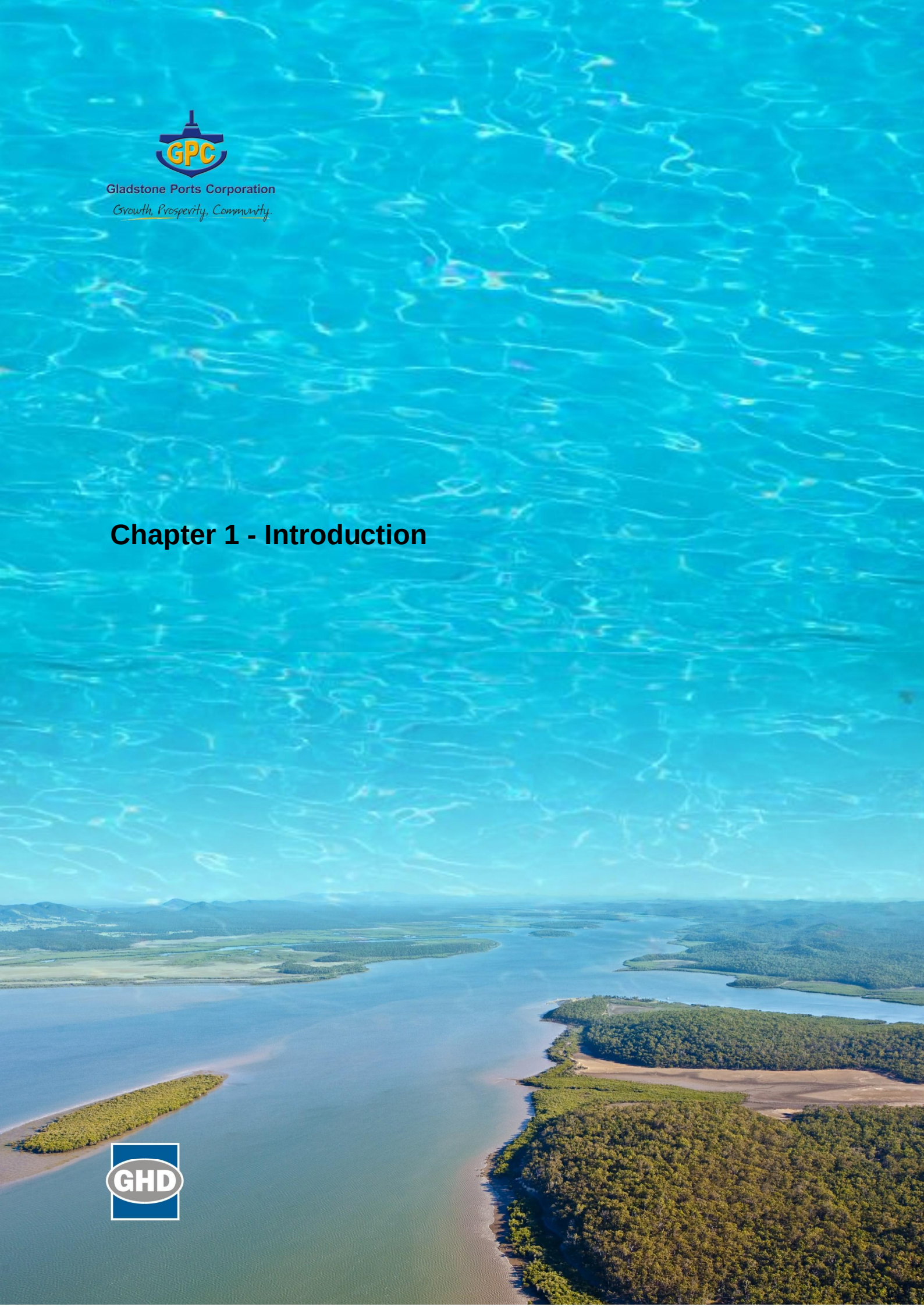
Gladstone Ports Corporation

Growth, Prosperity, Community.

Chapter 1 - Introduction



1. Introduction

Overview

The Port of Gladstone Western Basin Dredging and Disposal Project (the Project) is seeking approval for dredging and dredged material disposal to accommodate the progressive development of the Port. The rate of development will be controlled by the demands of industry locating in the Gladstone region requiring access to port facilities. This Environmental Impact Statement (EIS) has been prepared in accordance with the Terms of Reference (ToR) for the project provided by the Coordinator General (Appendix A).

This chapter of the EIS has been prepared to address Section 1.0 Introduction in the ToR and includes the rationale, relationship to other projects, socio-economic costs and benefits of the project and alternates to the project. Appendix B provides a table cross referencing the EIS sections with the ToR sections.

1.1 Project Proponent

The Gladstone Ports Corporation (GPC) is the Project Proponent. GPC is a Government Owned Corporation under the *Government Owned Corporation Act 1993*, which manages the Port of Gladstone. The Port of Gladstone (the Port) comprises six major port facilities including; Boyne Smelter Wharf, South Trees Wharf, Barney Point Terminal, Auckland Point Terminal (Port Central), RG Tanna Coal Terminal and Fisherman's Landing.

The key contact for the project is:

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1.1.1 Environment, Health, Safety and Community

The following section outlines GPC's environmental, health and safety and community commitments and polices. Copies of GPC's Environment and Safety policies are provided in Appendix C.

Environment

GPC has an Environment Management System that is externally certified to the international standard AS/NZS ISO 14001:2004 and includes the following Environment Policy:

- *"Achieve continual improvement in environmental performance through a commitment to meeting all requirements of AS/NZS ISO14001:2004.*
- *Maintain compliance with all environmental legislation and other related requirements for all stages of GPC's projects and operations.*

- *Effectively communicate with, and engage, stakeholders including the community, employees, contractors, suppliers, partners and customers to ensure appropriate input and awareness in achieving the objectives of GPC's Environmental Policy.*
- *Manage GPC's effect on air quality through maintaining a detailed understanding of local, regional and international air quality issues and striving to achieve best practice in air quality management.*
- *Implement an effective organisation wide "Energy and Greenhouse Declaration of Commitment", supported by individual policies, to manage risks associated with climate change. Provide annual public reporting of energy efficiency performance to external stakeholders.*
- *Implement Waste Management Plans to drive effective and efficient use of resources. Measure, monitor and benchmark waste management for continual improvement.*
- *Ensure ongoing assessment and management of all impacts GPC's operations may have on the health of the Port Curtis and broader marine environment..*
- *Ensure all new GPC development meets the requirements of this policy throughout design, construction, operations and closure.*
- *Implement Aesthetics Management Strategies to improve the overall visual impact the operations have on the wider community.*
- *Ensure dredging and reclamation activities meet the needs of Port Users whilst giving detailed consideration to environmental impacts. Manage possible impacts by setting planning objectives over a planning horizon of 50 years and beyond."*

Safety

GPC workplace policy includes the following commitments:

- *"Our goal is zero for all injuries and occupational illness and we will work to progressively identify and eliminate unsafe conditions, acts and behaviours from the workplace.*
- *We will establish and maintain a safe, productive and healthy place to work, that does not place personnel, contractors, visitors and the public at risk.*
- *We are a committed to the management of injuries, occupational illnesses and the rehabilitation process and all work related incidents, injuries or illnesses will be promptly investigated.*
- *Every individual is responsible and accountable for their safety and the safety of others, and they will not place themselves or others at risk or conduct works that may be considered to be unsafe.*
- *We will strive for excellence in managing health and safety, set objectives, targets, measure, audit, review and report to continually improve our performance and to achieve best practice.*
- *We will mitigate the adverse impacts of our activities and prevent property loss or damage by education and awareness and by establishing by consultation and enforcing policies.*
- *We will conduct our operations in compliance with all relevant legislation and applicable laws, legal compliance is the absolute minimum performance standard expected.*
- *We will promote employee's, contractor's, visitor's and the public's awareness of health and safety issues, requirements and objectives through ongoing training, communication programmes and we will encourage feedback.*

- *We are committed to developing and implementing safe work procedures and safe work method statements for all identified high risk tasks."*

Community

GPC's community commitment is stated on the GPC website (GPC 2009a):

"GPC maintains its position as a good corporate citizen by being actively involved in the Gladstone regional community through programs and initiatives that provide benefit to both the organisation and regional community members. We proudly provide the Gladstone Marina recreational parklands for the enjoyment of our community, sponsorships and donations, community events, educational programs and free weekly tours of our port facilities.

Our Community Working Group is a regular community consultative process involving community and business representatives with an interest in our projects and activities. The Group is our link to our most important stakeholders – our community, and is a forum in which GPC Management, Community Relations and Environment team members work collectively to create community awareness of our activities with a particular focus on environmental initiatives."

1.2 Project Context

The Queensland Department of Infrastructure and Planning (DIP) and the Coordinator General (CG) have prepared the Draft Port of Gladstone Western Basin Master Plan (Master Plan) (Coordinator General, 2009). The Master Plan sets the direction for the Port of Gladstone, in particular the development of its Western Basin, for the next 30 years. The Master Plan aims to provide certainty to industry that the area will be developed, and this development will be in a coordinated manner for mutual benefit and a net reduction in potential cumulative environmental impacts.

There are currently two key projects being developed by GPC to assist in meeting the Master Plan's strategic objective of developing the inner harbour:

- Fisherman's Landing Northern Expansion Project; and
- Port of Gladstone Western Basin Dredging and Disposal Project.

1.2.1 Fisherman's Landing Northern Expansion Project

The Fisherman's Landing Northern Expansion project is being developed separately to the Port of Gladstone Western Basin Dredging and Disposal Project. This project is located directly adjacent to area being assessed for the disposal of dredged material for the Port of Gladstone Western Basin Dredging and Disposal Project. The Fisherman's Landing Northern Expansion Project is the subject of a separate Environmental Impact Assessment (EIS) as a Significant Project under the *State Development and Public Works Organisation Act 1971*. This EIS was released for public and stakeholder comment by the Coordinator General on 3 October 2009.

1.2.2 Port of Gladstone Western Basin Dredging and Disposal Project

The Port of Gladstone Western Basin Dredging and Disposal Project, which is the subject of this EIS, seeks to accommodate the long term dredging and dredged material disposal that is required to provide safe and efficient access to the existing and proposed port facilities in the harbour. The project has been developed in accordance with investigations and direction outlined in the Draft Master Plan (Coordinator

General 2009). The project has been declared a Significant Project under the *State Development Public Works Organisation Act 1971* and is also a Controlled Action under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999*. The project is being assessed under the Bilateral Agreement between the State and Federal Governments.

1.3 Project Description

The Project Area is situated in the Port of Gladstone, 10 kilometres (km) north of Gladstone. Gladstone is located on the eastern seaboard of Australia, approximately 525 km north of Brisbane and 100 km south of Rockhampton on the Capricorn Coast of Central Queensland (Figure 1-1). This section briefly summarises the project elements, with a more detailed project description provided in Chapter 2.

Approval for dredging and dredged material disposal is sought to support the progressive development of the harbour through provision of access to port facilities, which will be a key component of the import and export chain and will assist in developing industries, specifically the developing Liquefied Natural Gas (LNG) industry, to be located within the Gladstone region. In line with the Draft Master Plan, two areas of development are required for the long-term strategic development of the Port and are the subject of this EIS:

- The inner harbour dredging associated with deepening and widening of existing channels and swing basins, and the creation of new channels, swing basins and berth pockets (Section 1.3.1); and
- The disposal of dredged material from the above dredging works in the Western Basin Reclamation Area, which is adjacent to the existing Fisherman's Landing Reclamation and the proposed Fisherman's Landing Northern Expansion (Section 0).

Specifically, this EIS addresses the following activities:

- Construction of the outer bund wall from bluestone material sourced from the GPC owned quarry;
- Capital and maintenance dredging from the nominated dredging footprint (Section 1.3.1);
- Placement of dredged material into the Reclamation Area and management of decant waters (Section 0); and
- Final capping, surface stabilisation and stormwater management upon completion of the reclamation.

With respect to dredging, the following is included:

- Access channels, swing basins and shipping berths; and
- Marine offload facilities on Curtis Island.

As per section 1.4 of ToR, this project does not address any dredging associated with the LNG pipelines. This is being addressed by the LNG proponents in association with the State Government.

By encompassing all of the dredging and dredged material disposal that is envisaged to enable the development of industries in the Port of Gladstone, the Western Basin Dredging and Disposal Project seeks to provide a cumulative impact assessment of these activities, to a greater extent than would be possible should each individual development attempt this assessment independently.

For this Project, the following project locality definitions apply:

Project Locality*	Description and Boundary
Project footprint	◗ The Western Basin Reclamation Area, which is a 235 ha site in the area to the north of the existing Fisherman's Landing Reclamation; and ◗ The Dredging Stages 1A, 1B, 2, 3 and 4, which consist of channels, swing basins and berth pockets.
Project Area	◗ The Project Area encompasses the Western Basin Reclamation Area, the areas of capital and maintenance dredging, and the areas with the potential to be directly impacted by the construction and operation of the proposed Project. ◗ The Project Area is generally defined as the subtidal and intertidal areas between the RG Tanna Coal Terminal and the entrance to The Narrows and the area landward of the proposed Western Basin Reclamation Area to the north of the existing Fisherman's Landing Reclamation. ◗ Within the Project Area, the bay to the north of the existing Fisherman's Landing Reclamation has generally been referred to as the Western Basin in the technical studies.
Study Area	◗ A Study Area is defined by each of the specialist studies and is specific to the particular impacting process being considered. ◗ The Study Area is generally broader than the Project Area, taking in areas that have the potential to be indirectly impacted by the Project and reference areas for ecological studies. ◗ The Study Area generally includes the Western Basin Reclamation Area, the existing channels, the proposed capital and maintenance Dredging Stages and offsite areas in The Narrows, the area between Fisherman's Landing and Wiggins Island, Pelican Banks, and the area southeast of Curtis Island.

** In providing these definitions, it is noted that the Draft Port of Gladstone Western Basin Master Plan refers to the Project Area as the Western Basin. This EIS takes a more narrow definition of the Western Basin as defined in the table.*

300,000 310,000 320,000 330,000 340,000 350,000 360,000

7,380,000 7,370,000 7,360,000 7,350,000 7,340,000

CENTRAL HILL
BLACK HEAD
CORAL SEA
The Narrows
CONNOR BLUFF
Graham Creek
SCRUBBY MOUNTAIN
KANGAROO ISLAND
FRIEND POINT
LAIRD POINT
CURTIS ISLAND
SOUTHEND
NORTH POINT
NORTHCLIFFE
BUTLERVILLE
SHIP HILL
TAIL POINT
HAMILTON POINT
PORT LIMIT
MOUNT LARCOM
MOUNT LARCOM
Port Curtis
AUCKLAND POINT
BARNEY POINT
GLADSTONE
YARWUN
SOUTH TREES POINT
MOUNT SUGARLOAF
CALLEMONDAH
GATCOMBE
GATCOMBE HEAD
EAST END
Calliope River
BEECHER
South Trees Inlet
BOYNE ISLAND
CANOE POINT
TANNUM SANDS
BURUA
Boyne River
RICHARDS POINT
WURDONG HEIGHTS
BRAY HILLS
GRAHAM
WILD CATTLE ISLAND
TABLE HILL
BENARABY
SPIT END
Colosseum Inlet
HUMMOCK HILL
CALLIOPE
HUMMOCK HILL ISLAND
RODDS PENINSULA
Rodds Harbour
NORTON POINT

1:200,000 (at A3)

0 2 4 6 8 10

Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 56

N

LEGEND

- Town or Locality
- Major Road
- Railway
- Port Limit

Port of Gladstone
Western Basin Dredging and Disposal Project

Location of the Port of Gladstone, Central Queensland

Job Number	42-15386
Revision	A
Date	30 Aug 2009

Figure 1-1

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1.3.1 Dredging Stages

The following summarises the maximum proposed dredging volumes for the Western Basin Dredging and Disposal Project (should each project proceed). The footprints are shown on Figure 1-2. Each Dredging Stage is required to either support various LNG proponents (Stages 1A, 1B and 2) or future import or export facilities for as yet unidentified proponents and/or GPC (Stages 3 and 4). The current EIS addresses all dredging stages and overall footprint of development to provide a cumulative assessment of potential impacts.

Dredging Stage	Description	Volume
Stage 1A	North China Bay LNG Precinct	16 million m^3
Stage 1B	Fisherman's Landing LNG	6.1 million m^{3*}
Stage 2	Laird Point	4.5 million m^3
Stage 3	Fisherman's Landing Development	5.5 million m^3
Stage 4	Hamilton Point	3.9 million m^3
	Total	**36 million m^3**

* part of this dredging may be undertaken by the proponent under a separate approvals process

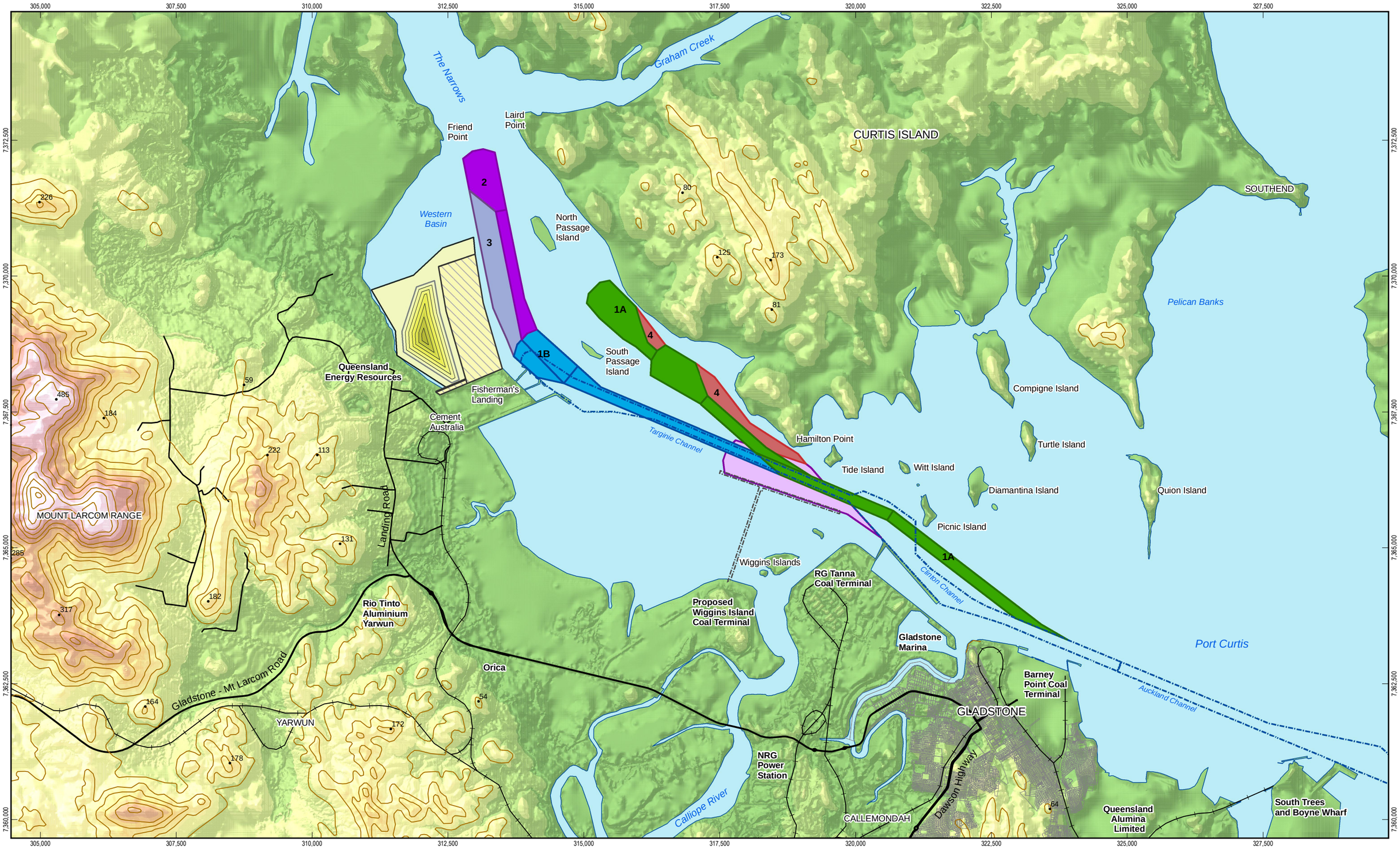
1.3.2 Western Basin Reclamation Area

Material dredged during the development of the Western Basin of the Port of Gladstone is proposed to be placed into a bunded Reclamation Area (Figure 1-3). The proposed Western Basin Reclamation Area is 10 km north of Gladstone, immediately adjacent to the existing Fisherman's Landing Reclamation and proposed Fisherman's Landing Northern Expansion, which is the subject of a separate EIS.

The reclamation areas and volumes are as follows:

Reclamation Area	Footprint	Volume Accommodated
Fisherman's Landing Northern Expansion (separate EIS)	173.5 ha	10 million m^3
Western Basin Reclamation Area	235 ha	45 million m^3
Total	**408.5 ha**	**55 million m^3**

The volume available in the reclamation makes allowance for a substantial volume of maintenance dredging material over the life of the project.



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0 0.5 1 1.5 2 2.5

Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 56

N

LEGEND

- Elevation Spot Height (metres ASL)
- Elevation Contour (50m interval)
- Railway
- Major Road
- Western Basin Reclamation Area
- Fisherman's Landing Northern Expansion
- Built Up Area
- Existing Channels, Swing Basins and Berths
- Wiggins Island Coal Terminal (Approved)

Proposed Dredging Stages

- Stage 1A - North China Bay LNG Precinct
- Stage 1B - Fisherman's Landing LNG
- Stage 2 - Laird Point LNG
- Stage 3 - Fisherman's Landing
- Stage 4 - Hamilton Point

Port of Gladstone

Western Basin Dredging and Disposal Project

Location of the Proposed Dredging Stages for the Western Basin Dredging and Disposal Project

Job Number	42-15386
Revision	A
Date	30 Aug 2009

Figure 1-2

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LEGEND

- Western Basin Reclamation Area
- Fisherman's Landing Northern Expansion
- Bund Wall

1:20,000 (at A4)

0 100 200 300 400 500

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

Port of Gladstone
Western Basin Dredging and Disposal Project

Location of the Proposed Western Basin Reclamation Area Footprint

Job Number 42-15386
Revision A
Date 01 Sept 2009

Figure 1-3

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1.4 Project Rationale

This section discusses the project rationale as outlined in Section 1.3 of the ToR. Specifically, the following is described:

- Project development and context (including regulatory and policy framework);
- Need for the project;
- Project objectives;
- Activity already underway;
- Technical and commercial viability; and
- Timing.

1.4.1 Project Development and Context

The Port of Gladstone is Queensland's largest multi-commodity port and the world's fifth largest coal export terminal. Handling close to 1,400 vessels annually, it is one of the busiest ports in Australia and plays a vital role in the local, state and national economies. Its facilities cater for the import of raw materials and the export of finished product associated with major industries in the Gladstone region. The Port has expanded rapidly over the last 30 years to meet development of major mining (predominantly coal) and industrial projects of state significance. The GPC 50 Year Strategic Plan forecasts an ultimate port shipping capacity of over 300 million tonnes per annum (GPC 2008a).

The Commonwealth and Queensland governments have identified Gladstone as a port with the potential to service future large scale export oriented, resource processing and value adding industries. The close proximity of Gladstone's international port facilities is an essential component of the economic viability of the Gladstone State Development Area (GSDA). The GSDA is an approximately 28,000 ha declared land bank managed and promoted by the Gladstone Economic and Industry Development Board (GEIDB), a statutory authority under the auspice of the Department of Infrastructure and Planning (DIP). A Materials Transportation Services Corridor (MTSC) links the GSDA to the Port.

The GSDA aims to attract industries by offering internationally competitive operating costs and has the capacity to accommodate significant future industrial growth. GPC is responsible for the provision of and maintenance of declared depths of shipping channels, swing basins and berth pockets in the Port. The Port of Gladstone Western Basin Dredging and Disposal Project encompasses all the dredging and disposal of dredged material that is currently outlined in the Coordinator General's Draft Port of Gladstone Western Basin Master Plan (Coordinator General, 2009).

In July 2008, the GSDA was extended to include a large area on the southern end of Curtis Island. The expanded area consists of three areas:

- The Curtis Island Industry Precinct, which provides for the establishment of liquefied natural gas facilities on the west coast of southern Curtis Island;
- The Restricted Development Precinct, applied to the area of Kangaroo Island, is intended to provide for the establishment of essential transportation infrastructure within the GSDA; and
- The Environmental Management Precinct has been applied to the area east of the range on southern Curtis Island to recognise, protect and maintain areas of high ecological significance (DIP 2008a).

In the Curtis Island Industry Precinct, there are currently a number of LNG proponents investigating sites. GPC is also looking to develop up to five berths at Hamilton Point for a range of future imports and exports. DIP is currently consulting with a working group to investigate and provide common user infrastructure to Curtis Island, including a potential road bridge from Friend Point to Laird Point at the southern end of The Narrows. Dredging and dredged material disposal are required to facilitate the potential LNG and GPC developments on Curtis Island.

Presented in Figure 1-4 is the process by which the Project was developed, including the Draft Master Plan and the preparation of this EIS. Importantly, the process for Project development shows that:

- The assessment and development of project drivers was considered in consultation with government agencies and industry;
- The area for development in the Port has been identified in the context of regional development, especially the LNG industry (see Section 1.5 for further detail);
- It has the commitment of the Queensland Government to ensure certainty for industry; and
- The assessment of the whole of Port development to meet the demands of industry will allow an understanding of the cumulative environmental impacts, thereby providing an opportunity to develop an environment management plan that will minimise these impacts over the life of the Project.

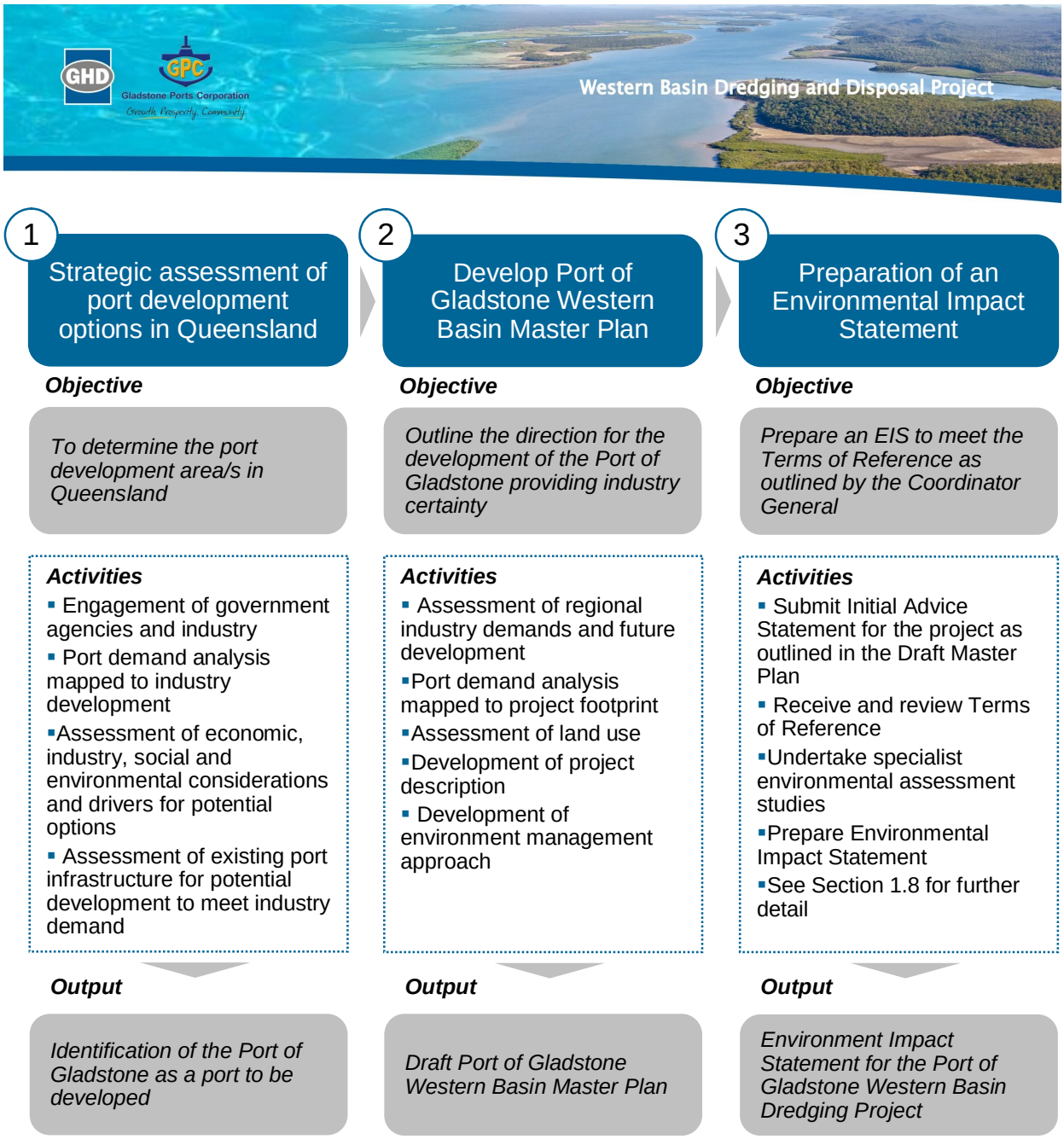


Figure 1-4 Development of Port of Gladstone Western Basin Dredging and Disposal Project

Draft Port Gladstone Western Basin Master Plan

The Draft Port of Gladstone Western Basin Master Plan was developed to allow Government to assess potential future industry and Port development opportunities in the Western Basin over the next 30 years (Coordinator General, 2009). This understanding allowed a strategic framework to be developed and will be used in assessing future projects in the Western Basin, providing an effective and efficient coordinated approach to the basin area development. As a part the framework, infrastructure 'triggers' were developed to understand the staging of the Project, and the way in which it is to be delivered. Importantly, this approach has allowed an understanding of how the cumulative impacts of the numerous projects proposed adjacent to the Western Basin are to be assessed, with a focus on the channel dredging and disposal of dredged material.

A steering committee was formed for the preparation of the Draft Master Plan and it included members from the following organisations:

- Department of Infrastructure and Planning (DIP);
- Department of Environment and Resources Management (DERM);
- Department of Transport and Main Roads (DTMR);
- Gladstone Regional Council (GRC); and
- Gladstone Ports Corporation (GPC).

Gladstone Ports Corporation 50 Year Strategic Plan

The GPC 50 Year Strategic Plan also nominates the Western Basin of the Port as an area that will undergo significant development over the coming years (GPC 2008a). Due to the significant development of the LNG industry and GSDA on Curtis Island, the predicted expansion in the Western Basin is more significant than the Strategic Plan anticipated.

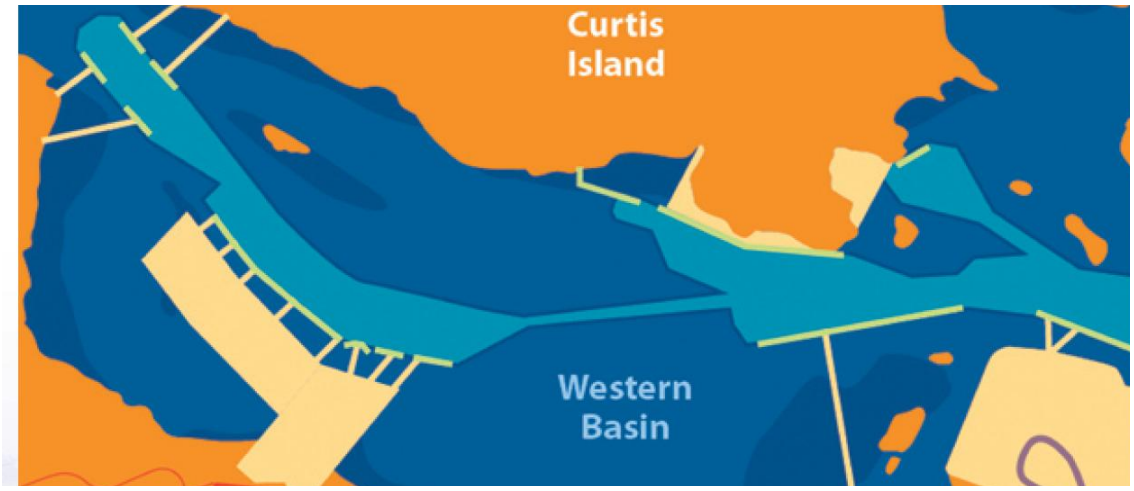


Figure 1-5 Proposed Development of the Western Basin as shown in GPC 50 Year Strategic Plan (GPC 2008a)

1.4.2 Need for the Project

Port Capacity and Access

The current Port capacity compared to forecast industry development, and consequent increased port capacity in Gladstone is a primary 'driver' for this Project in the Western Basin. Currently, the Port has only one existing channel leading to the current Fisherman's Landing facility, and all future shore side developments in the Western Basin will need new channels, berths and swing basins. In particular, the proposed LNG facilities on Curtis Island require a new channel, swing basins and berths to access these areas. The area to the north of the existing Fisherman's Landing Reclamation Area also requires dredging to allow access to proposed future berths adjacent to the Fisherman's Landing Northern Expansion.

Future Industrial Development

Port capacity within the Western Basin is currently being utilised by a range of industries. The LNG industry is the primary 'driver' for the increased demand in port capacity, as well as the land requirement for shore side facilities development.

One of the key assumptions in the draft Master Plan is for the development of the LNG industry in the Western Basin to be in the order of 40 to 50 million tonnes of LNG per annum (Mtpa). The Master Plan states that this production figure has been based on the size and number of announced LNG projects in the Gladstone area (Table 1-1). There are a number of factors that are likely to affect the eventual size of the LNG industry in the Western Basin and they include but are not limited to:

- Future market conditions;
- Physical, regulatory, environmental and commercial factors assessed in each proponent's EIS; and
- Commercial considerations by proponents.

It is unknown whether all these projects will proceed, but all have been included for the purposes of this EIS.

Table 1-1 LNG Proponents in the Western Basin

Proponent	Proposed Production (Mtpa)	Potential Production Date
Arrow Energy	10	2014
BG/QGC	12	2014
Impel LNG	1.5	TBC
LNG Limited	3	2012
Origin/ConocoPhillips	14	2015
Santos/Petronas	10	2014
Shell	14	TBC

Source: Draft Port of Gladstone Western Basin Master Plan (Coordinator-General 2009)

Disposal of Dredged Material

If all of the proposed LNG development outlined above is realised, the provision of the required channels, swing basins and berth facilities will require a volume of material in the order of 36 million m^3 to be dredged in the Western Basin. The Draft Master Plan investigated a range of disposal area options and concluded that an area behind the proposed Fisherman's Landing Northern Expansion was suitable for disposal of dredged material from these works (Figure 1-3). An assessment of multiple disposal areas was also considered, however the plan concluded that it was cost prohibitive, would sterilise future industry development sites and impact on other environmentally sensitive areas (Coordinator General 2009). The options considered are further outlined in Section 1.7.

1.4.3 Project Objectives

To meet the objectives in the Draft Port of Gladstone Western Basin Master Plan the Port of Gladstone Western Basin Dredging and Disposal Project has been developed. There are two main objectives for this Project:

- To accommodate the long term dredging and dredged material disposal that is required to provide safe and efficient access to the existing and proposed port facilities in the harbour; and
- The provision of a location for the disposal of dredged material from capital and maintenance dredging in the Port.

1.4.4 Activity Already Underway

There are a number of activities already underway in Gladstone that are either in support of or dependant on the Western Basin Dredging and Disposal Project.

GPC Activities

The construction of the Western Basin Reclamation Area bund wall will be supported by the development of a quarry and haul route by GPC. The quarry from which the bund construction materials will be sourced is located within the GSDA. Materials from this quarry will also be used to service other GPC construction projects in the short and long term. Therefore the quarry is undergoing a separate development approval process to be undertaken prior to the commencement of GPC projects requiring these materials.

For this Project, the bluestone materials will be hauled from the quarry to the reclamation site using trucks, which will travel on either an on-road or off-road haul route depending on the required bund wall construction rate and haulage vehicle size. These haul routes are undergoing a separate options assessment and approvals process to allow them to be developed prior to the receipt of approvals for the construction of the bund wall.

An EIS process is currently underway for the adjacent Fisherman's Landing Northern Expansion. The relationship of this project to the current Project is further discussed in Section 1.5.2.

LNG Proponent Activities

A number of LNG proponents are actively investigating LNG plant sites in the Western Basin and are progressing through the environmental approvals process. These activities are outlined further in Section 1.5.

1.4.5 Technical and Commercial Viability

A number of investigations have been undertaken into the technical and commercial viability of the Project. Many of these are related to the LNG shipping protocol investigations, which have involved extensive navigational simulations at specialised facilities both in Australia and internationally. These investigations have determined the dimensions of the shipping channels and the shipping protocols that are required for safe operation of this new industry in the Port of Gladstone. These investigations have established the proposed dredging channel configuration to be technically and commercially feasible for both the proposed new LNG industry and the existing industries within the Port.

Preliminary engineering studies have been and continue to be undertaken into the design of the Western Basin Reclamation Area bund walls and the reclamation strategy, including the development of the proposed mound of dredged material. Further detail is provided in Chapter 2.

1.4.6 Timing

The capital dredging of the Western Basin will occur in stages and the rate of development will be controlled by the demands of industry locating in the Gladstone region requiring access to port facilities. Operational works approvals will be sought for each project stage as they are required. Table 1-2 provides an overview of the current likely timing of the stages of the Project as presented in Figure 1-2.

Table 1-2 Project Timing

Project Stage*	Potential Length and Timing of Dredging
Stage 1A – North China Bay Industry Precinct	Late 2010 – 2012 (2 years)
Stage 1B – Fisherman's Landing LNG	Late 2010 – 2012 (dredged concurrently with Stage 1A)
Stage 2 – Laird Point	2014 (follows after Stage 1A and 1B)
Stage 3 – Fisherman's Landing Development	To be determined (will be intermittently staged over a number of years)
Stage 4 – Hamilton Point	To be determined (will be intermittently staged over a number of years)

1.5 Relationship to other Projects

1.5.1 Overview of other Projects in the Gladstone Area

There are a range of projects underway in the Gladstone area, many of which are dependant on the Western Basin Dredging and Disposal Project proceeding. Presented in Table 1-3 are current projects in the Gladstone Port area.

Table 1-3 Other Projects in the Gladstone Port Area

Proponent and Project	Overview of Gladstone Port Project Component	Project Status*	Dependence on the Western Basin Dredging and Disposal Project
Gladstone Port Corporation Fisherman's Landing Northern Expansion	Northern Expansion of the existing Fisherman's Landing reclamation through the reclamation of an additional 153 hectares (ha) adjacent to the existing port facility	EIS on public display from 3 October to 9 November 2009	No

Proponent and Project	Overview of Gladstone Port Project Component	Project Status*	Dependence on the Western Basin Dredging and Disposal Project
Arrow Energy Gladstone LNG Project	Natural gas liquefaction plant and required infrastructure located at the Fisherman's Landing Wharf	EIS approved	No
Santos and PETRONAS Gladstone LNG Project	LNG processing plant and export facility located on Curtis Island	EIS closed for public comment (Q3 2009)	Yes
QGC Ltd and BG Group Queensland Curtis LNG Project	LNG processing plant and export facility located on Curtis Island	EIS closed for public comment (early Q4 2009)	Yes
Sunshine Gas and Sojitz Corp. Sun LNG	LNG processing plant and export facility located at the Fisherman's Landing Wharf	EIS Terms of Reference released	No
Impel LNG Southern Cross LNG Project	LNG processing plant and export facility located on Curtis Island	Project announcement May 2008	Yes
ConocoPhillips and Origin Energy Australia Pacific LNG Project	LNG processing plant and export facility located on Curtis Island	Initial Advice Statement prepared, project declared a Significant Project Terms of Reference on public display Q3 2009	Yes
Wiggins Island Coal Export Pty Ltd Wiggins Island Coal Terminal	Development of a coal terminal, wharfs and berth pockets and swing basin	Project Approved	No
Shell Curtis Island LNG Project	LNG processing plant and export facility located on Curtis Island	Terms of Reference on public display Q4 2009	Yes

Source: GLNG Project Environmental Impact Statement (Santos 2009)

**Status is at the time of writing of this EIS*

1.5.2 Fisherman's Landing Northern Expansion

Of particular relevance to this Project is the Northern Expansion of the existing Fisherman's Landing Reclamation Area through the reclamation of additional land adjacent to the existing port facility (this project is currently in the EIS stage of project development). The Project will contribute to the overall reclamation area of 408.5 ha in the Western Basin. Once complete, the reclamation will provide additional land to support the construction of six wharves and for the development of associated transport, storage, loading and unloading facilities. A bund wall will be constructed and the area will be reclaimed using dredged material from future capital and maintenance dredging programs in the Port. Specifically, the Fisherman's Landing Northern Expansion Project addresses the proposed capital dredging to deepen and widen the Targinie Channel and Fisherman's Landing Swing Basin.

Expansion of the facilities at Fisherman's Landing will serve future industries located within the GSDA and the two will be linked via the MTSC (Figure 1-3). It is intended that the construction of the Fisherman's Landing Northern Expansion will be staged to meet development needs. Currently, based on likely demand for wharves and the requirement to dispose of dredged material, it is anticipated that at least one third of the bund wall will be constructed in a single construction program. This area will receive capital dredging material from the proposed expansion of the Targinie Channel and Fisherman's Landing swing basin. The capital cost of construction of the reclamation bund has been estimated to be approximately $82.5 million in 2009 dollars.

1.5.3 Dredging and Shipping for other Projects

As outlined in Table 1-3, the dredging and disposal of dredged material from a number of other projects in the Gladstone Port area form part of the Western Basin Dredging and Disposal Project. A number of project proponents have also investigated the dredging associated with their particular projects in their EIS studies as required by the Terms of Reference for their projects. However, the Western Basin Dredging and Disposal Project encompasses all the dredging proposed for the LNG industry and future GPC developments within the inner harbour in the Port. This includes the marine offload facilities to support various LNG proponents on Curtis Island, but does not include those marine facilities subject to early works applications by LNG proponents, or any dredging associated with the LNG pipelines that may cross The Narrows. The latter is specifically excluded from the ToR for this project (ToR section 1.4). Early works for marine facilities on Curtis Island and pipelines crossing the Narrows will be dealt with in the individual EISs for those projects.

The dredging proposed in this EIS will facilitate increased shipping and wharf construction within the Port of Gladstone. While these impacts are considered in the cumulative impacts discussed in this EIS, detailed impact assessments will be undertaken in the EISs for the individual proponents establishing in the Port in the future.

1.6 Socio-economic Costs and Benefits of the Project

1.6.1 Costs and Benefits to Business and Wider Community (including Employment)

The Western Basin Dredging and Disposal Project is anticipated to support between approximately 850 and 1,500 full time equivalent positions (directly and indirectly) annually throughout the first ten years of project works. The labour market has slackened over the past few months, resulting in the availability of qualified employees. For positions that are unable to be filled by workers within the region, the existing

commercial accommodation appears to have sufficient capacity to accommodate the new workers. In the housing and rental market, housing costs have increased, but no more than in Queensland generally. The median weekly rents for two bedroom units and three bedroom houses are traditionally below the state average. As such, the project is unlikely to place significant pressure on the housing market.

At the target discount rate of 6%, the project has a positive net present value and is economically viable. For the main case of the cost benefit analysis, the project remains economically viable across a spread of discount rates, having an internal rate of return of 12.33%. The project remains economically viable at the test discount rate of 6% in both sensitivity tests. In the first test, the extent of environmental disbenefits is assumed to significantly increase, and in the second test the willingness to pay for Western Basin harbour services is assumed to fall from $2.75/tonne to only $1.00/tonne.

The annual economic impact of the Western Basin Dredging and Disposal Project between 2010 and 2019 was assessed (Chapter 15). Economic impacts are anticipated to be most significant in 2013, representing:

- $534.4 million in output (or consumption) impacts, including $344.2 million in indirect impacts;
- $93.4 million in household income impacts, including $80.2 million in indirect impacts;
- 1,867 full time equivalent positions, including 1,497 indirect full time equivalent positions; and
- $183.2 million in value added impacts, including $142.5 million in indirect impacts.

1.6.2 Social Costs and Benefits

As outlined in the previous section, the Western Basin Dredging and Disposal Project will result in the creation of direct and indirect employment, for which the skills base is already present, resulting in a direct benefit to the Gladstone community. There is also expected to be a positive impact on local businesses throughout the construction period.

Impacts on commercial and recreational fishing, access to the harbour, visual amenity and safety are likely to be negative and will be particularly experienced by those sectors of the community that most value the conservation of natural resources and access to the harbour.

1.6.3 Demands on Local and Regional Community Services and Facilities

Given the anticipated workforce demand for the Project is not high and it does not demand skills that are not available in the local area, it is not expected that there will be a significant population increase, nor an increase in the demand for education and training from this Project. There may be a temporary increase in the demand for temporary accommodation facilities during dredging, however this is not expected to be significant as much of the dredging workforce will be housed on the dredgers. Therefore, no substantial pressure is anticipated on local and regional community services and facilities.

1.6.4 Influence of Project on Demand for Natural Resources

The main natural resources consumed in the construction phase of this Project will be rock materials from the GPC owned quarry and energy in the form of fuels and oils consumed by the construction equipment and dredgers. Indirectly, the dredging of access channels and swing basins will provide the ability for natural resources such as LNG to be exported from Australia, thereby contributing to the worldwide consumption of natural resources. However, development of the LNG industry in Gladstone

will assist in meeting the worldwide demand for energy with a new source, reducing reliance on fossil fuels such as coal, which are high producers of greenhouse gases.

1.7 Alternatives to the Project

This section of the EIS addresses Section 1.6 Alternatives to the Project of the ToR (Appendix A). The GPC 50 Year Strategic Plan and the Draft Port of Gladstone Western Basin Master Plan nominate the Western Basin of the Port as an area that will undergo significant development over the coming years (GPC 2008a and Coordinator General 2009). Following on from the discussion in the previous sections, this section outlines the alternatives available to meet the needs of the Port and associated industries and the social, economic and environmental benefits and disadvantages of the proposed alternatives.

1.7.1 Alternative Industry Locations

A number of alternative locations have been considered for the establishment of industrial facilities in Central Queensland. In particular, the LNG industry has considered other central Queensland ports for the export of their product, with detailed options assessments being provided in their individual EIS's (GLNG 2009; QGC 2009). Alternative ports considered include Townsville, Abbot Point, Mackay Port, Port of Hay Point and Port of Brisbane. Many of these ports are located substantial distances from the coal seam gas fields, and a number were considered too exposed for LNG berthing requirements (GLNG 2009).

In the more local context of the Port of Gladstone, the Draft Master Plan provides guidance as to the appropriate locations for industry, particularly the LNG industry (Coordinator General 2009). The GPC Strategic Plan nominates proposed import and export facilities and the GSDA has been declared to the north west of the city of Gladstone, with the specific intention of attracting industry to this location.

Given the intent of a number of policy and strategic framework documents to encourage industry to develop in Gladstone and specifically to import and export materials through the inner harbour of the Port of Gladstone, there is a need to consider the appropriate dredging and disposal locations to support this industry. The following sections discuss the development of and alternatives to the proposed dredging footprint, dredged material disposal options and reclamation area design and location.

1.7.2 Alternative Dredging Footprints

The dredging footprints considered in the Western Basin Dredging and Disposal Project are driven by the location of sites that are being investigated for establishment of industries and their shipping requirements, including the volume of shipping traffic and associated safety requirements. The dredging footprints have therefore been optimised to best accommodate the industry requirements. Further minor refinements may continue to be made, but these will be on a localised and small scale.

Given that there is currently no road access to Curtis Island and a bridge could not be constructed in time to meet the current construction schedules of the LNG proponents, marine offload facilities are also required to provide access to the Island. Ferries and barges will be required to transport goods and people during both construction and operation phases. While the designs of these facilities are also being optimised by LNG proponents, this EIS discusses the maximum footprint and volumes, therefore alternatives to these facilities are not considered further in this EIS.

1.7.3 Alternatives for Disposal of Dredged Material

The Draft Master Plan investigated a range of disposal area options and concluded that the area behind the proposed Fisherman's Landing Northern Expansion was suitable for disposal of dredged material from these works (Coordinator General 2009). A description of the alternative dredged material disposal options that have been considered is provided in Table 1-4. Social, economic, engineering and environmental constraints are considered.

From the options discussed in Table 1-4, the option for a single Reclamation Area, adjacent to the existing Fisherman's Landing reclamation and behind the proposed Fisherman's Landing Northern Expansion was considered the most suitable option for the disposal of dredged material from the Western Basin Dredging and Disposal Project.

Table 1-4 Alternative Dredged Material Disposal Options within the Port of Gladstone

Potential Dredged Material Disposal Location	Assessment
Reuse of material	Commercial re-use of the dredged material is not practical because the material to be dredged generally contains a mix of material types including clays, silts, sands, gravels and cobbles, making it difficult to separate the materials when they are dredged and placed in a Reclamation Area. These material types are found throughout the sediment profile and single material types are not generally located in a particular area which would allow selective dredging. The material is also not suitable for beach nourishment as it ranges from large cobbles and gravels to silts and stiff clays, which is not consistent with material types on local beaches. There is also only one very small beach (Barney Point Beach) located within the Port.
Unconfined disposal in subtidal locations within the port	Disposal of dredged material into the subtidal environment has the advantage of keeping the material within the marine environment. However, unconfined disposal in subtidal locations within the Port of Gladstone is not considered a viable solution for the following reasons. While dredging and disposal in any locations creates turbid plumes, the tidal currents within the port have the potential to remobilise deposited material and transport it into the existing shipping channels, swing basins and berth pockets. This channel sedimentation would result in a need to increase maintenance dredging operations and represent inefficient operation of the port. It would also increase the environmental impacts of maintaining the declared depths of the channels through increased frequency and duration of dredging. Remobilised material would also potentially be deposited on benthic communities such as seagrass and algal beds, resulting in smothering of these areas. The presence of silts and clays within the material to be dredged also means that unconfined disposal into subtidal areas would result in the generation of turbid plumes, which has the potential to impact upon benthic communities. In particular, material from capital dredging tends to have high clay content and the inner harbour maintenance material has a higher silt and clay content than the outer harbour maintenance material.

Potential Dredged Material Disposal Location	Assessment
Offshore disposal ground	Maintenance dredging material from both inner and outer harbour areas is currently disposed of in the East Banks Sea Disposal Site. However, this site is currently approaching capacity, with less than 1,000,000 m^3 of volume remaining, therefore, it cannot be utilised for disposal of material from future capital dredging programs. A new offshore disposal ground would need to be developed to allow ocean disposal of future maintenance and capital dredging material. Based on the Port Limits, a new offshore disposal area would be immediately adjacent to or within the Great Barrier Reef Marine Park (GBRMP) boundaries. Currently, the existing port facilities and the proposed Fisherman's Landing Northern Expansion are located outside the GBRMP. As a signatory to the London Convention and the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Protocol), Australia is committed to the management of ocean disposal to minimise pollution of marine environments. The National Assessment Guidelines for Dredging (NAGD 2009, Section 4.1.1) state that alternatives to offshore disposal of dredged material must be evaluated in the first instance and require that opportunities for beneficial reuse (including land reclamation) be considered, where possible. While the material to be dredged is unlikely to contain high levels of contaminants which would render it unsuitable for offshore disposal, the clay and silt content of maintenance dredging material from the inner harbour and the heavy clays contained in most capital material within the Port also have the potential to generate turbid plumes which may migrate from an offshore disposal area and impact on the marine communities of the GBRMP. Also, it is generally uneconomical to transport dredged material from the inner harbour and Western Basin to offshore disposal areas. The breakeven point, where offshore disposal becomes uneconomical, has previously been determined to be South Trees wharf (GPC pers. comm.). Offshore disposal from the inner harbour also results in longer steaming times and greater disruptions to shipping traffic.

Potential Dredged Material Disposal Location	Assessment
Inshore disposal area (terrestrial disposal)	Initial disposal sites had been investigated at Hamilton/Boatshed Point and Laird Point on Curtis Island. These two sites could accommodate up to 20 million m^3 of dredged material when retaining walls are developed to a height of ~15 m. However, with additional LNG proponents enquiring of sites for development on Curtis Island there is a wish to avoid the placement of dredged material onshore that may prevent potential sites from being utilised by the LNG industry. The Laird Point site is under investigation by an LNG proponent and other proponents are investigating options around the development of the Boatshed Point area. Terrestrial disposal sites could be established to the south of Fisherman's Landing and along Gladstone-Mt Larcom Road between Gladstone and the GSDA. However, the Stuart Shale Oil Mining Lease, Mineral Development Licences and Exploration Permits cover much of the area south of Fisherman's Landing, limiting the ability of this land to be used for dredged material disposal. Construction of a disposal area on the tidal flats or undeveloped bushland between the proposed Wiggins Island Coal Terminal (WICT) and Yarwun Precinct of the GSDA would require material to be pumped long distances utilising booster pumps which is impractical due to the coarse nature of some of the dredged material. The long pumping distances also make this option uneconomical. It also takes some time for the material to consolidate once it is placed in a disposal area. Placing it on land that could be used for development in its current state represents inefficient use of land resources in the GSDA. There would also be a need to manage the decant waters and a discharge would need to be established from the disposal site through mangrove habitats to the Port. While placing the material in terrestrial reclamation areas would reduce potential impacts on marine flora and fauna, it would result in impacts on terrestrial flora and fauna.

Potential Dredged Material Disposal Location	Assessment
Alternative reclamation areas within the Port	Alternative reclamation areas within the Port were considered, however, the nearshore environments throughout the Port generally have the same environmental values, supporting seagrass and fringing mangrove communities and intertidal habitats; with some also supporting soft corals. All would require the construction of substantial bund walls to allow containment of dredged material. Alternative reclamation areas include: ◗ The area between Golding Point and Wiggins and Mud Island; ◗ The area between Hamilton Point and Boatshed Point; and ◗ North China Bay.

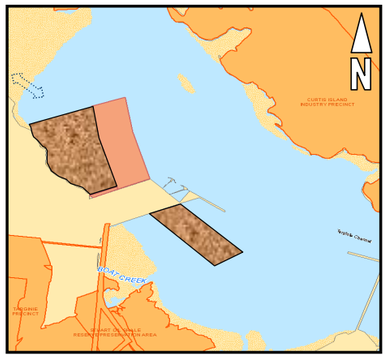
1.7.4 Proposed Reclamation Design and Location

It is acknowledged that the general area in which the reclamation is proposed has significant environmental values, particularly in terms of intertidal and subtidal seagrass beds. This section outlines the alternative locations and designs that were considered for the reclamation, to minimise these impacts.

An options assessment workshop was held with key EIS team members and GPC staff to discuss the design options for the reclamation. The design and layout options focused on reducing potential impacts on adjacent mangrove and saltpan areas, particularly towards The Narrows. The five options considered are shown schematically but to scale in Figure 1-6, along with their advantages and disadvantages as documented in the workshop. As indicated in Figure 1-6, the preferred option is Option 5.

Figure 1-6 Western Basin Reclamation Area Options Assessment

1

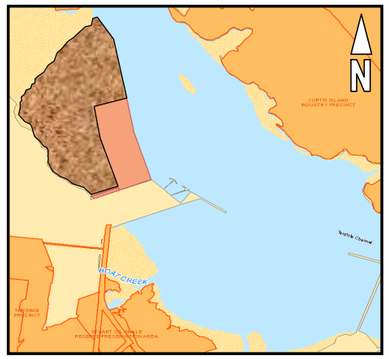


Advantages
- No land attachment to north (environmentally sensitive area)
- Intertidal exchange in north not impacted
- Recreational access to north not impacted
- Reduced impact on seagrass colonies in northern bay
- Reduced impact on discharge of creeks to northern bay
- Increased wharf frontage

Disadvantages
- Bays to the north and south of Fisherman's Landing impacted
- Large dredging volume required to access southern reclamation
- Rio Tinto infrastructure prevents land access to construct southern reclamation

Summary
Conclusion: Not recommended
Notwithstanding the numerous advantages that the above option offers, the cumulative effect of impacting both the bays to the north and south of Fisherman's Landing was considered greater than just impacting the area to the north of Fisherman's Landing.

2

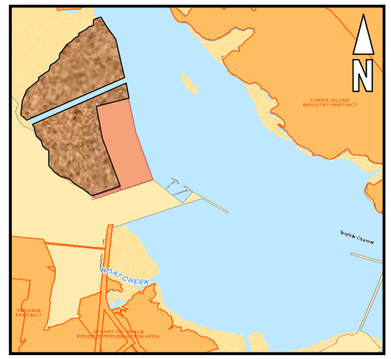


Advantages
- Only northern bay impacted
- Maximum dredged material volume
- Single land mass - simplified construction staging
- Increased wharf frontage

Disadvantages
- Complete land attachment to north (environmentally sensitive area)
- Loss of intertidal exchange to the north
- Recreational access to north impacted
- All seagrass habitat to north of Fisherman's Landing lost
- Discharge of creeks to north of Fisherman's Landing substantially impacted

Summary
Conclusion: Not recommended
Disadvantages considerably outweigh advantages.

3

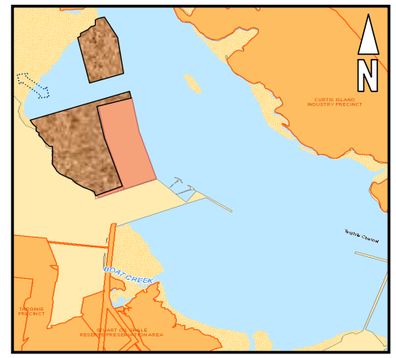


Advantages
- Only northern bay impacted
- Provision of waterway for discharge of creeks to northern bay
- Large dredged material volume accomodated

Disadvantages
- Complete land attachment to north (environmentally sensitive area)
- Loss of intertidal exchange to the north
- Recreational access to north impacted
- All seagrass habitat to north of Fisherman's Landing will be lost
- Bund length substantially increased
- Access to northern reclamation area would require a bridge
- Complex construction staging

Summary
Conclusion: Not recommended
Disadvantages considerably outweigh advantages.

4

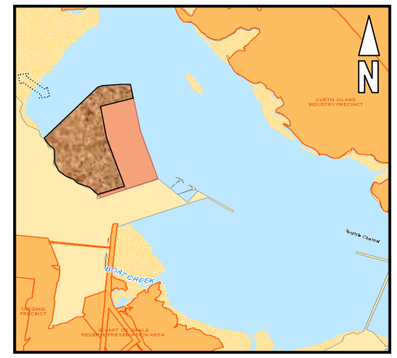


Advantages
- Only northern bay impacted
- Intertidal exchange in north not significantly impacted
- Limited impact on recreational access to north
- Reduced impact on sea grass colonies in northern bay
- Provision of waterway for discharge of creeks to northern bay

Disadvantages
- Partial land attachment to north (environmentally sensitive area)
- Formed harbour unlikely to be frequented by marine megafauna
- Formed harbour configuration may not receive adequate flushing
- Access to northern reclamation area would require a bridge
- Complex construction staging
- Dredged material volume achieved by increasing height of reclamation area (visual impact)

Summary
Conclusion: Not recommended
Disadvantages outweigh advantages.

5



Advantages
- Only northern bay impacted
- No land attachment to north (environmentally sensitive area)
- Intertidal exchange in north not impacted
- Recreational access to north remains
- Reduced impact on seagrass colonies north of Fisherman's Landing
- Reduced impact on discharge of creeks to northern bay
- Adequate flushing
- Reduced bund length
- Single land mass - simplified construction staging

Disadvantages
- Dredged material volume requires increasing height of reclamation area (visual impact)

Summary
Conclusion: Recommended

The particular location and configuration of the Western Basin Reclamation Area (Option 5) has both benefits and disadvantages and these are outlined in the following sections.

Disadvantages

The following are disadvantages of the proposed location of the Western Basin Reclamation Area:

- There is known recreational and commercial fishing activity in the area to the north of the existing Fisherman's Landing Reclamation (Chapter 13). However, this is one of many locations in the port where these activities occur and the reclamation has been located to avoid the areas that consultation indicates support the highest levels of use, which are to the north of the embayment;
- The area supports seagrass and mangrove meadows. The creation of a reclamation in this location will result in the direct loss of some habitat and indirect impacts on the adjacent habitat and the associated species of marine fauna supported by these habitats (Chapter 9). It is noted that these habitat types are also present throughout the Port and the region and that GPC will negotiate an offsets package with the relevant State Government Departments; and
- The proposed Western Basin Reclamation Area is located within the Great Barrier Reef World Heritage Area (GBRWHA), however, all existing Port of Gladstone facilities and operations located below the low water mark are located within the GBRWHA. The proposed Western Basin Reclamation Area is not located within the Great Barrier Reef Marine Park (GBRMP). The Port of Gladstone is similar to many other ports in Queensland, which are excised from the GBRMP, but where all facilities and operations below the low water mark lie within the GBRWHA.

Benefits

The following factors are advantages to the proposed design and location of the Western Basin Reclamation Area:

- The expansion is located adjacent to the existing Fisherman's Landing reclamation, resulting in the co-location of similar land uses and providing continuity in port facilities and avoiding additional fragmentation of marine habitats. The direct extension of the existing reclamation does not result in further fragmentation of port facilities within Port Curtis;
- The proposed Western Basin Reclamation Area is located outside of both State and Commonwealth Marine Parks;
- The proposed Western Basin Reclamation Area represents a single location for disposal that is large enough to accommodate a significant amount of dredged material over time;
- The proposed Western Basin Reclamation Area is located within the vicinity of proposed capital dredging (Targinie Channel and Fisherman's Landing Swing Basin) and ongoing inner harbour maintenance dredging, making it economical to transport dredged material to the Reclamation Area for disposal;
- The use of dredged material to create a new land resource represents beneficial reuse of dredged material;
- The Fisherman's Landing area supports less extensive seagrass and mangrove communities than the area between the mouth of the Calliope River and the current Fisherman's Landing Reclamation;
- The proposed Western Basin Reclamation Area is currently impacted by trawling and recreational fishing activities and therefore does not represent unimpacted habitat. However, the area adjacent to

the northern foreshore is where the highest use occurs and this has been retained by locating the reclamation in the southern part of the embayment;

- The seaward wall of the reclamation is aligned parallel and close to the existing current flows and allows for the alignment of the future berths and swing basins with the existing Targinie Channel, reducing the amount of dredging required to create new berths; and
- The proposed Western Basin Reclamation Area is in an area that is currently shallow, reducing the potential to significantly impact current water flow patterns, therefore reducing the potential for impacts to the environment in the general vicinity of the Reclamation Area.

It is concluded that the proposed location and design of the Western Basin Reclamation Area is the most appropriate location from an economic and environmental viewpoint that is able to also meet the more immediate requirements of dredged material disposal in the Port and the anticipated growth in industrial development within the GSDA.

1.7.5 No Project

Not constructing the Western Basin Reclamation Area would result in significant limitations to the capacity of the Port of Gladstone to expand to accommodate future import and export facilities, which will be required to support industrial development in the region (in particular the LNG industry). As discussed in Section 1.4.1, the GSDA is marketed internationally by the Queensland Government as an attractive location for industrial development and this area of land has been specifically allocated to this type of development into the future. One of the key reasons for the location of the GSDA was the availability of the port facilities.

The Port of Gladstone has ongoing maintenance dredging requirements and there are substantial capital dredging projects currently proposed in the port that may occur within the short and long term. At present, GPC's current land based reclamation areas and offshore disposal area have reached or will reach capacity within the short term. Given the lack of capacity in current disposal areas and the ongoing need for dredged material disposal to maintain the economic viability of the Port, there is an urgent need to develop new dredged material disposal areas in the Port.

Therefore, the implication of not developing the Western Basin Reclamation Area is that there would be a restriction in the ability of Gladstone to meet the future market requirements for port facilities and GPC would still require a new site for disposal of dredged material to be located somewhere in the port. Restriction of industrial development in the Gladstone region will result in a loss of potential employment and economic benefits at local, state and national levels.

1.7.6 Ecologically Sustainable Development

This project has been assessed using the National Strategy for Ecologically Sustainable Development outlined in Table 1-5 and the detailed analysis and results are presented in Chapter 18.

Table 1-5 National Strategy for Ecologically Sustainable Development

National Strategy for Ecologically Sustainable Development, Australian Government	
Goal	Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.
Core Objectives	◗ To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations. ◗ To provide for equity within and between generations. ◗ To protect biological diversity and maintain essential ecological processes and life-support systems.
Guiding Principles	◗ Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations. ◗ Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. ◗ The global dimension of environmental impacts of actions and policies should be recognised and considered. ◗ The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised. ◗ The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised. ◗ Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms. ◗ Decisions and actions should provide for broad community involvement on issues which affect them.

1.8 The Environmental Impact Assessment Process

1.8.1 Methodology of the Environment Impact Statement

This section provides a description of the steps followed in the EIS process, including the timing and decisions made for the different stages of the project. It demonstrates that legislation has been addressed, processes followed and stakeholders have been made aware of participatory opportunities. This process is presented in Figure 1-7.

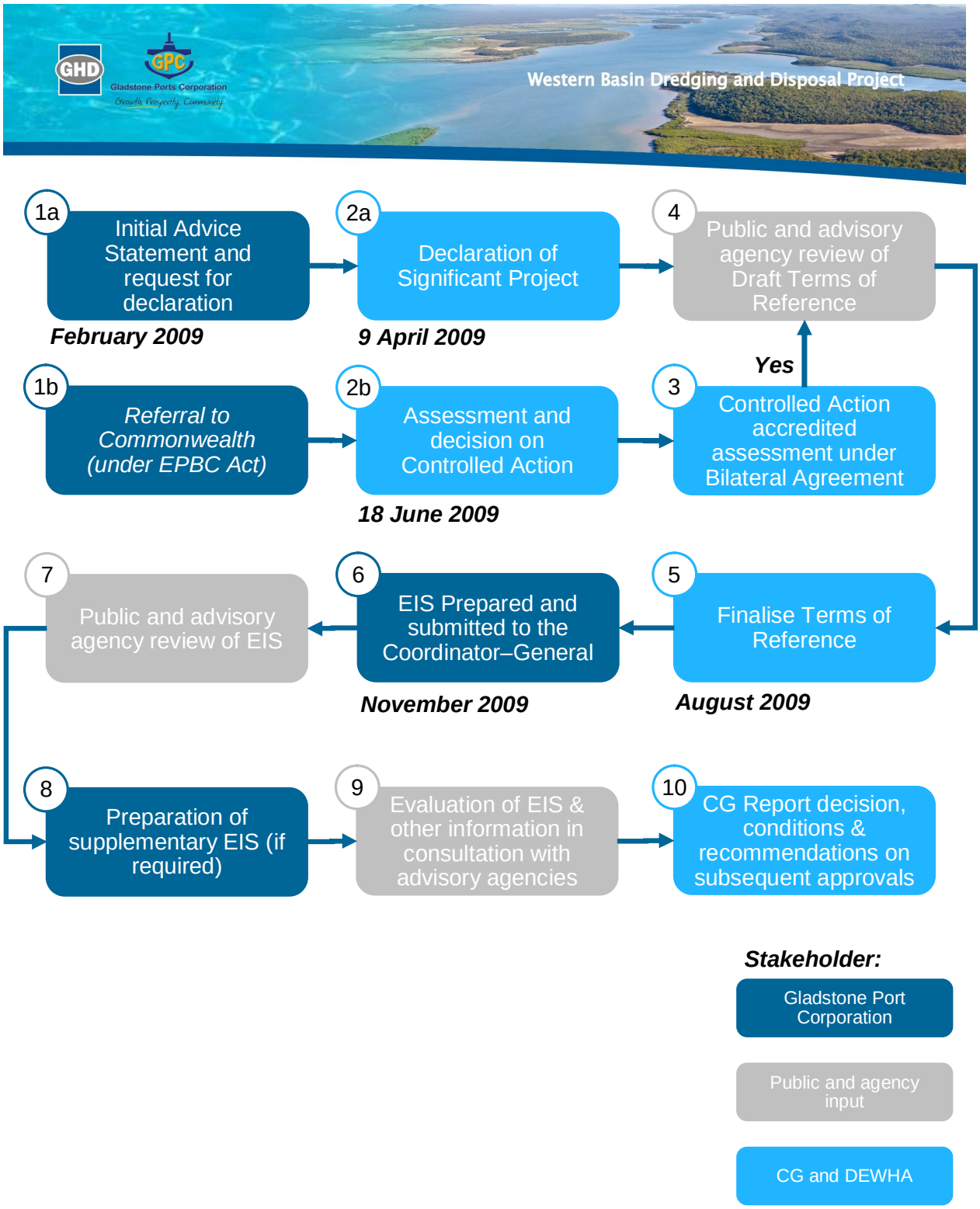


Figure 1-7 Environment Impact Statement process (Under Part 4 of the *State Development and Public Works Organisation Act 1971*)

The Project was declared by the Queensland Coordinator-General (CG) as a "significant project for which an EIS is required" under Section 26 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) on 9 April 2009. In making this decision, the Coordinator General had regard to items provided in Section 27 of the SDPWO Act, including, but not limited to, information provided by the proponent in the Initial Advice Statement, potential environmental impact of the project and strategic significance of the project to the locality and region. The proponent was notified that an EIS was required and draft Terms of Reference (ToR) released for public comment. Comments were considered and the

ToR were finalised by the Coordinator-General on 10 September 2009, with an early copy provided to GPC on 21 August 2009 (Appendix A).

This EIS has been prepared in accordance with the ToR. The way in which the project addresses relevant legislation, policies, plans and guidelines is outlined in Section 1.10 and in the various technical chapters. Appendix B provides a table that cross-references the Terms of Reference to the relevant EIS sections.

On 18 June 2009, the Australian Government Minister for Environment, Water, Heritage and the Arts (DEWHA) determined that the Project is a 'controlled action' (2009/4904), which requires assessment and approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Appendix D). The controlling provisions are:

- World Heritage properties (section 12 & 15A);
- National Heritage places (section 15B &15C);
- Listed threatened species and communities (sections 18 & 18A); and
- Listed migratory species (sections 20 & 20A).

The statutory impact assessment process under the SDPWO Act is also the subject of a bilateral agreement between the Queensland and the Commonwealth Governments in relation to environmental assessment under the EPBC Act. Pursuant to the bilateral agreement, this EIS addresses the requirements of both State and Commonwealth legislation.

The EIS has been developed in the following phases:

- **Data Collection and Review:** This included collation of all available relevant data for the Project area from previous studies specific to the development and general studies within the region. New data was also collected where existing data and references were insufficient.
- **Specialist Studies:** A number of specialist studies were undertaken to provide input into the EIS. These assessments included:
  - Climate and Climate Change;
  - Acid Sulphate Soils;
  - Hydrodynamic Modelling;
  - Coastal Processes;
  - Water Quality;
  - Sediment Quality;
  - Stormwater Management;
  - Groundwater Resources;
  - Terrestrial Ecology;
  - Marine Ecology;
  - Marine Megafauna;
  - Noise and Vibration;
  - Greenhouse Gas;
  - Traffic and Transport;

  - Cultural Heritage;
  - Social Impact;
  - Stakeholder and Community Consultation;
  - Landscape and Visual Character; and
  - Economic.

- **Description of the Environmental Values:** Based on the data collection and specialist studies conducted for the Project, a detailed description of the existing environmental values was prepared. The purpose of this phase is to provide a baseline from which to determine potential impacts associated with the Project.
- **Description of Potential Environmental Impacts:** The identification and quantification of potential impacts that may result from development of the Project is based on an analysis of known impacts associated with the proposed works, from previous knowledge and experience, and the characteristics of the areas to be impacted. From this analysis, potential impacts can be identified and quantified (where possible) and possible mitigation strategies developed where necessary to minimise the potential impacts.
- **Development of the Environmental Management Plan:** The Environmental Management Plan details the implementation strategies for the development of the Project to achieve the mitigation strategies identified to minimise potential impacts.

Stakeholder consultation has been undertaken and integrates with various components of the EIS, as described in Appendix F.

1.8.2 Objectives of the Environmental Impact Statement

An EIS is a public document and its purpose is to provide information to regulatory agencies and members of the public on the scope, impacts and mitigation measures arising from the construction and operation of developments. Sound environmental protection and management criteria are presented to avoid potential negative impacts whilst positive impacts are also highlighted within the EIS.

Specific objectives for the EIS include the provision of:

- Options for development including the no development option;
- Information on the proposed port expansion and development process to the wider community and decision makers;
- Identification and evaluation of all relevant issues associated with the proposed expansion;
- Identification of potential environmental, cultural, social, economic, transport and land use planning impacts of the proposed expansion;
  - Recommendations of infrastructure and facility needs together with other design and operational measures required to minimise or compensate for adverse impacts and to enhance benefits;
- Consultation with the wider community and relevant stakeholders in the process of identifying, assessing and responding to the impacts of the proposal;
- Consideration of effects and impacts of the proposed expansion on other proposed developments nearby and within the Port of Gladstone and Gladstone State Development Areas;

- Identification of all necessary licences, planning and environmental approvals including approval requirements pursuant to the *Coastal Protection and Management Act 1995, Integrated Planning Act 1997, Environmental Protection Act 1994, Fisheries Act 1994, Environment Protection and Biodiversity Act 1999* and other relevant legislation;
- Inputs to the decision-making process, assisting with the determination of whether to accept or modify the proposed expansion, approve it with conditions or carry out further studies; and
- Development of a draft Environmental Management Plan for the project.

GPC has commissioned consultants GHD to prepare the EIS documentation.

1.8.3 Environmental Offsets Approach

Draft Policy Statement: Use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999

The Draft Policy Statement on the use of environmental offsets under the EPBC Act defines environmental offsets as 'actions taken outside a development site that compensate for the impacts of that development - including direct, indirect or consequential impacts'. The policy states that offsets are generally considered to provide compensation for the impacts of a project that cannot be adequately reduced through mitigation, but notes that offsets are not designed to make projects with unacceptable impacts acceptable.

Offsets can be direct or indirect, with direct offsets relating to on-ground maintenance and improvement of habitat or landscape values, while indirect offsets include a range of actions that aim to improve knowledge, understanding and management, leading to improved conservation outcomes.

The Australian Government applies the following eight principles when considering offsets under the EPBC Act:

5. Environmental offsets should be targeted to the matter protected by the EPBC Act that is being impacted.
6. A flexible approach should be taken to the design and use of environmental offsets to achieve long-term and certain conservation outcomes which are cost effective for proponents.
7. Environmental offsets should deliver a real conservation outcome.
8. Environmental offsets should be developed as a package of actions - which may include both direct and indirect offsets.
9. Environmental offsets should, as a minimum, be commensurate with the magnitude of the impacts of the development and ideally deliver outcomes that are 'like for like'.
10. Environmental offsets should be located within the same general area as the development activity.
11. Environmental offsets should be delivered in a timely manner and be long lasting.
12. Environmental offsets should be enforceable, monitored and audited.

The Project design considered in the EIS has been developed to avoid and minimise environmental impacts where possible. However, the Project will result in some impacts which are unable to be adequately mitigated. Therefore, opportunities for offsets will be explored, with consideration to the above principles.

The Queensland Government Environmental Offsets Policy

The Queensland Government Environmental Offsets Policy (QGEOP) was developed by the DERM. The policy provides a framework for the appropriate use of environmental offsets across terrestrial and aquatic ecosystems, based on the principles of *Ecologically Sustainable Development* (ESD) and the premise that offsets should only be considered after all environmental impacts have been avoided and minimised.

An environmental offset is a positive action for the natural environment taken to counterbalance unavoidable, negative environmental impacts that result from an activity or a development. It differs from mitigation in that it addresses remaining impacts, after attempts to reduce (or mitigate) the impact have been undertaken. An offset may be located within or outside the geographic site of the impact.

The scope of the QGEOP is limited to Queensland Government-led assessment of impacts to environmental values and it applies where current legislation triggers State Government assessment of impacts on environmental values. The QGEOP applies to decisions on *development approvals* under a range of approval processes, that is, for all developments under the EP Act, IPA, the SDPWO Act and Main Roads administrative processes.

As the Western Basin Dredging and Disposal Project has been declared a Significant Project under the SDPWO Act, the need for offsets should be considered during the EIS assessment stage. The project design considered in the EIS has been developed to avoid and minimise environmental impacts where possible. However, there are remaining impacts that are covered by a specific-issue offsets policy(s) and, accordingly, it is anticipated that the CG's report will provide recommendation for the provision of offsets consistent with the specific-issue offsets policy(s).

Queensland currently has three specific-issue offsets policies that provide detailed direction for offsets that address specific environmental issues and are administered by the relevant government agencies. The specific-issue offsets policies, and their regulating agencies are:

- Vegetation Management — Policy for Vegetation Management Offsets, September 2007, DERM;
- Fish Habitat Management Operational Policy FHMOPOO5 — Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss, 2005, DEEDI; and
- Koala Habitat — Offsets for Net Benefit to Koalas and Koala Habitat, 2006, DERM.

As the proposed works are likely to result in the disturbance of marine plants (Chapter 9) the relevant offset policy for the Project is the Fish Habitat Policy. Koalas are not a feature of the landscape of the Project Area and terrestrial vegetation is not expected to be impacted by development of the Reclamation Area and, accordingly, the other specific-issue policies are not applicable to this Project.

Fish Habitat Management Operational Policy

The Fish Habitat Management Operational Policy (FHMOP) assists and guides permit assessment to achieve mitigation of impacts and compensation for marine fish habitat losses that are likely to result from authorities granted under the Fisheries Assessment. A range of actions for mitigation or compensation are recognised by the FHMOP that can include:

- Best practice methodologies;
- Habitat productivity enhancement;
- Restoration/rehabilitation or replacement of fish habitat;

- Fisheries resource research, education support and community initiatives;
- The payment of bonds (held towards ensuring that impacts are minimal;
- Fish habitat acquisition/exchange (relinquishment of private tenure); or
- Fisheries stock enhancement;
- Signage or educational materials for marine fish habitat information management; or to enhance fishing access for the community; and
- Land-exchange where landholders may choose to relinquish critical fish habitats to the State, and in some cases, for these habitats to be included within declared Fish Habitat Areas.

Compensation options may be part of a 'Statewide Compensation Program' that may consider projects including:

- Undertaking/funding restoration projects across the State, where outcomes have a Statewide application;
- Initiating community awareness projects; or
- Contributing credits before debits are used (mitigation banking concept).

Mitigation or compensation agreements will be recognised as a condition of the authority granted, and monitoring will be required to evaluate and document the success of the measures adopted.

Chapter 9 provides information on the existing conditions, potential impacts that may result from the Western Basin Dredging and Disposal Project and strategies for mitigation of those impacts. Where impacts may not be mitigated, GPC is undertaking discussions with both Queensland and Commonwealth governments to develop an appropriate offset against those impacts.

1.8.4 Environmental Impact Statement Study Team

The EIS study team, their qualifications and experience are outlined in Appendix E.

1.8.5 Submissions

Following the Coordinator General's acceptance of the EIS, the document is subject to a public exhibition period. The Coordinator-General's office will notify the public about the release of the draft EIS document via a public notice in national, state and local newspapers. A weblink to the document will be made available on DIP's website.

As part of the public exhibition period, the GHD Consultation team will work in collaboration with GPC to notify stakeholders about the process, timeframes and locations (e.g. GPC office, local library) where people can review the document and provide written submission to the Coordinator General. In addition, GPC will place a copy of the EIS on their website and will send an email notification of the public exhibition period to all stakeholders listed on the project's database. Information will include notification about the pubic release of the EIS document, how to obtain a copy and how to provide written submissions to the Coordinator General.

Submissions on the EIS must be made in writing and forwarded to the Coordinator-General c/- EIS Project Manager shown below and be received by 5 pm, 21 December 2009. Submissions must state the grounds of the submission and the facts and circumstances relied upon to support the grounds. Properly made submissions must be signed by each person who made the submission and include their

name and address. A pro-forma submission form is available for download from the Port of Gladstone Western Basin Dredging and Disposal Project page on the DIP website at http://www.dip.qld.gov.au/projects.html

Persons or groups with special communication needs who wish to comment on the EIS should contact the EIS Project Manager to make alternative arrangements. Submissions will be treated as public documents unless confidentiality is requested. Copies of all submissions will be forwarded to GPC.

For further inquiries about the EIS process for this project, please contact:

EIS Project Manager – Western Basin Dredging Project
Significant Projects Coordination
Department of Infrastructure and Planning
PO Box 15009
Brisbane City East QLD 4002
Tel (07) 3224 2748
Fax (07) 3225 8282
wbdp@dip.qld.gov.au
www.dip.qld.gov.au

For technical information about the project, please contact:

The Project Manager
Gladstone Ports Corporation Limited
Port of Gladstone
19 Yarroon Street
PO Box 259
Gladstone QLD 4680
tel (07) 4976 1333
fax (07) 4972 3045
www.gpcl.com.au

Following completion of the public exhibition period, all stakeholder and community feedback will be reviewed and addressed. A decision by the Coordinator-General about future development of the project will be made public via the DIP and GPC websites. It is envisaged that GPC will provide future updates about the progress and status of the Project in its Port Talk publication and through representatives of the Community Working Group.

1.9 Public Consultation Process

1.9.1 Overview

In June 2009 a Consultation Plan was developed in consultation with GPC outlining the framework for consultation activities in relation to the EIS for the Project. The Plan outlined the consultation procedures and methods, including objectives, key stakeholders, activities and evaluation, required to meet the ToR for the Project. The Plan was approved by the GPC in June 2009 and used to guide implementation of the consultation process.

The full Community Consultation report is contained in Appendix F and an overview of the community engagement process is presented in Figure 1-8.

A preliminary stakeholder list was developed through desk-based research, analysis of existing information materials and by contacting local and state community groups and organisations. The preliminary stakeholder list was also expanded through recommendations made by stakeholder participants during implementation of consultation activities.

A range of tools and activities were implemented to facilitate timely two-way information flow with all stakeholders and gain an understanding of their concerns. These included one-on-one meetings, a Project information sheet, advertising, and a project hotline and email address. Throughout all activities key messages were utilised to communicate the assessment methodology and approval process.

The opportunity to participate in the consultation process was widely communicated, with a web link on the GPC website (live from 30 June 2009), newspaper advertisements (published on 13, 27 and 30 June 2009) and an article in Ports Talk magazine (6 June 2009). Stakeholders were also contacted directly by telephone. As a result, 13 meetings were held with a total of 80 stakeholders from local government, Indigenous group, environmental groups, recreational groups and the broader community. In addition, four community members attended a locally publicised Community Open Day. Two feedback forms were also received as a result of the consultation process.

Stakeholder and community feedback indicated that there is interest in the environmental impacts of the Project, particularly regarding nature conservation, which was the top ranking area of concern. Also of concern were social and economic issues which featured heavily in discussions with most stakeholders. No issues were raised in regard to air quality, waste, or noise and vibration.

All feedback was acknowledged and accurately recorded in the Project database. Future consultation activities have been planned to reflect the ToR, Section 1.7.3 – Submissions. Stakeholders will be notified by the Coordinator General's office regarding public release of the EIS, as discussed in Section 1.8.5.

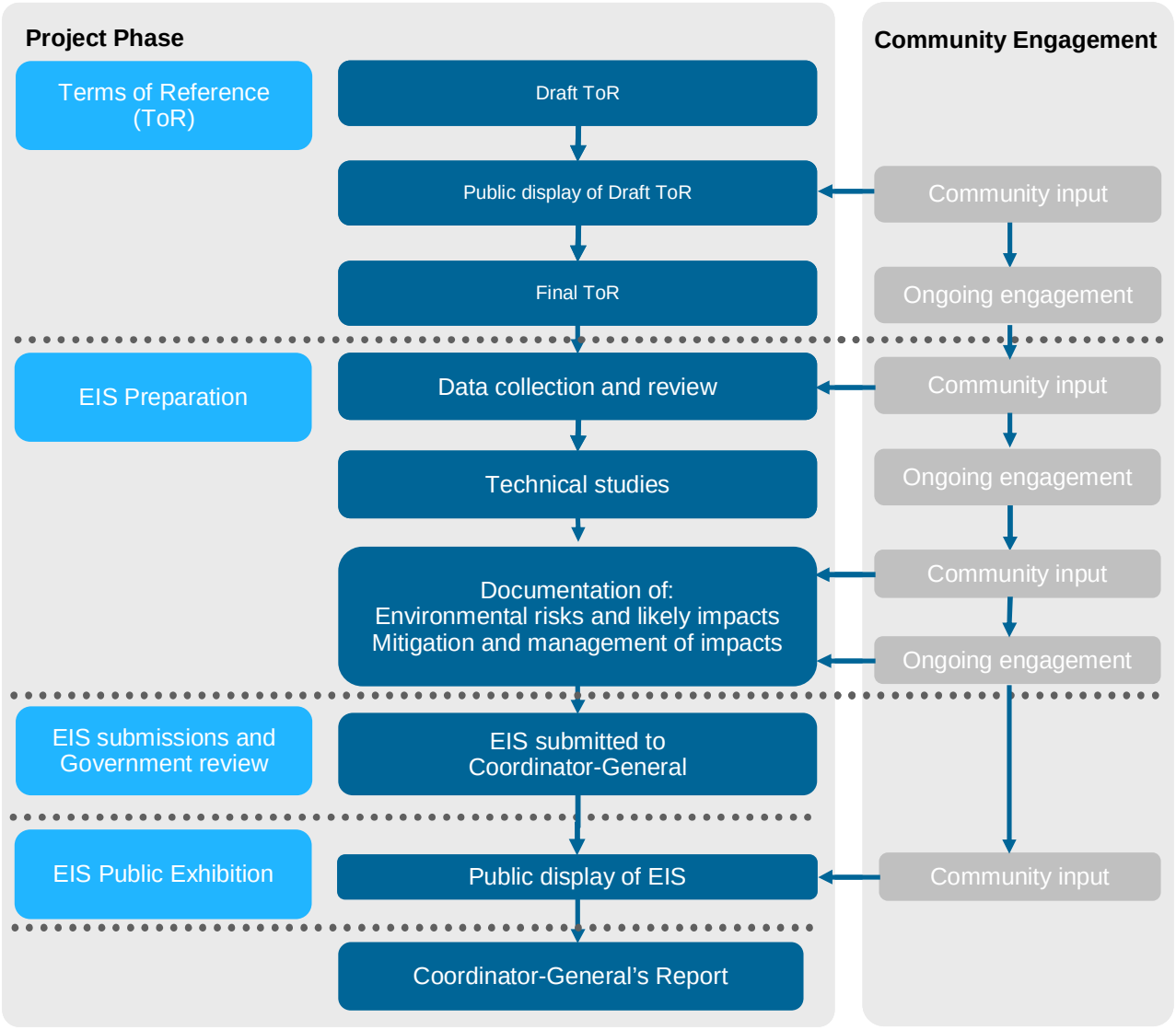


Figure 1-8 Community Engagement Process

1.9.2 Consultation Plan Objectives

Following approval of the consultation plan, the objectives were updated to better reflect the final ToR, which was released in August 2009. The revised objectives guided the implementation of the consultation process in order to fulfil the ToR. They are to:

- Establish an open and transparent consultation process, designed to meet both community and government agency requirements;
- Facilitate timely two-way information flow with all stakeholders to seek an understanding of their concerns;
- Communicate the assessment methodology and approval process to all stakeholders;

- Work in collaboration with other components of the EIS to consider social and cultural factors, customs and values, and linkages between environmental, economic and social impact issues; and
- Produce a Consultation Report that accurately details the community engagement processes, and stakeholder comments and concerns.

1.10 Project Approvals

1.10.1 Overview

The nature of the Project location is such that there are a number of regulatory jurisdictions that are relevant. These include Commonwealth, State and local government jurisdictions. Commonwealth and State jurisdictions are focused on specific aspects of the locality, in particular environmental and infrastructure matters.

The site of the Project falls within the Curtis Coast Coastal Management District, and is currently below high water mark within Port Limits. Because the land is below high water mark and has not been reclaimed or its tenure designated, there is no cadastral property description available. The site is within the boundaries of the Gladstone Regional Council (GRC, formerly part of the Calliope Shire).

The Great Barrier Reef World Heritage Area (GBRWHA) extends to the low water mark on the mainland coast. Under the *Great Barrier Reef Marine Park Act 1975*, the Great Barrier Reef Marine Park (Marine Park) includes all islands and waters within the outer boundaries of the Marine Park. The Project is located within the GBRWHA but it falls outside the Marine Park.

The site is not shown as future port development in the Central Queensland Ports Authority's Strategic Plan 1997 – 2047, which has been noted by the Queensland Government. It would be the GPC's intention to gain ownership over the land once reclaimed and apply for the area to be designated Strategic Port Land.

While the proposed reclamation is not included in the Gladstone State Development Area (GSDA), the Port is connected to the GSDA via the Materials Transportation and Services Corridor (MTSC) which is itself part of the GSDA.

In addition to the EIS approval process, the project will need to obtain other approvals before actual commencement.

The Acts, State Government Policies, Local Government planning controls, local laws and policies that may have relevance to the various approvals and impact on the proposed development are outlined in Figure 1-9.

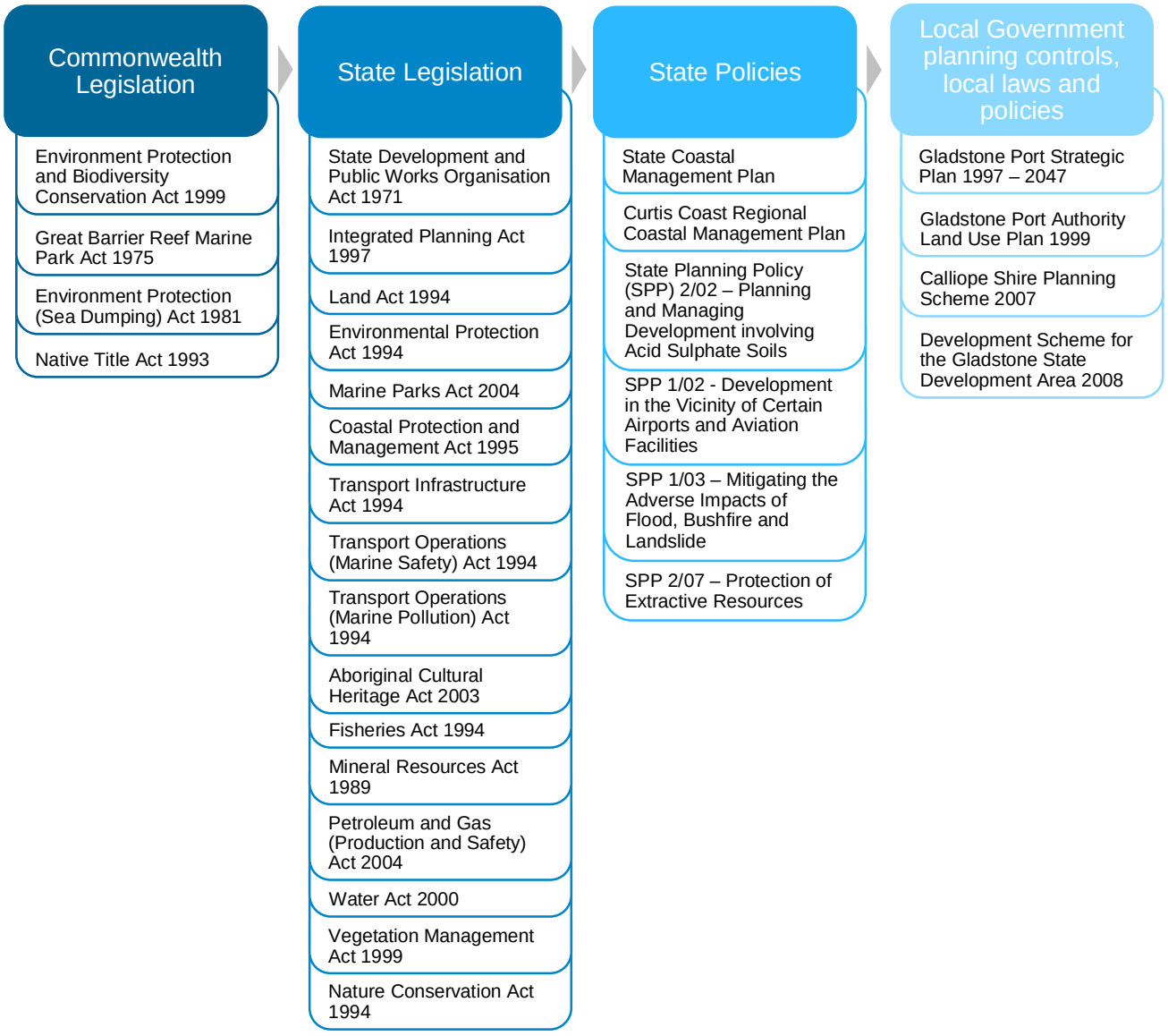


Figure 1-9 The Acts, State Government Policies, Local Government Planning Controls, Local Laws and Policies Relevant to the Project

The relevance of the abovementioned Acts, policies and planning instruments and subsequent approval requirements are provided in the following sections.

1.10.2 Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999

Overview

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Commonwealth's principal piece of environmental protection legislation. Under Part 3 of the EPBC Act, a person must not take an action that has or is likely to have a significant impact on a matter of national environmental

significance unless that person can rely on an exemption or obtain an approval from the applicable Commonwealth Minister.

The EPBC Act identifies seven matters of national environmental significance, some of which are relevant to consideration of the Project and the nature of the Project area:

- World Heritage properties;
- National Heritage places;
- Ramsar wetlands of international significance;
- Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas; and
- Nuclear actions (including uranium mining).

Under the EPBC Act an approval from the Minister of the Department of the Environment, Water, Heritage and the Arts (DEWHA) must be sought prior to undertaking an action, which has, would have, or is likely to have, a significant impact (defined in the Act) on a matter of national environmental significance. An action includes a project, development, or undertaking an activity or series of activities.

Relevance to Project

On 18 June 2009, the Minister for the DEWHA determined the Project as a 'controlled action', which requires assessment and approval under the EPBC Act. The controlling provisions for the Project are:

- World Heritage Area (sections 12 and 15A);
- National Heritage Places (sections 15B and 15C);
- Listed threatened species and communities (sections 18 and 18A); and
- Listed migratory species (sections 20 and 20A).

The Queensland Department of Infrastructure and Planning will manage the EIS assessment process on behalf of the Coordinator-General. The EIS process, accredited under a bilateral agreement between the Commonwealth Government and the Queensland State Government, will address matters on behalf of both the State and Commonwealth governments.

An approval from the Minister of the DEWHA is required prior to any action in relation to the Project being undertaken.

Great Barrier Reef Marine Park Act 1975

Overview

Proponents of activities which have direct or indirect impacts on the Great Barrier Reef Marine Park (GBRMP), are required under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) to obtain a Marine Parks Permit prior to undertaking development. The Great Barrier Reef Marine Park Authority (GBRMPA) considers the *Great Barrier Reef Marine Park Regulations 1983*, *Sea Dumping Act 1981*, *National Ocean Disposal Guidelines for Dredged Material 2002* and any GBRMPA policies when assessing an application made under the GBRMP Act.

Relevance to Project

The Project is excluded from the GBRMP. GBRMPA has, however, been consulted and informed of progress throughout the planning and investigative stages of the project.

Native Title Act 1993

Overview

The *Native Title Act 1993* (NT Act) recognises the rights and interests over land and water of Australian Indigenous people in accordance with traditional laws and customs.

The objectives of the NT Act are:

- to provide for the recognition and protection of native title;
- to establish ways in which future dealings affecting native title may proceed, and to set standards for these dealings;
- to establish a mechanism for determining claims to native title; and
- to provide for, or permit, the validation of past acts and intermediate acts, invalidated because of the existence of native title.

A "Native Title Tribunal" has been established in accordance with the provisions of the NT Act. The tribunal prescribes processes for the determination of native title rights and interests over land and water.

Relevance to Project

There are a number of traditional owner groups in the Port Curtis area. There is a Native Title Claim (QC01/29) over the Gladstone region, including parts of the GSDA. Port Curtis Coral Coast (PCCC) Native Title Claim Group is the Claimant. Through the EIS process, all claimants will be formally notified and invited to be part of a Cultural Heritage Management Plan process under the *Aboriginal Cultural Heritage Act 2003*. GPC has previously worked with the PCCC group to negotiate a Cultural Heritage Management Plan for the Wiggins Island Coal Terminal development.

Environment Protection (Sea Dumping) Act 1981

Overview

The *Environment Protection (Sea Dumping) Act 1981* (Sea Dumping Act) regulates the deliberate loading and dumping of wastes and other matter at sea (including relocation of dredged material). It applies to all vessels, aircraft or platforms in Australian waters and to all Australian vessels or aircraft in any part of the sea. The Sea Dumping Act applies in respect of all Australian waters (other than waters within the limits of a State or the Northern Territory inland waters), from the low water mark out to the limits of the Exclusive Economic Zone.

The National Ocean Disposal Guidelines for Dredged Material (NODGDM, EA 2000) establishes a procedure to determine if material is suitable for unconfined disposal at sea. Should any material be required to be disposed at sea, outside Queensland State waters, then an approval under the Sea Dumping Act is required.

Relevance to Project

The disposal of the dredge material will be within State waters (within 3 nautical miles of the coast) therefore it is not anticipated that a Sea Dumping Permit will be required.

1.10.3 State Legislation

State Development and Public Works Organisation Act 1971

Overview

The purpose of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) is to provide for State planning and development, through a coordinated system of public works organisation, for environmental coordination and for related purposes.

State Development Areas

State Development Areas are created under Section 77 of the Act. Their creation promotes economic development and addresses areas of market failure in the development of industrial land and multi-user infrastructure corridors. The GSDA was first declared in December 1993. Since its declaration, the GSDA has been reviewed and amended a number of times. The subject Project area does not fall within the GSDA; however, industry and infrastructure development that requires dredging for ship access is located in the GSDA. The Project area also adjoins the GSDA in several locations, particularly where berths are located.

Significant Project

In accordance with section 26 of the Act, the Coordinator-General may declare a project to be a significant project for which an EIS is required; or declare a project to be a significant project for which an EIS is not required.

The SDPWO Act contains provisions which outline the relationship with the *Integrated Planning Act 1997* (IPA) if an application is required for a development approval for a Material Change of Use under IPA and IDAS linked legislation (refer to Part 4, Division 4 of the SDPWO Act). The EIS process, in terms of the SDPWO Act, replaces the Information and Referral Stage as well as the Notification Stage of the IDAS process for applications that are defined as a Material Change of Use under the IPA. At the completion of the EIS process, the Coordinator-General's Evaluation Report will be taken as being a Concurrence Agency response under IPA and will be provided to the Assessment Manager to consider when issuing a Decision Notice.

The process for undertaking an EIS under the SDPWO Act is as follows:

- The environmental impact assessment process for a significant project is commenced by the CG advising the developer that an EIS is required for the project;
- The CG then prepares and publicly notifies a draft terms of reference for the EIS. During the notification period, comments are invited from the public;
- To assist in the preparation of the EIS, the CG may also refer the details of the project, the initial advice statement from the developer and the terms of reference to any entity;
- The EIS prepared by the developer must address the terms of reference to the satisfaction of the CG;
- If the CG is satisfied with the EIS, the developer must publicly notify the EIS for a period (the submission period) set by the CG, during which submissions may be made by interested members of the public;
- The CG must accept a properly made submission during the submission period;

- The CG must, after the close of the submission period, consider the EIS, all properly made submissions and any other material the CG considers relevant; and
- The CG must then prepare a report evaluating the EIS and forward a copy of that report to the developer and the Assessment Manager. The report may include conditions which should be imposed on the project.

Relevance to Project

Significant Project

The Project was declared a significant project under the SDPWO Act, requiring an EIS, on the 9 April 2009. The EIS process under the SDPWO Act is also subject to the a bilateral agreement between the Queensland Government and the Commonwealth whereby the EIS process is also the process for consideration of matters affecting national environmental significance as determined under the EPBC Act.

State Development Areas

While the proposed reclamation and dredging is not included in the GSDA, the Port is connected to the GSDA via the MTSC, which is itself part of the GSDA. The elements of the GSDA that are located on Curtis Island are to be accessed for shipping via the dredging component of this project. The assessment manager may refer the proposed development to the Coordinator-General (DIP). It is therefore considered appropriate that the proposed development be assessed against the objectives of the GSDA.

Integrated Planning Act 1997

Overview

The purpose of the *Integrated Planning Act 1997* (IPA) is to seek to achieve ecological sustainability by coordinating planning at all levels of government and by managing the development process and the impacts of development through the Integrated Development Assessment System (IDAS). IDAS allows multiple assessments to be integrated in one overall assessment. It is a four stage assessment process including:

- Application Stage;
- Information and Referral Stage;
- Notification Stage; and
- Decision Stage.

Not all stages or all parts of stages apply to all applications. Schedule 8 of IPA prescribes certain developments to be assessable or self-assessable. Development that is prescribed by the State in Schedule 8 or by a local government through its planning scheme requires application for development approval under IPA.

The IDAS process requires referrals to be made to individual referral agencies, if those agencies are 'triggered'. A referral agency has, for assessing and responding to the part of a development application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.

Section 5.8.14 of the IPA sets out how the IDAS process applies for development that is the subject of an EIS as follows:

1. *Where the development application is for a development that is the subject of the EIS, the following apply:*
   - *the EIS and the EIS assessment report are part of the supporting material; and*
   - *sections 3.3.6 (Information Request Stage) to 3.3.9 (Referral Agencies advice to Assessment Manager that they have received the applicant's response) and the notification stage do not apply; and*
   - *for development requiring impact assessment—a properly made submission about the draft EIS is taken to be a properly made submission about the application; and*
   - *if there is a referral agency—the referral agency's assessment period does not start unless the chief executive gives the referral agency the material under section 5.8.13; and*
   - *if there is no referral agency—the decision stage does not start unless the chief executive gives the assessment manager the material under section 5.8.13; and*
   - *if the application is changed in a way that the development is substantially different—the EIS process starts again for the development.*

Material Change of Use:

The SDPWO Act contains provisions which outline the relationship with the IPA if an application is required for a development approval for a Material Change of Use under IPA and IDAS linked legislation (refer to Part 4, Division 4 of the SDPWO Act). The EIS process in terms of the SDPWO Act replaces the Information and Referral Stage as well as the Notification Stage of the IDAS process for applications, which are defined as a Material Change of Use. At the completion of the EIS process, the Coordinator-General's Evaluation Report will be taken as being a Concurrence Agency response under IPA and will be provided to the Assessment Manager to consider when issuing a Decision Notice.

The above only applies to assessable development.

Operational Works:

In accordance with section 1.3.5 of the IPA, the following (amongst others) constitutes Operational Works:

- tidal works; or
- work in a coastal management district; or
- constructing or raising waterway barrier works; or
- performing work in a declared fish habitat area; or
- removing, destroying or damaging a marine plant.

In terms of Schedule 8A of the IPA, the Chief Executive administering the *Coastal Protection and Management Act 1995* is the assessment manager for tidal work or work within a coastal management district for operational work that is:

a) *tidal work* ***not in a Port Authority's strategic port land tidal area*** *or in local government's tidal area; or*

b) *work carried out completely or partly within a coastal management district; and*

c) *does not involve other assessable development.*

In the case under consideration, the proposed works are in the GPC strategic port land tidal area.

Schedule 10 of the IPA defines a "tidal area" as follows:

***tidal area**, for strategic port land, means—*

(a) to the extent both banks of a tidal river or estuarine delta are part of the strategic port land, the part of the river or delta below high-water mark that is—

(i) from the mouth of the river or delta as far up the river or delta as the spring tides ordinarily flow and reflow; and

(ii) adjacent to the strategic port land; and

(b) to the extent one bank of a tidal river or estuarine delta is part of the strategic port land, the part of the river or delta between high-water mark and the middle of the river or delta that is—

(i) from the mouth of the river or delta as far up the river or delta as the spring tides ordinarily flow and reflow; and

(ii) adjacent to the strategic port land; and

(c) if the boundary of the strategic port land is the high-water mark or is seaward of the high-water mark—the area that is seaward and within 50m of the high-water mark.

Given that the subject site is identified as **"*strategic port land tidal area*"** and the proposed works are assessable under the IPA, the development application must be assessed in accordance with the IDAS with GPC as the assessment manager.

Relevance to Project

13. For the proposal under consideration no Material Change of Use is applicable. The land, when reclaimed, will not be included in the GPC *Land Use Plan 1999* until such time that it is included in accordance with the provisions of the *Transport Infrastructure Act 1994*. In terms of Section 3.1.2 of the IPA, all development is exempt development unless it is assessable development or self-assessable development. Section 3.1.4 of the IPA states a development permit is necessary when the development is considered assessable development and not for self-assessable or exempt development.

    The impact of future development on the land and on the existing infrastructure will be assessed at the time when application is made for the establishment of future uses of the reclaimed land, as the nature and scale of such developments is currently an unknown entity.

14. Under the *Coastal Protection Act 1995* the proposed works are defined as tidal works. Approval is required for the dredging and disposal of solid waste material in tidal water. The application will require referral to the Department of Environment and Resource Management (DERM) which will assess the proposed development against the *Coastal Protection and Management Act 1995* (Coastal Act) and the provisions of the State Coastal Management Plan – Queensland's Coastal Policy (2001) (State Coastal Plan) and relevant regional coastal management plans.

15. The application for tidal work must be lodged with GPC as Assessment Manager pursuant to the provisions of the IPA. The application will trigger referral to the following Referral Agencies:

- DERM as Concurrence Agency;
- Department of Employment, Economic Development and Innovation (DEEDI) as Concurrence Agency; and
- Department of Infrastructure and Planning (DIP) as Advice Agency.

Sustainability Planning Bill 2009

Overview

The *Sustainable Planning Bill 2009* (SPB) has been tabled in the Queensland Parliament to replace the IPA.

The following information outlines the possible impacts the introduction of this new legislation may have on the approval process and approvals for the Project. An outline of the SPB is provided along with an assessment of the implications of this Bill on the Project.

The SPB was only tabled in Parliament on the 19th June 2009, and no timetable has been disclosed in relation to roll out of the new Act. There are currently no supporting regulations. This assessment has been based on a review of the Bill, and information that has been provided by DIP. This advice will need to be reviewed again prior to the introduction of the new legislation.

The Bill retains many of the core features of IPA with little change to its form, including the retention of:

- The IDAS, although there has been the introduction of some additions such as a new Compliance Stage, and a Prohibited Development category;
- Community infrastructure designations;
- The requirement for a resource allocation for State resources for development applications; and
- Preliminary approvals.

Prohibited development is included in the Bill with applications for such development not able to be made. If an application is made, and all or part of it is for prohibited development, then the application is taken not to have been made, and the IDAS will not apply to it. Prohibited development is identified in Schedule 1 of the Bill, along with development declared under a State planning regulatory provision to be prohibited, and stated or declared as prohibited in a planning scheme (including a structure plan) and a temporary local planning instrument (planning schemes, structure plans and temporary local planning instruments can only state that development is prohibited if it is stated as such in the standard planning scheme provisions).

At this stage, only Schedule 1 is available for assessment and of particular note is that clearing of native vegetation is listed in this Schedule. In relation to vegetation clearing, Schedule 1 item 3 states as prohibited development:

> *Assessable development prescribed under section 232(1) that—*
>
> *(a) is operational work that is the clearing of native vegetation; and*
>
> *(b) is not for a relevant purpose under the Vegetation Management Act, section 22A.*

A further assessment of this is contained in the review of other legislation and the implications of the Bill for the proposed development.

Schedule 8 of the IPA sets out State government level approvals required for development projects with this schedule being removed in the SPB. Under the Bill, whether or not development is assessable development requiring a development permit will be determined by a:

- Regulation; or
- State planning regulatory provision; or
- Planning scheme; or
- Temporary local planning instrument; or
- Master plan for a declared master planned area; or
- Preliminary approval.

As there are currently no regulations or state planning regulatory provisions drafted for review, the potential impact of this cannot be assessed.

The introduction of a process for deemed approvals is proposed in the Bill. This process is proposed for some code assessable development applications with an application deemed to have been approved if the assessment manager does not decide the application within the decision period. Deemed approvals do not apply for applications:

- For preliminary approval; or
- That a concurrence agency has directed the assessment manager to refuse or approve in part only; or
- For development in a wet tropics area, in a wild river area, on a Queensland heritage place or in a protected area, critical habitat or area of major interest under the *Nature Conservation Act 1992*; or
- For vegetation clearing under the *Vegetation Management Act 1999*; or
- For building development; or
- For aquaculture developments; or
- In an iconic place under the *Iconic Queensland Places Act 2008*.

The SPB proposes expanded Ministerial IDAS powers which have been proposed to better complement the call in powers, enable the Minister to intervene in the IDAS process, 'fast track' development where the development exhibits exemplary sustainability features, and ensure the process operates more effectively and efficiently. The implication of these expanded Ministerial powers is not understood at this time and will only become evident with the working of the legislation.

Amendments to Other Acts

A consequence of the proposed Bill is that amendments are required to other Acts, primarily to change the Act reference, but also to incorporate other amendments. The proposed amendments to other Acts are contained in Schedule 2 of the Bill and the proposed amendments that are relevant to the Project are outlined below:

- *Aboriginal Cultural Heritage Act 2003*

  The proposed amendments relate only to the change of name of the legislation.

- *Environmental Protection Act 1994*

The legislation has proposed amendments to the EP Act where a development application is lodged in relation to wild river areas. The Project is not in proximity of a wild river and these amendments are therefore not applicable in this instance.

- *Fisheries Act 1994*

  There are proposed amendments relating to the change of name of the legislation, to applications in wild river areas, and to the penalties associated with Fisheries offences.

- *Nature Conservation Act 1992*

  The proposed amendments relate only to the change of name of the legislation.

- *State Development and Public Works Organisation Act 1971*

  The proposed amendments relate primarily to the change of name of the legislation. Other proposed amendments are not specifically related to the proposed development.

- *Vegetation Management Act 1999*

  In addition to the amendments relating only to the change of name of the legislation, there is also a proposed amendment to Section 22A(1) and Section 22A(2)(e) of the *Vegetation Management Act 1999*. These amendments do not alter the process of applying for approval to clear vegetation or what constitutes a relevant purpose. This section of the *Vegetation Management Act 1999* identifies the constructing of necessary built infrastructure, where there is no alternative site for such infrastructure as being a relevant purpose.

- *Vegetation Management (Regrowth Clearing Moratorium) Act 2009*

  The proposed amendments relate primarily to the change of name of the legislation. Other proposed amendments are not specifically related to the proposed development.

Relevance to the Project

Based on our understanding at this time, the SPB as currently drafted, does not result in the requirement for any new approvals to be sought, or prohibit applications to be lodged or require new approvals to be gained. This understanding is supported by commentaries that have been prepared to date regarding the Bill. The further introduction of regulations or planning scheme provisions may change this and it is recommended that an additional review be undertaken prior to any such changes being implemented.

In relation to the SPB and vegetation clearing applications under the *Vegetation Management Act 1999,* there is effectively no change to the current arrangements. Schedule 1 identifies vegetation clearing as being prohibited development unless it is for a prescribed purpose under the *Vegetation Management Act 1999*, section 22A. This section of the *Vegetation Management Act 1999* identifies the constructing of necessary built infrastructure, where there is no alternative site for such infrastructure as being a relevant purpose.

The types of approvals that are able to be gained under the Bill has expanded on those contained in the IPA which may have some benefits for the project in terms of timing and certainty of outcome of the approvals process. A further assessment, prior to the commencement of the approvals process, will be required to determine if any of these are applicable

In summary, the SPB, as tabled in Parliament, does not appear to materially impact on the approvals requirements or the approvals process for the Project. With the debating of this Bill in Parliament, the drafting of regulations to support the Act, or the introduction of other statutory planning instruments

covering the proposed sites, a further assessment of the potential impact on the approvals process will need to be undertaken.

Land Act 1994

Overview

The DERM administers the *Land Act 1994*. The object of the Act is to ensure that, in the administration of the Act, land to which the Act applies is managed for the benefit of the people of Queensland. The Act applies to all land, including land below high-water mark.

In terms of section 9(1) of the Act, all land below high-water mark, including the beds and banks of tidal navigable rivers —

(a) is the property of the State, unless the land is inundated land or a registered interest in the land is held by someone else; and

(b) may be dealt with as unallocated State land.

Section 126 of the Land Act states

126 Strategic port land

(1) If land above high-water mark is needed as strategic port land for a port authority, the port authority may be given, without competition, either a lease or deed of grant.

(2) However, if land below high-water mark is needed as strategic port land for a port authority, the port authority may be given, without competition, only a lease.

Section 127 of the Land Act addresses land tenure for reclaimed land as follows:

127 Reclaimed land

(1) If a person has reclaimed land under the authority of an Act—

(a) the Governor in Council may issue to the person, without competition, a deed of grant over all or part of the land; or

(b) the Minister may issue to the person, without competition, a lease over all or part of the land.

(2) When granting the reclaimed land, the Governor in Council or Minister may amalgamate the land granted with an adjoining tenure held by the person.

(3) If the reclaimed land is already held under lease, the lease must be surrendered before a new lease or deed of grant is issued.

(4) If a deed of grant or lease is issued over only part of the reclaimed land, the rest of the land must be dedicated as a reserve or a road.

(5) If the reclaimed land is dedicated as a reserve and the person who reclaimed the land wishes to be the trustee of the reserve, the Minister must appoint the person as the trustee.

(6) If a deed of grant is issued, the purchase price is—

(a) the purchase price stated in the permission to reclaim the land or in the lease; or

(b) if no purchase price is stated—the amount of the unimproved value of the land, on the day the permission to reclaim the land was given, decided by the Minister.

(7) The person may appeal against the Minister's decision on the amount of the unimproved value.

Relevance to Project

The exact position and extent of the proposed development has been determined and is currently below the high-water mark and thus, owned by the State. In its current state, the land that is the subject of the proposed development may be given to the GPC under lease only. Prior to application being made for Resource Allocation, application must be made to lease the unallocated State land. Once the land is reclaimed, the GPC can apply for ownership of the land. However, in terms of section 127(3), if the reclaimed land is held under lease, that lease must be surrendered before a deed of grant can be issued.

Environmental Protection Act 1994

Overview

The DERM administers the *Environmental Protection Act 1994* (EP Act). The object of the Act is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (*ecologically sustainable development*).

The EP Act, together with the IPA, provides a licensing and approval regime for a range of Environmentally Relative Activities (ERA's). A regulation may prescribe an activity, other than a mining activity, as an ERA if the Governor in Council is satisfied that:

- a contaminant will or may be released into the environment when the activity is carried out; and
- the release of the contaminant will or may cause environmental harm (refer to Sections 18 and 19).

The EP Act requires that any person carrying out an ERA must hold, or be acting under a registration certificate for the activity. It is an offence to carry out an ERA unless the person is a registered operator for the activity, or is acting under a registration certificate for the activity. All operators are also required to have a development permit approval for the activity, unless a code of environmental compliance applies to the activity. Development permit approvals are granted under the IPA.

Levels of Environmentally Relevant Activities:

There are two levels of ERA's:

- ERA's with an aggregate environmental score (AES) are considered to present a higher risk to the environment. There is an annual fee based on the AES for these ERA's.
- ERA's without an AES are considered to present a lower risk to the environment. There is a set annual fee for these ERA's.

ERA's (excluding mining and petroleum activities) are required to have obtained development approval or a code of environmental compliance (where one has been approved for a particular ERA or certain

aspects of a particular ERA) and a registration certificate. This will be achieved through the process outlined in the *EP Act* and the *Environmental Protection Regulation 2008*.

Environmental Protection (Noise) Policy 2008

The purpose of the *Environmental Projection (Noise) Policy 2008* (Noise EPP) is to achieve the object of the EP Act in relation to the acoustic environment.

The development of the Project under consideration is highly likely to generate noise throughout the construction and operational phases of the development and dredging activities. In regards to the requirements outlined under the Noise EPP, the *AS 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites* will be adhered to.

Specifically, the following parts of the Noise EPP are key reference points that are addressed by the Project:

- Part 3 – Environmental values and acoustic quality objectives;
- Part 4 – Avoiding, minimising or managing noise; and
- Schedule 1 – Acoustic quality objectives for sensitive receptors.

Environmental Protection (Air) Policy 2008

As with the Noise EPP, the purpose of the *Environmental Protection (Air) Policy 2008* (Air EPP) is to achieve the object of the EP Act in relation to the air environment. The policy seeks to achieve this through the identification of environmental values to be protected or enhanced, specify air quality objectives and provide a framework for decision-making.

Specific obligations currently prescribed under the Air EPP that will be applicable to future development within the Project include:

- Part 3 – Environmental values and air quality objectives;
- Part 4 – Avoiding, recycling, minimising or managing air emissions; and
- Schedule 1 – Air quality objectives for indicators.

Environmental Protection (Water) Policy 1997

The *Environmental Protection (Water) Policy 1997* (Water EPP) aims to fulfil the object of the *EP Act* by identifying environmental values for Queensland waters, providing water quality guidelines and objectives, efficiently and equitably using water recourses, promoting best practice environmental management, and promoting community responsibility and involvement.

Unless prior approval is obtained, as outlined in Sections 31(3) or 32(2), the Water EPP prohibits the release of the following items into a roadside gutter, stormwater drain or a water; or in a place where it could reasonably be expected to move or be washed into a roadside gutter, stormwater drain or a water, and result in a build-up of sand, soil, silt or mud in the gutter, drain or water:

- rubbish;
- scrap metal, motor vehicle parts, motor vehicle bodies or tyres;
- building waste;
- sawdust;

- solid or liquid waste from an on-site domestic waste water treatment system;
- cement or concrete;
- a degreasing agent, paint, varnish or paint thinner;
- any manufactured product, or any by-product or waste from a manufacturing process, that has a pH less than 6 or greater than 9;
- an insecticide, herbicide, fungicide or other biocide;
- oil;
- stormwater run off; and
- sand, soil, silt or mud.

Environmental Protection (Waste Management) Policy 2000

The *Environmental Protection (Waste Management) Policy 2000* (Waste EPP) provides a strategic framework for managing waste in Queensland. The objectives of the Waste EPP are achieved through establishing a preferred waste management hierarchy and principles for achieving good waste management, to be applied by both industry and government. The waste management hierarchy provides a framework for prioritising waste management practices to achieve the best environmental outcome. The hierarchy, from the most preferred to the least preferred method, is: waste avoidance; waste reuse; waste recycling; energy recovery from waste; and waste disposal.

The principles for achieving waste management objectives include:

- The polluter pays principle - all costs associated with waste management should be borne by the waste generator, including the costs of minimising the amount of waste generated, containing, treating and disposing of waste, and rectifying environmental harm;
- The user pays principle - all costs associated with the use of a resource should be included in the price of goods and services (including government services) developed from the resource; and
- The product stewardship principle - the producer or importer of a product should take all reasonable steps to minimise environmental harm from the production, use and disposal of the product.

The required contents of a Waste Management Program are outlined in Sections 18-21 of the Waste EPP. It is likely that GPC will be required to implement a Waste Management Program as a condition of an ERA licence.

Relevance to Project

Dredging is classified as an ERA under the *Environmental Protection Regulation 2008* of the EP Act. Dredging is classified as ERA 16. In accordance with changes to the ERA legislation (in force as of 1 January 2009), port authorities are no longer exempt from requiring approval to undertake dredging. GPC will be required to make an application for ERA 16 for the dredging of any material that is to be placed in the proposed reclamation.

Based on the current understanding of the Project, the only ERA set out under Schedule 1 of the *Environmental Protection Regulation 2008* that will require assessment is ERA 16.

When considering the proposed development, DERM will also assess the proposal against the relevant policies under the Act. These policies would include noise, air, water and waste management.

Marine Parks Act 2004

Overview

The Marine Parks Act was passed in 1982. The Queensland Parliament replaced the *Marine Parks Act 1982* in 2004. The new *Marine Parks Act 2004* commenced on 31 August 2006 along with the new *Marine Parks Regulation 2006* and *Marine Parks (Declaration) Regulation 2006*. DERM administers the Act. The three State marine parks in Queensland are the Great Barrier Reef Coast Marine Park (GBRCMP), Great Sandy Marine Park and the Moreton Bay Marine Park. The *Marine Parks Act 2004* provides for the management and control of Marine Parks and a Marine Parks Permit may be required if the proposed activity is deemed to impact on the Marine Park.

Relevance to Project

The boundary of the Great Barrier Reef Coast Marine Park is located between Friend and Laird Points. North of this point, the GBRCMP Habitat Protection Zone is present. As the reclamation and dredging proposed under this project will not be occurring within the GBRCMP, a permit under the Marine *Parks Act 2004* will not be required.

Coastal Protection and Management Act 1995

Overview

DERM administers the *Coastal Protection and Management Act 1995* (Coastal Act). The main objects of the Act are to—

- *provide for the protection, conservation, rehabilitation and management of the coast, including its resources and biological diversity; and*
- *have regard to the goal, core objectives and guiding principles of the National Strategy for Ecologically Sustainable Development in the use of the coastal zone; and*
- *provide, in conjunction with other legislation, a coordinated and integrated management and administrative framework for the ecologically sustainable development of the coastal zone; and*
- *encourage the enhancement of knowledge of coastal resources and the effect of human activities on the coastal zone.*

Coordinated and integrated planning and decision making involves coastal management plans, coastal management districts and the use of other legislation.

Coastal management plans identify principles and policies for coastal management, identify key coastal sites and coastal resources in the coastal zone and plan for their long term protection or management. Coastal management plans are developed in consultation with the public having regard to Aboriginal tradition and Island custom of Aboriginal and Torres Strait Islander people particularly concerned with land affected by the plans.

The State Coastal Plan was prepared by the Minister in accordance with Section 30 of the Coastal Act. The State Coastal Plan deals with matters of international, national and state significance. It is a requirement under Section 35 of the Coastal Act that the Minister also prepares Regional Coastal Management Plans to provide direction for the implementation of the State Coastal Plan, and identify Coastal Management Districts in each region. Coastal Management Districts are areas requiring special development controls and management practices.

Regional Coastal Management Plans must describe how the coastal zone is to be managed and identify the Coastal Management Districts in particular regions. Regional Coastal Management Plans implement the State Coastal Plan's policy framework at the regional level and identify key coastal sites requiring special management within the region.

The Project is located in the area covered by the Curtis Coast Regional Coastal Management Plan, September 2003 (Curtis Coastal Plan). As required, the Curtis Coastal Plan was developed to operate in conjunction with the State Coastal Plan and include region-specific policies as well as applying State Coastal Plan policies to specific geographic areas.

The removal of quarry material from State coastal land below high water mark in a Coastal Management Districts is regulated by means of either a resource allocation (Chapter 2, Part 5, Division 1) or a dredge management plan (Chapter 2, Part 5, Division 2). The removal of quarry material below high water mark refers to all types of dredging activity, including extractive industry dredging, capital dredging associated with some form of tidal works, and maintenance dredging. Approval of either authorisation is assessed against Section 75 of the Coastal Act, the State Coastal Plan and the Curtis Coastal Plan 2003. An allocation notice or an approved dredge management plan authorises the holder, during the period the notice or plan is in force, to access quarry material (refer to Section 100).

DERM assesses applications for allocation of quarry material and dredge management plans against the criteria listed in section 75 of the Coastal Act as well as the provisions in the State Coastal Plan and the relevant regional coastal management plans.

In addition to the removal of quarry material, operational work involving the disposal of dredge spoil or other solid waste material in tidal water, carried out completely or partly within a coastal management district, is also deemed assessable development under the IPA (Schedule 8). The DERM is the assessment manager for the development application and assesses the proposal against the Coastal Act and the provisions of the State Coastal Plan and relevant regional coastal management plans.

Relevance to Project

Tidal Works

The proposed development is not defined as Prescribed Tidal Work in Schedule 4A of the Coastal Act. This is because Prescribed Tidal Works exclude:

- Tidal works that will be used for port authority operations or a public marine facility constructed by or for Queensland Transport or a port authority; and
- Tidal works for creating or changing the configuration or characteristics of a navigational channel.

The adjoining land to the proposed reclamation area is identified as “Strategic Port Land”.

In accordance with the *Transport Infrastructure Act 1994*, the Calliope Planning Scheme identifies that “Strategic Port Land is not subject to the Planning Scheme”. As the subject site is identified as “strategic port land tidal area”, the proposed works will be assessed against the relevant provisions of the GPC Land Use Plan by the GPC as assessment manager. An application to undertake tidal work will be assessed by the GPC in accordance with the relevant procedural requirements of the IDAS.

State and Regional Coastal Management Plans

The Project lies within the Curtis Coast Regional Coastal Management District and is therefore subject to the provisions of the Curtis Coast Regional Coastal Management Plan. The Curtis Coastal Plan and the

State Coastal Plan also have effect as State Planning Policies under the IPA. The GPC Land Use Plan and the Calliope Shire Planning Scheme are therefore required to be consistent with these documents.

Dredging

A quarry material allocation notice or a dredge management plan will be required for the Project development under Chapter 2, Part 5 of the Coastal Act. This will also be required for any specific dredging projects that nominate the Project as the area for disposal of material.

Land Reclamation

The application required to dispose of material in tidal water will form part of the application for tidal works. If DERM is not the assessment manager for the proposed development, the proposed development will be referred to the agency as a concurrence agency. DERM will assess the proposed disposal of dredged material against the provisions of the Coastal Plan.

Impact on Stuart Oil Shale Deposits

Liaison with a representative from DEEDI for the Fisherman's Landing Expansion EIS highlighted the fact that the proposed development will sterilise a part of the Stuart Oil Shale Deposit for future mining. One of the objectives of the *Mineral and Resources Act 1989* is to minimise land use conflict with respect to prospecting, exploring and mining. According to the Department's representative, the proposed development will be referred to DEEDI by DERM for advice.

On the advice from DEEDI, DERM will detail the prescribed process to determine the impact of the development on the future use of the oil shale deposit as a strategic resource to assist the Minister in deciding the proposed development.

Transport Infrastructure Act 1994

Overview

The Department of Transport and Main Roads (DTMR, formerly Queensland Transport) administers the *Transport Infrastructure Act 1994*. The overall objective of the Act is, consistent with the objectives of the *Transport Planning and Coordination Act 1994*, to provide a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure.

To provide a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure, land needs to be managed in terms of a land use instrument which will make development assessable or at least provide codes for self-assessable development.

Section 285 of the Act provides the mechanism whereby reclaimed land can be incorporated into a port authority's Strategic Land Use Plan. Unless the land is incorporated in a land use plan, development of the land will be considered exempt development, thereby leaving little or no control over the development of the land.

Relevance to Project

The proposed Reclamation Area falls outside the *Gladstone Port Authority Land Use Plan 1999* which means that any future development on the reclaimed land will be exempt development, not requiring any approval under the plan. Once the land for the Project has been reclaimed, the GPC Land Use Plan will

be amended (in accordance with Section 285 of the *Transport Infrastructure Act 1994*) to include the reclaimed area in the plan.

The Project involves dredging, therefore an IPA application for tidal works will be required that will trigger referral to the Department of Transport and Main Roads under the *Transport Infrastructure Act 1994* for a concurrence response from Maritime Safety Queensland (MSQ) in relation to maritime safety.

Transport Operations (Marine Safety) Act 1994

Overview

The *Transport Operations (Marine Safety) Act 1994* is administered by MSQ. MSQ is a government agency of the Department of Transport and Main Roads.

The objectives of the Act are to provide a system that achieves an appropriate balance between regulating the maritime industry to ensure marine safety; and enabling the effectiveness and efficiency of the Queensland maritime industry to be further developed.

In particular, the objectives of the Act are:

- *to allow the Government to have a strategic overview of marine safety and related marine operational issues; and*
- *to establish a system under which:*
  - *marine safety and related marine operational issues can be effectively planned and efficiently managed; and*
  - *influence can be exercised over marine safety and related marine operational issues in a way that contributes to overall transport efficiency; and*
  - *account is taken of the need to provide adequate levels of safety with an appropriate balance between safety and cost.*

These objectives are to be achieved mainly by imposing general safety obligations to ensure seaworthiness and other aspects of marine safety, and allowing a general safety obligation to be discharged by complying with relevant standards or in other appropriate ways chosen by the person on whom the obligation is imposed.

A further objective of the Act is to manage the operation and activities of ships.

Relevance to Project

No specific approvals are required under this Act for the Project, however all shipping operations will need to comply with the maritime safety requirements of this legislation.

Transport Operations (Marine Pollution) Act 1995

Overview

The *Transport Operations (Marine Pollution) Act 1995* is administered by Maritime Safety Queensland. Maritime Safety Queensland is a government agency of the Department of Transport and Main Roads.

The overall purpose of the Act is to protect Queensland's marine and coastal environment by minimising deliberate and negligent discharges of ship-sourced pollutants into coastal waters.

The Act's purpose is to be achieved primarily by giving effect to relevant provisions of the MARPOL Convention. The MARPOL Convention is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.

The purpose is also to be achieved by:

- *providing an approach to protecting Queensland's marine and coastal environment from ship-sourced pollutants complementary to the approach of the Commonwealth and the other States; and*
- *making provision about the discharge of sewage from ships; and*
- *giving power to deal with shipping casualties that are polluting, or threatening to pollute, coastal waters; and*
- *enhancing, through education processes, industry and community awareness of the effects of ship-sourced pollutants on Queensland's marine and coastal environment; and*
- *providing for the imposition of severe penalties on persons who pollute Queensland's marine and coastal environment in contravention of this Act.*

Relevance to Project

No specific approvals are required for the Project under this Act, however all shipping operations will need to comply with the maritime pollution prevention and management requirements of this legislation.

Aboriginal Cultural Heritage Act 2003

DERM administers the *Aboriginal Cultural Heritage Act 2003*. The Act binds all persons including the State, to provide effective recognition, protection and conservation of Aboriginal cultural heritage. The Act is to provide effective recognition, protection and conservation of Aboriginal cultural heritage.

Aboriginal cultural heritage is defined under Section 8 of the Act as anything that is:

- *A significant Aboriginal area in Queensland; or*
- *A significant Aboriginal object; or*
- *Evidence of archaeological or historic significance, of Aboriginal occupation of an area in Queensland.*

Section 14 of the Act denotes that as far as practicable, Aboriginal cultural heritage should be owned and protected by Aboriginal people with traditional or familiar links to the cultural heritage if it is comprised of any of the following:

1. Aboriginal human remains;
2. Secret or sacred objects; or
3. Aboriginal cultural heritage lawfully taken away from an area.

In accordance with Sections 87, 88 and 89, the Act requires the development of a Cultural Heritage Management Plan if:

1. An EIS is required;
2. An environment authority is required under a different Act; or
3. Under the IPA, a development application is made for the project or the chief executive is a concurrence agency.

The requirements of a Cultural Heritage Management Plan and the assessment process are outlined in Part 7 of the Act.

Relevance to Project

As the Project requires an EIS, a Cultural Heritage Management Plan will be developed in accordance with Section 87 of the Act.

Fisheries Act 1994

Overview

DEEDI administers the *Fisheries Act 1994*. The Act provides for the management, use, development and protection of fisheries resources and fish habitats, and the management of aquaculture activities. The Act holds provisions for the following:

1. Taking, causing damage to or disturbance to marine plants, including mangroves;
2. Works in a declared fish habitat;
3. Waterway barrier works; and
4. Tidal water, fresh and marine aquaculture operations.

In accordance with Schedule 8 of the IPA, operational works for the purposes of the above activities under the *Fisheries Act 1994* is assessable development. Fisheries development approvals for the above activities are required under the IPA.

Relevance to Project

The Project will result in the disturbance of marine plants and therefore, requires assessment against the *Fisheries Act 1994*. Therefore, when the application for tidal works is lodged, the proposal will be referred to the DEEDI as a referral agency.

Mineral Resources Act 1989* and *Petroleum and Gas (Production and Safety) Act 2004

Overview

The *Mineral Resources Act 1989* and *Petroleum* and *Gas (Production and Safety) Act 2004* are considered under one heading because they both are 'triggered' by the Stuart Oil Shale Deposit south of the Project site.

Mineral Resources Act 1989

The principal objectives of this Act are to—

(a) encourage and facilitate prospecting and exploring for and mining of minerals;

(b) enhance knowledge of the mineral resources of the State;

(c) minimise land use conflict with respect to prospecting, exploring and mining;

(d) encourage environmental responsibility in prospecting, exploring and mining;

(e) ensure an appropriate financial return to the State from mining;

(f) provide an administrative framework to expedite and regulate prospecting and exploring for and mining of minerals; and

(g) encourage responsible land care management in prospecting, exploring and mining.

Petroleum and Gas (Production and Safety) Act 2004

The purpose of this Act is to facilitate and regulate the carrying out of responsible petroleum activities and the development of a safe, efficient and viable petroleum and fuel gas industry, in a way that—

(a) manages the State's petroleum resources—

(i) in a way that has regard to the need for ecologically sustainable development; and

(ii) for the benefit of all Queenslanders; and

(b) enhances knowledge of the State's petroleum resources; and

(c) creates an effective and efficient regulatory system for the carrying out of petroleum activities and the use of petroleum and fuel gas; and

(d) encourages and maintains an appropriate level of competition in the carrying out of petroleum activities; and

(e) creates an effective an efficient regulatory system for the construction and operation of transmission pipelines; and

(f) ensures petroleum activities are carried on in a way that minimises conflict with other land uses; and

(g) optimises coal seam gas production and coal or oil shale mining in a safe and efficient way; and

(h) appropriately compensates owners or occupiers of land; and

(i) encourages responsible land management in the carrying out of petroleum activities; and

(j) facilitates constructive consultation with people affected by activities authorised under this Act; and

(k) regulates and promotes the safety of persons in relation to operating plant.

Relevance to Project

The proposed reclamation area appears to be affected by the following licenses and permits:

- Mineral Development License (MDL 225), which was granted on 4 October 2007. This license expires on 31 October 2012.
- Exploration Permit for Minerals (EPM 3215), which was granted on 1 January 1982 and expired on 31 December 2008. It is not clear whether this permit has been renewed.

Liaison with a representative from DEEDI highlighted the fact that the proposed development would sterilise a part of the Stuart Oil Shale Deposit for future mining. According to the Department's representative, DERM will refer the proposed development to DEEDI for advice.

Water Act 2000

Overview

DERM administers the *Water Act 2000* (Water Act). The Water Act provides a regime for the licensing, regulation and management of water resources in Queensland. The Water Act requires requisite licences (and/or development approvals under the Schedule 8 of IPA) be obtained for the purposes of all or some of the following:

- Artesian bores;
- Water pipelines;
- Pumping stations;
- Ground level storage sites; and
- Treatment plants.

All work that may interfere with or impact on watercourses, particularly within the bed and banks, must comply with the requirements of the Water Act and, as necessary or desirable, must also be discussed with DERM.

Under section 266 of the Water Act, any activities involving excavation or the destruction of vegetation in a watercourse require a permit. In deciding such an application, DERM considers the type and location of the vegetation, the effect of the activity on the watercourse and the reason for the proposal, among other things.

A watercourse is defined as:

> *"1 Watercourse means a river, creek or stream in which water flows permanently or intermittently—*
>
> *(a) in a natural channel, whether artificially improved or not; or*
>
> *(b) in an artificial channel that has changed the course of the watercourse; but,* ***in any case, only****—*
>
> *(c) unless a regulation under paragraph (d), (e) or (f) declares otherwise—at every place upstream of the point (point A) to which the high spring tide ordinarily flows and reflows, whether due to a natural cause or to an artificial barrier; or*
>
> *(d) if a regulation has declared an upstream limit for the watercourse—the part of the river, creek or stream between the upstream limit and point A; or*
>
> *(e) if a regulation has declared a downstream limit for the watercourse—the part of the river, creek or stream upstream of the limit; or*
>
> *(f) if a regulation has declared an upstream and a downstream limit for the watercourse—the part of the river, creek or stream between the upstream and the downstream limits."*

Relevance to Project

This Act will not apply as there are no works proposed within a watercourse as defined under the Act.

Vegetation Management Act 1999

Overview

The *Vegetation Management Act 1999* (VMA), in conjunction with the IPA, regulates the clearing of native vegetation excluding grasses and mangroves. The VMA is administered by DERM. Under the IPA, operational works are defined as, in part, clearing vegetation, including vegetation to which the VMA applies. Schedule 2 Table 2 of the *Integrated Planning Regulation 1998* (IP Reg) requires that operational work that is the clearing of native vegetation be assessed against the provisions of the VMA.

Relevance to Project

As the Project involves the reclamation of land there is unlikely to be any clearing of terrestrial vegetation that is subject to regulation under the VMA. However, some terrestrial vegetation clearing may be required as part of the construction of any road or access way. DERM would assess any clearing required for the proposed works against the relevant Regional Ongoing Clearing Code. Only the clearing of remnant vegetation (native vegetation that occurs in a mapped Regional Ecosystem (RE), or that meets the structural and species requirements to be mapped as a RE) will be assessed under this process (non-remnant vegetation can be cleared under this VMA without a permit).

Nature Conservation Act 1994

Overview

DERM administers the *Nature Conservation Act 1992* (NCA). Under section 73 (a) of the NCA, DERM is required to conserve wildlife and its values to:

- Ensure the survival and natural development of the wildlife in the wild;
- Conserve the biological diversity of the wildlife to the greatest possible extent;
- Identify, reduce or remove, the effects of threatening processes relating to the wildlife; and
- Identify the wildlife's critical habitat and conserve it to the greatest possible extent.

Relevance to Project

Any activity that may have the potential to impact on wildlife or its values in an area may be seen as a threatening process, and will be referred to the DERM as part of the development approval process. In particular, the effect of the Project on Endangered, Vulnerable or Rare wildlife, or the habitat on which that wildlife depends will be of interest to DERM in regard to its obligations under section 73 of the NCA. Chapter 9 further details the requirements of the NCA on the Project.

Under the NCA a permit is required to clear native plants. This permit is not incorporated into IDAS and is issued by DERM. Therefore, if any native plants require clearing as part of the Project a permit will be required under the NCA.

Queensland Heritage Act 1992

Overview

The *Queensland Heritage Act 1992* (QHA) provides for the conservation of Queensland's historical cultural heritage. It requires all involved in its administration to achieve the retention of the cultural heritage significance of the places and objects to which it applies and the greatest sustainable benefit to

the community from those places and objects consistent with the preservation of their cultural heritage significance.

The CHA administers the Queensland Heritage Register. The Heritage Register is a record of registered places. The Act contains the criteria for entry in the Register and procedures for making an entry, removing a place, assessment, objections and appeals, and development in registered places including development by the State. Development in privately owned registered places is part of the IDAS under the IPA. One part provides for heritage agreements and their enforcement, if necessary. Another part protects archaeological objects on land and under water, and provides for areas of archaeological interest to be protected.

Relevance to Project

The Project site does not contain any places registered on the Queensland Heritage Register. As the Project requires an EIS, a Cultural Heritage Management Plan will be developed for the Project in accordance with the CHA.

1.10.4 State Planning Policies

State Coastal Management Plan

Overview

This State Coastal Plan delivers a vision and direction for coastal management in Queensland. The Plan commenced in February 2002 and describes how the coastal zone is to be managed as required by the Coastal Act. The Plan has been developed under the Coastal Act and has the force of law as a statutory instrument. It therefore has the effect as a State Planning Policy under the IPA. Any development in the State Coastal Plan area therefore has to be consistent with the provisions of the State Coastal Plan.

The Curtis Coastal Management Plan was prepared in accordance with the State Coastal Plan. The Project is considered consistent with the Curtis Coastal Management Plan and therefore, consistent with the State Coastal Plan.

Relevance to Project

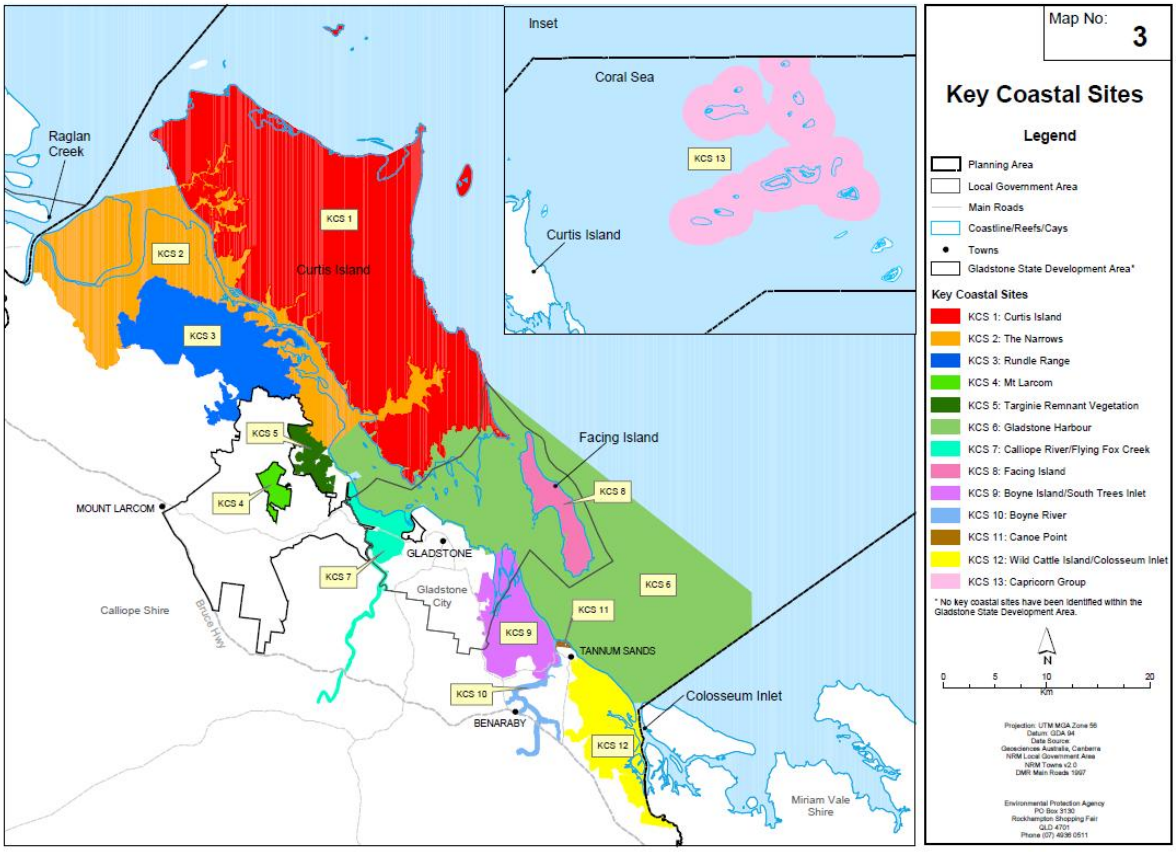
The compliance of the Project with the State Coastal Plan is further detailed in Chapter 7 (Coastal Processes) of this EIS. The Curtis Coastal Management Plan is discussed further below and was prepared in accordance with the State Coastal Plan. The Project is considered consistent with the Curtis Coastal Management Plan and therefore consistent with the State Coastal Plan.

Curtis Coast Regional Coastal Management Plan

Overview

The Curtis Coast Regional Coastal Plan describes how the coastal zone in the Curtis Coast region is to be managed within the policy framework established by the State Coastal Plan. As with the State Coastal Plan, the Curtis Coast Regional Coastal Plan has the effect as a State Planning Policy under the IPA. Any development in the Curtis Coast Regional Coastal Plan area therefore has to be consistent with the provisions of the said Plan. State Government and any other decision making authority are required to consider the Curtis Coast Regional Coastal Plan when making relevant decisions about coastal management in the Curtis Coast region.

The Curtis Coast Regional Coastal Plan identifies 13 key coastal sites (refer Figure 1-10) and their 23 coastal localities (refer to Map 4.1 and Map 4.2 of the Plan) where special coastal management needs have been identified in the Curtis Coast region. The Gladstone Port is identified as “Key Site 6: Gladstone Harbour” (refer to Figure 1-10). The Project is not identified on Map 4.1 and Map 4.2 of the Plan. Map 5 of the Curtis Coast Regional Coastal Plan identifies the Project being partially the “Approved Reclamation Area” (refer to Figure 1-11). Site specific guidance for decision-makers is given for each key coastal site and coastal locality by providing desired coastal outcomes.



Source:http://www.epa.qld.gov.au/environmental_management/coast_and_oceans/coastal_management/regional_coastal_management_plans/curtis_coast/

Figure 1-10 Curtis Coast Regional Coastal Plan Map 3 – Key Coastal Sites

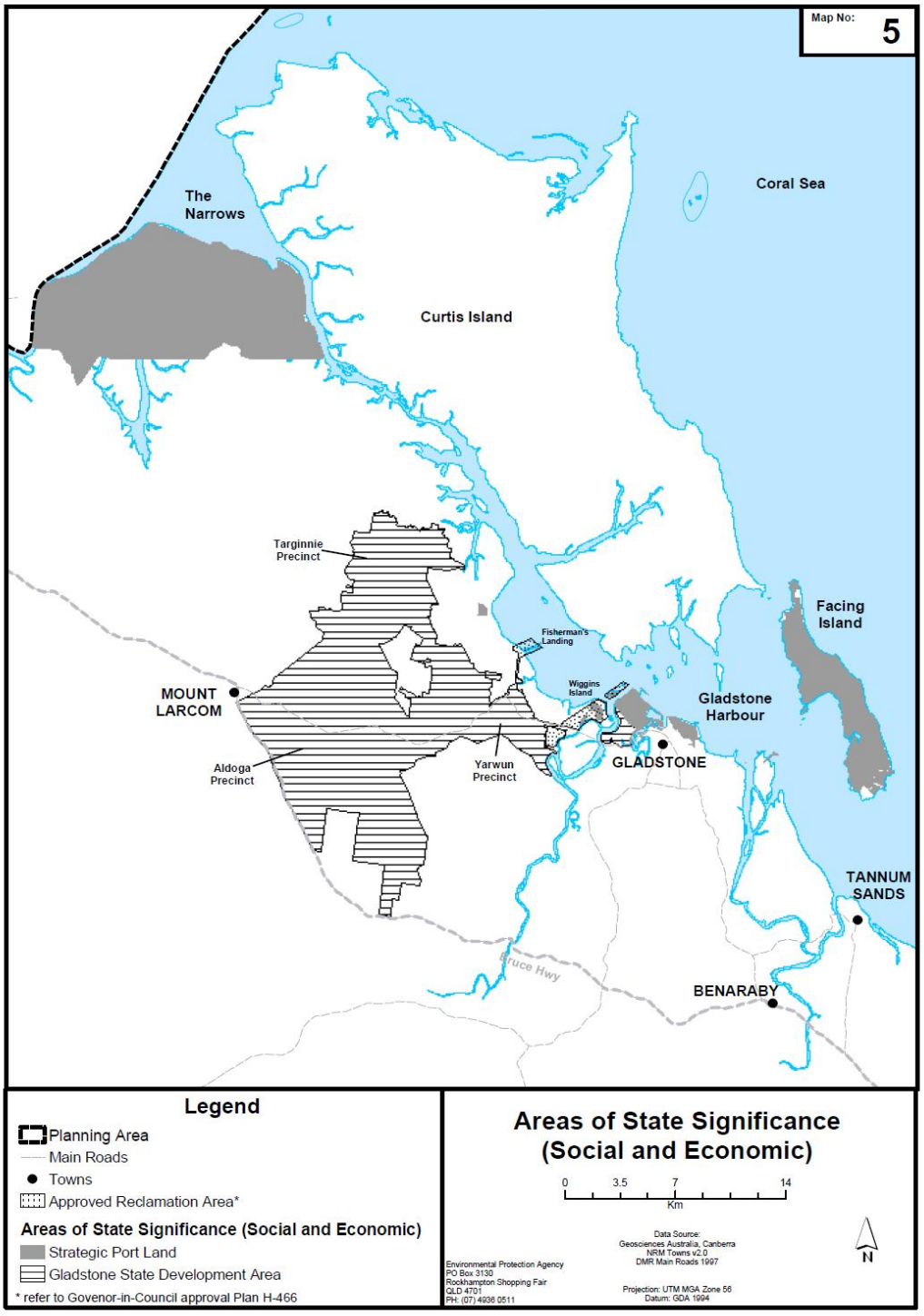


Figure 1-11 Curtis Coast Regional Coastal Plan Map 5 – Areas of State Significance

Relevance to Project

It is considered that the Project is consistent with the intent of the Curtis Coast Regional Coastal Plan as it is partially located in an "Approved Reclamation Area" and is consistent with the outcomes of the key coastal sites as detailed in Table 1-6.

Table 1-6 Desired Coastal Outcomes for Key Coastal Site 6 – Gladstone Harbour

Desired Coastal Outcomes	Comments
Management of the harbour providing for a range of uses, while ensuring conflicts between these uses are managed and adverse impacts on coastal resources and their values are minimised.	*The proposed development supports this outcome.* *Day to day management of the harbour will undertaken by GPC and the construction and operation of the Project will be undertaken in accordance with approved DMP, CEMP and OEMP.*
Continued development of the Port of Gladstone in an ecologically sustainable manner avoiding the location of port infrastructure in areas of high conservation significance, where possible.	*The proposed development supports this outcome.* *Location of development has been selected to minimise impacts on areas of conservation significance. Impacts and mitigation measures regarding conservation areas have been discussed further in Chapter 9 of this EIS.*
Recognition of the importance of the undeveloped inner-harbour islands in providing public access, recreation, biodiversity and scenic amenity to the regional community and avoidance of development with the potential to compromise these values.	*The proposed development will not permanently interfere with public access to the undeveloped harbour islands. Some disruption may occur during construction and dredging of the harbour. However these impacts will be managed through a CEMP.*
Inclusion of inner-harbour islands within open space areas where appropriate.	*Not applicable*
Coordination of management approaches among land and marine resource managers in relation to monitoring the health of the harbour in regards to water quality, managing increasing vessel use and minimising impacts to shorebirds, turtles and dugong.	*The proposed development supports this outcome.* *Day to day management of the harbour will undertaken by GPC and the construction and operation of the Project will be undertaken in accordance with approved DMP, CEMP and OEMP.*
Future use of the following State land on the coast protects coastal resources and values through the implementation of an appropriate management regime: 5DS219, 10SUSL39395, 8USL39395, 9USL39395, 7USL39395, 6USL39395, 11USL39395, 1USL36585.	*Not applicable*

SPP 2/02 – Planning and Managing Development involving Acid Sulphate Soils

Overview

State Planning Policy 2/02 (SPP 2/02) for Planning and Managing Development involving Acid Sulphate Soils (ASS) is concerned with the development of low-lying coastal areas below 5 m AHD potentially containing ASS.

These soils may be found close to natural ground level but could also be found at depth in the soil profile. ASS generally overlies potential ASS horizons, but both may also occur within the same layer and may not be mutually exclusive.

The SPP applies to development that would result in:

- the excavation of, or otherwise removing, 100 m3 or more of soil or sediment from areas below 5 m AHD; or
- filling of land involving 500 m3 or more of material with an average depth of 0.5 metres or greater.

If DERM is not the Assessment Manager for a development proposal the Department may be 'triggered' as a Referral Agency to assess potential ASS issues during the development assessment process.

Relevance to Project

Based on the requirements of the SPP 2/02[2] , under the IPA the proposed development requires a detailed ASS assessment because more than 500 m^3 of fill, to an average depth of more than 0.5 m, will be placed on land below 5 m AHD[3]. The implementation of an ASS Management Plan will ensure that potential disturbance of ASS is minimised and that the Project will comply with this SPP.

The residual environmental risk for this proposed project falls under the duty of care provision of the EP Act and the EPP Water. To prevent environmental harm, the General Environmental Duty established under Section 36 of the Act must be observed and activities must be undertaken with due diligence. The General Environmental Duty states *"a person must not carry out any activity that causes or is likely to cause environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm".* To act with due diligence, the parties must show that the environmental risk associated with the activity has been assessed and minimised where possible.

SPP 1/02 - Development in the Vicinity of Certain Airports and Aviation Facilities

Overview

State Planning Policy 1/02 (SPP 1/02) for Development in the Vicinity of Certain Airports and Aviation Facilities sets out broad principles for protecting airports and aviation facilities as they are essential components of the State's transport infrastructure and national defence system.

Relevance to Project

The subject site is affected by the Kangaroo Island Obstacle Limitation Surface. While the reclamation area is under the flight path of the proposed Kangaroo Island airport it is not envisaged that development will project into the flight plane and it is considered the Project complies with the SPP. Airports in the Project area will be consulted as part of the EIS

[2] SPP 2/02 has effect in Local Government Areas typically located along the coast of Queensland.

[3] Dear SE, Moore NG, Watling KM, Fahl D and Dobos SK (2004) Legislation and Policy Guide. *Queensland Acid Sulphate Soil Technical Manual.* Department of Natural Resources and Mines, Indooroopilly, Queensland Australia.

SPP 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide

Overview

State Planning Policy 1/03 (SPP 1/03) for Mitigating the Adverse Impacts of Flood, Bushfire and Landslide seeks to minimise the potential adverse impacts of natural hazards by providing guidelines for considering potential natural hazards when making decisions about development. SPP 1/03 identifies three outcomes that developments affected by natural hazard overlays must comply.

SPP 1/03 applies to assessable development not addressed by a planning scheme and subject to assessment under the *IPA Reg*. The assessment manager must have regard to the SPP 1/03 when assessing development proposals in "Natural Hazard Management Areas" (flood prone land, steep land and bushfire areas).

Relevance to Project

The subject site is not likely to include natural hazard management areas and therefore is not applicable to the proposed works. It is also not likely to be a flood prone area.

SPP 2/07 – Protection of Extractive Resources

Overview

State Planning Policy 2/07 (SPP 2/07) for Protection of Extractive Resources came into force on 3 September 2007. The purpose of this policy is to identify and protect extractive resource areas of state or regional significance from incompatible land uses that could potentially constrain or sterilise resources.

SPP 2/07 defines, extractive resources as sand, gravel, quarry rock, clay and soil. The policy identifies a number of "Key Resource Areas" (KRAs) and "Transport Routes" throughout the State.

Relevance to Project

The potential impact of the proposed development on the Stuart Oil Shale Deposits has been discussed. The proposed development has to be assessed against the outcomes of SPP 2/07.

No other identified KRAs or "Transport Routes" are in close proximity to the subject site.

1.10.5 Local Government Planning Controls, Local Laws and Policies

Gladstone Port Strategic Plan 1997 – 2047

Overview

The Gladstone Port Strategic Plan 1997 – 2047 (Port Strategic Plan) was developed in consultation with relevant stakeholders, including the GBRMPA, as required under the 25 Year Port Strategic Plan for the GBRWHA. The 50 Year Port Strategic Plan has been the focus of community consultation on two occasions, first in 1992 and again in 1997 as part of the 5-year review process.

The following statement is made on p2 of the Port Strategic Plan:

> *"The Port Strategic Plan is not to be interpreted as a commitment by the Gladstone Port Authority (GPA), industry, government or other organisations to carry out the works shown in the Plan. Rather, it is a forecast of what is expected to be needed and the time when it is likely to be needed. Therefore, in addition to catering for proposed trade expansion, the plan needs to be flexible to cater for those trades which are unknown at this particular time.*

Any new proposals requiring Port development will, of course, have to satisfy both the GPA's and State's environmental criteria."

The Port Strategic Plan is not a statutory document but rather an expression of the GPA's vision and forecasted needs for the next 50 years.

In terms of the Strategic Planning of the Port, Fisherman's Landing is shown to have a northern expansion to have occurred in the period 2002 – 2007. The scale of the expansion is not reflected accurately but it is considered that the Project is consistent with the intent of the Port Strategic Plan.

Relevance to Project

The Project is consistent with the intent of the Port Strategic Plan because the plan shows reference to an expansion of the Port to the north of Fisherman's Landing. The scale of the expansion is not reflected accurately but it is considered that the Project is consistent with the intent of the Port Strategic Plan.

Gladstone Port Authority Land Use Plan 1999

Overview

The GPC Land Use Plan 1999 (Port Land Use Plan) was approved via Government Gazette No 89 issued 19 April 1996 and has statutory powers. The Port Land Use Plan recognises Fisherman's Landing in its current form as a multi-user/multi-product wharf.

The proposed reclamation and dredging area falls outside the Port Land Use Plan which means that any future development on the reclaimed land will be exempt development, not requiring any approval until it has been incorporated into the Port Land Use Plan. Section 285 of the *Transport Infrastructure Act 1994* provides the mechanism whereby the reclaimed land can be incorporated into the Port Land Use Plan, as described in Section 1.10.3.

Relevance to Project

For the proposal under consideration (reclamation of land) no Material Change of Use is applicable until such time that the GPC Land Use Plan has been amended to incorporate the land in accordance with the provisions of section 285 of the *Transport Infrastructure Act 1994*.

Calliope Shire Planning Scheme 2007

Overview

In terms of section 3.1.2 of the IPA, any development is considered exempt development unless it is made assessable or self-assessable development. The reclaimed land is unallocated and, as stated above, future application will be made in accordance with Section 285 of the *Transport Infrastructure Act 1994* to have the reclaimed land designated as Strategic Port Land.

The requirements for development on or adjacent to Strategic Port Land in terms of the Calliope Shire Planning Scheme are set out in Table 1-7 (refer to Table 6-5, Section 6.9 of the Calliope Shire Planning Scheme 2007). It should be noted that no probable or acceptable solutions are specified, which means that the specific outcomes are the only acceptable solutions.

Table 1-7 Requirements for Development on or Adjacent to Strategic Port Land

Specific Outcomes	Comment
O1 Development on land adjacent to or within the Major Industry Zone, Major Infrastructure Zone or Strategic Port Land, will be designed to mitigate reverse amenity issues in regards to noise, dust, odours, traffic and other potential impacts from the nearby industrial activities including: (i) adopting suitable buffer distances; (ii) incorporating visual screening (planting of vegetation and fencing) to provide an effective screen and visual outlook; (iii) incorporating noise attenuation materials in the construction of dwelling units; and (iv) siting sensitive uses away from likely sources of dust, noise and odours.	*Any future development on the proposed reclaimed area can be conditioned to ensure compliance with this outcome.*
O2 The operational and expansion requirements of the major industrial areas and major infrastructure facilities listed below will not be compromised by encroachment of inappropriate development: (i) major transmission lines; (ii) Awoonga Dam; (iii) Gladstone State Development Area; (iv) Bruce Highway; (v) Dawson Highway; (vi) Gladstone Mt Larcom Road; (vii) Gladstone Monto Road; (viii) North Coast Railway; (ix) Moura short railway; (x) State railway linking the limestone mine at East End with the cement plant at Fisherman's Landing; (xi) Expanding port facilities at Fisherman's Landing; (xii) Future airport to be developed on Kangaroo Island; (xiii) Queensland Cement Development; and (xiv) Shale Oil Development.	*Any future development on the proposed reclaimed area can be conditioned to ensure compliance with this outcome. Specifically, this outcome allows for the expansion of port facilities at Fisherman's Landing.*
O3 Suitable activities on premises adjoining the Gladstone State Development Area (GSDA) and the GSDA materials handling and transport corridor comprise compatible rural activities.	*Any future development on the proposed reclaimed area can be conditioned to ensure compliance with this outcome.*

Relevance to Project

Any proposed development on the proposed reclaimed land will be considered assessable development only when the reclaimed land is designated as Strategic Port Land.

As far as the Project is considered, the proposed development is not assessable against the provisions of the Calliope Shire Planning Scheme as the land is unallocated state land. The proposed development is, however, considered consistent with the intent of the Planning Scheme.

Development Scheme for the Gladstone State Development Area 2008

Overview

The GSDA Development Scheme has been prepared pursuant to the SDPWO Act.

The intent of the GSDA Development Scheme is, among other things, to:

- establish a set of objectives for the orderly development of the GSDA;
- provide guidance and a framework for the orderly development of the GSDA; and
- identify different land use designations for the GSDA and specify their intended purpose.

Relevance to Project

Whilst the proposed reclamation is not included in the GSDA, the Port is connected to the GSDA via the MTSC, which is in itself part of the GSDA. The assessment manager may refer the proposed development to the Coordinator-General (DIP). It is therefore considered appropriate that the proposed development be assessed against the objectives of the GSDA listed in Table 1-8.

Table 1-8 Objectives of the GSDA Development Scheme

Objectives of the GSDA	Comment
(a) Provide land for industrial development of national, State and regional significance and complementary industrial, infrastructure and service uses (within the Aldoga, Targinie, Yarwun, Clinton and Curtis Island Industry Precincts)	*The proposed development falls outside the GSDA and therefore outside the precincts mentioned.*
(b) Provide land and plan for a dedicated and efficient means of access for materials, products, wastes and services between the Gladstone State Development Area (Aldoga, Targinie, Yarwun, Clinton and Curtis Island Industry Precincts) and the Port of Gladstone	*Proposed development is connected to the GSDA via the MTSC.*
(c) Recognise areas of the Stuart oil shale resource as a valuable mineral resource for mining	*Discussed under Mineral Resources Act.*
(d) Establish a development framework that provides for long term orderly industrial development in the Gladstone region.	*Proposed development is consistent with this objective as it will provide for additional land for industrial development in an orderly manner which is connected to the GSDA via the MTSC.*

Objectives of the GSDA	Comment
(e) Ensure that the integrity and functionality of the Gladstone State Development Area is maintained and protected from incompatible land uses and activities that may adversely affect the continued use of the area.	*Proposed development supports this objective.*
(f) Encourage the development of synergies between industries to minimize waste production and promote re-use and recycling of waste.	*Not applicable.*
(g) Encourage and promote industry having regard to the cultural heritage value of the Gladstone State Development Area.	*Not applicable. Future development will be assessed against the provisions of the Gladstone Port Land Use Plan.*
(h) Ensure the physical characteristics of land are considered in determining the suitability and location of development.	*Not applicable. Future development will be assessed against the provisions of the Gladstone Port Land Use Plan.*
(i) Ensure development recognises and protects environmental, cultural heritage and community values.	*Not applicable. Future development will be assessed against the provisions of the Gladstone Port Land Use Plan.*
(k) Ensure the impacts of development on the environment, including cumulative impacts, are minimized to meet the requirements of applicable government policies.	*Future development will be assessed against the provisions of the Gladstone Port Land Use Plan and any other applicable policies.*
(l) Ensure areas of high ecological significance within and adjacent to the Gladstone State Development Area are protected.	*Future development will be assessed against the provisions of the Gladstone Port Land Use Plan and any other applicable policies.*
(l) Provide land and plan for adequate areas of open space within the Gladstone State Development Area.	*Not applicable.*

It is considered that the Project is consistent with the objectives of the GSDA Development Scheme.

1.10.6 Regional Strategies and Plans

Central Queensland Regional Growth Management Framework 2002 - Non-statutory regional plan

Overview

Seven Queensland regions have non-statutory plans in place. These plans have been developed in close partnership with local councils, communities and business and industry representatives. These plans were developed before the commencement of statutory regional plans and do not have legislative power.

The Project falls within the *Central Queensland Regional Growth Management Framework 2002* (CQRGMF), which is a joint initiative bringing together governments at all levels and the community to create a framework to guide future growth and development of the Central Queensland region.

Relevance to Project

A key outcome of the CQRGMF is to develop port infrastructure that meets the needs of industry and the community while minimising the potential for detrimental environmental impacts. The CQRGMF seeks to achieve this outcome through:

- maintaining, upgrading and expanding where necessary, the existing port infrastructure at Gladstone Port to meet the current and future needs of users of the ports; and
- identifying the need for port developments and supporting port authorities in sustainable development.

The Project seeks to expand the existing Gladstone Port infrastructure and therefore, is considered to be consistent with the CQRGMF.

Gladstone Integrated Regional Transport Plan 2001-2030

Overview

The *Gladstone Integrated Regional Transport Plan 2001-2030* (GIRTP) was developed to guide the region's transport needs for the future. It is the result of collaboration between the Department of Transport and Main Roads, Gladstone City Council, Calliope Shire Council, QR, GPC and the Gladstone–Calliope Aerodrome Board, in partnership with state and local government.

The plan sets a comprehensive framework for the future development of the region's transport network up to 2030. It contains eight action plans, which are being implemented cooperatively and in a coordinated manner by all of the partners involved.

The plan helps meet emerging transport needs for the Gladstone area, in response to regional growth in population, employment and industry.

The plan area is bound to the east by Port Curtis, extends north to Kangaroo Island, west to the towns of Mount Larcom and Calliope, and south to the area immediately south of Tannum Sands.

Relevance to Project

The long-term planning provision for port and marine infrastructure and services in Gladstone as set out in the GIRTP is to increase the operational efficiency of Gladstone's overall transport network to result in increased opportunities for the development of trade (both domestic and export).

The GIRTP Action Plan for the planning and provision of infrastructure at the port is based on the Gladstone Port Strategic Plan. The GIRTP capital program for the port reflects the capital program outlined in the Gladstone Port Strategic Plan up until the year 2017.

It is also recognised that future decisions on the development of infrastructure and services at the Port will be affected by ongoing commercial decisions about the location of future industry in the region, the expansion of existing industry and the movement of freight through the region to the Port.

The GIRTP Action Plan for port and marine recognises the role of the Gladstone Port Authority to operate and manage Gladstone Port to achieve price and service competitiveness to help attract industry to the region, in accordance with the Gladstone Port Strategic Plan.

The Project seeks to expand the existing Gladstone Port infrastructure in accordance with the Gladstone Port Strategic Plan and therefore, is considered to be consistent with the GIRTP.

1.10.7 Summary of Relationship of Various Acts, State Policies and Local Government Planning Instruments to the Project

- *Great Barrier Reef Marine Park Act 1975* - The Project is excluded from the GBRMP. However if any development should be within the boundaries of the GBRMP, the GBRMP Act will apply.
- *Native Title Act 1993* - There are a number of traditional owner groups in the Port Curtis area. Through the EIS process, all claimants will be formally notified and invited to be part of a Cultural Heritage Management Plan process for the Project under the *Aboriginal Cultural Heritage Act 2003*.
- *State Development and Public Works Organisation Act 1971* - The Project was declared a significant project under the SDPWO Act, requiring an EIS.
- *Integrated Planning Act 1997* - For the proposal under consideration, no Material Change of Use is applicable. The land, when reclaimed, will not be included in the GPC *Land Use Plan 1999* until such time that it is included in accordance with the provisions of the *Transport Infrastructure Act 1994*.

  Approval is required for the dredging and disposal of solid waste material in tidal water. The application for tidal work must be lodged with GPC as Assessment Manager pursuant to the provisions of the IPA.
- *Land Act 1994* - In its current state, the land that is the subject of the proposed development may be given to the GPC under lease only.

  Prior to application being made for Resource Allocation, application must be made to lease the unallocated State land.

  Once the land is reclaimed, the GPC can apply for ownership of the land.
- *Environmental Protection Act 1994* - The dredging operation associated with the development is classified as ERA 16.

  In accordance with changes to the ERA legislation (in force as of 1 January 2009), port authorities are no longer exempt from requiring approval to undertake dredging. GPC will be required to make an application for ERA 16 for the dredging of any material that is to be placed in the proposed reclamation.
- *Coastal Protection and Management Act 1995: -*
  - *Tidal Works* - As the subject site is identified as "*strategic port land tidal area*", the proposed works will be assessed against the relevant provisions of the GPC Land Use Plan by the GPC as Assessment Manager. An application to undertake tidal work will be assessed by the GPC in accordance with the relevant procedural requirements of the IDAS.
  - *State and Regional Coastal Management Plans* – The Project lies within the Curtis Coast Regional Coastal Management District and is therefore subject to the provisions of the Curtis Coast Regional Coastal Management Plan.
  - *Dredging* - A quarry material allocation notice or a dredge management plan will be required for the Project under Chapter 2, Part 5 of the Coastal Act. This will also be required for any specific dredging projects that nominate the Project as the area for disposal of material.
  - *Land reclamation* - The DERM will assess the proposed disposal of dredge spoil against the provisions of the Coastal Plan.
  - *Impact on Stuart Oil Shale Deposits* - Liaison with a representative from the DEEDI for the Fisherman's Landing Northern Expansion EIS highlighted that the proposed development will

sterilise a part of the Stuart Oil Shale Deposit for future mining. In accordance with advice from the DEEDI the proposed development will be referred to the DEEDI by the DERM for advice.

- *Transport Infrastructure Act 1994* - Once the land for the Project has been reclaimed, the GPC Land Use Plan has to be amended (in accordance with Section 285 of the *Transport Infrastructure Act 1994*) to include the reclaimed area in the plan. Failing to do so will, as stated, result in all development on the reclaimed land to be exempt development.
- *Aboriginal Cultural Heritage Act 2003* – The development requires an EIS and therefore, a Cultural Heritage Management Plan will be developed in accordance with Section 87 of the Act.
- *Fisheries Act 1994* - The development will result in the disturbance of marine plants and therefore, requires assessment against the *Fisheries Act 1994*. Therefore, when the application for tidal works is lodged, the proposal will be referred to the DEEDI as a referral agency.
- *Mineral Resources Act 1989 and Petroleum and Gas (Production and Safety) Act 2004* - The impact of the Mineral Development License (MDL 225) and Exploration Permit for Minerals (EPM 3215) on the development has to be investigated.
- *Vegetation Management Act 1999* - Some remnant vegetation clearing may be required as part of the construction of any road or access way. DERM would assess any clearing required for the proposed works against the relevant Regional Ongoing Clearing Code.
- *Nature Conservation Act 1994* - The effect of the project on endangered, vulnerable, or rare wildlife, or the habitat on which that wildlife depends will be of interest to the DERM in regard to their obligations under section 73 of the Act.
- *State Coastal Management Plan and the Curtis Coast Regional Management Plan* - It is considered that the development is consistent with the intent of the State Coastal Plan and Curtis Coastal Plan as it is partially located in an “Approved Reclamation Area” and is consistent with the outcomes of the key coastal sites.
- *SPP 2/02 – Planning and Managing Development involving Acid Sulphate Soils* - Based on the requirements of the SPP 2/02[4], under the IPA the proposed development requires a detailed ASS assessment because more than 500 m3 of fill, to an average depth of more than 0.5 m, will be placed on land below 5 m AHD[5]. These appropriate measures will ensure that potential disturbance of ASS is minimised and that the Project will comply with this SPP.
- *SPP 1/02 - Development in the Vicinity of Certain Airports and Aviation Facilities* - The subject site is affected by the Kangaroo Island Obstacle Limitation Surface. While the Reclamation Area is under the flight path of the proposed Kangaroo Island airport, it is not envisaged that development will project into the flight plane and it is considered the Project complies with the SPP. Airports in the Project area will be consulted as part of the EIS
- *SPP 2/07 – Protection of Extractive Resources* - The proposed development has to be assessed against the outcomes of SPP2/07 due to the potential impact on the Stuart Oil Shale Deposits.
- *Gladstone Port Strategic Plan 1997 – 2047* - It is considered that the development is consistent with the intent of the Gladstone Port Strategic Plan.

[4] SPP 2/02 has effect in Local Government Areas typically located along the coast of Queensland.

[5] Dear SE, Moore NG, Watling KM, Fahl D and Dobos SK (2004) Legislation and Policy Guide. *Queensland Acid Sulphate Soil Technical Manual.* Department of Natural Resources and Mines, Indooroopilly, Queensland Australia.

- *Gladstone Port Authority Land Use Plan, 1999* - It is considered that the development is consistent with the intent of the Port Land Use Plan. For the proposal under consideration (reclamation of land) no Material Change of Use is applicable until such time that the GPC Land Use Plan has been amended to incorporate the land.
- *Development Scheme for the Gladstone State Development Area, 2008* - Whilst the proposed reclamation is not included in the GSDA, the Port is connected to the GSDA via the MTSC, which is in itself part of the GSDA. The assessment manager may refer the proposed development to the Coordinator-General (DIP). It is therefore considered appropriate that the proposed development be assessed against the objectives of the GSDA It is considered that the development is consistent with the objectives of the GSDA Development Scheme.
- Central Queensland Regional Growth Management Framework 2002 - It is considered that the development is consistent with the objectives of the CQRGMF.
- *Gladstone Integrated Regional Transport Plan 2001-2030* - It is considered that the development is consistent with the objectives of the GIRTP.

1.10.8 List of Approvals Required

The approvals required and the act regulating the approval is listed in Table 1-9. As stated elsewhere in this report, for the proposal under consideration no Material Change of Use is applicable.

Table 1-9 Approvals Required for the Project

Legislation	Administering Authority	Trigger	Project Response
Aboriginal Cultural Heritage Act 2003	Department of Environment and Resource Management	Fact that development requires an EIS	A Cultural Heritage Management Plan will be developed for the Project.
Coastal Protection and Management Act 1995	Department of Environment and Resource Management	Land Reclamation Impact on Stuart Oil Shale Deposits	If the DERM is not the assessment manager for the proposed development, the proposed development will be referred to the agency as a concurrence agency. The DERM will assess the proposed dredging and disposal of dredge spoil against the provisions of the Coastal Plan. The DERM will refer the development to the Department of Employment, Economic Development and Innovation for advice.
Environmental Protection Act 1994	Department of Environment and Resource Management	Possible noise, air and water pollution and waste management	Approval for ERA 16 will be required. When considering the development, the DERM will also assess the proposal against the relevant policies under the Act. These policies would include noise, air, water and waste management.

Legislation	Administering Authority	Trigger	Project Response
Fisheries Act 1994	Department of Efficiency, Economic Development and Innovation	Marine plant clearing	Authorisation to clear marine plants will be considered during the referral and assessment process.
Integrated Planning Act 1997	Department of Infrastructure and Planning	Tidal Works	The Assessment Manager for an application for Tidal Works is Gladstone Ports Corporation. The application will cover the work for dredging as well as the disposal of material in tidal water. The application will require referral to the following agencies: ◗ DERM as concurrence agency; ◗ DEEDI as concurrence agency; and ◗ DIP as advice agency.
Land Act 1994	Department of Environment and Resource Management	Tenure	Prior to application being made for Resource Allocation for the Reclamation Area, application must be made to lease the unallocated State land. Once the land is reclaimed, the GPC can apply for ownership of the land. However, in terms of section 127(3), if the reclaimed land is held under lease, that lease must be surrendered before a deed of grant can be issued.
Native Title Act 1993	Department of Environment and Resource Management	Native Title Notification	The Assessment Manager is responsible for undertaking Native Title Notification. Notification is done at the time when an application for a development permit (in this case application for tidal works) is lodged. The process runs concurrently with the IDAS process.
Nature Conservation Act 1994	Department of Environment and Resource Management	Possible effect of project on endangered, vulnerable, or rare wildlife, or the habitat on which that wildlife depends	Will be assessed as part of the referral and assessment process.

Legislation	Administering Authority	Trigger	Project Response
Transport Infrastructure Act 1994	Queensland Transport	Creation of land (land reclamation)	The GPC Land Use Plan has to be amended to include the reclaimed area in the plan in order to make development on the reclaimed land assessable development. This process can only be started after completion of the reclamation.
Vegetation Management Act 1999	Department of Environment and Resource Management	Possible vegetation clearing	Authorisation to clear vegetation (if required) will be acquired as part of the referral and assessment process.

1.11 Accredited Process for Controlled Actions Under Legislation

This Project has been determined to be a controlled action under the Commonwealth EPBC Act and a significant project under the SDPWO Act. In this regard, the Australian Government has accredited the Queensland EIS process for the purposes of the Australian Government assessment under Part 8 of the EPBC Act.

When a State EIS process has been accredited, it is necessary to address potential impacts on the matters of national environmental significance that have been identified in the 'controlling provisions' for the project. In this case, the matters are as follows:

- World Heritage Area (sections 12 and 15A);
- National Heritage Places (sections 15B and 15C);
- Listed threatened species and communities (sections 18 and 18A); and
- Listed migratory species (sections 20 and 20A).

A stand-alone report addressing the matters of national environmental significance is provided, as Appendix G. This document exclusively addresses the issues relevant to the controlling provisions.

A description of the affected environment relevant to the matters protected, including assessment of relevant impacts and mitigation measures and potential offsets, is provided in Chapter 9 of this document.