a controlling provision (as listed in the preamble of this document). This section must provide clear linkages with the existing environmental values described in section 5.9 and proposed avoidance, safeguards, management and mitigation measures described in section 5.11. Impacts during all phases of the project must be addressed. This section must include:	Chapters 3 to 21
a) A description of the framework used to assess impacts, including risk assessment processes based on an approved standard;	Section 1.7
b) A detailed assessment of the nature, extent, likelihood and consequence of the likely short-term and long-term impacts including but not limited to: description of the risks and potential impacts (acute and chronic) from geotechnical activities (such as blasting and pile driving), 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); impacts from the proposal on air quality impacts; dredging and dredged material disposal impacts and impacts from increased shipping;	Chapters 3 to 21
c) A statement whether any relevant impacts are likely to be unknown, unpredictable, irreversible or sub-lethal (reversible over time) and what confidence level is placed on the predictions of relevant impacts;	Chapters 3 to 21
d) Analysis of the significance of the impacts;	Chapters 3 to 21
e) Any technical data, including modelling, and other information used or needed to make a detailed assessment of the relevant impacts;	Chapters 3 to 21
f) A risk assessment of changing climate patterns that may affect the proposal and surrounding environment and a description of the preferred and alternative adaptation strategies to be implemented;	Section 11.5; Section 11.7; Section 11.8
g) In discussing potential impacts, consider how the interaction of extreme environmental events (e.g. cyclones, coral bleaching, flood events) and any related cumulative impacts may impact on the proposal and the environment (both independently and cumulatively);	Section 11.6; Section 20.5; Appendix G
h) Consideration of potential impacts throughout the life of the proposal – from pre- construction, construction through to operation and any decommissioning;	Chapters 3 to 21
i) Consideration of any recommendations concerning impacts that are identified in the Independent Review of the Port of Gladstone, including Curtis Island;	Section 2.2.4; Appendix D
j) Impacts, including any downstream impacts of the proposed action on water quality, seagrass habitats, wetlands, Dugong Protected Areas and Fish Habitat Areas and adjacent reef communities and island communities;	Sections 9.5, 9.7, 9.9 and 9.23
k) Impacts to the sea floor through anchoring and/or direct placement of material/infrastructure, sediment disturbance. The GBRMP zone of likely seabed disturbance must be identified;	Sections 9.7 and 9.13

Specific content requirements	Corresponding section in EIS
l) Impacts of anticipated illumination on marine fauna particularly seabirds, marine turtles and other migratory species, including impacts on nesting and disorientation;	Sections 9.19 and 9.15
m) Impacts on the existing use of the area and nearby areas that may be affected by the proposed action;	Section 3.5 (land use); Section 4.6 (visual); Section 12.5 (air); Section 13.6 (noise); Section 15.4 (transport)
n) Impacts on amenity (including from the mainland, air, vessels and surrounding islands);	Section 3.5 (land use); Section 4.6 (visual); Section 12.5 (air); Section 13.6 (noise); Section 15.4 (transport)
o) A description of anticipated positive and negative social, cultural and/or economic impacts of the proposal on key stakeholder groups and individuals. This should include a consideration of anticipated changes in the social, cultural and heritage values of the GBRMP;	Sections 16.6 and 16.7; Section 17.6; Section 18.8
p) An assessment of all impacts to known and potential historic shipwrecks in accordance with the Historic Shipwrecks Act 1976;	Sections 17.6 and 17.8
q) A description of how components of the project may impact upon listed threatened and/or migratory species and their habitat, as well as any listed ecological communities;	Sections 9.19, 9.15 and 9.21
r) Impacts on any at-risk species, groups of species and habitats as identified in the Draft Great Barrier Reef Biodiversity Conservation Strategy 2012 that may be affected by the proposed action; and	Sections 9.5, 9.7, 9.9, 9.15, 9.19 and 9.21
s) A risk assessment and description of potential impacts, including (but not limited to) spills, the construction and operation of the proposed Heavy Fuel Oil Storage tank and associated new fuel storage infrastructure and pipeline from the fuel storage area to the cruise wharf. The risk assessment must incorporate three-dimensional stochastic modelling of potential spills including likely and worst case scenarios.	Not Applicable (NA)
5.10.2 Impacts to Listed Values of the Great Barrier Reef World Heritage Property	
Provide an assessment of all potential and likely impacts to the World Heritage values of the Great Barrier Reef World Heritage Area that have been identified in the vicinity of the proposal. This assessment must include an analysis of the impacts at all stages of the proposal on the expression of the values at this location and how this in turn impacts on the overall values of the Great Barrier Reef World Heritage Area.	Section 4.6; Section 9.23
Provide an analysis of direct, indirect and relevant impacts of the proposal on the integrity and Outstanding Universal Value of the Great Barrier Reef World Heritage Area.	Sections 9.23 and 9.24
5.10.3 Impacts to Listed Values of the Great Barrier Reef National Heritage Place	
Provide an assessment of all potential and likely impacts to the National Heritage values of the Great Barrier Reef National Heritage place that have been identified in the vicinity of the proposal. This assessment must include an analysis of the impacts at all stages of the proposal on the expression of the values at this location and how this in turn impacts on the overall values of the Great Barrier Reef National Heritage place.	Sections 9.23 and 9.24

Specific content requirements	Corresponding section in EIS
5.10.4 Impacts to Listed Migratory Species, Threatened Species and Ecological Communities	
Provide an assessment of all potential and likely impacts to listed migratory species, threatened species and ecological communities that have been identified in the vicinity of the proposal.	Sections 9.5, 9.7, 9.9, 9.15, 9.19 and 9.21
This assessment must include an analysis of the impacts at all stages of the proposal.	Sections 9.5, 9.7, 9.9, 9.15, 9.19 and 9.21
5.10.5 Impacts to the Commonwealth Marine Environment	
Provide an assessment and discussion of the potential direct, indirect and consequential impacts of the proposed action on the Commonwealth marine environment.	Section 9.23
5.10.6 Impacts to the Great Barrier Reef Marine Park	
Provide an assessment and discussion of the potential direct, indirect and consequential impacts of the proposed development on the environment and values of the Great Barrier Reef Marine Park (with regards to Attachments 2 and 3).	Section 9.23
5.10.7 Cumulative Impacts of the Proposed Development	
The EIS must identify and address cumulative impacts, where potential project impacts are in addition to existing impacts of other activities (including known current and future expansions or developments by the proponent and other proponents in the region and vicinity. This should include other dredging and dredge spoil disposal projects and Liquid Natural Gas projects).	Chapter 21
The EIS must also address the potential cumulative impact of the proposal on ecosystem resilience. The cumulative effects of climate change impacts on the environment must also be considered in the assessment of ecosystem resilience. Where relevant to the potential impact, a risk assessment must be conducted and documented.	Section 21.5
The risk assessment must include known future expansions or developments by the proponent and other proponents and known impacts on ecosystem resilience and matters of National Environmental Significance. Information on cumulative impacts may include as appropriate, but not be limited to:	Section 21.5
a) Description of existing, planned or potential developments (including construction status) of a similar type and scale to the proposed development, that have been approved within the last five years or are still under assessment with emphasis on those in the region that have, will have or are likely to have impacts on the same matters of National Environmental Significance;	Section 1.5; Section 3.4; Section 21.4 and 21.5
b) Description of any current or likely development precincts or zones in the region, their relationship to the proposed development and the likely cumulative impacts on the general environment, ecosystems and matters of National Environmental Significance as all projects are developed to capacity;	Section 1.5; Section 3.4; Sections 21.4 and 21.5
c) Discussion of the impacts of other tourism, residential, industrial and infrastructure projects both directly and indirectly related to the proposal in a regional context;	Section 1.5; Section 3.4; Sections 21.4 and 21.5
d) Discussion of the range of developments which will be facilitated or impacted (either positively or negatively) by the proposal and if the project will result in an intensification of development in the region;	Section 1.5; Section 3.4

Specific content requirements	Corresponding section in EIS
e) Discussion of known impacts on ecosystem resilience, including reference to issues identified in the Great Barrier Reef Outlook Report 2009 (e.g. rising sea temperatures, rising sea levels, ocean acidification, Crown-of-thorns starfish and increasing severity of cyclone events);	Section 21.5
f) Discussion and analysis of the cumulative impacts of this proposal on the integrity and Outstanding Universal Value of the Great Barrier Reef World Heritage Area;	Section 9.23; Section 21.5
g) Discussion and consideration of any recommendations pertaining to cumulative impacts that are identified in the Independent Review of the Port of Gladstone, including Curtis Island;	Section 2.2; Section 21.2; Appendix D
h) Discussion of existing and known and/or predicted increases in shipping in the region, the relationship to the proposed development and the likely cumulative impacts on matters of National Environmental Significance;	Section 1.4.5; Sections 21.4 and 21.5
i) Discussion of any potential future changes to the development which are likely to change the nature or scale of environmental impacts;	Section 2.3.4
j) Outline if existing impacts on the environment in general and matters of National Environmental Significance will be amplified by the action in combination with impacts of other projects;	Section 21.5
k) Discussion of the developments and activities which are likely to be facilitated by the proposal;	Section 1.5; Section 3.5
l) Identify if the resulting impacts on the general environment, ecosystems and matters of National Environmental Significance could be unacceptable;	Section 9.24; Sections 21.4 and 21.5
m) Identify if these impacts on the general environment, ecosystems and matters of National Environmental Significance could be permanent. If the impacts on matters of National Environmental Significance are not permanent, describe how long it will take before recovery from the effect;	Section 9.24
n) Describe how the cumulative impact of the proposed project will impact on the reproductive capacity and/or survival of listed threatened and migratory species;	Section 21.5
o) Explain how much recovery of matters of National Environmental Significance population, habitat, ecosystems, and the environment in general could occur, with and without mitigation (e.g. complete, partial, none);	Section 9.24; Section 21.5
p) Describe how soon restoration of habitat could be achieved to reinstate ecosystem function for matters of National Environmental Significance;	Section 9.24
q) Where possible, identify how much likely change to matters of National Environmental Significance exceeds natural variability in the region;	Section 9.24
r) Describe how this project will contribute to the desired conservation objectives for matters of National Environmental Significance;	Section 9.24
s) Describe how housing, workforce and local and regional community changes as a result of the development; and	Section 18.8
t) In conducting the risk assessment, key information sources and indicators for assessing change and impact must be described.	Section 21.4

Specific content requirements	Corresponding section in EIS
5.10.8 Consequential Impacts	
Provide a detailed assessment of any likely impacts that this development may facilitate on the following (at the local, regional, state, national and international scale):	
a) The World Heritage values of the Great Barrier Reef World Heritage Area;	Section 9.25
b) The National Heritage values of the Great Barrier Reef National Heritage place;	Section 9.25
c) Listed threatened species and ecological communities;	Sections 9.5, 9.7, 9.9, 9.15, 9.19 and 9.21
d) Listed migratory species;	Sections 9.15, 9.19 and 9.21
e) The Commonwealth marine environment; and	Section 8.6 (water quality impacts) Section 9.9; Section 9.11; Section 9.13; Section 9.15; Section 9.19; Section 9.21 (ecological impacts)
f) The environment and values of the Great Barrier Reef Marine Park, including coastal ecosystems that provide a function in maintaining the health of the Great Barrier Reef.	Section 8.4; Section 8.5 (water quality) Section 9.8; Section 9.10; Section 9.12; Section 9.18; Section 9.20; Section 9.25 (ecological values) Appendix I1 (ecological values)
5.10.9 Dredging and Dredged Material Disposal Related Impacts	
The EIS must provide an assessment of all dredging and dredged material disposal related elements of the project and its impacts, including but not limited to the following:	Section 2.2; Appendices B1 and B2
a) Review of the historical use of the dredge disposal ground/s to be used by the proponent, including but not limited to;	Section 2.2
i) location, volume, timing, nature of material and equipment used;	Section 2.2
ii) identification of direct and indirect impacts of dredge material disposal over time; and	Section 2.2
iii) an assessment of alternatives to the current dredge disposal ground.	Section 1.6; Appendices B1 and B2
b) Detailed evaluation of all potential disposal options in accordance with the National Assessment Guidelines for Dredging 2009 (NAGD 2009) and Annex 2 of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972 (as amended in 2006) (London Protocol), identification of the preferred disposal option(s) and explanation of how the preferred option was selected;	Section 1.6; Appendices B1 and B2
c) Address any recommendations and issues pertaining to dredging and dredged material disposal that are identified in the Independent Review of the Port of Gladstone, including Curtis Island;	Section 1.4; Appendix D
d) The amount to be dredged and a map of the dredge footprint and locations for proposed disposal. The map must also indicate the proposed staging of dredging activities;	Section 2.4; Figures 2.11 and 2.12

Specific content requirements	Corresponding section in EIS
e) The type and method of dredging proposed with the expected length and timing of the dredging activities;	Section 2.4
f) Discussion of proposed dredging equipment and methodology;	Section 2.4
g) Other uses of the dredged material including any re-use, recycling or possible future use;	Section 1.6; Appendix B
h) Assessment of sediment according to the NAGD 2009. This must include an assessment of the suitability of this material for land deposition and offshore disposal at any proposed dredged material disposal ground;	Section 6.5 and 6.6
i) Assessment of the risk and potential impacts of acid sulfate soils (ASS) and potential acid sulfate soils (PASS);	Sections 5.4 and 5.5
j) Consideration of potential impacts of mobilised sediments (e.g. metal or contaminant release);	Section 6.6; Section 7.4; Section 8.6
k) Details of future maintenance dredging and disposal requirements over the life of the project;	Section 2.11
l) Details of any previous sea dumping permits applied for including dates and volumes and whether the permit was for capital dredging or maintenance dredging;	Section 2.2.3
m) Detailed descriptions of potential impacts on the marine habitats and species within the proposed dredge footprint and disposal areas, including but not limited to assessment of seagrass and species that depend on it, and those at-risk species, groups of species and habitats as identified by the Draft Great Barrier Reef Biodiversity Conservation Strategy 2012, including any marine flora and fauna protection measures proposed;	Sections 9.5, 9.7
n) The characteristics of the dredged material disposal area(s) proposed including the history of the site and the predicted fate of the material after disposal and over time and the potential zone of impact;	Section 2.5; Appendix E5 (characteristics of proposed dredged material placement area) Section 2.2 (history of dredging in the Port) Sections 8.6.6 (fate of material during dredging) Figure 8.8 (water quality zones of impact)
o) Detailed descriptions of both the direct and indirect impacts along with an assessment of the reversibility of those impacts are to be included in predictions of impacts associated with the activity of dredging and disposal on marine habitats and species;	Sections 9.5, 9.7, 9.9, 9.11, 9.13, 9.15, 9.17, 9.19 and 9.21
p) Predictive, fully three dimensional modelling of indirect impacts of dredge generated sediments within the Great Barrier Reef Marine Park must be undertaken in accordance with the GBRMPA Guidelines for the Use of Hydrodynamic Numerical Modelling for Dredging Projects in the Great Barrier Reef Marine Park (Attachment 4).	Chapter 7; Appendix G
q) Predictive, fully three dimensional modelling of indirect impacts of dredge generated sediments must include:	
i) Hydrodynamic modelling;	Chapter 7; Appendix G
ii) Sediment transport modelling where the range of particle fractions (sand, silt and clay) are all modelled;	Chapter 7; Appendix G
iii) Modelling must include all types of resuspension possibilities including currents and wave-induced bottom shear stresses as well as wave induced mud fluidisation. If not modelled a justification as to why this phenomena was not relevant for that site;	Chapter 7; Appendix G

Specific content requirements	Corresponding section in EIS
iv) Ecological impact predictions. Lethal and sub lethal thresholds used for the ecological impact predictions must be clearly indicated and substantiated with relevant scientific peer reviewed articles. This may be presented as zones of impact (high, moderate and influence);	Section 8.6.3, Appendix Q3
v) Testing the sensitivity of ecological impact predictions to different pressure thresholds and considering seasonal effects must also be undertaken to understand the likely range of prediction outcomes;	Section 8.6.3
vi) Proponent to provide results of modelling in a suitable electronic format (i.e. shapefiles);	To be provided on request
vii) The modelling must represent the conditions at the time of year in which the dredging will actually occur. If this is not known then modelling must be undertaken for all seasons (i.e. wet season conditions, dry season conditions and transitional conditions) depending on prevalent oceanographic conditions; and	Chapters 7 and 8; Appendix G
viii) The modelling should demonstrate total suspended solids (TSS) at the surface, mid depth and within one metres of the sea floor, and predicted sedimentation rates within the zones of impact.	Section 8.6
r) Modelling must include likely dispersion and re-suspension from both dredging operations and dredge material disposal during a range of probable hydrodynamic conditions, weather events (including cyclones) and expected dredge equipment scenarios;	Section 8.6.6 Appendix G
s) Site selection of dredge disposal site (even if a historic site) must be justified and compared to other possible sites with a prediction for re-suspension and possible direction and distance of the migration of the dredged material under different current conditions;	Section 1.6; Appendix B
t) Model outputs must use a spatially based scheme that provides for a clear and consistent way of describing and presenting the extent, severity and duration of predicted impacts of dredging and material disposal and must include likely "best case" and likely "worst case" scenarios;	Section 8.6
u) Modelling must be independently peer reviewed. Information relating to the peer review, including the Terms of Reference and the peer reviewer's report must be included as part of the EIS documentation; and	Appendix G
v) Describe future maintenance dredging and disposal requirements over the life of the project, including:	Section 2.11
i) Impacts to benthic habitat, in particular benthic primary producer habitat (BPPH), must be described. The benthic habitat must be mapped and the potential impacts must be described, taking into consideration the sediment plume modelling. Cumulative impacts of the entire dredge operation and likely maintenance dredging requirements must be described; and	Section 9.5, 9.13 and 9.17
ii) Identify the potential vectors and risks of introducing marine invasive species through vessels involved in dredging operations; and how these risks will be appropriately managed. Must include but not be limited to ballast water, entrainment of mud and sediment and biofouling in dredge equipment and ancillary fitting, niche areas, internal seawater systems, vessel history, previous work locations and maintenance history.	Section 2.13 (managing vector risks) Section 9.22, Table 9.87 (pest and weed management plan, and ballast water management plan) Appendix Q1, Section 9.5 (pest and weed management plan)

Specific content requirements	Corresponding section in EIS
5.10.10 Reclamation and Land Based Disposal	
a) Describe, any prudent and feasible alternatives to any proposed reclamation (such as beneficial re-use). For each alternative listed the proponent must detail the impacts (positive and negative), location, scale, and configuration;	Section 1.6; Appendices B1 and B2
b) A plan of the proposed land to be reclaimed, drawn to an appropriate scale, showing the following information:	Figures 2.16 to 2.21
i) the boundary of the land to be reclaimed, tied to real property boundaries;	Figures 2.16 to 2.21
ii) the location of the line of mean high water spring tide and highest astronomical tide in relation to the area of reclamation;	HAT location refer Figure 5.2 The location of the mean high water spring tide has not been included due to lack of accurate topographic and bathymetry levels in these intertidal areas within the Port of Gladstone. The mean high water spring tide level (above LAT) has been included in Figure 5.2.
iii) existing levels of the land and proposed final levels of reclamation in relation to the Great Barrier Reef Marine Park Boundary and lowest astronomical tide (LAT) or Australian Height Datum (AHD);	Figures 2.16 to 2.21
iv) location of fauna and flora habitat within and surrounding the land to be reclaimed as well as existing and proposed bund area;	Sections 9.4 and 9.16
v) typical cross section across the land to be reclaimed showing the proposed finished levels and method of protecting the seaward boundary of the reclamation from erosion; and	Figures 2.16 to 2.21
vi) discussion of how any proposed land reclamation may affect the current erosion and deposition patterns in terms of any changes to the low water mark of the World Heritage Area boundary.	Section 8.6.4.2 (changes in erosion and deposition patterns) Section 7.4.2.1 (no change to low water mark)
c) The method, location and issues associated with the disposal of dredged material must be described including:	Section 2.5
i) for land-based dredge material disposal, a detailed description of potential methods, location issues/risks must be presented.	Section 2.5
Consideration must be given to:	
i) quantity and quality of tail water likely to be generated from dredging activities and the rate of their discharge;	Section 2.5
ii) the settling rate of fine sediments from all dredge material types;	Section 2.5
iii) the residence time within settling ponds prior to discharge (related to dredge pumping rate, ratio of solids to water in dredged material, settling rates, available capacity of the disposal and settling areas, potential bulking factor, intensity and duration of rainfall events with consideration given to the worst case scenario for these factors); and	Section 2.5
iv) source of material for bunds and bund wall stability.	Section 2.5

Specific content requirements	Corresponding section in EIS
5.10.11 Increased Shipping	
a) In relation to the projected increase in shipping, at a minimum, details of the following must be discussed:	
i) Describe current vessel numbers and type utilising the port, their size, speed, shipping movements, anchorages, access to/from the port and navigational arrangements;	Section 1.4
i) Describe projected total vessel movements (including any barges) at each stage of the project, including at the completion of the project. Include a comparison with total shipping movements through the Great Barrier Reef World Heritage Area and National Heritage place and Great Barrier Reef Marine Park; and	Section 1.4
ii) 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 and Great Barrier Reef Marine Park, and to the main shipping channels and any other navigational arrangements.	Section 2.1.3; Figure 2.3
b) In regard to increased shipping volumes, the following must be specifically addressed:	
i) Potential for introduction of marine invasive species from increased shipping rates;	Section 2.13; Section 9.22
ii) Potential increase in ship groundings and related impacts;	Section 1.4; Section 15.6
iii) Potential increased risk of vessel collisions and related impacts;	Section 1.4; Section 15.6
iv) Potential for increased vessel strike to marine species;	Section 9.19 and 9.21
v) Ballast water management arrangements - including Australian Quarantine and Inspection Service (AQIS) mandatory arrangements and agency contingency planning;	Section 2.12; Section 2.13
vi) Management of ship waste, in particular quarantine waste, domestic garbage, oil and sewage;	Section 2.12; Section 2.13; Section 14.6
vii) Potential risk of oil, chemical and other hazardous and noxious substance spills and their management, including three-dimensional stochastic modelling of likely and potential worst case spill scenarios. Models must incorporate seasonal variations;	Section 20.4; Section 20.5.2; Modelling not applicable
viii) Potential impacts on existing shipping activity;	Section 1.4.5; Section 15.6
ix) Impacts of increased marine underwater noise on marine species from all shipping activities;	Section 13.6; Section 9.13.3; Section 9.17.3; Section 9.19.3; Section 9.19.3
x) Additional marine transport issues that must be considered include the potential of the proposal to impact on domestic commercial and recreational vessels; and	Section 15.6
xi) The potential use of the Great Barrier Reef World Heritage Area and Great Barrier Reef Marine Park for the offshore anchorage of ships and the associated impacts of anchorages, including impacts on other users.	Section 2.1; Section 15.6

Specific content requirements	Corresponding section in EIS
5.10.12 Other Uses of the Area and Nearby Areas	
The EIS must identify the potential impacts of the proposed action on other uses of the area, including but not limited to the following:	
a) Social, cultural and heritage values for each stage of the proposal;	Sections 16.6 and 16.7; Section 17.6; Section 18.6
b) Current and projected commercial, recreational and scientific use, including any changes in visitation patterns;	Section 18.8
c) Heritage and social values, including sites of historic or archaeological significance;	Sections 16.6 and 16.7; Section 17.6; Section 18.6
d) Commercial and recreation fishing;	Section 9.11; Section 19.4
e) Tourism; and	Section 19.4
f) Traditional use activities.	Section 16.7
5.11 Proposed Avoidance, Safeguards, Management and Mitigation Measures	
The EIS must provide information on proposed avoidance, safeguards and mitigation measures to deal with the impacts of the action. Specific and detailed descriptions of proposed measures must be provided and substantiated, based on best available practices/standards and must include the following elements.	Chapters 3 to 21; Chapter 22; Appendices Q1 and Q2
a) Identify the level of risk associated with potential impacts already identified and those that require mitigation, monitoring or management to avoid or reduce impacts to an acceptable level;	Chapters 3 to 21 (within the risk assessment sections)
b) A consolidated list of measures proposed to be undertaken to avoid, prevent, minimise or compensate (in priority order) for the impacts of the action (as specified in section 5.10), including:	Chapter 22; Appendices Q1 and Q2
i) A description of proposed avoidance, safeguards and mitigation measures to deal with impacts of the action, including measures proposed to be taken by State governments, local governments or the proponent;	Chapter 22; Appendices Q1 and Q2
ii) Assessment of the expected or predicted effectiveness of the measures;	Chapter 22; Appendices Q1 and Q2
iii) Any statutory or policy basis for the mitigation measures;	Chapter 22; Appendices Q1 and Q2
iv) The cost of the mitigation measures; and	Chapter 22
v) The resulting risk level for that impact post- avoidance, mitigation and/or management.	Chapter 3 to 21 (within the risk assessment sections)
c) Particular focus must be given to:	
i) Determining factors in the planning of the proposal so as to avoid damage to the environment;	Section 1.6; Appendix B; Section 9.25, Appendix Q1 and Q2
ii) Measures to avoid or minimise damage to the Great Barrier Reef World Heritage Area and estuary environment;	Section 9.25; Appendices Q1 and Q2
iii) Measures to avoid or minimise damage to the National Heritage Values of the Great Barrier Reef;	Section 9.25; Appendices Q1 and Q2

Specific content requirements	Corresponding section in EIS
iv) Measures to avoid or minimise damage to the environment of the Great Barrier Reef Marine Park;	Section 9.25; Appendices Q1 and Q2
v) Address any recommendations pertaining to avoidance, risks, management and mitigation measures that are identified in the Independent Review of the Port of Gladstone, including Curtis Island and draft Great Barrier Reef Biodiversity Conservation Strategy 2012;	Appendix D (independent reviews) Section 1.9.3.1 (Great Barrier Reef Biodiversity Conservation Strategy 2013) Appendices Q1 and Q2 (management and mitigation measures)
vi) Articulating conservation objectives for individual matters of National Environmental Significance with a focus on receptors;	Section 9.24
vii) Describing how this project is likely to contribute to protection of matters of National Environmental Significance;	Section 9.24
viii) Outline how any avoidance, safeguards, management and mitigation measures will increase resilience of the environment, ecosystems and matters of National Environmental Significance within the region;	Section 9.24
ix) Demonstrate how impact management and mitigation measures would ensure that matters of National Environmental Significance in the affected region are maintained or improved;	Section 9.24
x) Characterise, quantify and address uncertainties that may affect the effectiveness of management measures and therefore on the confidence that biodiversity values would be maintained (or improved) during and after the project;	Section 9.25
xi) Measures to avoid or minimise disturbance to fauna and flora found around and within the proposal area (particularly listed threatened species and communities and listed migratory species);	Section 9.25; Appendices Q1 and Q2
xii) Management of the dredged material during the loading of the dredged material;	Section 2.4
xiii) Management of the dredged material disposal area(s) during disposal operations;	Section 2.5
xiv) Management strategies for dredging, loading and dredged material disposal, including trigger levels for management actions linked to quantitative measurements of water quality and Benthic Primary Producer Habitat (BPPH) based on baseline data;	Section 9.25; Appendices Q1, Q2 and Q3
xv) Proposed monitoring before, during and after dumping including:	Appendix Q3
(i) Monitoring of disposal plumes, sedimentation, current strength and direction, turbidity, water quality parameters that are likely to be affected and BPPH monitoring. Water quality parameters being monitored must include but should not be restricted to dissolved oxygen, nutrients, pH, turbidity, light attenuation, metals and metalloids and toxicants. Baseline water quality data that includes values for these parameters needs to be included in the EIS. This section must also include the likely impacts on turbidity and water quality from dredging and dredged material disposal and establish the triggers for management actions and specify proposed management actions; and	Appendix Q3
(ii) Location of monitoring stations and rationale for location of monitoring stations and frequency of monitoring (down load frequency or via telemetry).	Appendix Q3

Specific content requirements	Corresponding section in EIS
xvi) For ocean-based dredged material disposal, proposed management must be presented. This must include how water quality will be monitored and managed to ensure that water quality objectives for this area are achieved and the environmental values of the connected surface water and groundwater are maintained. Reference must be given to the National Water Quality Management Strategy including the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)</i> , <i>Queensland Water Quality Guidelines 2009</i> , <i>Water Quality Guidelines for the Great Barrier Reef 2010</i> and the <i>Australian Monitoring and Reporting Guidelines (2000)</i> . Any toxicants that may occur in the sediments must be identified and must be managed appropriately;	Appendix Q3
xvii) Measures to limit channelling and sediment re-suspension in settling ponds;	Section 9.25; Appendices Q1, Q2 and Q3
xviii) Measures to limit erosion and sediment re-suspension in discharge channels;	Section 9.25; Appendices Q1, Q2 and Q3
xix) Monitoring of water quality and operational performance monitoring;	Section 9.25; Appendices Q1, Q2 and Q3
xx) Disposal of tail waters or overflow due to climatic conditions (such as rain or flooding) to the receiving environment;	Section 2.5.10
xxi) Contingency measures in the event that discharge limits are exceeded; and	Section 9.25; Appendices Q1, Q2 and Q3
xxii) Staff training, including training in relation to environmental issues.	Section 9.25; Appendices Q1, Q2 and Q3
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;	Appendices Q1, Q2 and Q3
e) The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program;	Appendix Q1 and Q2
f) Measures to ensure that increases in shipping and ship movements do not negatively impact on water quality objectives and environmental values of the Great Barrier Reef Marine Park and Great Barrier Reef World Heritage Area, including but not limited to:	Sections 8.7, 9.25; Appendices Q1, Q2 and Q3
i) Provision of appropriate navigational and anchorage controls;	Section 8.6.7
ii) Provision of best practice waste disposal facilities; and	Section 2.11; Section 14.6
iii) Adequate risk management procedures and response equipment in place to identify and address risks of marine pollution.	Appendix Q1; Appendix Q2
g) The EIS must describe the proponent's capacity to satisfactorily develop and manage the project including the capacity to remove, clean up, rehabilitate and/or take preventative action for the entire proposal.	Section 1.2
5.12 Other Approvals and Conditions	
The EIS must include 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:	Section 1.9; Section 3.7
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:	Section 3.7

Specific content requirements	Corresponding section in EIS
i) What environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy; and	Section 3.7
ii) How the scheme provides for the prevention, minimisation and management of any relevant impacts.	Section 3.7
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 or the GBRMP Act), including any conditions that apply to the action;	Section 1.9
c) A statement identifying any additional approval that is required; and	Section 1.9
d) A description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.	Section 1.9
5.13 Offsets	
Environmental offsets broadly mean measures to compensate for the adverse residual impacts of an action on the environment. More specifically, offsets are measures to compensate for 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 manage the impacts that remain after avoidance and mitigation measures. These remaining impacts are termed 'residual impacts'.	
Offsets are not intended to make proposals with unacceptable impacts acceptable. They simply provide an additional tool that can be used during project design and the Environmental Impact Assessment process.	
This section of the EIS must outline plans to offset the residual potential impacts of the proposal. Environmental offsets may be appropriate when they:	Section 9.28; Sections 9.5, 9.7, 9.9, 9.11, 9.15, 9.17, 9.19, 9.21, 9.23, 9.24, 9.25 and 9.26.14
a) Are necessary to protect or repair impacts to a protected matter – i.e. a matter of national environmental significance or the environment more broadly;	Section 9.28; Sections 9.5, 9.7, 9.9, 9.11, 9.15, 9.17, 9.19, 9.21, 9.23, 9.24, 9.25 and 9.26.14
b) Relate specifically to the matter (for example, species) being impacted; and	Section 9.28; Sections 9.5, 9.7, 9.9, 9.11, 9.15, 9.17, 9.19, 9.21, 9.23, 9.24, 9.25 and 9.26.14
c) Seek to ensure that the health, diversity and productivity of the environment are maintained or enhanced.	Section 9.28; Sections 9.5, 9.7, 9.9, 9.11, 9.15, 9.17, 9.19, 9.21, 9.23, 9.24, 9.25 and 9.26.14
Any proposed environmental offsets must comply with the <i>Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, 2012</i> .	Section 9.28; Sections 9.5, 9.7, 9.9, 9.11, 9.15, 9.17, 9.19, 9.21, 9.23, 9.24, 9.25 and 9.26.14

Specific content requirements	Corresponding section in EIS
5.14 Monitoring and Reporting	
<p>Appropriate baseline data requirements are to be provided as part of the EIS to form the basis for baseline measurement and ongoing monitoring of environmental parameters. It must be demonstrated that the proposed methods for baseline measurements and subsequent monitoring are based on current best practice/standards, scientifically robust and statistically sound to enable diligent and systematic data collection that will deliver unbiased and sound responses to EIS Guideline requirements. This section must identify parameters to be monitored, the performance indicators to be used to evaluate accuracy of predicted impacts and effectiveness of mitigation measures and offsets, and management response trigger values and response activities.</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>This section is to also identify and describe monitoring programs, procedural and compliance audit programs and reporting requirements and arrangements which will demonstrate the effectiveness of proposed management measures and monitoring.</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>The proponent must, in addition to outlining proposed programs, clearly identify what is to be monitored and why. Monitoring programs must be designed to provide objective evidence regarding activities associated with the proposal and if these activities are adversely impacting on the environment in the short, medium and long term. Monitoring programs must demonstrate an understanding and consideration of:</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>a) Ecosystems and habitats, climatic or seasonal variations, flora and fauna (particularly listed threatened species/ecological communities and listed migratory species), and those at-risk species, groups of species and habitats identified in the Draft Great Barrier Reef Biodiversity Conservation Strategy 2012, underwater noise issues, light and light horizon impacts and water quality issues as a result of the proposed development;</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>b) Measuring the effectiveness of mitigation and/or rehabilitation and offset measures;</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>c) Documenting the difference between predicted and actual impacts;</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>d) Methods for identification of non-predicted impacts and appropriate reporting and remedial measures;</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>e) Application and effectiveness of emergency and contingency plans;</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>f) Review of consultation and management arrangements with regulatory authorities and the community. A diagram showing monitoring and reporting arrangements must be included in the EIS; and</p>	Chapter 22 (consultation arrangements) Appendices Q1 and Q2; Section 6.6 (reporting arrangements) Appendix Q3 (monitoring arrangements)
<p>g) Trigger values must be outlined for use in management actions and response to adverse project impacts.</p>	Chapter 22; Appendices Q1, Q2 and Q3
<p>A diagram showing monitoring and reporting arrangements must be included in the EIS.</p>	Chapter 22; Appendices Q1, Q2 and Q3
5.15 Environmental Record	
<p>The EIS must include the environmental record of the proponent. This must include:</p>	Section 1.2
<p>a) Reference to the GBRMP Regulations 88R(j) which includes the applicant's history in relation to environmental matters (for example compliance with Marine Park permits and environmental management plans) and any outstanding charges; and</p>	Section 1.2.2 (GPC environmental record) Section 1.9.1.2 (GBRMP Regulations 88R(j))

Specific content requirements	Corresponding section in EIS
b) 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 the person proposing to take the action. If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework must be provided.	Section 1.2
Information relating to the persons' environmental record must also include any accreditations (for example ISO 14001), environmental awards, and other recognition for environmental performance.	Section 1.2
5.16 Additional 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.	Chapters 3, 16, 17, 18 and 19
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.	Noted
The mandatory considerations for applications under the GBRMP Regulations are outlined at Attachment 2 .	Noted
A table cross-referencing information relevant to 5.16 and the mandatory considerations for applications under the GBRMP Regulations must be provided identifying relevant text in the body of the EIS.	Appendix A4
5.17 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 and the GBRMP Act including the principles of ESD (Attachment 3). 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 impacts on the environment.	<p>Section 1.9.1.1 (Project compliance with objectives of the EPBC Act)</p> <p>Project compliance with objectives of the GBRMP Act is no longer relevant due to no direct Project impacts will occur within the GBRMP</p> <p>Section 2.15 (Project compliance with principles of ESD)</p> <p>Section 23.4 (environmental acceptability of the proposal)</p> <p>Section 1.4 (reasons justifying undertaking the proposal)</p> <p>Appendices Q1 to Q3 (measures to avoid or mitigate Project impacts)</p> <p>Section 9.28 (Offset requirements refer</p>

Specific content requirements	Corresponding section in EIS
5.18 Information Sources	
<p>Information sources used in the formulation of the EIS are to be provided. This section will describe consultations and studies undertaken in the course of proposal formulation and preparation of the draft EIS, and sources of information and technical data. The following details must be provided for information used in developing the EIS:</p> <ul style="list-style-type: none"> a) The source of the information; b) How recent the information is; c) How the reliability of the information was tested; and d) What uncertainties and/or gaps (if any) are in the information. 	Appendices B, E, G, H, I, J, K, L, M and P
<p>A copy of all data and the sampling methodologies must be made available to the DSEWPaC and GBRMPA for the purpose of peer review on receipt of a written request from the DSEWPaC or GBRMPA. 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.</p>	Noted
<p>Any further or ongoing consultations or studies must be outlined here.</p>	Section 1.8; Appendix N
5.19 Reference List and Bibliography	
<p>The reference list and bibliography 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.</p>	Chapter 25
5.20 Appendices and Glossary	
<p>Detailed technical information studies or investigations necessary to support the main text of the EIS, 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. 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.</p>	Appendices; Glossary; Abbreviations