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Introduction

Contents

1 Introduction

1.1 Chapter purpose

The purpose of this chapter is to introduce the Environmental Impact Statement (EIS) process, the proponent and the Project for the Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project EIS. This chapter includes the following:

- Project name and proponent details (Section 1.2)
- Summary of Project description (Section 1.3)
- Project rationale and justification (Section 1.4)
- Relationship to other projects (Section 1.5)
- Summary of Project alternatives considered as part of the EIS process (Section 1.5.1)
- Environmental impact assessment process (Section 1.7)
- Summary of public consultation process (Section 1.8)
- Relevant legislation and approvals required for the Project (Section 1.9).

The EIS has been prepared to meet the requirements of both the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth (Cth)) (EPBC Act) and the *State Development and Public Works Organisation Act 1971* (Queensland (Qld)) (SDPWO Act). On 23 October 2012, the Project was declared to be a 'controlled action' for which an EIS is required under the EPBC Act. The Commonwealth EIS Guidelines were released in March 2013 (refer Appendix A2). On 13 December 2016 the Department of the Environment and Energy (DoEE) confirmed that the EIS Guidelines remain applicable to the Project. A cross reference table showing how the EIS Guidelines have been addressed is provided in Appendix A4.

On 25 September 2012, the Project was declared to be a 'coordinated project' under the SDPWO Act for which an EIS is required. The EIS process under the SDPWO Act is being undertaken in parallel with the Commonwealth EPBC Act 'controlled action' EIS process using one EIS to address the statutory requirements of both EIS processes. Terms of Reference (ToR) for the EIS were released by the Queensland Coordinator-General in November 2012 (refer Appendix A1). A cross reference table showing how the EIS ToR have been addressed is provided in Appendix A3. The Coordinator-General has extended the project declaration lapse date to 30 September 2019.

1.2 Project name and proponent

The project name and title is the **Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project** (hereafter referred to as the Project).

The Gladstone Ports Corporation Limited (GPC) is the Project proponent. GPC is a Company Government Owned Corporation under the *Government Owned Corporation Act 1993* (Qld), and GPC manages and operates the Port of Gladstone, Port of Rockhampton and Port of Bundaberg.

The GPC designated proponent contact is:

Mr Craig Walker
Acting Chief Executive Officer
Gladstone Ports Corporation
40 Goondoon Street
Gladstone Queensland 4680

1.2.1 Nature and extent of business activities

The Port of Gladstone is located 525 kilometres (km) north of Brisbane, Queensland and includes 4,448 hectares (ha) of land that falls under the control and management of GPC. The location of the Port is shown in Figure 1.1.

The Port of Gladstone officially commenced operations in 1914 with the formation of the Gladstone Harbour Board, and became a port authority in 1987. The Port was included as a Company Government Owned Corporation in 2007.

GPC's core business functions are to manage port infrastructure and cargo handling operations for coal and other products at the three ports; provide and maintain vital shipping channels; and to develop, manage and lease Strategic Port Land (SPL). GPC is directly responsible for road infrastructure, pilotage services, towage services (through an exclusive licence), property services, community parklands and quarantine and waste disposal services.

The Port of Gladstone is Queensland's largest multi-commodity port, and RG Tanna Coal Terminal (RGTCT) is the world's fourth largest coal export terminal (by throughput). Cumulatively, the three ports handle the export of mineral resources from Central Queensland and products (such as sugar, grain and tallow) from local industries, and the import of raw materials from national and international sources.

GPC directly supports the resources sector by operating the facilities required to export significant quantities of the State's resources (e.g. coal, alumina, etc.) to international markets and by planning and building infrastructure to grow the region and the Queensland economy. The Port of Gladstone's trade will increase over the next decade with gradual increases in operational throughputs of the three liquefied natural gas (LNG) plants on Curtis Island and the Wiggins Island Coal Terminal (WICT).

Further details on Port operations are contained in Section 2.1.

1.2.2 Environmental management and record

GPC's environmental commitment is to manage, develop and operate their business in a manner which:

- Minimises environmental harm and preserves the inherent worth of the environment for future generations, through the adoption of leading practice environmental management
- Ensure continual improvement in environmental performance
- Ensure compliance with all relevant legislative requirements.

These objectives will be generally achieved by GPC through the development, implementation and maintenance of an Environmental Management System (EMS) that is accredited under AS/NZS ISO 14001:2004, and specifically by:

- The identification of environmental risks associated with activities undertaken by, or on behalf of, GPC
- Adopting a comprehensive and consultative strategic planning process, which involves relevant stakeholders in developing specific objectives and targets based on significant environmental risks
- Ensuring processes, procedures and equipment are in place to monitor and manage significant environmental risks
- Communication of environmental risks and adopted management responses throughout the organisation
- Maintenance of a comprehensive inventory of legal and other obligations that dictate the way GPC must conduct its business, and conducting regular evaluations of compliance to these obligations
- Maintaining a high level of environmental awareness throughout GPC by implementing appropriate training and communications to staff and contractors

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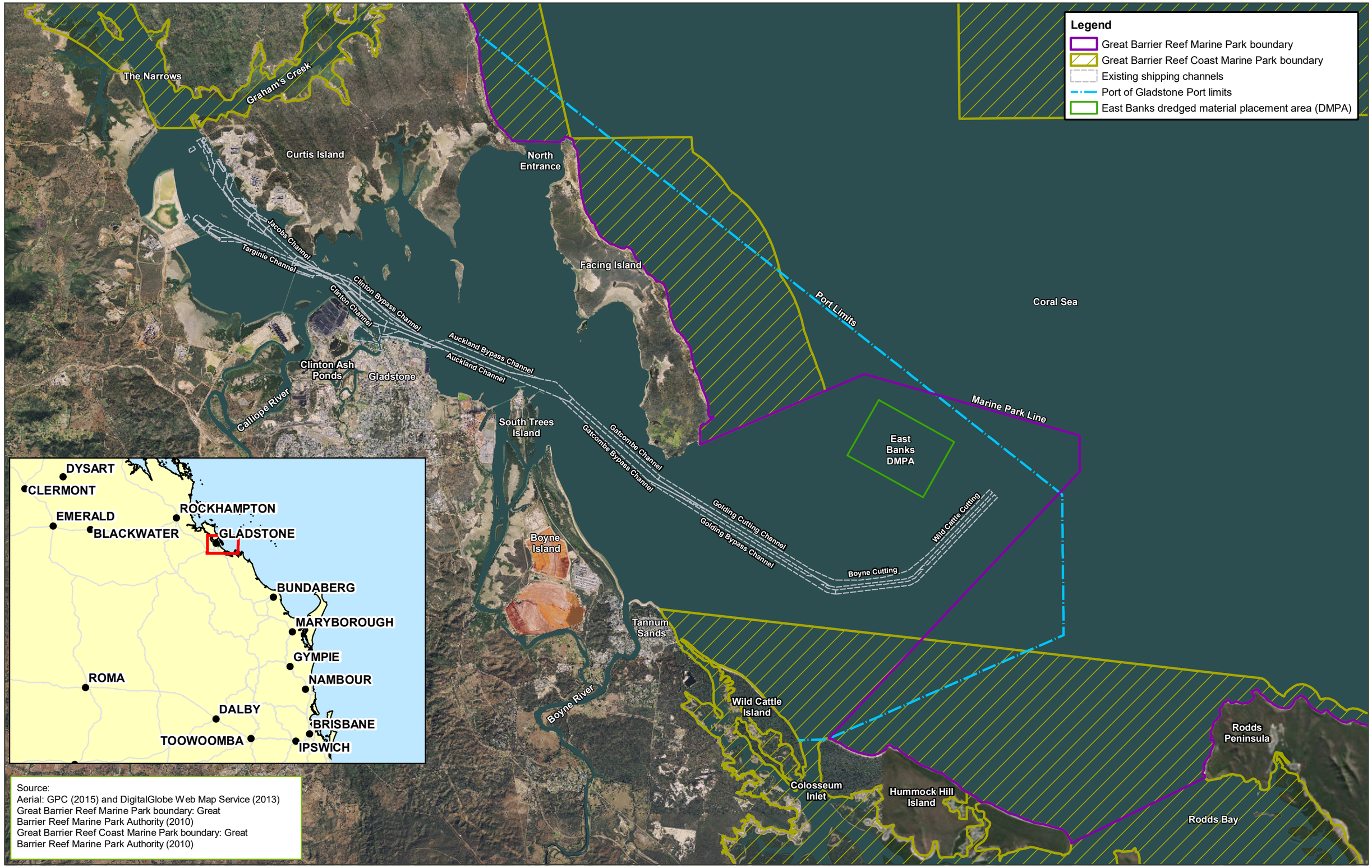

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Aerial: GPC (2015) and DigitalGlobe Web Map Service (2013)
Great Barrier Reef Marine Park boundary: Great Barrier Reef Marine Park Authority (2010)
Great Barrier Reef Coast Marine Park boundary: Great Barrier Reef Marine Park Authority (2010)

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Gatcombe and Golding Cutting Channel Duplication Project

Figure 1.1: Locality plan

- Developing, implementing and maintaining documented operational procedures and infrastructure to control activities, including foreseeable emergency events, that could cause environmental impacts
- Identifying and applying appropriate corrective and preventive actions to address environmental non-conformances
- Actively engaging with port land users and contractors to ensure that they comply with GPC environmental requirements
- Implementing a schedule of regular internal and external audits of the EMS
- Providing the appropriate resources to implement, maintain and improve the management of environmental risks
- Regular executive management team reviews of GPC's environmental performance.

The EMS is audited by an independent third party on a triennial basis and in 2018 it has been certified to ISO AS/NZS 14001:2015. Ongoing certification demonstrates GPC's commitment to systems compliance and improvements. GPC has many initiatives in place to improve GPC's environmental performance thus achieving the objective of an EMS that supports and enhances the effective, efficient and sustainable operation of GPC.

A summary of the relevant GPC breaches of environmental laws over the last 10 years is provided in Table 1.1.

Table 1.1 Relevant GPC breaches of environmental laws

Date	Details of environmental law breaches
August 2010	Discharge of water from RGTCT into Port Curtis that did not comply with specified limits. Former Department of Environment and Resource Management (DERM) issued GPC a Penalty Infringement Notice under the *Environmental Protection Act 1994* (Qld) (EP Act).
November 2010	Two discharges of water from RGTCT into Port Curtis that did not comply with specified limits. Former DERM issued GPC a Penalty Infringement Notice under the EP Act.
January 2012	During the Western Basin Dredging and Disposal Project (WBDDP) a dredging vessel placed a load of dredged material outside of the approved East Banks dredged material placement area (DMPA). The former Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) issued GPC an Infringement Notice under the EPBC Act.
July 2012	Water containing coal fines was released into Port Curtis from RGTCT wharf. The former Department of Environment and Heritage Protection (EHP) issued GPC a Penalty Infringement Notice under the EP Act.
September 2013	Release of dust from Barney Point Coal Terminal did not comply with the Environmental Authority (EA) conditions. Former EHP issued GPC a Penalty Infringement Notice under the EP Act.

GPC has not received any breaches of the *Great Barrier Reef Marine Park Regulations 1983* (Cth), or under superseded versions of the Regulations (e.g. Section 88R(j)).

GPC's activities are subject to many legislative obligations. The EMS is used to ensure compliance with these obligations and to drive continuous improvements which lead to enhanced environmental performance.

1.2.3 Workplace health and safety policy

GPC's Workplace Health and Safety Policy and its supporting standards and procedures provide a framework to protect the health and safety of people entering, or working on, GPC owned and operated sites; and undertaking activities on behalf of GPC.

The objectives of this Policy are:

- To ensure the health, safety and well-being of all workers and visitors entering, or working on, GPC owned and operated sites; and undertaking activities on behalf of GPC
- To ensure, so far as is reasonably practicable, that the health and safety of people is not put at risk from work carried out as part of the conduct of GPC's business activities or undertakings
- To actively promote the Zero Harm philosophy at all levels of GPC
- To establish measurable objectives and targets for monitoring safety performance
- To ensure compliance with all relevant legislative requirements
- To ensure continual improvement in GPC's health and safety performance.

The GPC Policy and supporting standards and procedures document how the objectives are achieved.

1.2.4 Community

GPC has been an active part of the Gladstone community for over 100 years, providing financial and in-kind support to ensure the sustainable future for the Gladstone region.

GPC's links with the local community are valued and significant, as they inform their operations and guide their role as a good corporate citizen in an industrial city. GPC is committed to contributing in a positive way to the communities and region in which GPC operates to foster sustainable development and share the socio-economic benefits from their operations.

GPC takes great pride in providing social infrastructure for the region, such as recreation and parkland facilities at the Gladstone Marina and East Shores – Gladstone Coal Exporters Maritime Precinct Development.

At a time when port facilities are expanding and change is occurring, GPC's aim is to inform the public with frequent, open communication and show the public first-hand the developments in and around the harbour.

1.3 Summary of project description

The Project involves the deepening of the existing Gatcombe and Golding Cutting bypass shipping channels that will be parallel to the main shipping channel, facilitating two-way passage of vessels arriving and departing the Port of Gladstone.

1.3.1 Overview of Project activities

The key components of the Project are summarised below with reference to the relevant section which contains further detail on the proposed activities.

- Construction of the Western Basin Expansion (WBE) bund walls and a barge unloading facility (BUF) prior to dredging commencing (refer Section 2.5)
- Initial dredging works of approximately 0.25 million cubic metres (Mm^3) of seabed material (including dredging tolerance) to establish a 2.3km long access channel to -7 metres (m) lowest astronomical tide (LAT) to allow barges to transport dredged material from the Gatcombe and Golding Cutting shipping channels to the BUF (refer Section 2.4.4)

- Dredging approximately 12.6Mm^3 of seabed material (including dredging tolerance) to duplicate the already existing Gatcombe and Golding Cutting shipping channels. The duplication involves the deepening and widening of the existing Gatcombe and Golding Cutting bypass shipping channels, resulting in two shipping channels of the same depth to allow vessel passing (refer Section 2.4.1). The preferred dredging methodology involves utilising a trailing suction hopper dredger (TSHD) which loads the dredged material from the Gatcombe and Golding Cutting bypass shipping channels into barges (four barges will be working in cycles for the entire dredging operation) which will transport the material to the BUF adjacent to the existing Western Basin (WB) reclamation area to be unloaded using large excavators into trucks for placement within the existing WB and WBE reclamation areas (refer Section 2.4.4).
- Dredged material placement for beneficial reuse within the WB and WBE reclamation areas (refer Section 2.5)
- Provision of supporting services to the Project activities (refer Section 2.6)
- Removal, relocation and installation of new navigational aids (refer Section 2.7)
- Demobilisation of dredging operation (refer Section 2.8)
- Project maintenance phase activities, including:
  - Reclaimed land surface stabilisation and maintenance activities (refer Section 2.11.1)
  - Final land uses on reclaimed land (refer Section 2.11.2)
  - Maritime operation within duplicated channels (refer Section 2.11.3)
  - Maintenance dredging within duplicated channels (refer Section 2.11.4).

It is important to note that the WBE reclamation area has the potential to be utilised as the preferred dredged material placement location for other Port capital dredging projects subject to obtaining the relevant Commonwealth and State Government approvals.

1.3.2 Location of shipping channels to be dredged and material volume

The major dredging component of the Project involves the duplication of the existing Gatcombe and Golding Cutting bypass shipping channels to provide a duplicated channel parallel to the main shipping channel with a sufficient depth and width to allow an improved two-way passage into the Port under all weather and tidal conditions. The location of the existing maintained channel and the area to be dredged as part of the Project are shown in Figure 1.2.

The proposed duplicate channel will be approximately 15km long and dredging is proposed to be undertaken to an ultimate depth of -16.1m LAT, with a channel width (toe to toe) of 200m. This equates to the removal of approximately 12.6Mm^3 of seabed material (including dredging tolerance) from the Gatcombe and Golding Cutting duplicate channels.

In addition to the 12.6Mm^3 of dredging for the Gatcombe and Golding Cutting Channels, initial dredging works of 0.25Mm^3 of seabed material is proposed (inducing dredging tolerance) to establish a 2.3km long access channel to allow barges (four barges will be working in cycles during the entire dredging campaign) to transport dredged material from the Gatcombe and Golding Cutting shipping channels to the BUF to be unloaded using large excavators into trucks for placement within the existing WB and WBE reclamation areas. The total estimated Project dredging volume is 12.85Mm^3.

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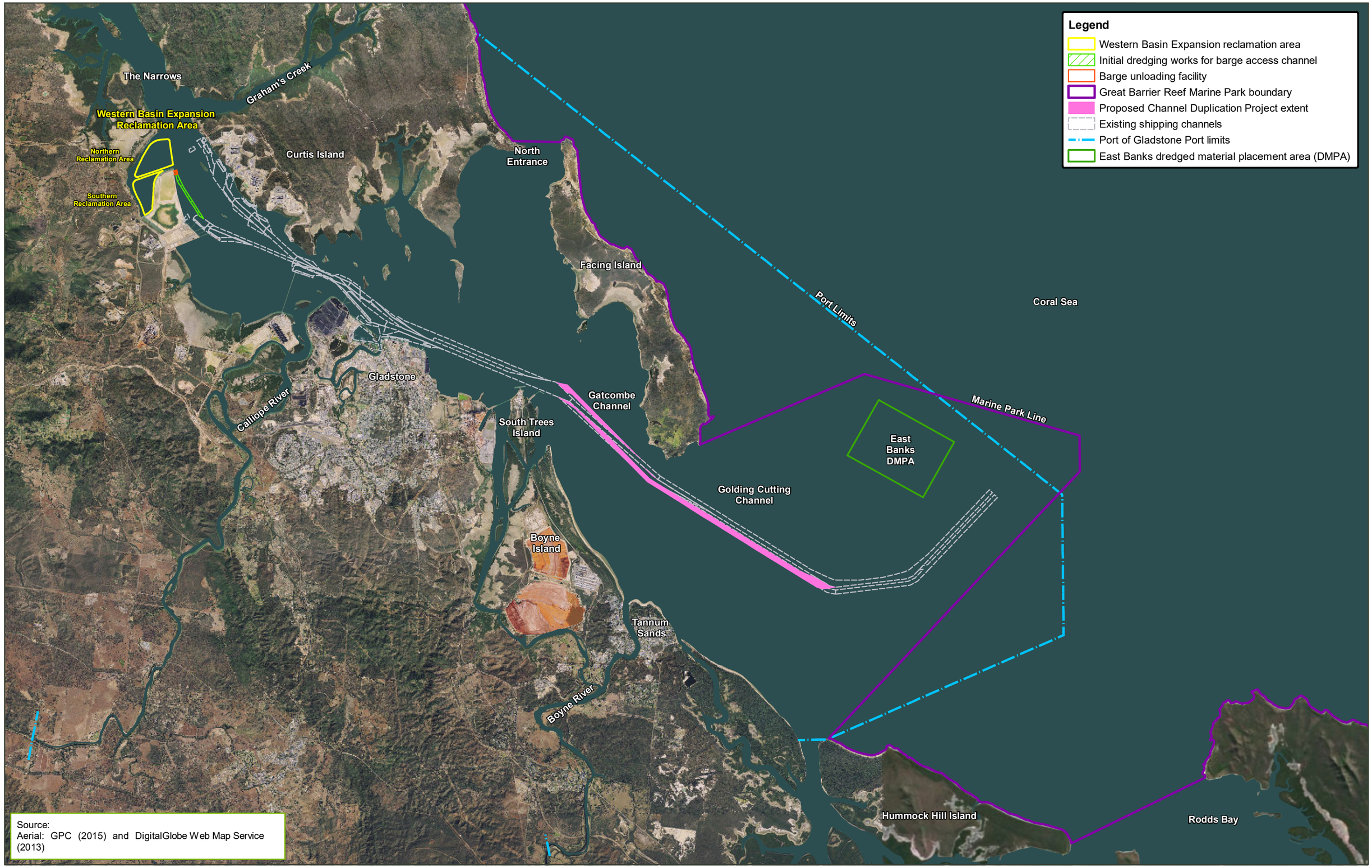

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Gatcombe and Golding Cutting Channel Duplication Project

Figure 1.2: Areas to be dredged, barge unloading facility and Western Basin Expansion reclamation area

Two dredging campaign options are proposed and will be selected upon predicted throughput and associated vessel movements. At this stage it is envisaged that the Project will be undertaken over two stages. However, should the need and/or growth for Port trade justify the need for the final design channel depth, the two stages will be combined into a singular campaign. As the dredging methodology is the same for both options, the initial dredging works will be required prior to either Stage 1 dredging or prior to the singular campaign. The likely volumes and timing of each dredging campaign option are outlined in Table 1.2.

It is important to note that sufficient capacity will be available within the WBE reclamation area (southern and northern areas) when dredged material is mounded to cater for other Port capital dredging campaigns. This was taken into account when identifying the WBE reclamation area as the preferred dredged material placement option for the Project (refer Appendices B1 and B2). However, this EIS does not seek to obtain Government approval for incorporating other Port capital dredged material within the WBE reclamation area.

Table 1.2 Dredging campaign and staging options, location and volumes

Stage	Location	Timeframe – likely start date or later (duration)	Design depth (m LAT)	Volume (Mm^3) [1]
Initial dredging works	Barge access channel	2023 (6.5 weeks)	-7.0	0.25
1	Gatcombe and Golding Cutting Channels	2023 or later (33 weeks)	-13.5	7.25
2	Gatcombe and Golding Cutting Channels	2026 or later (25 weeks)	-16.1	5.35[2]
Singular campaign	Initial dredging works and Gatcombe and Golding Cutting Channels	2023 or later (64.5 weeks)	-16.1	12.60

Table notes:

1 Includes 0.3m (depth) allowance for average dredging tolerance
2 The Stage 2 dredged material volume assumes that the barge access channel is maintained at the Project design depth as part of the Port-wide maintenance dredging

There is potential for dredging to commence after 2023 subject to actual and predicted Port throughput and associated vessel movements over the next 5 to 10 years.

1.3.3 Dredging equipment and dredged material placement scenarios

A Dredged Material Placement Options Investigation (DMPOI), Supplementary DMPOI and subsequent reclamation area and dredging methodologies options assessment analysis have been undertaken as part of the EIS. This investigation and analysis process identified the WBE reclamation area as the preferred DMPA to be included in the detailed impact assessment (refer Appendices B1 and B2 and Section 1.6).

Based on the nature and volume of the material to be dredged, availability and limitations of dredging equipment, and location of the WB and WBE reclamation areas, the Project dredging methodology adopted for the EIS includes:

- A TSHD (e.g. Brisbane) and a cutter suction dredger (CSD) dredging a barge access channel from the existing Port shipping channels to a BUF. The dredged material from the barge access channel will be placed directly into the existing WB reclamation area by the TSHD and CSD.
- A large sized TSHD (i.e. 20,000m^3) hopper capacity with production in the order of approximately 0.2Mm^3 per week) dredging the Gatcombe and Golding Cutting channel duplication areas

- The dredged material from the TSHD will be placed into a series of large barges (i.e. four barges with a capacity of approximately 7,000m^3 to 10,000 m^3) which will transport the material to the BUF, adjacent to the existing WB reclamation area, to be unloaded by large excavators into trucks for placement within the existing WB and WBE reclamation areas. The dredged material placed within the reclamation area will be managed for dewatering purposes with licenced discharge of excess water into Port Curtis.

1.3.4 Navigational aids

The key infrastructure associated with the Project is the removal of two existing navigational aids, the relocation of five navigational aids and the installation of an additional five new navigational aids. Maritime Safety Queensland (MSQ) requires navigational aids to be located in the Gatcombe and Golding Cutting Channels to ensure safe boating and passage for commercial vessels. The proposed location and configuration of the navigational aids required for the Project are shown in Figure 1.3.

1.3.5 Final land use of reclaimed land

Following the completion of the filling operations and a period of several years to allow dewatering and consolidation of the dredged material within the WB and WBE reclamation areas, GPC will undertake surface stabilisation works where practical for the portion of the reclamation areas that have achieved the final Project surface level. The final land uses for the WBE reclamation area post Project dredging (Stages 1 and 2) will be stormwater ponds and potential Port development area with three to four wharves attached to the northern area (refer Section 2.11.2).

The eastern side of the barge dock wall within the BUF will form the wharf line for a future shipping berth for the WB port land when it is no longer required for unloading dredged material from Port dredging campaigns.

1.3.6 Maintenance dredging

Maintenance dredging associated with the Project will be undertaken as part of the Port-wide maintenance dredging program and in accordance with the Queensland Government's 'Maintenance Dredging Strategy for Great Barrier Reef World Heritage Area Ports'. Whilst the Project will result in potential increase to existing maintenance dredging requirements within the Port, this increase is not considered to be significant.

1.4 Project rationale and justification

This section outlines the Project need and justification for the capital dredging associated with the duplication of the Gatcombe and Golding Cutting shipping channels, and specifically includes:

- Existing and predicted estimated future growth of Port tonnage throughput and vessel numbers
- Global and Queensland trend towards increasing the size of bulk carriers and their numbers
- Existing Port of Gladstone operational constraints
- Future growth for Port of Gladstone and associated industries within the region.

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Turtle Island
Quoin Island
Facing Island
Gladstone
Gatcombe Channel
South Trees Inlet
Boyne Island
Golding Cutting Channel
Tannum Sands
East Banks DMPA

Legend

- Existing navigational aids
- Proposed additional navigational aids
- Proposed removal of navigational aids
- Reposition of existing navigational aids
- Great Barrier Reef Marine Park boundary
- Proposed Channel Duplication Project extent
- Existing shipping channels
- Port of Gladstone Port limits
- East Banks dredged material placement area (DMPA)

Source:
Aerial: GPC (2015) and DigitalGlobe Web Map Service (2013)

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Gatcombe and Golding Cutting Channel Duplication Project

Figure 1.3: Proposed changes to navigational aids

1.4.1 Existing, committed and predicted estimated future growth of tonnage throughput and vessel numbers

The Port of Gladstone is Queensland's largest multi-commodity port, with RGTCT being the world's fourth largest coal export terminal (by throughput) in the world in the 2017/18 reporting period. Cumulatively, the Port handles the export of mineral resources from Central Queensland and products from local industries, and the import of raw materials from national and international sources (GPC 2014).

The Port of Gladstone is also one of the busiest ports in Australia, important to the local, state and national economies. Major exports from the Port include coal, alumina, cement, petroleum, aluminium and agricultural resources.

Table 1.3 summarises the Port of Gladstone throughput (in million tonnes (Mt)), total vessel numbers and a breakdown of vessel sizes that have occurred over the previous eight financial years.

Since 2010/11, there has been a consistent increase in throughput and vessel numbers utilising the Port of Gladstone. Generally there have been increases in coal export from the Port over the last eight years, and also a general corresponding increase in the number of Capesize vessels within the Port of Gladstone.

Table 1.3 Port of Gladstone existing throughput and number of commercial vessel movements

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total Port throughput (Mt)	76.40	83.79	85.29	97.67	99.29	115.98	120.29	119.39
Coal exports (Mt)	53.19	59.75	57.31	69.62	68.56	72.17	68.95	67.16
Breakdown of vessel size numbers								
Capesize vessels	202	248	281	308	313	328	286	294
Panamax vessels	528	516	522	619	600	673	681	667
Handymax vessels	263	290	266	250	252	237	207	205
LNG tanker	0	0	0	0	26	187	295	309
Handysize vessels	323	369	461	466	350	329	319	310
Total vessel numbers	**1,316**	**1,423**	**1,530**	**1,643**	**1,541**	**1,754**	**1,788**	**1,785**

Source: GPC internal database records

Table 1.4 and Table 1.5 provides the Port of Gladstone predicted estimated future low growth and moderate/high growth of total throughput, respectively. These tables also provide the predicted coal exports and total vessel numbers, including a breakdown of vessel sizes. These estimates include a Port throughput base of 120 million tonnes per annum (Mtpa) which is defined as the average Port throughput that will be consistently achieved in future financial years from the existing operational industries, and potential expansions and new industries within the region.

The predicted estimated future growth throughput numbers for the Port of Gladstone have been based on:

- Government approved throughput capacity for existing wharf centres (e.g. EAs under the EP Act)
- New projects and expansion projects that have been approved by Government (e.g. projects with an EIS approved and proponent funding commitment) and are expected to be operational within the relevant timeframes
- Predicted industrial and resource growth within the Gladstone region and resource catchment, including potential developments that may utilise the future Port wharves identified within GPC's *50 Year Strategic Plan* (Strategic Plan).

There is likely to be a continued strong growth in bulk carrier vessel movements within the Port of Gladstone (refer Sections 1.4.4 and 1.4.4.3). Given the high portion of existing and future coal and LNG throughput for the Port, there is likely to be a corresponding increase in the number of Capesize vessels and LNG tanker utilising the Port.

There is also the potential future requirement for the Port of Gladstone to accommodate the arrival of deep drafted vessels with import cargo on high tides.

Table 1.4 Port of Gladstone predicted estimated future low growth in throughput and number of vessel movements

	2018/19	2019/20	2025/26	2030/31
Port throughput base (Mt)	120	120	120	120
Port throughput predicted estimated growth (Mt)	8	12	16	16
Total Port throughput (Mt)	**128**	**132**	**136**	**136**
Coal exports (Mt)	74	76	78	76
Capesize vessels	301	308	317	309
Panamax vessels	717	736	756	746
Handymax vessels	218	224	230	227
LNG tanker	311	319	328	328
Handysize vessels	336	344	354	349
Total vessel numbers	**1,883**	**1,931**	**1,985**	**1,959**

Source: GPC internal database records

Table 1.5 Port of Gladstone predicted estimated future moderate/high growth in throughput and number of vessel movements

	2018/19	2019/20	2025/26	2030/31
Port throughput base (Mt)	120	120	120	120
Port throughput predicted estimated growth (Mt)	8	12	32	52
Total Port throughput (Mt)	**128**	**132**	**152**	**172**
Coal exports (Mt)	74	76	86	96
Capesize vessels	309	320	352	385
Panamax vessels	717	736	756	780
Handymax vessels	218	224	230	227
LNG tanker	311	319	328	328
Handysize vessels	336	344	354	349
Total vessel numbers	**1,891**	**1,943**	**2,020**	**2,069**

Source: GPC internal database records

The key throughput assumptions used to predict the estimates of future growth within the Port of Gladstone are summarised in Table 1.6.

Table 1.6 **Key assumptions for predicted estimated Port of Gladstone throughput and number of vessel movements (low and moderate/high growth)**

Year	Key assumptions		
	Port centre	Predicted estimated throughput change for low growth (Mtpa)	Predicted estimated throughput change for moderate/high growth (Mtpa)
2018/19	WICT and RGTCT	+3	+3
	Other Port centres	+1	+1
2019/20	WICT and RGTCT	+2	+2
	Other Port centres	+2	+2
2025/26	WICT and RGTCT	+2	+10
	Other Port centres	+2	+10
2030/31	WICT and RGTCT	-2	+10
	Other Port centres	+2	+10

Figure 1.4 shows the actual and predicted estimated future low and moderate/high growth in total Port throughput and the number of Capesize vessels between 2010/11 and 2030/2031 financial years.

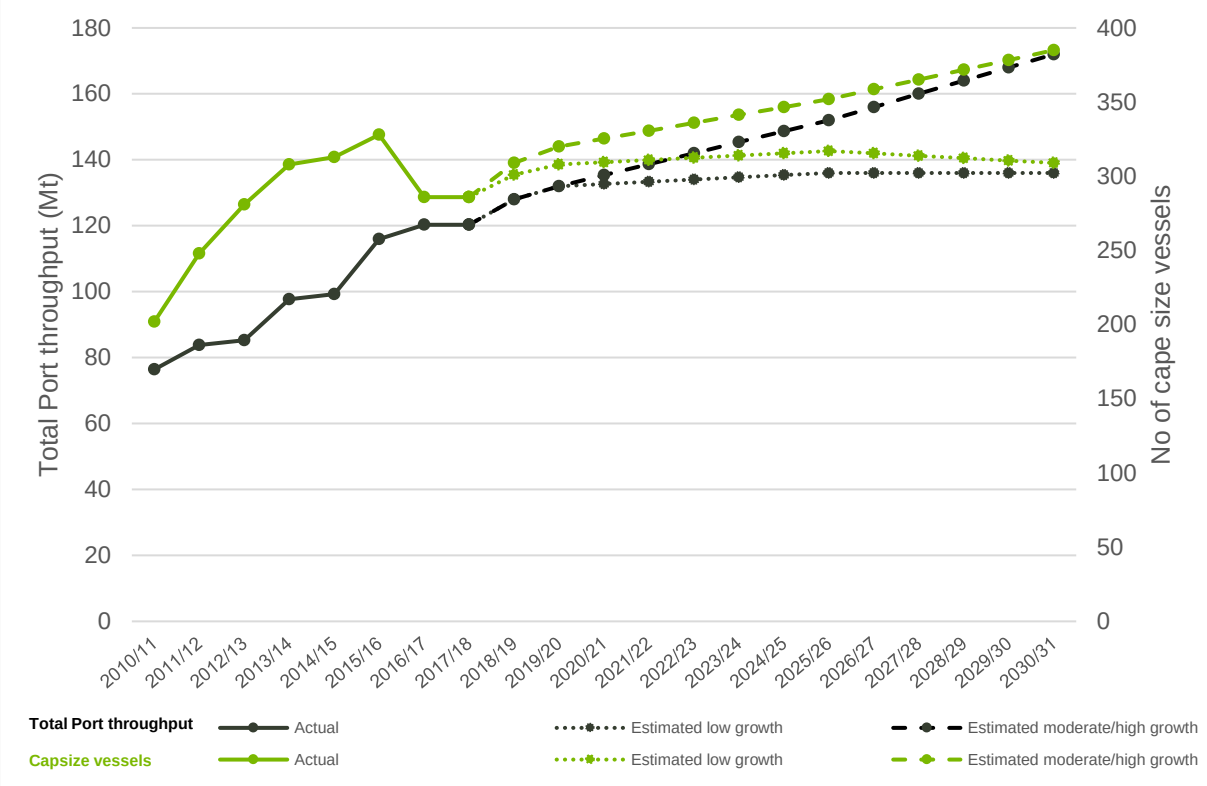

Figure 1.4 **Actual and predicted estimated future low and moderate/high growth in Port throughput and number of Capesize vessels**

1.4.2 Increasing size of bulk carriers

Cargo ships or vessels come in different types and sizes to meet the various demands of marine cargo transportation. Cargo ships are categorised partly by capacity and partly by dimensions, which often relate to the different canals and canal locks they are frequently travelling through, for example Capesize ships are too large to transit the Suez Canal or Panama Canal and as a result have to pass either via the Cape of Good Hope or Cape Horn to traverse between oceans.

Increased demand for maritime transport around the world has given rise to a need for better economies of scale through the use of larger vessel sizes.

In order to deal with these increasing trading volumes, bulk vessels are also increasing in size. Table 1.7 illustrates the increasing size of bulk carriers which are normally stated as the maximum size possible dead weight tonnage (dwt) corresponding to the fully loaded dead weight. Table 1.7 also presents the increasing draft requirements of larger vessels.

Australia's international trading competitiveness, particularly in the commodity markets against countries such as Brazil, South Africa and Indonesia, depends on keeping pace with these global trends.

Table 1.7 Size of bulk carriers and associated draft requirements

Vessel class	Size ranges (dwt)	Draft requirements
Very large bulk carrier	Greater than 200,000	18m to 25m
Capesize	Greater than 100,000	13m to 18m
Panamax	60,000 to 99,999	13m to 15m
Handymax	40,000 to 59,999	Low to 13.5m
LNG tanker	Up to 120,000	Low to 12.0m
Handysize	Up to 39,999	7.5m to 10.5m

Source: Clarksons Research (2018)

The global increase in the size of vessels means that for a port to be competitive in the international market it must be able to provide deeper access channels allowing improved economic efficiencies, whilst also ensuring vessel safety, and infrastructure protection and managing potential environmental impacts from port operations.

The trend in increasing bulk carrier size continued over a six year period (i.e. 2009 to 2015) for vessels importing and exporting from Queensland, with bulk carrier industries constructing larger vessels that allow for the transport of a higher volume of cargo per vessel. This trend has been experienced in the Port of Gladstone (refer Table 1.3). The average growth in vessel size through to 2025 included in the North Queensland Ship Traffic Growth Study (Braemar Seascope 2013) provides an analysis of the current world fleet, trends in vessel sizes, new builds, and ships likely to be scraped (refer Table 1.8). The increased use of Capesize vessels has benefits of economies of scale (i.e. the cost advantage from transporting larger volumes of product).

Table 1.8 Vessel size growth trends

Vessel size	2011	2012	2013	2014	2015	2020	2025
Capesize	181,706	185,070	186,752	187,344	187,683	189,701	192,201
Panamax	76,880	77,894	77,981	77,856	77,925	78,000	78,000
Handymax and supramax	52,247	52,298	52,579	52,827	52,966	53,816	54,816
Handysize	27,961	28,294	28,775	29,054	29,200	30,025	31,025

Source: North-East Shipping Management Plan (AMSA 2014)

While over the last five years the growth in vessel numbers in the Capesize class has primarily been driven by iron ore trades, the construction of these vessels and the associated network of countries with port infrastructure designed to accommodate Capesize vessels (e.g. China, India) has resulted in a corresponding trend to increase the number of Capesize vessels exporting coal from Australian ports. In particular, this includes the coal export terminals at Gladstone, Hay Point and Abbot Point.

1.4.3 Existing Port bulk carrier operational constraints

The Port of Gladstone is predominately a bulk export port with entry and exit from the Port via a series of single width harbour channels, and shallower bypass channels for Gatcombe, Golding Cutting, Clinton and Auckland Channels. The existing maintained channel and passing channel depths are provided in Table 1.9.

Table 1.9 Port of Gladstone main channel and bypass channel declared depths

Port channel	Maintained channel depth (m LAT)	Existing passing channel depth (m LAT)
Gatcombe	-16.1	-12.5
Golding Cutting	-16.1	-7.3
Clinton	-16.0	-13.0
Auckland	-15.8	-6.8

The under keel clearance requirements for different sized vessels within the Port of Gladstone are outlined in Table 1.10. The under keel clearance requirement for a vessel is the safe operating depth of water below the keel of the vessel (i.e. distance from keel to seabed).

Table 1.10 Port of Gladstone under keel clearances

Vessel size	Under keel clearance		
	At berth	Inner harbour	Outer channel
Up to 85,000 dwt	0.5m	1.7m	1.5m
85,000 dwt to 200,000 dwt	0.5m	1.2m	1.8m
Greater than 200,000 dwt	0.5m	1.2m	2.0m

Source: Port of Gladstone Information Handbook 2011 (GPC 2011)

The existing depths of the Gatcombe and Golding Cutting bypass channels and the under keel clearance requirements of the Port results in adequate natural water depths to safely allow vessel passing for only light draft handimax or smaller vessels. Tidal assistance (i.e. utilising the higher water level tidal window) for deep draft vessels (e.g. Capesize) is required for safe movement and passing of vessels within the harbour.

The Port vessel capacity is also limited by the vessel follow-on times (i.e. the time from one ship passing a point in a shipping channel to the following ship passing the same point) required to ensure safe operation within the harbour. Current vessel follow-on times within the Port are:

- Capesize vessels follow-on approximately one hour on preceding vessels, which allows anchorage in South Trees Anchorages if transit is to be aborted
- Panamax and other vessels follow-on approximately 30 minutes on preceding vessels, which allows vessels to abort transit in natural deep water in the Gatcombe Channel area.

Inbound and outbound vessel movements at the Port of Gladstone can only be scheduled if the following requirements are satisfied:

- Sufficient under keel clearance in each channel
- Minimum headway between successive vessels in the same direction
- Separation between vessels in opposing directions passing entry/exit points to single-width channels (with no bypass)
- Appropriate state of the tide for departing from or arriving at a berth (some Port wharf centres require flood or slack water for only arrivals or departures)
- Berth, tug and pilot availability.

Complex interactions between shipping movements in the Port, whilst adhering to the above constraints and the vessel size profile for the import and export trades, limits the total number of annual vessel movements in the Port which in turn places limitations on the vessel capacity of the Port.

Given the above limitations, outbound Capesize vessels with a draft of 17m are provided with an average departure window of approximately three hours either side of high tide and departures on almost all high tides throughout the year. An outbound vessel with a draft of 18m has an average departure window of approximately one and half hours both sides of the high tide and can only depart on some high tides.

Therefore the existing Port of Gladstone infrastructure (in particular shallow bypass channels) and the constraints outlined above provide a limit to the number of Capesize tidal slots per year.

1.4.4 Future growth for Port of Gladstone

1.4.4.1 National Ports Strategy 2011

In 2011, the National Ports Strategy was published by Infrastructure Australia and endorsed by the Council of Australian Government. A key aspect of the National Ports Strategy is to achieve national collaboration between all levels of government and industry in planning for the future development of port and freight infrastructure.

The purpose of the National Ports Strategy is to *drive the development of efficient, sustainable ports and related freight logistics that together support the needs of a growing Australian community and economy, and the quality of life aspirations of the Australian people* (Infrastructure Australia 2012).

Four specific priorities have been identified as being central to a National Ports Strategy, including:

1. Planning for relevant ports
2. Ensuring plans can be executed
3. Improving landside efficiency, reliability, security and safety of container ports
4. Promoting clarity, transparency and accountability.

Priority port master planning (refer Section 1.4.4.2) is consistent with the National Ports Strategy which was endorsed by the Council of Australian Governments in 2012 as part of collaborative approach to the future development and planning of Australia's port and freight infrastructure.

The Project is consistent with the objectives of the National Ports Strategy to facilitate trade growth and improve the efficiency of port-related freight movement across infrastructure networks.

1.4.4.2 Priority port master planning

Background

The Queensland Government is delivering master planning for the priority ports in accordance with the *Sustainable Ports Development Act 2015* (Ports Act) and to meet its commitment under the Reef 2050 Long-Term Sustainability Plan (Reef 2050). Priority port master planning has a timeframe up to 2050 to align with Reef 2050.

The priority Port of Gladstone operates in the Great Barrier Reef World Heritage Area (GBRWHA) and is a declared priority port under the Ports Act. Through master planning the Queensland Government will establish a long term vision for the future development of priority ports consistent with the principles of ecologically sustainable development (ESD). Long term planning for priority ports will provide a strategic and coordinated approach to managing economic and environmental values, including natural, cultural and social values in the GBRWHA.

The priority Port of Gladstone is a major bulk-commodity port critical to the State's economy. It supports a number of associated industry sectors, including resources, energy and agriculture, and its growth will enable expansion of the state's trade and investment opportunities. The Queensland Government recognises the port as an important economic hub that contributes significantly to regional employment opportunities. Through master planning, the government has demonstrated a commitment to support the Port's ongoing sustainable development and in turn, support job growth in the entire region.

Sustainable Ports Development Act 2015

In 2015, the Ports Act commenced, providing a legislative framework for sustainable port development in Queensland. The purpose of the Ports Act is:

> *to provide for the protection of the GBRWHA through managing port-related development in and adjacent to the area.*

The purpose of the Ports Act is achieved by:

(a) Prohibiting particular future development in the GBRWHA; and

(b) Providing for the development of master plans that establish a long-term vision for the future development of priority ports consistent with the principles of ecologically sustainable development; and

(c) Implementing master plans through port overlays that regulate development in and surrounding priority ports.

The Ports Act prescribes a strategic planning process for priority ports which seeks to achieve a balance between managing impacts from development on environmental values and the sustainable development of the State's priority ports which are critical elements of Queensland's economic development.

Section 1.9.2.6 provides further details on the Ports Act.

Master plan for the priority Port of Gladstone 2018

The Master plan for the priority Port of Gladstone 2018 is the first master plan prepared under the Ports Act and considers issues beyond SPL, including marine and land base impacts, port and supply chain infrastructure capacity and connectivity, and economic, community and environmental interests.

The strategic vision for the future of the master planned area relates to a long term planning horizon to 2050 and states:

> *The master planned area for the priority Port of Gladstone will enable Queensland's largest multi-commodity port and associated industrial area to develop in a sustainable manner. Development will provide for management of the local expression of the Outstanding Universal Value (OUV) of the GBRWHA, and any potential impacts on environmental values, community wellbeing and cultural heritage within and surrounding the master planned area.*

The master plan seeks to achieve the strategic vision through objectives which clarify how the strategic vision will be achieved and their alignment with state interests. The objectives to achieve the strategic vision and their alignment with state interests are summarised in Table 1.11.

Table 1.11 Master plan for the priority Port of Gladstone 2018 – objectives to achieve the strategic vision

State interest	Objectives
Management of port-related development	**Sustainable growth** – enable the ongoing sustainable growth of trade through the priority Port of Gladstone
	Efficient land use – continue to use and develop land and marine infrastructure efficiently where practicable
	Efficient operations – maintaining and enhancing the efficient and effective operation of the Port
	Locational integration – continuous optimisation of the nature and location of port operations to minimise off-site impacts and to improve integration with surrounding land uses
	Safe navigation – maintain and enhance the safe operation of the port's navigable waterways and shipping
	Operational security – ensure future land uses and development within the port and in surrounding areas do not compromise or impact upon current or future port operation
Economic	**Economic prosperity** – facilitate the economic growth of the Gladstone region and Queensland
Environment	**Protecting the GBRWHA** – avoid, mitigate and/or offset impacts from development on the OUV of the GBRWHA
	Environmental values – recognise and avoid, mitigate and/or offset impacts from development on environmental values, including the natural, social and cultural environments within and surrounding the master planned area
Infrastructure	**Supply chain efficiency** – protect land required for supply chain infrastructure to maximise the effective operation of the port and associated industrial areas, as well as the transport network servicing the port
	Industrial opportunities – promote opportunities for the growth of logistics, freight and complementary land uses in strategic locations
	Efficient logistics – ensure port-related development is located to support efficient operation of supply chain infrastructure and improve road freight transport efficiency by catering for high productivity vehicles on road freight routes leading to the port
Community	**Community wellbeing** – support wellbeing for the community in the Gladstone region
	Safety and security – provide for the safety and security of people and property
	Community access – provide for community use of, and access to, public space

The master plan identifies supply chain efficiency, locational integration (port optimisation) and capital and maintenance dredging as critical to supporting the ongoing operation and the growth of the Port.

Master planning for the priority Port of Gladstone supports capital dredging as an essential part of port development and has identified areas which may have the potential for the beneficial reuse of dredged material to the year 2050, subject to compliance with Commonwealth and State legislation. The Project is consistent with the master planning process facilitating growth within one of Queensland's priority ports and improving vessel movement efficiency and safety within the Port of Gladstone.

The Port of Gladstone is a declared priority port under the Ports Act and in late 2018, the Master plan for the priority Port of Gladstone 2018 was released by the Queensland Government.

1.4.4.3 GPC Strategic Plan

GPC as the governing authority for the Port of Gladstone has released the Strategic Plan to support their mission to responsibly manage, develop and operate Port facilities, and services for the sustainable economic growth and social prosperity of the region, Queensland and Australia (GPC 2012).

The key objective of the GPC Strategic Plan is to support the development of the Port of Gladstone in a systematic and sustainable manner so as to facilitate the continued growth of trade.

The Strategic Plan recognises the Port of Gladstone as a one of Australia's finest natural deep water harbours, and identifies the key centres and existing infrastructure within the Port, together with planned development and expansions, and key economic and environmental considerations. The Strategic Plan is not a statutory instrument, but rather a document which sets out GPC's vision for the Port of Gladstone for the next 50 years.

Table 1.12 summaries the existing, EIS approved and potential future wharves within the Port of Gladstone contained in the Strategic Plan.

Table 1.12 Port of Gladstone existing and potential future wharves

Port centres	Existing wharves in operation in 2018	Expansion potential for additional wharves[1]
Existing		
Boyne Wharf	1	0
South Trees	2	0
Barney Point Wharf	1	0
Auckland Point Wharves	4	3
RGTCT	4	1
WICT	1	3 (coal) 2 (other bulk cargo)
Fisherman's Landing (including Western Basin reclamation area)	4	7
Curtis Island (LNG Precinct)	3	1 (APLNG) 1 (QCLNG) 1 (Santos GLNG)
Future		
Hamilton Point (Curtis Island)		4
Tide Island		2
Total	**20**	**25**

Table notes:

Queensland Curtis LNG (QCLNG), Gladstone LNG (GLNG) and Australia Pacific LNG (APLNG)

1 Potential additional wharves based on GPC's Strategic Plan and likely future projects

The GPC Strategic Plan states that the Port of Gladstone will ultimately develop into a strategic port centre handling 250 to 300Mt of cargo each year. The Strategic Plan also recognises the need to duplicate the Gatcombe and Golding Cutting Channels to facilitate the future increase in industrial demand within Gladstone and the region, and mitigate vessel safety and operational risk caused by vessel movements within the channels. Depending on future industry and Port demand, other Port of Gladstone channels may require duplication.

In addition to the Strategic Plan, GPC's Statement of Corporate Intent outlines the strategies that will be implemented in a given year to support the Queensland Government's objective of growing a four pillar economy in Queensland through agriculture, tourism, resources and construction. The Port of Gladstone directly supports the resources sector and is a critical node in the supply chain that supports the national and state economy (Department of State Development, Infrastructure and Planning (DSDIP) 2014).

The Project is consistent with the intent of the Strategic Plan given that the plan includes key references to duplication of the Gatcombe and Golding Cutting Channels. Whilst the Strategic Plan does not specify dredging volumes or dredged material placement options to support the primary dredging activity, the Project area to be dredged is considered to be consistent with the indicative area to be dredged in the Strategic Plan.

1.4.4.4 Western Basin Master Plan

The Port of Gladstone Western Basin Master Plan provides the strategic planning framework against which the Coordinator-General and other approval agencies will consider future development in the Port of Gladstone Western Basin. The master plan identifies current and planned land and marine uses, infrastructure development (including pipeline corridors, transport networks and potential bridge access to Curtis Island), as well as port activities, common user channels, dredging and disposal options until 2039 (DSD 2017). The master plan provides industry and community with certainty that the Western Basin will be developed in an efficient manner that meets the future development requirements.

The purpose of the master plan is:

- To provide the government with a broad assessment of current and potential industrial and port infrastructure development opportunities in the Western Basin
- To provide a strategic land and port development framework (2009 to 2039) which can be used by the Coordinator-General when making decisions related to current and future projects in the Western Basin, and to ensure the coordinated and efficient development of this area
- To assist the GPC and the Coordinator-General to develop complementary planning strategies for the Port of Gladstone and the Gladstone State Development Area (GSDA)
- To assess the capacity triggers necessitating new infrastructure within the Western Basin and the means to deliver those activities
- To promote the development of common-user infrastructure where there is mutual benefit and/or where a net reduction in impacts on the environment can be obtained.

The Project is consistent with the purpose of the master plan. The master plan includes channel and reclamation works to occur within this area.

1.4.4.5 Gladstone State Development Area

The Port is essential to Gladstone's economic viability, and has been a key driving force in the development and growth of the region's key industrial land use areas. In particular, the Port's deep water access was identified as a major driving factor in the site selection of the current GSDA. Established in 1993 under the SDPWO Act, this area has grown from its initial land area of 6,800ha at Aldoga, north west of Gladstone, to its current land area of 29,000ha. Section 3.3.4.5 provides additional information on the GSDA and proximity to existing and future Port wharf centres.

In 2008, the GSDA was expanded to include the south west corner of Curtis Island, to accommodate the LNG processing facilities. Along with expansion in coal exports from the Port, the LNG industry of Central Queensland and Gladstone is a key driver in the need to improve the operational efficiency and safety of vessel movements within the Port.

1.4.4.6 Regional resource and industry growth

The Queensland Government's Governing for Growth – Economic Strategy and Action Plan sets out the government's direction and priorities to steer economic growth in Queensland. The strategy outlines the government's commitment to growing a four pillar economy involving agriculture, resources, construction and tourism. These pillars are the existing and future foundations of the Queensland economy and the mainstay of regional economies such as Gladstone (Queensland Government 2014).

National and state government policies, strategy and action plans demonstrate a clear expectation that the Port of Gladstone be further developed to allow an increase in throughput, in particular to accommodate the future expansion in coal, LNG exports and other industries.

The Port of Gladstone has a potential resource opportunity catchment that includes the following areas:

- Central and southern Bowen Basin (includes thermal and coking coal reserves (over 30 billion tonnes) (Mutton 2003)
- Surat Basin (includes strong and traditional agricultural production, thermal coal reserves (6 billion tonnes) and coal seam gas reserves (18,249 petajoules) (Queensland Government 2011)
- Wide Bay Burnett region, including the North Burnett Minerals Province opportunities (e.g. mineral production in particular coal resources in the Tiaro, Monto and north of Bundaberg areas). Other potential resources identified within this region include gold, silver, kaolin, limestone, ilmenite, apatite, scandium, feldspar, siltstone, silica sand, black granite and clay. Industry is also investigating coal seam gas in this region (Wide Bay Burnett Regional Organisation of Councils 2014).

Figure 1.5 illustrates the location of the above resource opportunity areas.

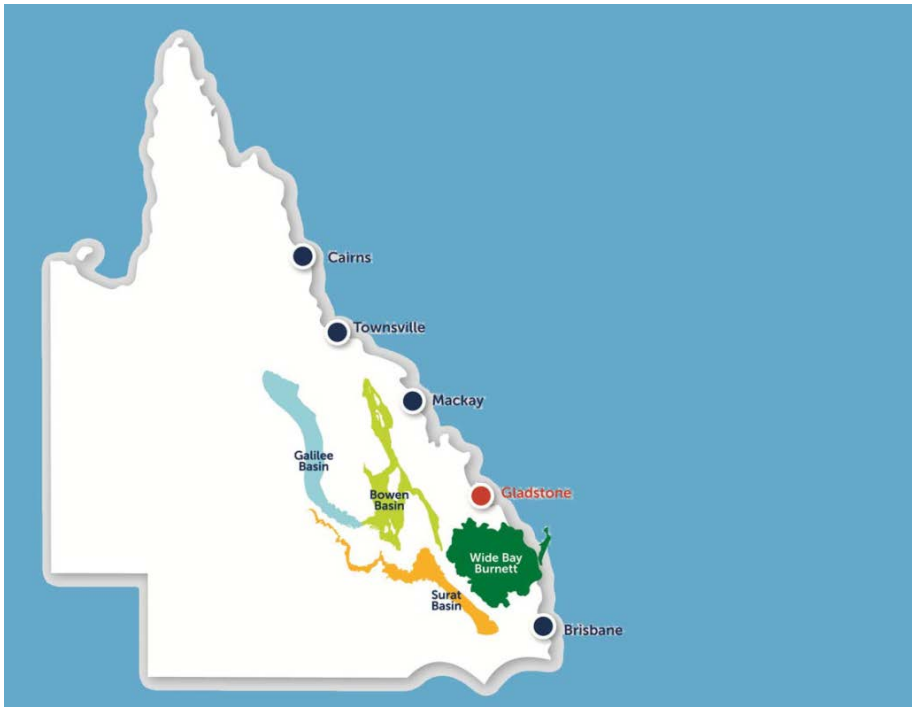

Figure 1.5 Resource opportunity areas for Port of Gladstone

Source: Regional Development Australia Wide Bay Burnett (2011)

While the timing, scale and volume of Queensland's resource growth in the short term is likely to be modest, the national and state government policies, strategies and action plans are being implemented to maximise Queensland's resource industry growth in the future.

Based on the current and future predicted Port of Gladstone throughput and bulk carrier vessel movements, the Gatcombe and Golding Cutting Channel Duplication dredging is likely to be required in 2023 (or later) to improve the operational and economical efficiencies of the Port of Gladstone, and mitigate an existing incident risk for vessel movement within the harbour.

It is also important to note the potential long lead times required for obtaining the post-EIS dredging and dredged material placement (e.g. new or expanded reclamation area) approvals, undertaking detailed design, procurement of dredging and civil works contractors, and implementing pre-dredging commitments and approval conditions. These long lead time items result in a Project program requirement to receive EIS approval in late 2019.

1.5 Relationship to other projects

There are a range of major projects that are proposed, approved and being considered for the Gladstone region that have the potential to be relevant to the Project. Table 1.13 provides the status of current known projects in the Gladstone region with a significant relationship to the Project.

Table 1.13 Other major projects in the Gladstone region

Project name and Proponent	Locality	Description	Development stage	Relationship to Channel Duplication Project
Aldoga Livestock Handling and Processing Facility Asia Pacific Agri-Corp (Projects) Pty Ltd	Aldoga within the GSDA at Euroa	Construction and operation of a livestock handling and processing facility, including an abattoir; beef and hide processing plants; packing, freezing and storage rooms; ancillary feedlot, stockyard and service areas; and administrative buildings	EPBC Act Referral decision notice that proposed action is not a controlled action received in April 2017. Coordinator-General approval issued in September 2018 Operations planned to commence in 2021	The facility may utilise Port of Gladstone to export products. The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port.
Australia Pacific LNG Project Australia Pacific LNG	Surat Basin and Curtis Island	Development of coal seam gas (CSG) resources in the Surat Basin, pipeline and LNG facility on Curtis Island. The LNG facility will consist of up to four LNG trains producing up to 18Mtpa of LNG, together with a 450km underground pipeline (Surat Basin to Curtis Island).	Two of four trains operational from 2015 First LNG shipment occurred in January 2016	The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. Additional LNG vessels associated with future LNG trains will also benefit from the Project.
Gladstone Liquefied Natural Gas Project Santos GLNG	Gladstone and Surat Basin, Curtis Island	Development of coal seam gas resources around Roma, Emerald, Injune and Taroom, 435km gas transmission pipeline and LNG facility on Curtis Island with a capacity of up to 10Mtpa utilising three trains.	First of three trains operational from 2015 with second from 2016 First LNG shipment occurred in October 2015	The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. Additional LNG vessels associated with future LNG trains will also benefit from the Project.

Project name and Proponent	Locality	Description	Development stage	Relationship to Channel Duplication Project
Queensland Curtis LNG Project Queensland Gas Company Ltd (QGC)	Surat Basin, Curtis Island	Expansion of QGC's existing CSG operations in the Surat Basin together with construction of a 730km network of gas pipelines and LNG facility. LNG facility will consist of up to three trains with a total capacity of up to 12Mtpa	First of three trains operational from 2014 with second from 2015 First LNG shipment occurred in January 2015	The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. Additional LNG vessels associated with future LNG trains will also benefit from the Project.
Queensland Energy Resources (QER) – Gladstone New Fuels Development Project QER Ltd	Landing Road, Yarwun	Development of an oil shale mining and processing operation within a Mining Lease, located on the Stuart Oil Shale Deposit near Yarwun Stage 1 demonstration plant producing 37-40 barrels of synthetic crude oil not operational and under a care and maintenance regime Stage 2 involves development of a small scale commercial facility producing 8,000 barrels per day Stage 2 was determined to be a 'controlled action' for which assessment under the EPBC Act will be required.	Stage 1 under care and maintenance regime Stage 2 design in progress and subject to regulatory approval. EIS yet to be submitted for Stage 2.	The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. If the final output products are exported via vessels the Gladstone New Fuels Development Project will also benefit from the Project.
Western Basin Dredging and Disposal Project GPC	Port of Gladstone	Dredging and disposal of 42.3Mm^3 of material from the Port of Gladstone associated with deepening and widening of existing channels and swing basins, creation of new channels, swing basins and berth pockets, and the reclaiming of land north of Fisherman's Landing	Stages 1A and 1B approved and Stage 1A completed in 2013 Stages 2 to 4 to be phased in accordance with a Long Term Sediment Disposal Plan to be approved by the Commonwealth Minister of the Environment.	WBE reclamation area has the potential to include the WBDDP Stages 1B and 2 to 4 dredged material The WBE reclamation area has been identified as part of this EIS as the preferred reclamation area for other Port capital dredging programs, including the WBDDP Stages 1B and 2 to 4 dredged material

Project name and Proponent	Locality	Description	Development stage	Relationship to Channel Duplication Project
Wiggins Island Coal Terminal Wiggins Island Coal Export Terminal Pty Ltd	Golding Point	Following the achievement of mechanical completion on 30 April 2015, the WICT has commenced ramp up commissioning work for Stage 1 of the new greenfield coal terminal. With a maximum throughput of 27Mtpa, WICT Stage 1 consists of rail receival, overland conveyor, stockyard, offshore jetty and berth wharf. The ultimate WICT Project includes infrastructure to support up to 84Mtpa throughput capacity.	Stage 1 construction complete and operational	The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. Additional vessels associated with future stages of the WICT will also benefit from the Project.
Clinton Vessel Interaction Project GPC	Port of Gladstone	Widening of the Clinton Channel by approximately 100m to alleviate the interaction forces between vessels passing vessels berthed at RGTCT Approximately 800,000 cubic metres (m^3) is required to be dredged, with placement in the existing Western Basin reclamation area	EPBC Act Referral was lodged in July 2017 and decision that the project is to be assessed by preliminary documentation. EPBC Act preliminary documentation was lodged with DoEE in September/October 2018 GPC has also lodged applications for approval to the State Government Project works will not commence until Commonwealth and State Government approvals are received	No relationship to the Project However, the Clinton Vessel Interaction Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port and within the vicinity of the Clinton Channel within the Port

Other Gladstone major projects that were considered in the EIS technical studies, but which are not considered to have a significant relationship with the Project include:

- Aldoga Renewable Energy Project
- Arrow Bowen Pipeline
- Gladstone Energy and Ammonia Project
- Gladstone-Fitzroy Water Pipeline
- Gladstone Offline Water Storage Facility
- Moura Link-Aldoga Rail Yard Project
- Pacificus Tourism Project (formerly Hummock Hill Island Development)
- Rodd's Bay Solar Farm
- Toolooa Priority Development Area
- Yarwun Alumina Refinery – Residue Management Area Expansion.

Gladstone major projects that were considered in the EIS technical studies and are assumed to have been retracted are:

- Arrow LNG Plant
- Gladstone Steel Plant.

It is important to note that the size of future import and export vessels utilising the Port of Gladstone is not fully known and is subject to global vessel trends. The Project will improve the existing Port commercial vessel movement efficiency and improve the safe passage of vessels within the Port. The need for the Project is detailed in Section 1.4.

1.5.1 Summary of dredging need and justification

In summary, the Gatcombe and Golding Cutting Channel Duplication dredging is required to improve Port of Gladstone operational and economical efficiencies, and reduce an existing and potentially increasing vessel incident risk as the Port throughput and associated vessel numbers increase, and the portion of predicted Capesize vessels (import and export) also increases in the future.

Improving the tidal constraints for bulk carrier vessel movements within the Gatcombe and Golding Cutting Channels will also allow improved flexibility for vessel passing within the Port. The improved Port operational efficiencies will also enable substantial economic benefits for the region to be realised by enabling future resource and industry expansion within the industry and resource catchment for the Port of Gladstone.

The Project is consistent with the National Ports Strategy and the Master plan for the priority Port of Gladstone 2018 as it addresses the primary objective of improving the efficiency and safety of port vessel movements.

The consequence of not proceeding with the Project (i.e. without the duplication of the Gatcombe and Golding Cutting Channels) is that there will continue to be existing vessel incident risk which has a direct impact on the safety of commercial vessel movements within the Port of Gladstone.

The future growth in Port vessel movements, including Capesize (import and export) vessels, will further increase this vessel incident risk, and increase Port traffic congestion and delays, and significantly limit the Port's shipping capacity.

It is important to note that while the Project will facilitate an improvement in the existing and future vessel movement efficiency, and a reduction in the likelihood of vessel incident risk, the duplication of the Gatcombe and Golding Cutting Channels will not have any direct influence on increasing vessel movement numbers within the Port.

1.6 Project alternatives

1.6.1 Overview

This section provides a summary of the DMPOI and Supplementary DMPOI that were undertaken to assess alternative beneficial reuse dredged material placement options for the Project. The assessment of dredging equipment and methodology options are provided in Section 2.4.4.

Further detail on the Supplementary DMPOI and DMPOI is included in Appendix B1 and B2, respectively.

1.6.2 Dredged Material Placement Options Investigation

As part of the EIS process, a DMPOI was undertaken between 2013 and early 2015 to support the identification of potential dredged material placement site option(s) for the placement of dredged material from the Project that:

- Complied with regulatory requirements and support current policy objectives
- Maximised the beneficial ecological environmental, social, cultural heritage and economic outcomes
- Could be considered feasible options to be taken forward into the detailed impact assessment phase of the EIS to undergo further analysis and impact assessment.

In seeking to achieve this primary objective, the following secondary objectives were also sought:

- Support a strategic approach to planning for the long term dredging needs of the Port of Gladstone by considering whether any of the identified placement sites would be more appropriately/efficiently used if prioritised for other future Port dredging requirements (capital and/or maintenance dredging)
- Develop a transparent, robust and repeatable process for how dredged material placement alternatives are considered and preferred options identified for future capital and/or maintenance dredged material for the Port of Gladstone, with a strong emphasis on early and ongoing stakeholder and regulatory agency engagement.

In undertaking the DMPOI, a six phase process was adopted which included the following key tasks:

- Completion of a literature review to gather existing information pertaining to dredging methods, dredged material placement management and potential beneficial reuse options within the local context of the Port of Gladstone
- Definition of constraints, opportunities and considerations through the mapping of spatial aspects (including ecological/environmental, social and cultural heritage, economic and operational) within the Gladstone region to assist in defining potential dredged material placement locations
- Undertaking preliminary site investigations to assess site availability and feasibility for dredged material placement
- Undertaking of a multi-criteria analysis (MCA) of the potential dredged material placement locations to identify potential/preferred locations to be taken forward into the impact assessment phase of the Project EIS process.

At the commencement of the DMPOI, a total of 16 potential dredged material placement sites were identified for investigation. Following completion of the MCA process, eight potential dredged material placement sites remained for consideration. Further short-listing of these eight sites occurred, and the DMPOI process concluded with three sites identified for further consideration and detailed impact assessment in the Project EIS process.

1.6.3 Commonwealth and State government policy and environmental regulation changes

During 2015 and 2016, after the DMPOI had been completed, significant legislative changes occurred in Commonwealth and State Government policy and environmental regulation which directly impacted the Project. These were:

- Release of the Reef 2050 Long-Term Sustainability Plan (Reef 2050) which presented a plan to action protecting the OUV of the GBRWHA
- Enactment of the Ports Act which introduced prohibitions on capital dredging and capital dredged material placement, restrictions on port development and the mandating of master planning for the priority ports of Gladstone, Abbot Point, Townsville, Hay Point and Mackay to 2050.

These policy and legislative changes triggered a review of the findings of the DMPOI and required the completion of a Supplementary DMPOI in 2017 and 2018.

1.6.4 Supplementary Dredged Material Placement Options Investigation

Whilst the primary objectives of the DMPOI were continued into the Supplementary DMPOI, the legislative changes that occurred in 2015 and 2016 (and more specifically, the mandating of the beneficial reuse of port-related capital dredged material) prompted the broadening of the original secondary objective of considering the longer term dredging needs of the Port of Gladstone to also include:

- The dredged material placement needs of other future capital dredging projects within the Port of Gladstone
- Potential opportunities for a DMPA to not only provide capacity for the Project, but also have sufficient additional capacity to accommodate dredged material from other future dredging projects/campaigns to 2050.

In undertaking the Supplementary DMPOI, the following key tasks were completed:

- Review of the legislative changes and the associated implications to the DMPOI findings and overall Project description
- Review the eight potential dredged material placement sites that remained following completion of the DMPOI MCA process through a short-listing process, having regard to site availability considerations, site economic feasibility, the long term dredged material placement needs within the Port of Gladstone, the volume of material to be dredged, the dredging concept design and methodology, and the capacity of the dredged material placement options
- Completion of a Supplementary DMPOI MCA process to identify a preferred DMPA to take forward into the detailed impact assessment phase of the Project EIS.

Of the eight potential dredged material placement options that remained following completion of the original DMPOI MCA process, four options were identified to progress into the Supplementary DMPOI MCA process. Upon completion of the Supplementary DMPOI MCA process, the WBE reclamation area was identified as the preferred dredged material placement option to take forward into detailed impact assessment stage of the Project EIS (refer Appendix B1).

1.7 Environmental impact assessment process

This section provides an outline of the environmental impact assessment process adopted for the Project.

1.7.1 Methodology implemented for Environmental Impact Statement preparation

1.7.1.1 General approach

The general approach has been used to meet the purpose and objectives of the EIS is summarised in Figure 1.6. A description of each EIS stage is provided in the sections below.

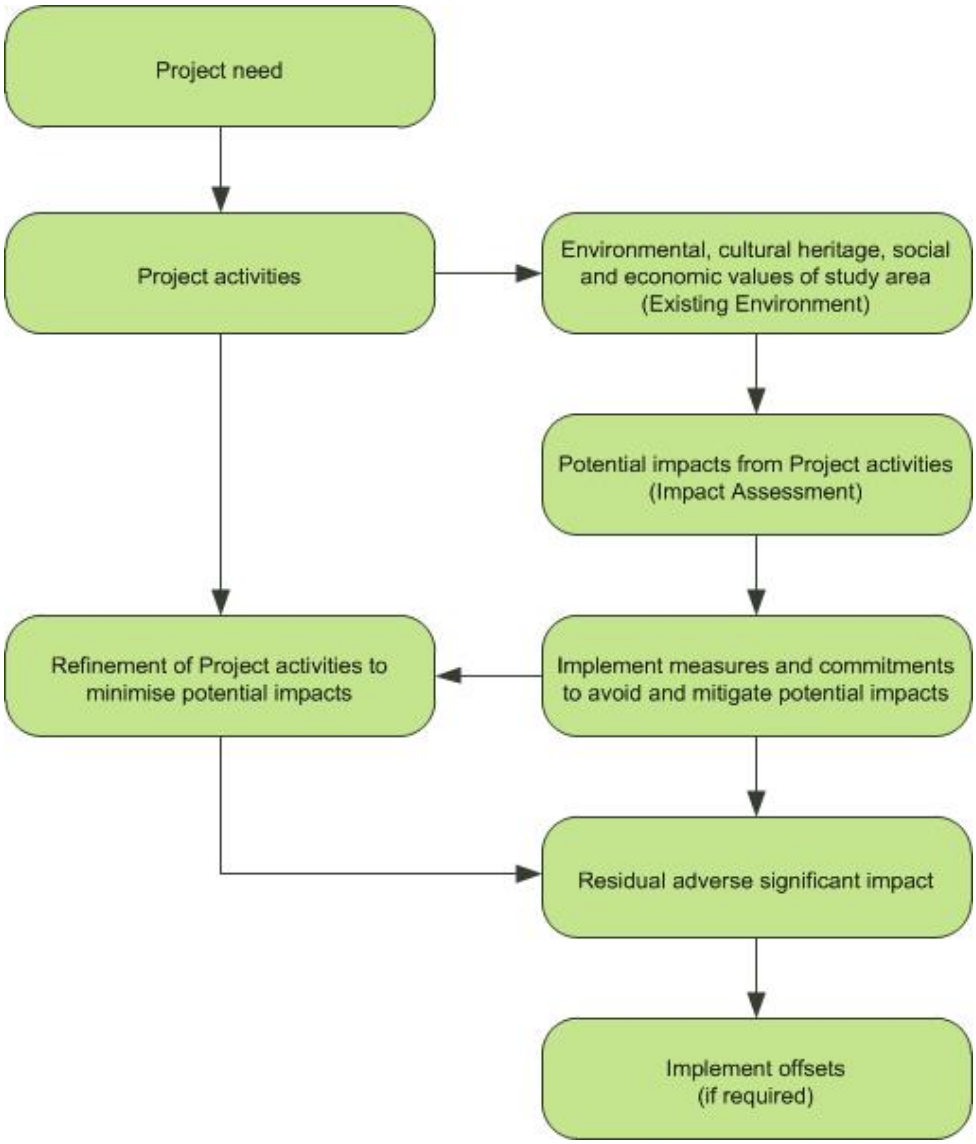

Figure 1.6 Environmental Impact Statement general approach flowchart

1.7.1.2 Existing environment

A substantial amount of existing environmental data exists for the Port Curtis and Gladstone region that is directly relevant to the Project and has been utilised to describe the existing environmental, cultural heritage, social and economic values.

The existing data and reports were reviewed and information gaps addressed during the baseline data collection phase of the EIS.

In relation to the existing data and reports for water quality and marine ecology values of Port Curtis, a detailed gap analysis was undertaken early in the EIS phase which involved preparing the *EIS Baseline Marine Ecological, Water Quality and Information Sources Data Collection Strategy (Dredge Area and Dredge Material Placement Areas)* report (Aurecon 2014). Commonwealth and State Government agencies were consulted on the draft strategy and consensus was obtained from agency representatives that the proposed baseline monitoring program was appropriate for the Project EIS.

For each of the identified existing values (receptors), information has been included in the EIS that addresses the direct impact areas and the potential zones of impact from indirect impacts, including the general assumptions adopted to define the study area for the value/receptor.

The description and assessment of values/receptors that occur within the direct impact areas and the zones of indirect impacts have been identified and described as applicable for each discipline in accordance with the requirements outlined in the:

- *Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project terms of reference for an environmental impact statement* (ToR) (DSDIP 2012) prepared under the SDPWO Act (refer Appendix A1)
- Guidelines for an environmental impact statement for the Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project, in Port of Gladstone & Great Barrier Reef Marine Park, Queensland (EIS Guidelines) (SEWPAC 2013) prepared under the EPBC Act (refer Appendix A2).

The description of existing values/receptors includes (where relevant):

- Baseline conditions, trends and location (mapped where applicable), including the modelling of existing conditions (e.g. water quality within Port Curtis)
- Legislative context and significance level of values/receptors
- Community and stakeholder views
- Sensitivity, adaptive capacity and vulnerability of the value/receptor to change
- Level of uncertainty and incomplete information.

1.7.1.3 Impact assessment

The EIS has adopted the general intent of the impact definition contained in Section 527E of the EPBC Act, which includes events or circumstances that are:

- A direct consequence of the action (i.e. direct impact)
- An indirect consequence of the action and the action/project activity that is a substantial cause of that event or circumstance (i.e. indirect impact), or
- Facilitated measurable change to values/receptors to a major extent by the project activity/action.

The Project impact assessment has been undertaken in accordance with the requirements outlined in the ToR and the EIS Guidelines

The context of each of the potential impact sources (including consideration of the exposure mechanism) has been described in relation to the following:

- Spatial extent of potential impact
- Temporal extent of potential impact (if applicable)
- Magnitude of impact (considering frequency, duration and/or volume of impact).

The above impact assessment analysis also identifies the exposure mechanism and defines the specific impact description.

The Project EIS has utilised an impact assessment methodology that is appropriate for the different environmental, cultural heritage, social and economic values/receptors. The particular methodology implemented was influenced by the nature of the regulatory regime and the sensitivity or vulnerability of the value/receptor, the nature of the potential impacts, and how mitigation measures are to be applied. The relevance of each methodology and the values/receptors to which they apply are summarised in Table 1.14.

Table 1.14 Impact assessment methodologies used for different values/receptors

Methodology type	Relevance	Value/receptor
Compliance assessment	Used where compliance with a known guideline or standard is required	Emissions (i.e. air quality, noise and vibration (excludes ecological impacts from these emissions))
Risk assessment	Used where the impact depends on how Project aspects or issues are managed	Aboriginal cultural heritage Economics Hazard and risk Land use Non-Aboriginal cultural heritage Social Soils and marine sediments Transport Waste Water quality
Significance assessment	Used where the sensitivity or the vulnerability of the environmental value is important	Ecology Visual amenity

A general explanation of how each impact assessment methodology was applied is provided below. In some cases, the methodology was amended to meet the needs of a particular value/receptor. Details of the specific impact assessment methodology used for each of the values/receptors is provided in the relevant EIS chapter and/or technical report.

The compliance impact assessment and components of the marine ecology significance impact assessment process have involved predictive modelling to determine the spatial extent and level/magnitude of potential impacts on the relevant values/receptors. Assumptions adopted as part of the modelling process are defined and justified where appropriate.

Compliance assessment

The compliance impact assessment has been implemented when there are defined statutory policies, guidelines, standards and/or other regulatory documents to protect, and/or manage environmental values/receptors.

The degree to which the Project emissions comply with these statutory requirements or guidelines has been used as a measure to determine the level of impact.

The compliance assessment methodology has used modelling to predict potential impacts from the proposed Project activities. This enables an assessment of the extent to which the Project complies with the published limits/thresholds and assists in scoping the type and extent of mitigation measures that may need to be applied in order to comply with the relevant statutory requirements and guidelines.

An overview of the compliance impact assessment framework, including the identification of Project activities (drivers/stressors), is provided in Figure 1.7.

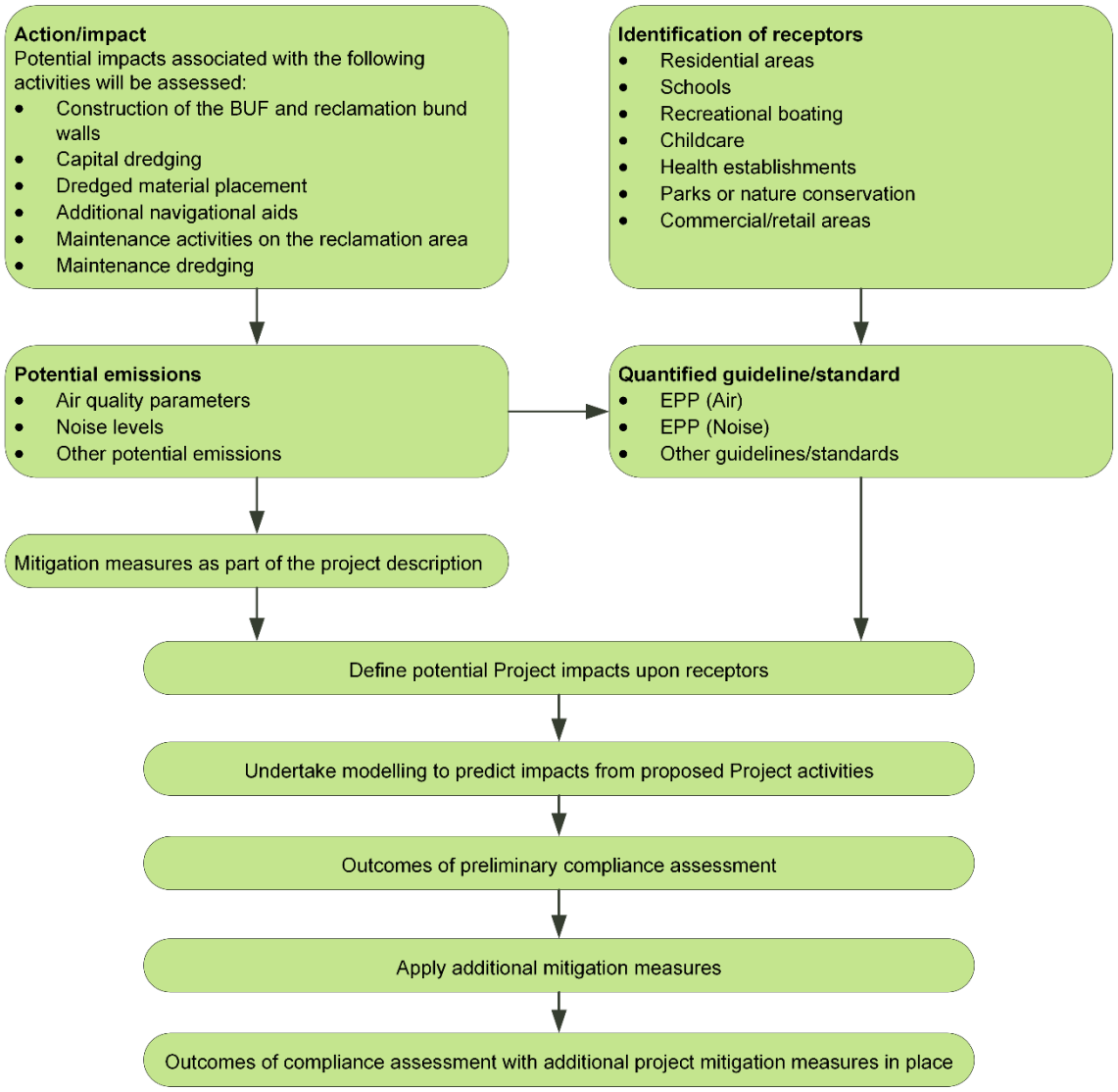

Figure 1.7 Compliance assessment framework

Risk assessment

For values/receptors where the potential impact depends on how the Project activities are managed, or where management measures are to be implemented to reduce the likelihood for a potential impact to occur, an assessment of the potential risk of the Project activities upon the value/receptor has been undertaken. A qualitative risk assessment based on the Great Barrier Reef Marine Park Authority's (GBRMPA) *Environmental Assessment and Management (EAM) Risk Management Framework* (GBRMPA 2009) has been used to identify the hazard risk grade (HRG). This risk management framework incorporates the Australian/New Zealand Standard for Risk Management (AS/NZS 4360:2004) and contains quantitative scales to define the **likelihood** of the potential impact occurrence and the **consequence** of the potential impact should it occur.

An overview of the interaction between Project activities (drivers/stressors), sensitive values/receptors and the risk impact assessment process is provided in Figure 1.8.

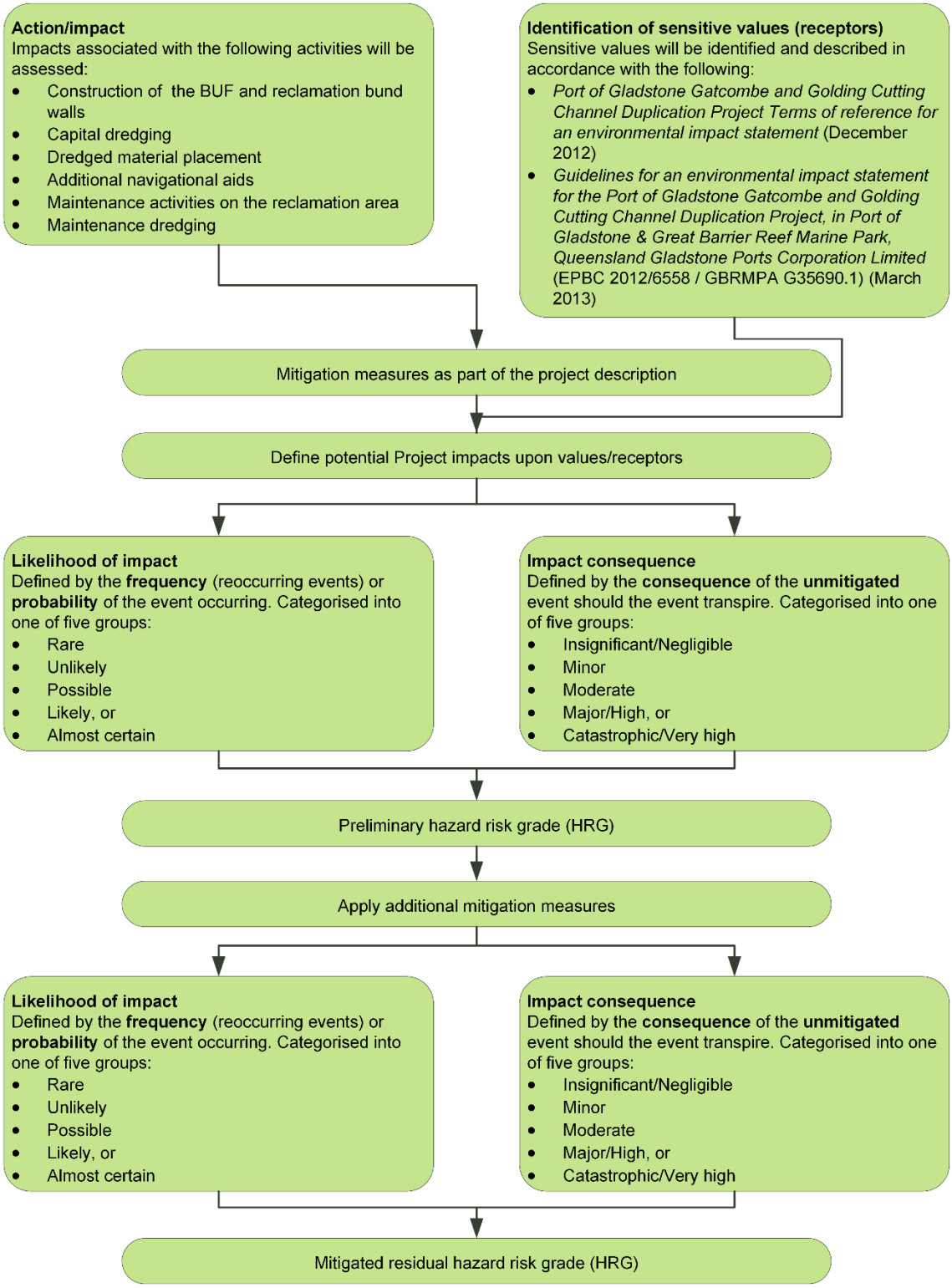

Figure 1.8 **Risk assessment framework**

Significance assessment

For assessment of the potential impacts to ecological, Aboriginal cultural heritage, GBRWHA values and community visual amenity values, where it is the sensitivity or the vulnerability of the sensitive value/receptor that is important, an assessment of the significance of potential impacts has been implemented. For the purposes of defining the potential impacts to sensitive values (receptors) from the Project activities, a significant impact is defined as an impact that is considered important, notable, or of consequence, having regard to its context or intensity. A significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the likely intensity, duration, magnitude and potential spatial extent of the potential impacts.

An overview of the interaction between Project activities (drivers/stressors), sensitive values (receptors) and the impact assessment process is provided in Figure 1.9.

1.7.1.4 Mitigation and management measures

Measures such as avoidance, minimise, mitigation and management will be applied during all phases of the Project to reduce the level of impact identified during the impact assessment process. These measures will have the objective of protecting or managing the impact on the identified values/receptors.

The details of the mitigation and management measures to be implemented as part of the Project have been included in the relevant EIS chapters, technical reports and the environmental management plans (EMPs).

1.7.1.5 Residual impacts and environmental management planning

An assessment of the magnitude or significance of the residual impacts remaining after application of the mitigation and management measures has been undertaken. This has provided an indication of the effectiveness of such measures in reducing the potential Project impacts upon the environmental, cultural heritage, social and economic values.

Details of the residual impacts indicating the effectiveness of the proposed mitigation and management measures have been included in the relevant EIS chapters, technical reports and the EMP.

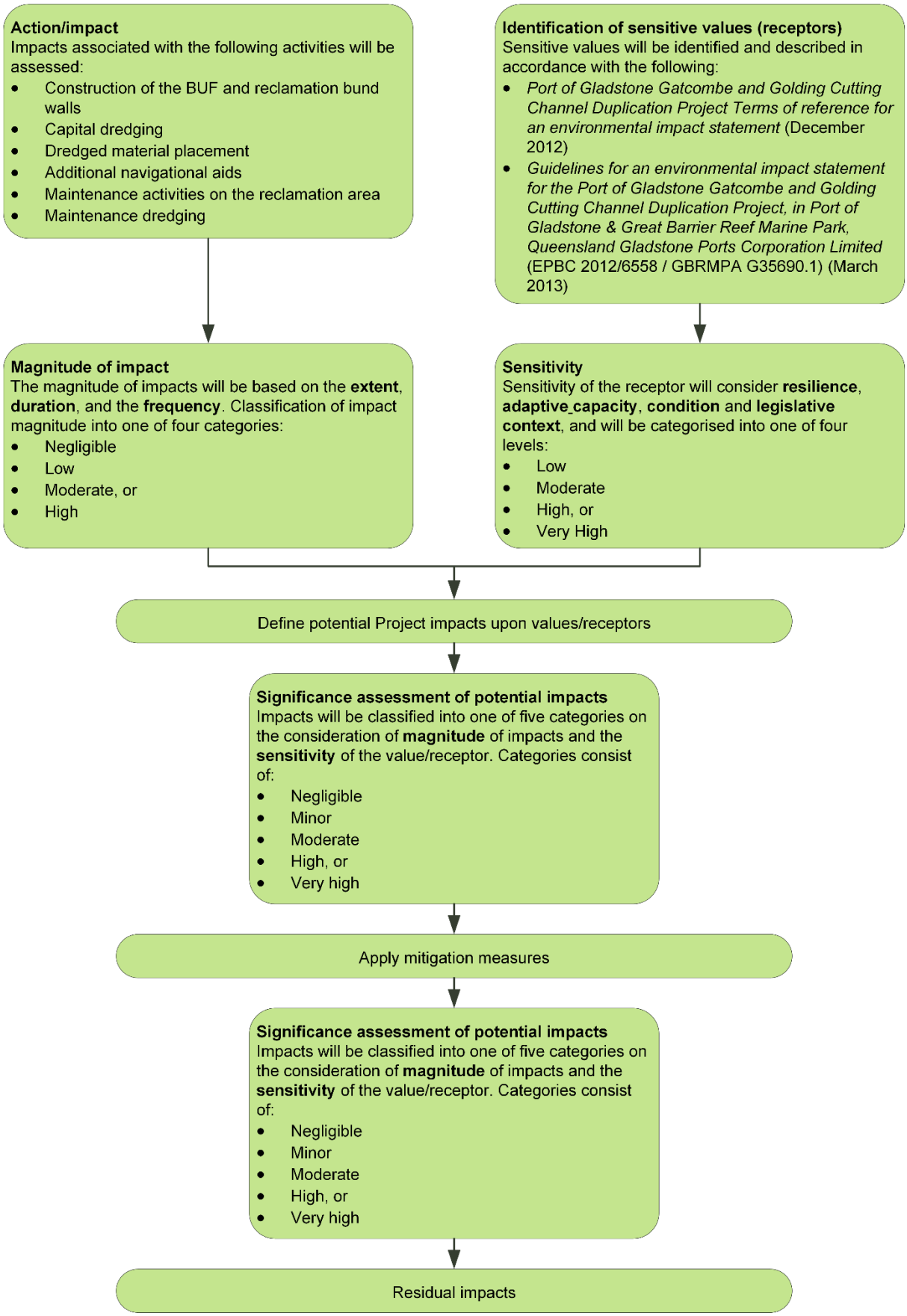

Figure 1.9 **Significance impact assessment framework**

1.7.2 Purpose and objectives of the Environmental Impact Statement

The purpose of the EIS as specified in the EIS ToR is to:

- Provide public information on the need for the project, alternatives to it, assess options and make informed decisions for its implementation
- Present the likely effects of the Project on the natural, social and economic environment
- Demonstrate how environmental impacts can be avoided, managed or mitigated and the offsets for any residual impacts
- Provide information to formulate the Project EMP, Dredging EMP and Environmental Monitoring Procedure.

The objectives of the EIS are to address the above purpose by identifying and describing:

- The need and justification for the proposal
- Any prudent and feasible alternatives to the proposal and the reasons for selection of the preferred option
- Proposal activities in sufficient detail to allow the spatial extent for the existing environment study area and potential proposal direct and indirect impacts to be defined and assessed
- Legislative framework for the proposal and approval requirements, including compliance with the objects of the EPBC Act and *Great Barrier Reef Marine Park Act 1975* (Cth) (GBRMP Act), and the principles of ESD
- Existing environment, social, cultural heritage and economic values, and sensitive receptors that have the potential to be impacted by the proposal activities
- Potential impacts from the proposal activities in terms of significance level, risks and consequences
- Proposed measures and commitments to avoid and mitigate the potential impacts, and offsets to address any residual adverse significant impact.

Additional EIS objectives relevant to government, stakeholders and the community include:

- To provide a source of information from which interested individuals and groups may obtain an understanding of the proposal
- To provide a forum for public consultation and informed comment of the proposal
- To provide a framework in which decision-makers can consider the environmental aspects of the proposal, including biophysical, cultural heritage, social economic, technical and other factors.

1.7.3 Environmental Impact Statement structure

The EIS consists of the main volume of the EIS and supporting technical appendices. The main volume of the EIS contains:

- The Executive Summary, the introduction to the Project (Chapter 1) and the Project description (Chapter 2)
- The technical assessment for each environmental aspect, including the existing environment, the impact assessment and the identification of mitigation measures (Chapter 2 through to Chapter 21)
- An overview of the Project EMP and Dredging EMP (Chapter 22)
- EIS conclusions (Chapter 23) and references (Chapter 24).

The supporting technical appendices contains the following documents:

- EIS ToR and EIS Guidelines and cross referencing tables to show how the EIS has addressed the ToR and EIS Guidelines (Appendix A)
- DMPOI (Appendix B)
- EIS Study Team (Appendix C)
- Technical reports and supporting information for the EIS technical assessment chapters (Appendices D to P)
- Project EMP, Dredging EMP and the Environmental Monitoring Procedure (Appendix Q).

1.7.4 Environmental Impact Statement study team

The EIS study team and a summary of their qualifications and experience are provided in Appendix C.

1.7.5 Environmental Impact Statement submission process

1.7.5.1 Environmental Impact Statement public display and inspection locations

The EIS will be available for public comment in accordance with Section 103(1)(c) of the EPBC Act and Section 33 of the SDPWO Act.

Copies of the EIS are available for inspection at several locations, including:

- Gladstone Regional Council library (39 Goondoon Street, Gladstone, Queensland)
- GPC Gladstone office (40 Goondoon Street, Gladstone, Queensland)
- State Library of Queensland (Cultural Precinct, Stanley Place, South Bank, Queensland)
- Department of Environment and Energy (51 Allara Street, Canberra) (email the DoEE at **epbc.referrals@environment.gov.au** to arrange a time for viewing).

Under the EPBC Act the EIS can be viewed at:

https://www.gpcl.com.au/development/channel-duplication-project

Under the SDPWO Act the EIS can be viewed at:

http://statedevelopment.qld.gov.au/assessments-and-approvals/port-gladstone-gatcombe-golding-cutting-channel-duplication-project.html

1.7.5.2 Environment Protection and Biodiversity Conservation Act 1999 – how to make a public submission

The EIS is required to undergo public notification under Section 103(1)(c) of the EPBC Act. Details specifying the requirements of the notice inviting public comment under the EPBC Act is contained within the EPBC Regulation.

In accordance with the requirements of Regulation 16.03(6) of the EPBC Regulation, GPC will publish a notice that states:

- The provision of the EPBC Act that requires the material to be published
- The identification number for the action, allocated by the DoEE
- A descriptive title for the action
- The location of the action
- The name of the person intending to take the action

- Each matter protected by a provision of Part 3 of the EPBC Act
- Where a copy of the material may be viewed or obtained (in electronic and hard copy form).

The notice containing the above information will be approved by the Minister prior to being published in accordance with Regulation 16.03(7) of the EPBC Regulation.

Section 103(1)(c) of the EPBC Act outlines that people intending to make submissions under the provisions of the EPBC Act are required to provide comments to the designated proponent (GPC) within the period specified in the notice.

Written submissions under the EPBC Act can be addressed to:

Gladstone Ports Corporation
PO Box 259
GLADSTONE QLD 4680

or alternatively email: **geninfo@gpcl.com.au**

1.7.5.3 State Development and Public Works Organisation Act 1971 – how to make a public submission

In accordance with Section 33 of the SDPWO Act, GPC will publicly notify:

- Where a copy of this EIS is available for inspection
- Where a copy of this EIS may be obtained at a stated reasonable cost
- That submissions may be made to the Coordinator-General about the EIS
- The submission period, set by the Coordinator-General, during which a submission may be made.

Properly made written submissions in relation to this EIS will be invited from any person and must be received within the EIS submission period. The commencement and conclusion dates for the EIS submission period will be prescribed in the notice.

For submissions made to the Coordinator-General under Section 34 of the SDPWO Act, a properly made submission is one that:

- Is written
- Is signed by or for each person ('signatory') who made the submission
- States the name and address of each signatory
- Is made to the chief executive
- Is received on or before the last day of the EIS submission period.

EIS submissions can be made online via: **https://www.statedevelopment.qld.gov.au/assessments-and-approvals/port-gladstone-gatcombe-golding-cutting-channel-duplication-project.html**

Written submissions under the SDPWO Act can be addressed to:

Coordinator-General
C/- Project manager – Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project
Coordinated Project Delivery
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

or by emailing: **gladstoneduplication@coordinatorgeneral.qld.gov.au**

All submissions will be forwarded to GPC so that each submission can be considered, and a response provided by GPC to the Coordinator-General. This EIS, public submissions and GPC's responses to the public submissions will be taken into account in the evaluation of the Project.

1.8 Public consultation process

1.8.1 Overview

Community and stakeholder engagement formed an integral part of the Project's EIS preparation. Engagement was undertaken to clarify specific Project issues and identify appropriate strategies for impact mitigation and management. It also sought to provide opportunities for interested parties to learn about the Project so they can make informed comments during the EIS public comment period.

Engagement activities have focused on community members and groups/organisations who have the potential to be impacted by the Project activities, in particular the proposed dredging activities. Consultation with relevant Commonwealth, State Government agencies and local government stakeholders has also been carried out.

Regard has been given to the views of the broader community during the preparation of the Project's EIS through general engagement activities and the monitoring of public opinion.

This engagement has been conducted in accordance with the principles and core values of the International Association for Public Participation (IAP2) and progressed at the 'consult–involve' level.

GPC's Engagement Report provides a full summary of the engagement activities undertaken for the Project (refer Appendix N2).

1.8.2 Consultation plan

Consultation and engagement activities for the Project EIS were led by GPC's Stakeholder Relations team with support from the EIS study team. This built on an initial engagement phase undertaken between 2013 and 2015 which focused gaining feedback concerning the purpose of the project, proposed reclamation sites and baseline monitoring.

GPC's engagement for the Project EIS was guided by the Stakeholder Engagement and Communication Strategy (GPC 2017) which is appended to the Engagement Report (refer Appendix N2). The adopted engagement framework is illustrated in Figure 1.10.

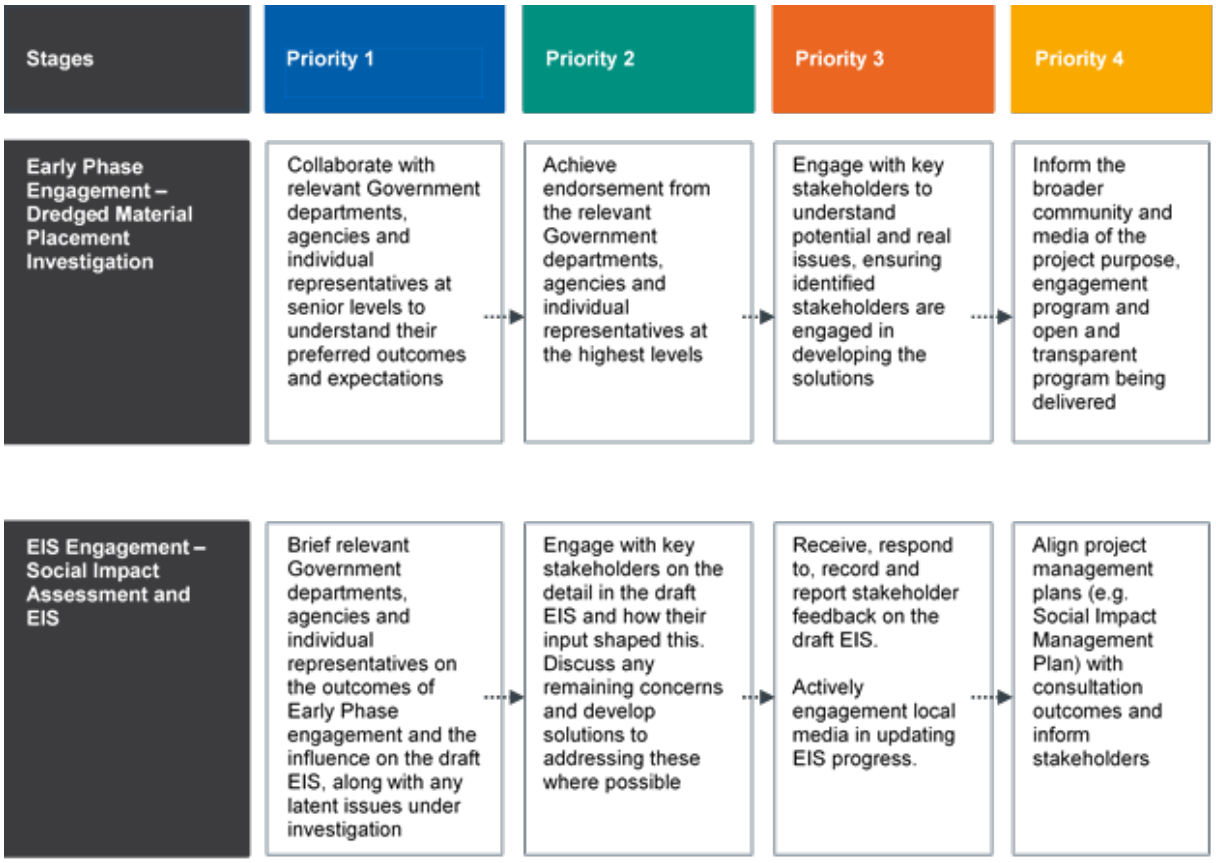

Figure 1.10 Overview of Stakeholder Engagement and Communication Strategy

The strategy confirms the timing of engagement activities and responsibilities, and sets the communication protocols for the Project.

A stakeholder assessment was completed to indicate which organisations, agencies and parties should be engaged with due to their interest and association with the Project activity areas. This assessment concluded that a range of public sector, private sector, non-governmental organisation (NGO) stakeholders and business groups with an interest in the marine environment were Project stakeholders. It was informed by those who raised a project interest during the 2013-2015 engagement phase.

Having regard to the range of stakeholders, the Strategy recommended a variety of consultation and communication methods be employed for the Project.

1.8.3 Project Engagement Report

The Project Engagement Report (refer Appendix N2) provides a detailed list of those parties with whom consultation was undertaken during the preparation of the EIS. Project stakeholders can be generally categorised as:

- Decision makers – those with decision making power or the ability to influence decisions (i.e. Coordinator-General and other government agencies)
- Port of Gladstone users – those who use the Project activity areas now and during the Project's construction and maintenance phases
- Local and regional communities – people who live and work within Gladstone and the surrounding area
- Special interest groups – those who have a specific interest in an aspect associated with the Project and/or environmental values within the region.

A set of engagement tools and methods has been employed ensuring those matters of importance to the community and Project stakeholders have been identified. These ranged from meetings, briefings and workshops to the production and distribution of Project factsheets and newsletters. Of importance have been the following activities:

- A Stakeholder Representative Group (SRG) was established to provide a collaborative forum for discussions regarding areas of interest, key challenges and opportunities, and Project enhancement
- Focus Group meetings which were advertised through social media and traditional print media were held with groups from key interest areas (e.g. Facing Island residents)
- One-on-one meetings with individuals from key interest areas (e.g. commercial and recreational fishing)
- Use of GPC's online media platforms.

Feedback was gathered from all engagement activities carried out and reported to the EIS study team to inform assessment and the development of Project mitigation measures. Overall, engagement outcomes were positive with stakeholders generally supportive to see the Project progress due to the future economic benefits it will bring, however, some concerns exist with respect to potential impacts on the marine environment (e.g. water quality, changes to hydrodynamics, marine fauna) and loss of environmental and recreational amenity. A matter of significant interest to stakeholders is transparency in and monitoring of impacts on marine flora and fauna.

It is GPC's intention that the communication channels established for the planning and approvals phase of the Project will be maintained for future phases of the Project, including detailed design, construction and maintenance. GPC has committed to continuing the SRG as a key engagement method for the Project.

1.9 Relevant legislation and approvals

This section provides a summary of the legislative framework and regulatory requirements relevant to the Project. Figure 1.11 identifies the jurisdictions within the Project area. In addition to the EIS approval process, GPC will obtain other approvals prior to commencement of the Project works. A summary table of the likely approvals to be triggered by the Project is provided at the end of this section.

1.9.1 Commonwealth legislation

1.9.1.1 Environment Protection and Biodiversity Conservation Act 1999

Overview

The EPBC Act provides that any action (i.e. a project, development, undertaking, activity or series or activities) that has, will have or is likely to have a significant impact on a matter of national environmental significance (MNES), or other matters protected under the EPBC Act such as the environment of Commonwealth land, requires approval from the Commonwealth Environment Minister.

The EPBC Act, which is administered by the Commonwealth DoEE identifies the following MNES as triggers for potential Commonwealth assessment and approval:

- World Heritage properties
- National Heritage places
- Wetlands of international importance (Ramsar wetlands)

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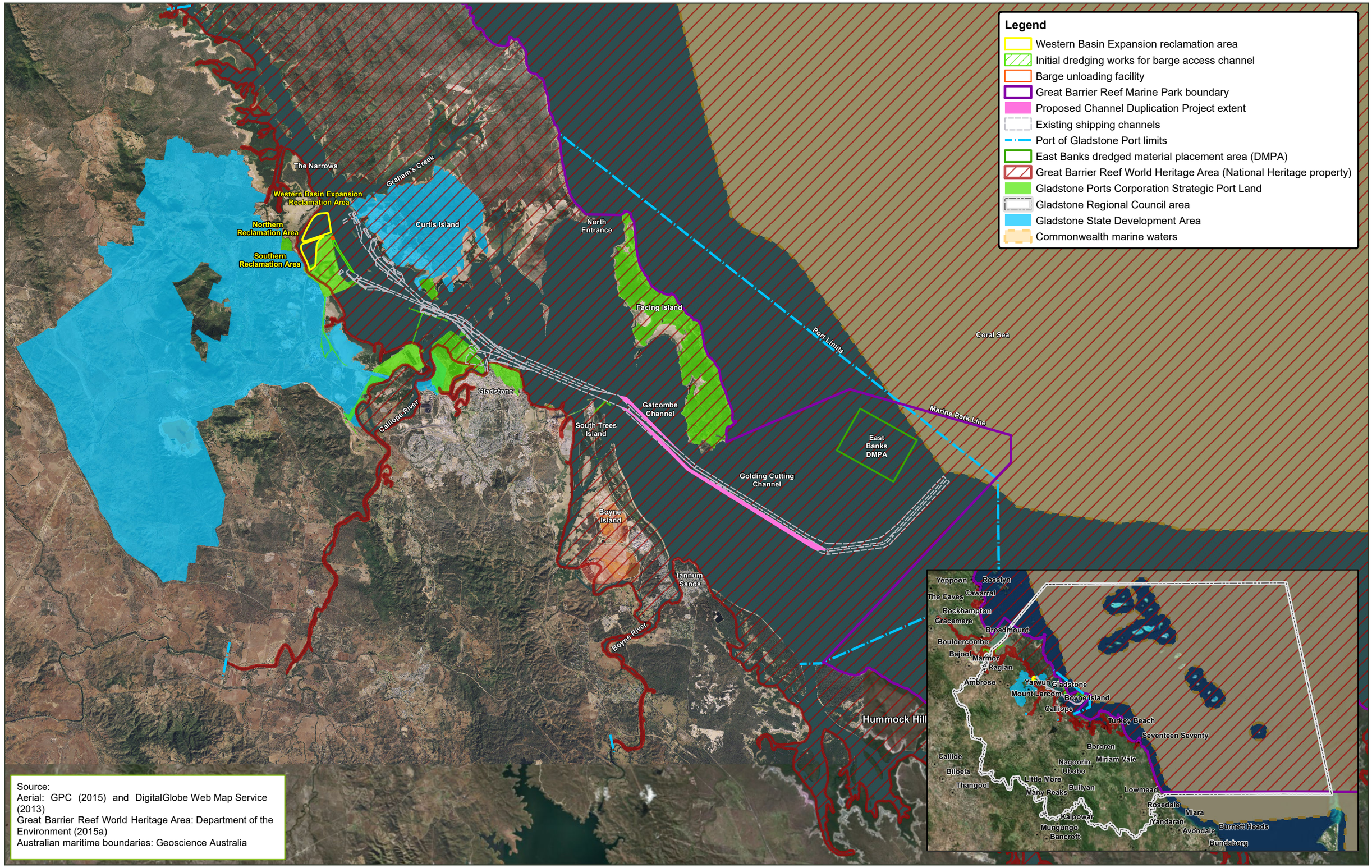

Source:
Aerial: GPC (2015) and DigitalGlobe Web Map Service (2013)
Great Barrier Reef World Heritage Area: Department of the Environment (2015a)
Australian maritime boundaries: Geoscience Australia

Map by: RB P:\GIS\Projects\237374_GPC_Channel_Duplication_EIS\237374_EIS_367.mxd 19/03/2019 11:59

0 2,550 5,100 Metres

Date: 19/03/2019 Version: 0 Job No: 237374

Coordinate system: GDA_1994_MGA_Zone_56

Gatcombe and Golding Cutting Channel Duplication Project

Figure 1.11: Jurisdictions within the Project area

- Listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mines)
- Water resources, in relation to coal seam gas development and large coal mining development
- The environment, where actions proposed are on, or will affect Commonwealth land and the environment
- The environment, where Commonwealth agencies are proposing to take an action.

If a project is likely to impact on any MNES, a referral under the EPBC Act must be made to the Minister. Subsequent to the receipt of a referral, the Minister will determine whether or not the proposed action is a 'controlled action'. If the action is considered a 'controlled action', then an environmental assessment must be submitted to the Minister for approval.

The environmental assessment can proceed through a bilateral agreement that accredits a State of Territory assessment process (i.e. EIS process under the EPBC Act), a ministerial declaration that accredits another Commonwealth agency or through assessment determined by the Minister.

Relevance to Project

On 23 October 2012, the Project was declared to be a 'controlled action' for which an EIS is required under the EPBC Act. The controlling provisions for the Project are:

- World Heritage properties (Sections 12 and15A)
- National Heritage places (Sections 15B and 15C)
- Listed threatened species and communities (Sections 18 and 18A)
- Listed migratory species (Sections 20 and 20A
- Commonwealth marine areas (Sections 23 and 24A)
- Great Barrier Reef Marine Park (Sections 24B and 24C).

In early 2019, GPC submitted a request to the Commonwealth Environment Minister to vary a proposal under the EPBC Act due to changes in the Project from the project description included in the Project EPBC Act referral submitted in 2012.

Approval is required from the Commonwealth Environment Minister prior to any action in relation to the Project being undertaken. Assessment of the Project under the provisions of the EPBC Act is being undertaken at the same time as the Queensland Government EIS assessment under the SDPWO Act, with one EIS covering the requirements of both assessments.

Environmental offsets may be required either under the Commonwealth conditions of the decision notice or in accordance with the *Environmental Offsets Act 2014* (Qld) (Offsets Act) (refer Section 1.9.2.12). The Offsets Act identifies each of the controlling provisions above as 'prescribed environmental matters', for which offsets may be required. The Offsets Act cannot however impose the provision of an offset for a matter which related to an area which there is an existing Commonwealth condition.

The Project is not being undertaken through the Bilateral Agreement between the Commonwealth and Queensland Government.

GPC holds an existing controlled action approval that authorises the dredging, beneficial reuse and dredged material placement of up to 46Mm^3 of material from the Port of Gladstone WBDDP (EPBC 2209/4904), which includes the placement of capital dredged material within the WB reclamation area.

Project compliance with the objects of the Act

The Project's compliance with the objects of the EPBC Act is summarised in Table 1.15.

Table 1.15 Project compliance with the objects of the *Environment Protection and Biodiversity Conservation Act 1999*

Objects of the EPBC Act	Project compliance
To provide for the protection of the environment, especially those aspects of the environment that are MNES	The majority of potential environmental impacts from Project activities fall within the significance range of low to moderate and are acceptable in the context of a Port infrastructure project to be carried out within Port limits. Where impacts due to the construction of the WBE reclamation area affect MNES matters (i.e. migratory shorebird habitat, seagrass, high ecological significance wetlands, and Beach stone curlew habitat) a Project offset framework has been developed which will be finalised during detailed design.
To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources	With the effective implementation of mitigation measures identified in the EIS, the Project impacts are of an acceptable nature and duration that are not predicted to compromise the sustainability of ecological systems or the sustainable use of natural resources.
To promote the conservation of biodiversity	The Project impacts will be managed with a range of mitigation measures, including the Project offset framework, which will be finalised during detailed design. With the effective implementation of these measures, the Project will not compromise the biodiversity of Port Curtis or the GBRMP.
To promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples	The EIS process has involved the participation of Commonwealth, State and local government as well as community and industry stakeholders, relevant landholders and Indigenous peoples. The consultation process will continue during the detailed design, construction and maintenance phases of the Project.
To assist in the co-operative implementation of Australia's international environmental responsibilities	The Project will not result in the loss of one or more World Heritage values, and these values will not be notably altered, modified, obscured or diminished by Project activities.
To recognise the role of indigenous peoples in the conservation and ecologically sustainable use of Australia's biodiversity	The role of Indigenous peoples in the sustainable use of biodiversity has been acknowledged by the Project and local Indigenous peoples have participated in the EIS process to date. Further participation, including use of Indigenous peoples' knowledge is proposed in future stages of the Project, in accordance with the existing Cultural Heritage Protocol.
To promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge	

1.9.1.2 Great Barrier Reef Marine Park Act 1975

Overview

The GBRMP Act establishes a legislative framework for ensuring the long term protection and management of the GBRWHA. The GBRMP Act is administered by the GBRMPA and holds provisions for:

- The establishment of the GBRWHA, which extends from the low water mark of the mainland and includes all islands, internal waters of Queensland and its seas, and exclusion under the *Submerged Lands Act 1973* (Cth), as detailed in Schedule 1 of the GBRMP Act
- The designation of the GBRMP as a protected area
- The establishment of the GBRMPA, the Commonwealth authority responsible for administering the GBRMP Act and managing the GBRMP

- A planning and management framework for the GBRMP, incorporating zoning plans, plans of management and a system of permissions.

Activities which are proposed within the GBRMP or have the potential to result in direct or indirect impacts on the GBRMP are required under the GBRMP Act to obtain a Marine Park Permit. The GBRMP Zoning Plan is the primary planning instrument for the conservation and management of the GBRMP. The GBRMP Zoning Plan establishes seven zones which regulate access and establish a system of permissions (or permits) to authorise entry or use within the GBRMP and one additional zone that applies to the Queensland Great Barrier Reef Coast Marine Park (GBR Coast MP). Generally, the following activities will require a Marine Park Permit prior to commencing:

- Commercial activities
- Installation, operation and repairing of structures, such as jetties, marinas and pontoons
- Aquaculture facilities
- Dredging and the placement of dredged material
- Placement and operation of moorings
- Waste discharge
- Anchoring or mooring for an extended period
- Research and educational programs.

A memorandum of understanding exists between the Commonwealth and the Queensland Government to coordinate the assessment process where works occur across the Commonwealth GBRMP and the GBR Coast MP under the *Marine Parks Act 2004*.

Relevance to Project

As part of the original EPBC Act referral of the Project, there was the potential that the DMPA could be located within the GBRMP. The Project has since changed as the placement of capital dredged material is prohibited within the GBRMP. Therefore, given that Project involves the undertaking of dredging and dredged material placement works within the GBRWHA, but outside of the GBRMP, a Marine Park Permit under the GBRMP Act will not be required. The *Great Barrier Reef Marine Park Regulations 1983*, and the superseded version of the Regulations Section 88R(j) (considerations of applications under the GBRMP Act) is not relevant to the Project.

Notwithstanding this, as part of water quality monitoring for the Project, monitoring buoys were installed at four locations within the GBRMP as part of the EIS baseline water quality monitoring. The buoys were installed and operated for a period of 13 months and were removed in July 2015 in accordance with a Marine Park Permit (Research) granted to GPC. The installation of any future monitoring buoys within the GBRMPA during the dredging phase of the Project will again be carried out under a Marine Park Permit (Research).

1.9.1.3 Native Title Act 1993

Overview

The *Native Title Act 1993* (Cth) (NT Act) provides the legal principles for the recognition of Native Title and the integration of this form of property right into the existing land title system. The NT Act provides for the validation of past Commonwealth acts and makes the same provision for each of the states and territories. The NT Act also establishes the processes involved in having Native Title recognised and the role and responsibilities of the different bodies involved in this process.

The NT Act adopts the common law definition of ‘Native Title’ and establishes the National Native Title Tribunal which governs how Native Title is dealt with across Australia.

Whilst Native Title has been extinguished over freehold land under the NT Act, Native Title interests and rights may still exist over land that is, or has been, subject to pastoral leases or other types of leases as well as Unallocated State Land (USL). The NT Act contains a statutory process to allow the parties to reach agreement and for state and territory governments to grant interests over that land to Native Title claimants.

Relevance to Project

The Port Curtis Coral Coast (PCCC) people are the Traditional Owners and relevant Native Title Party for the Gladstone area, which includes the Port of Gladstone. An Indigenous Land Use Agreement (ILUA) under Section 24 of the NT Act is currently in place between GPC, the PCCC people and the State of Queensland.

Further to this ILUA, a Cultural Heritage Protocol (the Protocol) was entered into by the ILUA parties on 23 March 2014 to ensure the protection and management of all Aboriginal cultural heritage in the ILUA area in relation to all port-related operations (proposed or undertaken).

Cultural heritage investigations and reporting for the Project EIS have been undertaken in accordance with the Protocol. Project works will be also undertaken in accordance with the Protocol and ILUA (refer Appendix M).

Chapter 16 (Aboriginal cultural heritage) provides additional details on the Protocol tasks undertaken as part of the Project EIS.

1.9.1.4 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

Overview

The purpose of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) (ATSIHP Act) is to ensure the 'preservation and protection of areas and objects in Australia and in Australian waters that are of particular significance to Aboriginal tradition'.

The ATSIHP Act contains provisions for an Indigenous person or group to submit an application to the Commonwealth seeking a declaration to protect an area or object of particular Indigenous significance from specific threats of injury or desecration. The Commonwealth would only seek to exercise its power after the relevant Indigenous party has exhausted all opportunities to preserve and protect the area or object through the relevant state or territory legislation.

Relevance to Project

There are no existing protected areas within the Project direct impact areas and potential indirect impact areas under the ATSIHP Act. Additional information on Indigenous cultural heritage and relevance to the Project is provided in Chapter 16 (Aboriginal cultural heritage).

1.9.1.5 Environment Protection (Sea Dumping) Act 1981

Overview

The *Environment Protection (Sea Dumping) Act 1981* (Cth) (Sea Dumping Act) regulates the loading and disposal of waste at sea. Administered by the DoEE, the Sea Dumping Act applies to all vessels, aircrafts and platforms in Australian waters (from the low water mark out the limits of the Exclusive Economic Zone) and to all Australian vessels and aircrafts in any part of the sea.

The Sea Dumping Act holds provisions for:

- Prohibiting ocean disposal of waste considered too harmful to be released in the marine environment

- Regulating permitted waste disposal to ensure environmental impacts are minimised.

Under the Sea Dumping Act, a Sea Dumping Permit is required for all sea dumping activities, including the disposal of dredged material. The *National Assessment Guidelines for Dredging* (NAGD) (Commonwealth of Australia 2009) set out a framework for environmental assessment and permitting for ocean disposal of dredged material.

Relevance to Project

Whilst a Sea Dumping Permit will not be required for the placement of capital dredged material as part of the Project, a permit will be required for the placement of future maintenance material within the existing East Banks DMPA. Approval for the placement of future maintenance material will be sought separately as part of GPC's Port-wide dredging program.

1.9.1.6 Maritime Transport and Offshore Facilities Security Act 2003

Overview

The *Maritime Transport and Offshore Facilities Security Act 2003* (Cth) was introduced to meet obligations in response to Chapter XI-2 of the *International Convention for the Safety of Life at Sea 1974* and the *International Ship and Port Facility Security Code 2003*. The purpose of *Maritime Transport and Offshore Facilities Security Act 2003* is to safeguard against unlawful interference with maritime transport or offshore facilities. To achieve this purpose the *Maritime Transport and Offshore Facilities Security Act 2003* sets out a regulatory framework which centres on maritime industry participants assessing their operations for security risks, and preparing a security plan which sets out measures to counter these identified risks. Security regulated shops, port operators, port facility operators, offshore facilities and offshore service providers are regulated under this framework.

Relevance to Project

The Project will be required to comply with all existing maritime security requirements for the Port of Gladstone.

1.9.1.7 Biosecurity Act 2015

Overview

The *Biosecurity Act 2015* (Cth) gives effect to Australia's international rights and obligations in relation to biosecurity into Australian domestic law under the International Health Regulations, the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) 1995, the Ballast Water Convention 2004, the United National Convention on the Law of the Sea 1982 and the Convention on Biological Diversity 1992.

The *Biosecurity Act 2015* provides the Commonwealth with the powers and tools to manage modern biosecurity threats, including:

- Biosecurity risks
- The risk of contagion of a listed human disease or any other infectious human disease
- The risk of listed human diseases or any other infectious human diseases entering Australian territory or a part of Australian territory, or emerging, establishing themselves or spreading in Australian territory or a part of Australian territory
- Risks related to ballast water
- Biosecurity emergencies and human biosecurity emergencies.

Particularly relating to the operation of vessels, the *Biosecurity Act 2015* prescribes that it is an offence for an Australian vessel (whether in or outside Australian seas) and a foreign vessel (in Australian seas) to discharge ballast water and/or sediment from a vessel unless the discharge occurs in accordance with the *Biosecurity Act 2015* management or exemption requirements. Compliance with the *Biosecurity Act 2015* ballast water management requirements is guided by the Australian Ballast Water Management Requirements.

Relevance to Project

All vessel operations, including the operation of dredging vessels associated with the Project will be required to comply with the *Biosecurity Act 2015* to ensure that biosecurity risks, including risks related to ballast water are appropriately managed.

1.9.1.8 Historic Shipwrecks Act 1976

Overview

The *Historic Shipwrecks Act 1976* (Cth) protects all shipwrecks and associated relics that are at least 75 years old where located in Commonwealth waters. Under the *Historic Shipwrecks Act 1976*, shipwrecks and associated relics are protected for their historic value and the *Historic Shipwrecks Act 1976* seeks to ensure that they are maintained for educational, scientific and recreational purposes. A register of known historic shipwrecks and relics protected under the *Historic Shipwrecks Act 1976* is maintained by DoEE (the Australian National Shipwreck Database). Declared protected zones are provided by the *Historic Shipwrecks Act 1976* to protect the shipwrecks of special significance, sensitivity or at risk. To enter any of these protected zones, permits are required.

The *Historic Shipwrecks Act 1976* also prescribes the requirement upon all persons who find the remains of a ship, or an article associated with a ship, to notify the Minister as soon as practicable.

Relevance to Project

The Project will not have an impact on any known historic shipwrecks, and therefore a permit under the *Historic Shipwrecks Act 1976* will not be required. Additional information on non-Aboriginal cultural heritage and relevance to the Project is provided in Chapter 17 (non-Aboriginal cultural heritage). The Project will be required to comply with the requirement to notify the Minister in the instance that discovery of a shipwreck or relic is made.

1.9.2 State legislation

1.9.2.1 State Development and Public Works Organisation Act 1971

Overview

The SDPWO Act provides for state development and planning through the provision of a system to coordinate and regulate public works, streamline the assessment of major project proposals, and manage major land and infrastructure assets. In doing so, the SDPWO Act seeks to facilitate timely, coordinated and environmentally responsible land use and infrastructure planning to support Queensland's economic and social development.

A key provision of the SDPWO Act is the function of the Coordinator-General appointed as a corporation sole, to represent the Crown. The Coordinator-General holds powers to:

- Manage the assessment and approvals of major infrastructure projects
- Declare a project to be a 'coordinated project' and coordinate the environmental impact assessment process for the project

- Declare a project to be a ‘prescribed project’
- Declare a project to be a ‘critical infrastructure project’
- Coordinate and regulate public works programs
- Access land, and compulsorily acquire land
- Declare and manage State Development Areas (SDAs) across the State.

Coordinated Project

In accordance with Section 26 of the SDPWO Act, the Coordinator-General may declare a project to a be a ‘coordinated project’ for which an EIS is required; or declare a project to be a ‘coordinated project’ for which an Impact Assessment Report (IAR) is required. Declaration of a project as a ‘coordinated project’ is based on one or more of the following criteria applying:

- Complex approval requirements involving local government, the State or the Commonwealth
- Strategic significance to a locality, region or the State, including for the infrastructure, economic and social benefits, capital investment or employment opportunities it may provide
- Significant environmental effects
- Significant infrastructure requirements.

Following declaration of a project as a ‘coordinated project’, the Coordinator-General must prepare and publicly notify the EIS terms of reference, firstly in draft form for public comment and then as a final to guide preparation of the draft and final EIS. In preparing the EIS documentation, the project proponent must address, for the whole project, the terms of reference to the satisfaction of the Coordinator-General.

Once the draft and final EIS documentation have been accepted by the Coordinator-General, the Coordinator-General must prepare a report evaluating the EIS (the Coordinator-General’s report). In evaluating the EIS and preparing the Coordinator-General’s report, the Coordinator-General may:

- Evaluate the environmental effects of the project and any other related matters
- Prescribe stated conditions on the project that apply to any later development approval under the *Planning Act 2016* (Qld) (Planning Act) or an EA under the EP Act, or certain leases or licences in relation to petroleum and gas, greenhouse gas or geothermal projects; and
- Make recommendations for the designation of a premises under the Planning Act or recommend that later approvals be granted subject to stated conditions or refused; and
- Impose conditions for the undertaking of the project if the project does not involve a material change of use under the Planning Act requiring impact assessment.

After completing the report, the Coordinator-General must give a copy of the Coordinator-General’s report to the proponent and publicly notify the report.

The Coordinator-General’s report for an EIS is subject to a currency period. Under Section 35A of the SDPWO Act, a Coordinator-General’s report ordinarily lapses:

- If the report states or implies a time for the report to lapse – at that stated or implied time; or
- Otherwise, three years after the day the report was publicly notified.

However, there are instances where the Coordinator-General’s report does not ordinarily lapse under section 35A, and instead may either lapse at a later date or not lapse. These are:

- Where a project requires one or more relevant approvals and the proponent applies for each relevant approval before the Coordinator-General’s report would have otherwise lapsed – instead the Coordinator-General’s report lapses after the relevant approval takes effect or if the application is refused

- Where the Coordinator-General has given the proponent written notice stating a later time for the report to lapse
- Where a project has been substantially started before the Coordinator-General's report would have otherwise lapsed to the extent that it imposes conditions for the project and the project is the subject of a subsequent relevant approval that continues to have effect – the Coordinator-General's report does not lapse

Section 1.7 provides additional information on the impact assessment process for the Project.

State Development Areas

Section 77 of the SDPWO Act holds provision for the establishment (declaration), planning and regulation of SDAs by the Coordinator-General. The declaration of a SDA seeks to promote economic development and addresses areas of market failure in the development of land for large scale, heavy industry, multi-user infrastructure corridors and major public infrastructure sites.

Once the EIS documentation has been prepared and accepted by the Coordinator-General, the Coordinator-General's report for the project will be issued and publicly notified. To the extent that the Coordinator-General's report approves the Project, consideration will need to be given with regards to the Coordinator-General's report currency period to ensure it adequately reflects the Project's timeframes and staging.

The GSDA was first declared in 1993. Whilst being subject to a number of amendments to reflect increases in size and other changes it now comprises an area of 29,000ha, with approximately 4,590ha set aside as an environmental management precinct. Existing and targeted land uses within the GSDA include industrial development, port-related activities, LNG processing, storage and export activities and materials and gas transportation. Land uses within the GSDA are regulated by the Coordinator-General through the *Gladstone State Development Area Development Scheme 2015* (GSDA Development Scheme).

Relationship with the Planning Act 2016

Division 4, Subdivision 1 of the SDPWO Act prescribes how the development assessment (DA) process applies to the assessment of development which is the subject of an EIS. Specifically:

(1) To the extent the relevant application relates to a material change of use of premises, or requires impact assessment, under the Planning Act—

(a) the application does not require public notification under the Planning Act, section 53; and

(b) there are no referral agencies under the Planning Act for the application; and

(c) a properly made submission about either of the following is taken to be a properly made submission about the application for the Planning Act, chapter 3—

i) a draft EIS or draft IAR for the project;

ii) any additional information, required by the Coordinator-General for the project, that was publicly notified under section 34C(3); and

(d) despite paragraph (b), until any development approval for the application has effect—

(i) the Coordinator-General's report for the EIS or IAR for the project is taken to be a referral agency's response for the application for the Planning Act, chapter 3; and

(ii) the Coordinator-General may exercise any power of an entity as a referral agency that, other than for paragraph (b), would have been a referral agency for the application.

(2) Subsection (1)(c) does not apply if the application involves only a material change of use requiring code assessment under the Planning Act.

Relevance to Project

On 25 September 2012, the Project was declared to be a 'coordinated project' under the SDPWO Act for which an EIS is required. The EIS process under the SDPWO Act is also being undertaken in parallel with the Commonwealth EPBC Act 'controlled action' EIS process using one EIS to address the statutory requirements of both EIS processes.

The Project will trigger the requirement to obtain a number of approvals, permits and authorities under State legislation after completion of the EIS process and the progression/completion of detailed design. On the basis that the Project is given approval to proceed, the Coordinator-General's report for the Project will prescribe a number of stated conditions that will apply to later development approvals under the Planning Act and EAs under the EP Act. In addition to seeking EIS level approval under the SDPWO Act, the Project is also seeking stated conditions that support preliminary approval for a number of aspects of Operational Works under the Planning Act. These approvals, permits and authorities, including the preliminary approvals being sought are detailed in Section 1.9.4.

The Project is not located on land directly within the GSDA, however it is recognised that the GSDA forms part of the existing surrounding land use environment, and provides important linkages between areas of the Project and the wider surrounding area. The location and relevance of the GSDA in relation to the Project components is provided in Chapter 3 (land use and tenure).

1.9.2.2 Planning Act 2016

Overview

On 3 July 2017, the Planning Act and associated *Planning Regulation 2017* (Qld) (Planning Regulation) came into force, repealing the *Sustainable Planning Act 2009* (Qld) as Queensland's principal planning legislation. The Planning Act sets out a planning system for development assessment, plan making and dispute resolution. The system is performance based, which allows for innovation and flexibility in how development can be achieved, whilst ensuring responsiveness to community needs and expectations.

Assessable development

Under the Planning Act, development is either accepted, assessable or prohibited. Assessment is carried out through the Development Assessment Rules (DA Rules). The DA Rules set out a standardised development assessment process to ensure development applications are progressed in a consistent and transparent way across the State. The development process is made up of parts, and not all parts apply to all applications.

Development that is prescribed by the State in Schedule 10 of the Planning Regulation or by a local government through a planning scheme as assessable development requires an application for development approval under the Planning Act, together with the relevant assessment manager and referral agencies identified in Schedules 10 and 8 (respectively) of the Planning Regulation. Where the Planning Regulation does not prescribe the relevant Assessment Manager for a particular development application type, a request is required to be made to the Planning Minister seeking a decision on which entity is the Assessment Manager.

Through the State Assessment and Referral Agency (SARA), the Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) coordinates the referral process for development applications where the State has a jurisdiction under Schedule 8 or 10 of the Planning Regulation.

Under Division 4, Subdivision 1 of the SDPWO Act there are provisions within the DA process for the assessment of development which is the subject of an EIS.

Development that a local categorising instrument is prohibited from stating is assessable development

Schedule 6 of the Planning Regulation identifies development that cannot be made assessable under a local government planning scheme. Under Part 3 this includes:

Item 8 – '*Operational work or plumbing or drainage work (including maintenance and repair work) if the work is carried out by or on behalf of a public sector entity authorised under a State law to carry out the work'*

Item 14 – Operational work for an aid to navigation or a sign for maritime navigation

Item 18 – Operational work for the removal, destruction or damage of a marine plant.

Accepted development

Schedule 7 of the Planning Regulation identifies development that is accepted development for which approval is not required. Under Part 3, this includes:

Item 6 – Operational work for constructing or raising a waterway barrier, where the requirements for the works are prescribed under the *Fisheries Act 1994* (Qld) (Fisheries Act), and the work complies with the requirements (i.e. the accepted development requirements for operational work that is constructing or raising waterway barrier works (October 2018 or later))

Item 8 – Operational work that is the removal, destruction or damage of a marine plant, where the requirements for the works are prescribed under the Fisheries Act, and the work complies with the requirements (i.e. the accepted development requirements for operational work that is the removal, destruction or damage of marine plants (July 2017 or later))

Item 10 – Operational work that is tidal work or work carried out completely or partly in a Coastal Management District (CMD) and is undertaken by the department in which the *Transport Infrastructure Act 1994* (Qld) (TIA) is administered and compiles with the requirements for the work prescribed under the *Coastal Protection and Management Act 1995* (Qld) (Coastal Act) Section 167(5)(b) (i.e. the Code for accepted development for tidal works or work completely or partly in a coastal management district (August 2017 or later)).

Assessment benchmarks

Under the Planning Act, assessment benchmarks are the matters that a categorising instrument (for example, a local planning instrument, or the Planning Regulation) or a port land use plan prescribes as the matters that an assessment manager must assess assessable development against.

GPC's LUP 2012 is the assessment benchmark used by the Port in its role in development assessment. The LUP 2012 is a statutory document, under the TIA and statutory assessment benchmark under the Planning Act (Schedule 10, Part 13, Division 5, Subdivision 1, Section 20), and has effect over SPL within the Port of Gladstone where the port authority is the assessment manager or referral agency for development applications on SPL or within the SPL tidal area. Further discussion of the LUP 2012 is provided in Section 1.9.3.5.

In addition to the LUP 2012 being an assessment benchmark, GPC's port authority functions (as prescribed by Chapter 8, Part 3 of TIA) also operate as statutory assessment benchmarks under the Planning Regulation (Schedule 10, Part 13, Division 3, Table 1) where GPC is an advice referral agency for development on land below the high-water mark and within the limits of the Port of Gladstone or where GPC is a concurrence referral agency for development that is carried out at a distance within:

- 200m from a shipping channel or an entry and exit shipping corridor from the Port of Gladstone
- 100m from a swing basin, a commercial shipping wharf, a mooring, anchorage or spoil grounds
- 1,000m from a planned port facility identified in the LUP 2012.

State Development Assessment Provisions

The Queensland State Development Assessment Provisions (SDAP) are the assessment benchmarks used by the State in its role in development assessment in accordance with the Planning Regulation. The SDAP is a statutory instrument under the Planning Act and has effect throughout the State where the chief executive is the assessment manager or referral agency for development applications which affect a state interest.

Under the Planning Act, a state interest is defined as an interest that the Planning Minister considers affects an economic or environmental interest of the State or part of the State; or affects the interest for/of ensuring that the purpose of the Planning Act is achieved.

The SDAP (version 2.4) consists of 24 state codes, which are supported by Development Assessment mapping (DA mapping). Applicants must address the relevant state code/s of the SDAP as part of their development application.

SDAP provisions, including supporting DA mapping must be considered as part of the DA process to assist in identifying potential key issues and gaps within existing State regulatory requirements applicable to the area.

Each of the relevant SDAP state codes will be addressed as part of the reporting to support the lodgement and assessment of the necessary post-EIS development applications.

Relevance to Project

The Project will trigger the requirement to obtain approval for aspects of development that are assessable under Schedule 10 of the Planning Regulation (and integrated through other legislation as part of the DA Rules process) following completion of the EIS process. A summary of the likely approval requirements is detailed in Section 6. As part of each of these approvals, referral will be required to the Chief Executive administering Planning Act (i.e. DSDMIP through SARA) for matters of State interest.

GPC is a Company Government Owned Corporation, governed under the *Government Owned Corporations Act 1993* (Qld) (GOC Act) and authorised to carry out works associated with operating a port under the TIA. Pursuant to Schedule 6 of the Planning Regulation, operational works undertaken by GPC for the Project will be exempt development under a local government planning scheme.

The Project has the potential to comply with a number of accepted development requirements prescribed by the Planning Regulation, which will need to be confirmed following the completion of detailed design following the EIS process.

The Project will trigger assessment under the SDAP state codes as part of any development application/s for aspects of development that are assessable under the Planning Act which include matters of state interest. The relevant matters of state interest and associated SDAP state codes which are anticipated to be triggered by the Project include:

- State code 7: Maritime safety
- State code 8: Coastal development and tidal works
- State code 11: Removal, destruction or damage of marine plants
- State code 22: Environmentally relevant activities.

The Project will trigger assessment under the LUP 2012 and/or Chapter 8, Part 3 of TIA as the relevant port development assessment benchmarks where development is proposed on SPL, within the SPL tidal area or within the limits of the Port.

1.9.2.3 Coastal Protection and Management Act 1995

Overview

Development within the coastal zone is administered by the Department of Environment and Science (DES) under the Coastal Act. The coastal zone covers Queensland waters and land within the area shown on the coastal zone map and the airspace above that surface and subsoil below that surface. The Coastal Act seeks to achieve the following main objectives:

- Provide for the protection, conservation, rehabilitation and management of the coastal zone, including its resources and biological diversity
- Have regard to Australia's goal, core objectives and guiding principles of the National Strategy for ESD in the use of the coastal zone
- Ensure decisions about land use and development safeguard life and property from the threat of coastal hazards
- Encourage the enhancement of knowledge of coastal resources and the effect of human activities on the coastal zone.

Tidal works

Tidal work is defined as:

> *Works in, on, or above, land under tidal water; or land that will, or may be, under tidal water because of development on or near the land; and work that is an integral part of the relevant work, wherever located.*

Tidal works that are completely or partly within a local government tidal area are defined as prescribed tidal works. However, under Section 15(2) of the *Coastal Protection and Management Regulation 2017* (Qld) (Coastal Regulation), the following work cannot be prescribed tidal work:

- Tidal work for a new or existing structure used for the operation of a port authority or port operator or a public marine facility constructed by or for Queensland Transport, a port authority or a port operator
- Tidal work for creating or changing the configuration or characteristics of a navigational channel.

Works within a Coastal Management District

In addition to regulating development on land within tidal areas, the Coastal Act also regulates certain types of work where they occur completely or partly within a CMD. Schedule 10, Part 17, Division 1 of the Planning Regulation specifies when development is assessable in relation to work in a CMD:

1) Operational work is assessable development, if the work is-

(b) Any of the following carried out completely or partly in a CMD-

(i) Interfering with quarry material, as defined under the Coastal Act, on State coastal land above high-water mark

(ii) Disposing of dredge spoil, or other solid waste material, in tidal water

(iii) Constructing an artificial waterway

(iv) Removing or interfering with coastal dunes on land, other than State coastal land, that is in an erosion prone area.

Accepted development

The Coastal Regulation is given effect under the Coastal Act to make provision for coastal management matters. Included within these provisions is the prescribing of the requirements in which tidal work or work in a CMD can be categorised as accepted development under the Planning Act (and for which no approval is required where the development complies with the requirements). Accepted development requirements under the Coastal Regulation are currently set out in the *Code for accepted development for tidal works, or work completely or partly in a coastal management district (August 2017).* The types of works included within the code for accepted development include (but are not limited to):

- Minor public marine development
- Stormwater infrastructure
- Demolition of structures seaward of the high-water mark.

Allocation of quarry material

An allocation of quarry material (provided through an Allocation Notice) is triggered where the undertaking of any activity results in the removal of material from land under tidal water (i.e. from the bed of tidal water) that is State coastal land and where the material is disposed of on land above the high water mark. This includes the undertaking of dredging works where dredged material is removed from under tidal water that is USL and the dredged material is used for reclamation works above the high water mark.

Royalties

Royalties for the removal of quarry material are payable under the Coastal Act at the rate set in the Coastal Regulation. Section 11 of the Coastal Regulation prescribes instances where royalties are not payable, including but not limited to, the port authority, port lessor port lessee or port manager for quarry material removed-

(a) to maintain or improve navigational channels or navigation in its port if the material is disposed of—

(i) in an area associated with port activities and approved by the Minister of the department in which the Transport Infrastructure Act 1994 is administered; and

(ii) under relevant statutory environmental controls; or

(b) to reclaim land that is, or is proposed to be, strategic port land or Brisbane core port land under the Transport Infrastructure Act 1994.

Coastal Management Plan 2014

The Coastal Management Plan commenced in 2014 under the Coastal Act and provides non-regulatory policy guidance to coastal land managers on how the coastal zone of Queensland is to be managed. Key management policies within the plan address coastal issues including maintaining coastal landforms and physical coastal processes, conserving nature, maintaining access, management planning, knowledge sharing and community engagement. The Coastal Management Plan does not apply to development assessment under the Planning Act.

Relevance to Project

The Project will trigger the requirement to obtain a Development Permit for Operational Works involving Tidal Works and Works within a CMD under the Coastal Act and Planning Regulation associated with undertaking the proposed dredging works, constructing the BUF and WBE reclamation area, and decommissioning a portion of the BUF. GPC holds an existing Development Permit for Operational Works involving Tidal Works and Works within a CMD for the placement of dredged material within the WB reclamation area.

The Project will also be required to obtain an allocation for quarry material under the Coastal Act to authorise the removal of dredged material from the area to be dredged and the placement of the material within the WB and WBE reclamation areas.

The installation and removal of navigational aids is considered to be accepted development under the Planning Regulation where it complies with the code for accepted development, therefore approval for this Project activity is not anticipated to be required.

1.9.2.4 Environmental Protection Act 1994

Overview

The object of the EP Act is to achieve ESD by protecting 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. The EP Act, which is administered by DES, seeks to achieve this by an integrated management system that is consistent with ESD.

Section 319 of the EP Act establishes a *'general environmental duty'* upon all persons to prevent and minimise environmental harm which states:

> *A person must not carry out any activity that causes or is likely to cause environmental harm unless all reasonable and practicable measures have been taken to prevent or avoid harm from an activity.*

Under the EP Act, 'environmental harm' and 'environmental nuisance' are defined as:

- Environmental harm is *any adverse effect or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance. Environmental harm may be caused by an activity—*
  - (a) *whether the harm is a direct or indirect result of the activity; or*
  - (b) *whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.*
- Environmental nuisance is *unreasonable interference or likely interference with an environmental value caused by:*
  - (a) *Aerosols, fumes, light, noise, odour, particles or smoke*
  - (b) *An unhealthy, offensive or unsightly condition because of contamination*
  - (c) *Another way prescribed by regulation.*

Environmental impact assessment

Chapter 3 of the EP Act includes provisions for an EIS process that applies only to mining and resource activities. Mining and resource activities which trigger an EIS under the EP Act require a project-specific terms of reference (which is used in parallel with DES's generic terms of reference) to support and guide the preparation of the EIS.

Environmentally relevant activities

The EP Act, together with the Planning Act, provides a licencing regime for Environmentally Relevant Activities (ERAs). ERAs are prescribed under Schedule 2 of the *Environmental Protection Regulation 2008* (Qld) (EP Regulation) and include activities where the Governor in Council is satisfied that:

- A contaminant will or may be released into the environment where the activity is carried out
- The release of the contaminant will or may cause environmental harm.

Approval in the form of an EA is required to lawfully undertake a prescribed ERA under Schedule 2 of the EP Regulation. Where a prescribed ERA is also listed as a Concurrence ERA in Schedule 2, a Development Permit for a Material Change of Use (MCU) under the Planning Act is also required where a change of land use occurs.

The EP Act also requires that any person carrying out an ERA must be a Registered Suitable Operator, which is a person or corporation who has been registered by DES as being suitable to undertake an ERA. Once a person or corporation becomes registered, the registration remains in effect unless it is suspended or cancelled.

DES has developed a framework of model operating conditions for ERA 16 – Extractive and screening activities (June 2018 or later) which cover a range of extractive and screening activities triggered under an ERA 16. Included within this framework are model operating conditions for coastal dredging. These include (but are not limited to):

- The requirement for the characterisation of sediments and suitability of dredged material to be submitted to the administering authority in accordance with NAGD or other appropriate guidelines
- The requirement for a dredging management plan (DMP) for the activity to be developed and implemented.

Disposal of contaminated soil from land

In addition to the provisions under the EP Act relating to the assessment and management of contaminated land, the EP Act also contains requirements for the lawful disposal of contaminated soil.

Under Section 739 of the EP Act, a person proposing to remove and dispose of contaminated soil from land which is recorded on either the Environmental Management Register (EMR) or the Contaminated Land Register (CLR) to an offsite location must obtain a disposal permit from DES in order to lawfully undertake the works. Disposal permits enable appropriate and legal disposal and tracking of contaminated soil or materials.

In most instances where site remediation works are being undertaken, an application for a disposal permit will be required to be accompanied by a site investigation report. A site investigation report is not required in the instance where the removal and disposal of contaminated soils is required from a site where a notifiable activity is continuing.

Environmental Protection (Noise) Policy 2008

The purpose of the *Environmental Protection (Noise) Policy 2008* (EPP (Noise)) is to achieve the object of the EP Act in relation to the acoustic environment. The policy seeks to achieve this purpose by identifying environmental values to be enhanced or protected, stating acoustic quality objectives in relation to these and providing a framework for making consistent, equitable and informed decisions about the acoustic environment.

Specific obligations prescribed under the EPP (Noise) applicable to the Project include:

- Part 3 – Environmental values and acoustic quality objectives, including qualities that are conducive to protecting the health and biodiversity of ecosystems, human health and wellbeing and community amenity. Specific objectives for sensitive receptors are stated in Schedule 1.
- Part 4 – Avoiding, minimising or managing noise in accordance with the management hierarchy.

Additional information on EPP (Noise) and the relevance to the Project is provided in Chapter 13 (noise and vibration).

Environmental Protection (Air) Policy 2008

The purpose of the *Environmental Protection (Air) Policy 2008* (EPP (Air)) is to achieve the object of the EP Act in relation to the air environment. Similarly, with the EPP (Noise), the policy seeks to achieve this purpose by identifying environmental values, specifying indicators and objectives, and providing a framework for decision making about the air environment.

Specific obligations prescribed under the EPP (Air) applicable to the Project include:

- Part 3 – Environmental values and air quality objectives, including qualities that are conducive to protecting the health and biodiversity of ecosystems, human health and wellbeing, protecting the aesthetics of the environment, including appearance of buildings, structures and other property, and protecting agricultural uses. Specific objectives for air quality indicators by value are stated in Schedule 1 of the EPP (Air).
- Part 4 – Avoiding, recycling, minimising or managing air emissions in accordance with the management hierarchy.

Additional information on the EPP (Air) and the relevance to the Project is provided in Chapter 12 (air quality and greenhouse gas assessment).

Environmental Protection (Water) Policy 2009

The *Environmental Protection (Water) Policy 2009* (EPP (Water)) seeks to achieve the object of the EP Act in relation to Queensland waters. The policy seeks to achieve this purpose by identifying environmental values and management goals for Queensland waters; stating water quality guidelines and objectives, to enhance or protect the environmental values, provide a framework for decision-making, and monitoring and reporting on the condition of Queensland waters.

Specific obligations prescribed under the EPP (Water) applicable to the Project include:

- Part 4 – Management goals and water quality objectives for water mentioned in Schedule 1. This includes water within the Boyne River basin, Calliope River basin and Curtis Island basin.
- Part 5 – Management of activities that may affect water in accordance with the management hierarchy for surface or groundwater
- Part 6 – Healthy Waters Management Plans.

Additional information on EPP (Water) and the relevance to the Project is provided in Chapter 8 (water quality).

Relevance to Project

Under the EP Regulation, the carrying out of dredging activities is a relevant activity, for which approval is required where the activity involves *dredging a total of 1,000t or more of material from the bed of naturally occurring surface waters, in a year.* The EP Regulation also specifies the following dredging activity thresholds:

1. *dredging, in a year, the following quantity of material–*
   - *(a) 1,000t to 10,000t*
   - *(b) more than 10,000t but not more than 100,000t*
   - *(c) more than 100,000t but not more than 1,000,000t*
   - *(d) more than 1,000,000t.*

The Project will trigger the requirement to obtain an EA for ERA 16 – Extractive and Screening Activities under the EP Act to authorise the proposed dredging works. It is anticipated that threshold 1(d) will be triggered. Additionally, under the EP Regulation, an ERA 16 for dredging activities is defined as a Concurrence ERA, and as such, a Development Permit for a MCU under the Planning Act will also be required.

GPC holds an existing EA to lawfully undertake dredged material placement at the WB reclamation area and associated dewatering and discharge of dredge decant water from the WB reclamation area licenced discharge points (where within the water quality discharge criteria specified by the EA).

Where rock armour and fill material is sourced from a location other than an existing third party commercial licenced quarry, the Project will be required to obtain approval for extractive and screening activities associated with *extracting, other than by dredging, a total of 5,000t or more of material, in a year, from an area* and/or *screening 5,000t or more of material, in a year* associated with operating a borrow source/quarry.

GPC holds an existing EA and associated Development Permit for a MCU to lawfully undertake quarrying activities at the GPC quarry site located to the west of Fisherman's Landing. Where this site is utilised to support the Project works, activities will be required to be undertaken in compliance with all existing approvals or a new/amended approval sought.

When considering the proposed works, and as part of making any environmental management decision under the EP Act, the administering authority is required to have regard to the matters set out under Section 51 of the EP Regulation, which include consideration of the relevant Environmental Protection Policies (EPPs) (i.e. water, air and noise).

GPC is an existing registered suitable operator under the EP Act.

1.9.2.5 Transport Infrastructure Act 1994

Overview

The overall objective of the TIA is to provide a regime that allows for and encourages the effective integrated planning and efficient management of a system of transport infrastructure. In particular, the objectives of TIA are to allow the State to have a strategic overview of the provision and management of all transport infrastructure, including roads, busways, rail (heavy and light), ports, air and public marine transport. The TIA is administered by the Department of Transport and Main Roads (DTMR).

Port authorities

Section 275 prescribes the functions of port authorities which include (but are not limited to) such functions as:

- To establish, manage and operate effective and efficient port facilities and services its port
- To make land available for the establishment, management and operation of effective and efficient port facilities and services in its port by other persons, as well as other purposes considered consistent with the operation of the port
- To provide or arrange for the provision of ancillary services or works necessary or convenient for the effective and efficient operation of the port
- To keep appropriate levels of safety and security
- To provide other services incidental to the performance of its other functions or likely to enhance the usage of the port.

Section 267A(4) of TIA defines port facilities to include (but not limited to):

- Marine and port structures

- Offshore structures used for shipping purposes.

Furthermore, Section 278 sets out the powers of port authorities, which include *powers necessary or convenient for the performing of port authority functions*, together with the power:

a) to dredge and otherwise maintain or improve navigational channels in its port; and

b) to reduce or remove a shoal, bank or accumulation in its port that, in the port authority's opinion, impedes navigation in its port.

Furthermore, a port authority is not liable to pay royalties where extractive material is removed for the purposes of:

- *maintaining or improving navigational channels in its port, or to improve navigation in its port, and the material is disposed of:*
  - *in an area associated with port activities and approved by the Minister; and*
  - *under all relevant statutory environmental controls; or*
- *to reclaim land that is, or is proposed to be, strategic port land.*

Strategic Port Land

Chapter 8 of TIA establishes the regime under which port authorities operate as landowners and land managers of SPL and port facilities. Generally, port authorities are responsible for establishing, managing and operating effective and efficient port facilities and services within their port.

Under Section 285 of TIA, land use plans are required for all port authorities for the planning and development of SPL, and are the key tool for assessing development on SPL and within the SPL tidal area. Under the Planning Act, port authorities have statutory power as the assessment manager for development on SPL and within the SPL tidal area, as well as for works identified as assessable development under their port LUP.

State-controlled roads

It is a requirement that any proposed development undertaken on land or land located in close proximity to a State-controlled road (e.g. access directly or indirectly to the site via a State-controlled road) must not adversely impact the operational efficiency and/or safety of the State-controlled road network. Impacts may include new or modified accesses and development-generated traffic.

Relevance to Project

The Project is considered to be consistent with the powers and functions granted to a port authority under the TIA given that the primary purpose of the Project is to carry out dredging to improve navigational access within the Port of Gladstone.

Development on SPL and within the SPL tidal area of the Port of Gladstone is administered by GPC and regulated under the LUP 2012 (refer Section 1.9.3.6) and associated GPC Development Code.

Project reclamation works on SPL and within the SPL tidal area will be subject to approval under the LUP 2012. The proposed reclamation works on SPL and within the SPL tidal area are within the Fisherman's Landing Locality (Port Industry Precinct and Port Operations Support Precinct) and are considered to be consistent with the provisions of the LUP 2012. Notwithstanding this, it is the intention of GPC that once any non-SPL land is reclaimed, the land will be included in an amended LUP, the amended LUP will be approved, and the additional land will be gazetted as SPL under TIA, and the LUP 2012 amended to include the reclaimed area in the plan. Although outside of the current scope of the Project, any future proposed uses of this reclaimed land (that becomes gazetted as SPL) will be subject to the provisions of the revised LUP.

The Project has the potential to trigger approval requirements under TIA where construction works involve the use or access to State-controlled roads, particularly for the haulage of material. Approval requirements will however be confirmed post-EIS during the Project's detailed design phase.

1.9.2.6 Sustainable Ports Development Act 2015

Overview

The Ports Act provides a legislative framework for the protection of the GBRWHA through managing port-related development in and adjacent to the area. It actions the State's key port-related commitments of Reef 2050.

In doing this, the Ports Act responds to the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee recommendations on the Great Barrier Reef, ensuring the OUV of the GBRWHA is protected and managed, and incorporated into port development.

There are a number of ways the Ports Act facilitates sustainable development, including:

- Restricting new port development in and adjoining the GBRWHA to within current port limits and outside both the Commonwealth and State marine parks
- Prohibiting capital dredging for the development of new, or the expansion of, existing port facilities within the GBRWHA outside the identified priority ports of Gladstone, Hay Point/Mackay, Abbot Point and Townsville
- Prohibiting the sea-based placement of port-related capital dredged material within the restricted area, unless the material is beneficially reused. A restricted area includes any area within the GBRWHA but outside the GBRMP.

In addition to the above, the Ports Act also achieves its purpose by declaring the four priority ports of Gladstone, Abbot Point, Hay Point and Mackay, and Townsville, and establishing the requirement for master planning at each priority port. As part of master planning, the Ports Act seeks to also achieve its purpose in a way that includes:

- Long term planning that provides a strategic and coordinated approach to managing economic, environmental, cultural and social values in the GBRWHA
- Concentrating port development in priority ports
- Recognising the diverse functions of the port network, including trade and tourism operations
- Efficiently using port and supply chain infrastructure
- Expanding port and supply chain capacity in a staged and incremental way to meet emerging demand for imports and exports
- Identifying and protecting land and infrastructure critical to the effective operation of the port network.

Capital dredging and dredged material placement

The Ports Act allows capital dredging to occur within the priority Port of Gladstone master planned area for the purpose of:

(i) creating or enlarging a channel, basin, port, berth or other similar thing; or

(ii) removing material that is unsuitable as a foundation for a port facility; or

(iii) creating a trench for a pipe, cable or tube; or

(iv) an activity incidental to an activity mentioned in subparagraph (i) to (iii).

However, capital dredging does not include dredging carried out for the purpose of:

(i) Maintaining a channel, basin, port, berth or other similar thing for its intended use; or

(ii) Protecting human life or property.

Section 36(2) of the Ports Act requires an approving authority for development that is, or relates to, capital dredging to include a condition that material generated from capital dredging must not be deposited, or disposed of, in a restricted area (within the GBRWHA but outside the Commonwealth marine park) unless the material is beneficially reused.

Master planning for priority ports

Under the Ports Act, the Queensland Government is delivering master planning for the priority ports to meet its commitment under the Reef 2050. Priority port master planning has a timeframe up to 2050 to align with Reef 2050.

Through port master planning, the Queensland Government seeks to appropriately manage the land and marine areas needed for the effective development and operations of each of the priority ports, while ensuring that the OUV of the GBRWHA is protected and managed as part of an intrinsic consideration in port development, management and governance. The purpose of master planning for each of Queensland's priority ports is to:

- Define a long term strategic vision, objectives and desired outcomes for each port master planned area
- Identify the desired outcomes in relation to the priority ports and articulate how those desired outcomes are to be considered in all planning decisions made within each port master planned area
- Present an environmental management framework (EMF) that states priority management measures for managing potential impacts from development on environmental values in the master planned area and surrounds.

In 2016, in response to the specific master planning action under Reef 2050, the Queensland Government released a guideline for master planning for priority ports that 'optimises infrastructure and considers operational, economic, environmental and social relationships as well as supply chains and surrounding land uses'. The guideline supports the development and implementation of master plans and port overlays prescribed by Sections 7 and 19 of the Ports Act, respectively.

Relevance to Project

The Port of Gladstone is a declared priority port under the Ports Act and in late 2018, the Master plan for the priority Port of Gladstone 2018 was released by the Queensland Government. The Gladstone port master planning process is currently ongoing, with the requirement now being to prepare and implement a port overlay (the regulatory instrument that implements the master plan over the master planned area). Whilst a preliminary draft port overlay was released in 2017, a formal draft port overlay is yet to be released for public consultation in accordance with the Ports Act. Further detail regarding the Master plan for the priority Port of Gladstone 2018 is provided in Section 1.4.4.2.

The Project involves dredging and other development work wholly contained within the existing port limits of the Port of Gladstone, and within a priority port as defined in the Ports Act, for the purposes of maintaining the effective operation of existing and future port facilities. All Project capital dredged material is proposed to be beneficially reused through reclamation of intertidal land and adjoining areas.

1.9.2.7 Aboriginal Cultural Heritage Act 2003

Overview

The *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act) binds all persons, including the State, to provide recognition, protection and conservation of Aboriginal cultural heritage. Section 23 of the ACH Act states that *a person who carries out an activity must take all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage* (the 'cultural heritage duty of care'). The ACH Act is administered by the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP).

The ACH Act requires the development of a Cultural Heritage Management Plan (CHMP) if:

- A lease, licence, permit, approval or other authority is required for a project, issued under another Act, and that Act requires an environmental assessment or EIS for the project
- Under the Planning Act, a development application is required to be made for a project and the chief executive of the ACH Act is a concurrence agency.

Notwithstanding the above, Section 86 of ACH Act holds provision to exclude the requirement to develop a CHMP where an existing agreement, such as an ILUA is in place.

As part of developing and implementing a CHMP or ILUA under the ACH Act, a proponent is required to notify to the relevant Aboriginal party.

There is currently no statutory requirement for proponents to notify the relevant Aboriginal party outside of the CHMP or ILUA process.

Relevance to Project

As stated in Section 1.9.1.3, the PCCC People are the Traditional Owners and relevant Native Title Party for the Gladstone area, which includes the Port of Gladstone. An ILUA under Section 24 of the ACH Act is currently in place between GPC, the PCCC People and the State of Queensland, removing the requirement for a CHMP.

Further to this ILUA, a Protocol was entered into by the ILUA parties on 23 March 2014 to ensure the protection and management of all Aboriginal cultural heritage in the ILUA Area in relation to all port-related operations (proposed or undertaken).

The cultural heritage investigation and reporting for the Project EIS have been undertaken in accordance with the Protocol. Project activities will be undertaken in accordance with the Protocol and ILUA (refer Appendix M).

Chapter 16 (Aboriginal cultural heritage) provides details of the desktop searches of the Cultural Heritage Register and Cultural Heritage Database completed for the Project.

1.9.2.8 Fisheries Act 1994

Overview

The Fisheries Act provides for the management, use, development and protection of fish habitats and resources, together with the management of aquaculture activities. Administered by the Department of Agriculture and Fisheries (DAF), the Fisheries Act holds provisions for the following:

- Taking, causing damage to or disturbance to marine plants
- Works in a declared fish habitat area (FHA)
- Constructing or raising waterway barrier works
- Tidal water, fresh and marine aquaculture operations.

Under Section 8 of the Fisheries Act, the definition of a 'marine plant' includes the following:

- A *plant (a tidal plant) that usually grows, or adjacent to, tidal land, whether it is living, dead, standing or fallen;*
- *Material of a tidal plant, or other plant material on tidal land; and*
- *A plant or material of a plant, prescribed under a regulation or management plan to be a marine plant.*

In accordance with Schedule 10, Part 6, Division 3, Subdivision 1 of the Planning Regulation, operational work for the purposes of the above activities is assessable development, and for which a development permit is required.

To support implementation of the Fisheries Act, a number of fish habitat policies have been developed which aim to ensure the long term protection and enhancement of marine plants and fish habitats along Queensland's coast. The policies document management objectives for development assessment and seek to maintain state wide consistency. Current relevant fisheries policies include:

- FHMOP 001: Management and protection of marine plants and other tidal fish habitats (November 2007)
- FHMOP 004: Dredging, extraction and spoil disposal activities (July 1998).

Fish Habitat Management Operational Policy FHMOP 001 – Management and Protection of Marine Plants and other Tidal Fish Habitats

This operational policy supports the role of DAF in delivering the Queensland Government's priority of protecting the environment for a sustainable future by protecting and managing marine plants and other tidal fish habitats. This policy contains background information on the protection and management of marine plants and other tidal fish habitats, policies relating to assessment of development activities and management of related impacts and a description of how to apply the policy.

There are five policy principles outlined within the policy which apply to decisions made when assessing applications for fisheries approvals covered by the policy. These are:

- The proper management, use and protection of Queensland's fisheries resources
- Ensuring the strategic management of marine plant communities
- Adopting a risk management approach for marine plants and other tidal fish habitats in relation to low impacts development works
- Promoting public awareness of the protection, diversity, role and value of Queensland's marine plant community and other tidal fish habitats.

Fish Habitat Management Operational Policy FHMOP 004 – Dredging, Extraction and Spoil disposal activities

This operational policy was prepared in 1998 and details DAF procedures for the provision of fisheries comments in relation to dredging, extraction and spoil disposal activities to guide DAF in the assessment and provision of these activities. Whilst not a statutory instrument, this operational policy seeks to ensure the protection of Queensland's fisheries resources and habitat while contributing to ecologically sustainable industry and economic development.

Relevance to Project

The Project will result in the temporary and permanent disturbance of marine plants, and will therefore trigger the requirement to obtain a Development Permit for Operational Works that are the removal, destruction or damage of a marine plant. The application will trigger assessment by the State (DAF) which will require consideration of the relevant DAF operational policies.

The need for the Project to obtain approval for waterway barrier works (temporary and or permanent works, such as works associated with the crossing between the northern and southern reclamation areas) will be confirmed during the detailed design phase of the Project.

1.9.2.9 Land Act 1994

Overview

The *Land Act 1994* (Qld) (Land Act) regulates the management of land in Queensland for the benefit of the people by having regard to seven key principles: sustainability, evaluation, development, community purpose, protection, consultation and administration. The Land Act is administered by the Department of Natural Resources, Mines and Energy (DNRME) and applies to all land throughout the State, including land that is, whether permanently or from time to time, covered by water subject to tidal influence.

The tidal environment

Under Section 9 of the Land Act, if land has a boundary that is a tidal boundary, then the boundary of the land is defined by the high water mark. Land that is therefore on the same side of the boundary as the water subject to tidal influence is the property of the State and is dealt with as USL, unless a registered interest is held by someone else.

Strategic Port Land

Under Section 126 of the Land Act, if land above high water mark is needed as SPL for a port authority, the port authority may be given, without competition, either a lease or deed of grant over the land. However, where the land is needed as SPL for a port authority and is located below high water mark, the port authority may only be given, without competition, a lease.

Reclamation

Under Section 127 of the Land Act, land that is in the ownership of the State of Queensland that becomes raised above high water mark as a result of the carrying out of works on or in proximity to the land remains under the ownership of the State and may be dealt with as USL unless:

- *A person has reclaimed the land under the authority of an Act-*
  - *The Governor in Council may issue to the person, without competition, a deed of grant over all or part of the land; or*
  - *The Minister may issue to the person, without competition, a lease over all or part of the land.*
- *When granting the reclaimed land, the Governor in Council or Minister may amalgamate the land granted with an adjoining tenure held by the person*
- *If the reclaimed land is already held under lease, the lease must be surrendered before a new lease or deed of grant is issued.*
- *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.*

- *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.*
- *If a deed of grant is issued, the purchase price is-*
  - *The purchase price stated in the permission to reclaim the land or in the lease; or*
  - *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 in the way prescribed by the regulation.*
- *The person may appeal against the Minister's decision on the amount of the unimproved value*.

Relevance to Project

The areas to be dredged are wholly contained on USL within the Port of Gladstone. Where dredging is proposed on USL by a port authority under the provisions of Section 278 of the TIA (i.e. power to undertake dredging and otherwise maintain or improve navigation channels in its port) no formal tenure is required under the Land Act.

In addition to the areas to be dredged, the majority of the footprint of the BUF and the WBE reclamation area are identified as being located on land below the high water mark that is USL owned by the State of Queensland.

Following the EIS process, GPC will be required to apply for a lease over the USL to support evidence of tenure and the granting of owner's consent from the State under the Land Act to support the making of development applications associated with the BUF and the WBE reclamation area. The timeframe for the BUF and the WBE reclamation area lease will be 20 to 30 years due to the potential for other Port capital dredging campaigns to utilise the area.

A portion of the BUF and the WBE reclamation area, along with the placement of dredged material within the WB reclamation area is proposed on land that is currently owned by the State, and is subject to existing lease arrangements held by GPC.

Under the provisions of the Land Act, the reclaimed land remains under the ownership of the State, with the existing leases being required to be surrendered before any new lease or freehold title is granted. Tenure arrangements will be finalised by GPC post-EIS process and prior to dredging and reclamation works commencing.

1.9.2.10 Marine Parks Act 2004

Overview

The *Marine Parks Act 2004* (Qld) (MP Act) provides a framework for the management and protection of the marine environment outside Commonwealth waters and under the jurisdiction of the State. The GBR Coast MP is located between the boundaries of highest astronomical tide (HAT) and the Commonwealth marine park (i.e. Mean Low Water Mark (MLMM)). The GBR Coast MP commenced in November 2004 as an amalgamation of the previous four individual marine parks in the Great Barrier Reef region. The MP Act is administered by the DES.

Relevance to Project

As the proposed dredging and reclamation works for the Project will not occur within the GBR Coast MP, a permit under the MP Act will not be required.

Information on GBR Coast MP zoning, adjoining Port Curtis is provided in Chapter 9 (nature conservation).

1.9.2.11 Nature Conservation Act 1992

Overview

The *Nature Conservation Act 1992* (Qld) (NC Act) provides for the conservation of nature whilst allowing for the use and enjoyment of protected areas by the community, involvement of Aboriginal people in the management of protected areas and the social, cultural and commercial use of protected areas consistent with the values of the areas. The NC Act is administered by DES.

The NC Act seeks to achieve its objective through an integrated and comprehensive State-wide conservation strategy that involves:

- Gathering of information and community education
- Dedication and declaration of protected areas
- Management of protected areas, in accordance with management principles, intent and management plans
- The use of protected wildlife and areas in an ecologically sustainable manner
- Recognition of Aboriginal and Torres Strait Islander interests in protected areas and wildlife, and their cooperation in nature conservation efforts
- Cooperative involvement of landholders.

The NC Act hold provisions to conserve, protect or manage wildlife, habitat or areas to ensure the survival of viable populations, particularly endangered, vulnerable and near threatened (EVNT) species, and to identify and reduce or remove the effects of threatening processes.

Authorisations are required under the NC Act for any proposed clearing which impacts EVNT species (clearing permit), any proposed clearing within a mapped 'flora survey trigger map' for which no impact to EVNT species will occur (exempt clearing notification) as well as the tampering of an animal breeding place (low risk or high risk species management program), interfering with a cultural or natural resource in a protected area or erecting a structure in a protected area.

Clearing of native vegetation

If the flora survey identifies the presence of EVNT plants in the clearing impact area, a clearing permit is required before any potential clearing. A clearing permit authorises the clearing of an area of land rather than an individual species of plant present.

If the flora survey does not identify any EVNT plants within the clearing area and the area is on the flora survey trigger map, , a clearing permit is not required, however an exempt clearing notification must be submitted to DES within one year of the survey being undertaken and at least one week prior to clearing.

Tampering with animal breeding places

Section 332 of the *Nature Conservation (Wildlife Management) Regulation 2006* contains provisions where a person must not, without a reasonable excuse, tamper with an animal breeding place that is being used by a protected animal to incubate or rear the animal's offspring.

A Species Management Program (SMP) is required where an animal breeding place has been identified and activities are required to tamper with the breeding place in order to complete the works and should be approved by DES prior to Project works.

Protected areas

Protected areas under the NC Act include:

- National parks (scientific)
- National parks
- National parks (Aboriginal land)
- National parks (Torres Strait Islander land)
- National parks (Cape York Peninsula Aboriginal land)
- Conservation parks
- Resources reserves
- Nature refuges
- Coordinated conservation areas.

Relevance to Project

The EIS field investigations indicated the presence of Water mouse (*Xeromys myoides*) (listed as Vulnerable under the NC Act) within the potential Project indirect impact areas. It is unlikely that the Project will trigger an approval of a SMP, however this is to be confirmed during Project detailed design phase.

Additional information on matters relevant to the Project under the provisions of the NC Act, including approval requirements is provided in Chapter 9 (nature conservation).

1.9.2.12 Environmental Offsets Act 2014

Overview

The Offsets Act and associated *Environmental Offsets Regulation 2014* (Qld) (Offsets Regulation) seeks to *counterbalance the significant residual impacts of particular activities on prescribed environmental matters through the use of environmental offsets*. The Offsets Act is administered by DES, and establishes a framework to regulate the delivery of offsets in Queensland, integrating the previous multiple sets of policies in a manner which provides an outcome based approach and reducing duplication.

Under the Offsets Act, an environmental offset is defined as *an activity undertaken to counterbalance a significant residual impact of a prescribed activity on a prescribed environmental matter*. The Act defines the type of activities for which offsets may be imposed (i.e. 'prescribed activities') where these activities are determined to result in a 'significant residual impact', and requires that an environmental offset must achieve a conservation outcome for the impacted prescribed environmental matter.

To achieve the purpose of the Offsets Act, the *Queensland Environmental Offsets Policy* (Version 1.6, June 2018 or later) (Offsets Policy) has been developed to provide further guidance on the requirements for the assessment of 'significant residual impacts', and accepted methods for the delivery of offsets, where required.

Relevance to Project

'Prescribed environmental matters' for which offsets may be imposed are outlined in Section 5 and Schedule 2 of the Offsets Regulation, and include the following triggers applicable to the Project:

- MNES:
  - A declared World Heritage property within the meaning of the EPBC Act

  - A Threatened Species within the meaning of the EPBC Act
  - A Migratory Species within the meaning of the EPBC Act
  - A National Heritage Place within the meaning of the EPBC Act
- Matters of State environmental significance (MSES)
  - A wetland of high ecological significance shown on the map of referable wetlands
  - A marine plant within the meaning of the Fisheries Act.

'Prescribed activities' for which offsets may be imposed are outlined in Schedule 1 of the Offsets Regulation, and include the following triggers applicable to the Project:

- A prescribed ERA under the EP Act
- Taking a protected plant within the meaning of the NC Act under a protected plant clearing permit approved under the NC Regulation in an area outside a protected area
- Development for which an offset may be required under the SDAP.

It is noted that whilst the Offsets Act identifies provision for offsetting protected MNES under the EPBC Act, Section 15 of the Offsets Act also restricts the State from imposing an offset condition for a matter which relates to an existing Commonwealth offset condition.

1.9.2.13 Queensland Heritage Act 1992

Overview

The *Queensland Heritage Act 1992* (Qld) (Heritage Act) seeks to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations and is administered by DES. In its functions, the Heritage Act regulates development in Queensland heritage places and local heritage places, the discovery and protection of archaeological artefacts and underwater cultural heritage artefacts. The Heritage Act also establishes the Queensland Heritage Council, together with the keeping of the Queensland Heritage Register, local heritage registers and the provision of heritage management agreements.

Under the Heritage Act, an archaeological artefact is any artefact that is evidence of an aspect of Queensland's history, whether it is located in, on or below the surface of land, but which does not include an artefact protected under the ACH Act or *Torres Strait Islander Cultural Heritage Act 2003* (Qld). Furthermore, the Heritage Act defines an underwater cultural heritage artefact to include any historic aircraft wreck, historic shipwreck and/or historic underwater article that is located in Queensland waters and for which has been in the waters for at least 75 years.

Under the Heritage Act, it is an offence for any person to interfere with an archaeological artefact or underwater cultural heritage artefact without the chief executive's written consent or reasonable excuse. Furthermore, where a person discovers a thing that the person knows or ought reasonably to know is an archaeological artefact or underwater cultural heritage artefact, that person must notify the chief executive as soon as practicable.

Relevance to Project

The Project will not have an impact on Queensland heritage places or local heritage places, and therefore a permit under the Heritage Act will not be required. Additional information on non-Aboriginal cultural heritage and relevance to the Project is provided in Chapter 17 (non-Aboriginal cultural heritage). The Project will be required to comply with the requirement to give notice under the Heritage Act in the instance that a discovery is made.

1.9.2.14 Transport Operations (Marine Pollution) Act 1995

Overview

The *Transport Operations (Marine Pollution) Act 1995* (Qld) (TOMPA) seeks to protect Queensland's marine and coastal environment by minimising deliberate and negligent discharges of ship-sourced pollutants into coastal waters. The TOMPA is administered by MSQ within the DTMR.

The key objectives of the TOMPA include providing an approach to protecting Queensland's marine and coastal environment from ship-sourced pollutants (including oil, noxious liquid substances, sewage and garbage) that:

- Compliments international standards and the approach of the Commonwealth and States
- Establishes regulations to prevent and control the discharge of ship-sourced pollutants
- Imposes obligations on all ship owners and masters to exercise responsibility for the marine environment by ensuring the containment of all specified pollutants onboard and their appropriate disposal.

The associated *Transport Operations (Marine Pollution) Regulation 2008* (Qld) (TOMP Regulation) provides the practical application of these and other objectives to allow the maritime industry and boating community to meet their obligations. Specifically, it highlights the reporting responsibilities of a vessel master to notify the Harbour Master where there is a spill to the marine environment.

Relevance to Project

No specific approval or permitting requirements apply to the Project under TOMPA, however all maritime shipping operations, including the operation of dredgers during dredging works will be required to comply with the provisions of TOMPA with respect to the prevention and management of marine pollution.

1.9.2.15 Transport Operations (Marine Safety) Act 1994

Overview

The overall objective of the *Transport Operations (Marine Safety) Act 1994* (Qld) (TOMSA) is, consistent with the objectives of the *Transport Planning and Coordination Act 1994* (Qld), to provide a system that achieves balance between regulation of the maritime industry to ensure marine safety, whilst enabling the effectiveness of efficiency of the Queensland maritime industry to be further developed. TOMSA is administered by MSQ through DTMR.

In addition to this overall objective, TOMSA also seeks to allow Government to have a strategic overview of marine safety and operational issues, as well as provide for a system under which marine safety and operational issues can be effectively dealt with through appropriate planning, management, efficiency and accountability.

The TOMSA seeks to achieve this overall objective through imposing general safety obligations to manage the operation and activities of ships, establish procedures and reporting requirements for marine incidents, and ensure seaworthiness and other aspects of marine safety.

Under TOMSA, the Regional Harbour Master (Gladstone) may give direction where necessary to ensure the safety and the effectiveness and efficiency of the Queensland maritime industry, and which applies to all ship owners, ship masters, ships, other persons or matters.

Relevance to Project

The Project will trigger approval under TOMSA associated with the installation of new and relocated navigational aids within the Port of Gladstone. Furthermore, all shipping operations, including the operation of dredgers will be required to comply with the maritime safety requirements prescribed under the TOMSA. This includes the Port Procedures and Information for Shipping for the Port of Gladstone (2018 or as amended).

1.9.2.16 Maritime Safety Queensland Act 2002

The *Maritime Safety Queensland Act 2002* (Qld) establishes MSQ and empowers it to monitor and manage maritime safety, security and navigation as well as respond to and investigate marine incidents and discharges of ship-sourced pollutants into coastal waters. The Act also enables MSQ to give function to port authorities in relation to providing or arranging the provision of, pilotages services in particular compulsory pilotage areas.

Queensland Coastal Contingency Action Plan 2018

MSQ is the control agency responsible for coordinating response activities in relation to maritime environmental emergencies within Queensland waters. MSQ undertakes this role through implementing the Queensland Coastal Contingency Action Plan (QCCAP). In this regard, the QCCAP outlines Queensland's prevention, preparation, response and recovery arrangements for a maritime casualty and/or marine pollution incident (oil and/or chemical spill) and marine pollution incidents under Queensland's state disaster management arrangements. QCCAP applies to events that occur in:

- Queensland coastal waters, including gazetted port limits
- Waters of the GBRMP as defined under the MP Act
- Waters of the Torres Strait Protected Zone.

Included within the QCCAP is a detailed prevention, preparation, response and recovery model, an incident management system, oiled wildlife response plan, first strike response plans and area specific plans for ports and other selected areas. Standards for hydrographic surveys within Queensland waters.

MSQ has developed required standards for hydrographic surveys within Queensland waters in consultation with all Queensland port authorities. These standards have been developed to ensure that all users select the survey class, survey interval and personnel required to guarantee that the declared depth may be confidently used by MSQ and port authorities to effectively and safely manage the ports and waterways of Queensland.

Relevance to Project

The Project will be required to comply with the QCCAP, including directions from MSQ and the Regional Harbour Master (Gladstone) in the instance of a marine pollution incident. Furthermore, all final hydrographic surveys for the Project will be required to comply with MSQ's standards for hydrographic surveys.

1.9.2.17 Vegetation Management Act 1999

Overview

The *Vegetation Management Act 1999* (Qld) (VM Act) regulates the clearing of vegetation in a manner that conserves and manages vegetation communities. The VM Act holds provisions for the conservation of Regional Ecosystems (REs) which are defined as a vegetation community in a bioregion that is consistently associated with a particular combination of geology, land form and soil. The VM Act is administered by DNRME.

The VM Act seeks to conserve vegetation that is classified as Endangered, Of Concern or Least Concern, as well as conserve vegetation in declared areas, prevent land degradation, loss of diversity, maintain ecological processes, reduce greenhouse gas emissions and allow for sustainable land use. There are a series of maps that determine what vegetation is regulated and where clearing may not take place.

The VM Act does not apply to the clearing of vegetation on:

- A forest reserve under the NC Act
- A protected area under Section 28 of the NC Act
- An area declared as a State forest or timber reserve under the *Forestry Act 1959* (Qld)
- A forest entitlement area under the Land Act.

Relevance to Project

The Project's indirect impact area encroaches on mapped remnant vegetation analogous with intertidal communities, which is listed as Least Concern vegetation under the VM Act. The Project's direct impact areas do not encroach on any mapped remnant terrestrial vegetation communities. There is potential for impact areas to encroach on mapped remnant vegetation. It is unlikely that the Project will trigger a permit for clearing of native vegetation, however this is to be confirmed during the Project detailed design phase.

Additional information on matters relevant to the Project under the provisions of the VM Act, including approval requirements is provided in Chapter 9 (nature conservation).

1.9.2.18 Water Act 2000

Overview

The *Water Act 2000* (Qld) (Water Act) provides for the sustainable management of non-tidal waters and other resources, together with the establishment and operation of water authorities, and for other purposes.

Under the Planning Act DA Rules, certain types of water related development are assessable under the Water Act and require assessment and approval under the Planning Act (as operational works). This includes approval for most works proposed within a defined watercourse (i.e. pumps, gravity diversion, stream diversion, weirs, barrages and dams).

Under the Water Act, a watercourse is defined as:

> *A river, creek or other stream, including a stream in the form of an anabranch or a tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events-*
>
> - *In a natural channel, whether artificially modified or not; or*
> - *In an artificial channel that has changed the course of the stream.*

In addition to the approvals triggered under the Planning Act, the Water Act regulates the taking or interfering with water (Water Licence). Furthermore, under the Water Act, the undertaking of works that involve the removal of vegetation, excavating or placing fill in a watercourse, lake or spring require a Riverine Protection Permit to authorise the works unless a relevant exemption applies.

Relevance to Project

Works proposed as part of the Project do not involve any works within a defined watercourse and as such the provisions of the Water Act do not apply.

1.9.2.19 Biosecurity Act 2014

Overview

The *Biosecurity Act 2014* (Qld) (Biosecurity Act) commenced on 1 July 2016, repealing the provisions of a number of existing Acts with respect to the management and impacts of animals and plant diseases and pests, including the *Plant Protection Act 1989* (Qld)*, Land Protection (Pest and Stock Route Management) Act 2002* (Qld) and Fisheries Act to provide a single cohesive legislative framework for biosecurity in Queensland.

The Biosecurity Act introduces the General Biosecurity Obligation upon all persons to take all reasonable and practical measures to prevent or minimise biosecurity risks. Additionally, the Biosecurity Act identifies seven categories of restricted matter (which include for example, diseases, viruses or parasites, invasive animals or plants, noxious fish, insect pests). Where activities are proposed contrary to the restriction for each category under the Biosecurity Act, a Restricted Matter Permit is required.

Queensland Biosecurity Strategy 2018-2023

The Queensland Biosecurity Strategy: Our next five years (2018 to 2023) has been endorsed by the Queensland Government. The objectives for the strategy are to prevent exotic pests and diseases from entering or spreading or becoming established in Queensland, ensure pests and diseases are contained, suppressed or managed, ensure Queensland's high quality trade is maintained, protect Queensland ecosystems and prepare for new pest and disease incursions.

Six strategic themes were identified to underpin the vision for the system over the next five years.

Relevance to Project

The movement of equipment, material and vehicles during the establishment of the BUF and WBE reclamation area has the potential to result in the introduction or spread of weed and pest species (including diseases which may impact on fauna species). The site preparation activities associated with establishment of the BUF and WBE reclamation area have the potential to result in the spread of existing weeds within the local area and may also introduce new declared weeds or pests into reclamation area and immediate surrounds.

Three invasive flora species listed under the provisions of the Biosecurity Act were recorded within the Project impact areas during EIS field investigations. A further 24 exotic flora species have been recorded within the Project impact areas during EIS field investigations. The movement of equipment, material and vehicles may inadvertently introduce and spread weed and pest species present within the Project impact areas across the region.

The Red imported fire ant (*Solenopsis invicta*) is a notifiable pest species under the provisions of the Biosecurity Act and a Category 1 restricted matter under the provisions of the Biosecurity Act. Consequently, landholders must report suspected sightings of Red imported fire ants to Biosecurity Queensland within 24 hours of the sighting.

The previous fire ant restriction areas declared within Yarwun, Callemondah, Targinnie and Curtis Island in Gladstone were removed in 2016, and restriction of the movement of potential fire ant carrying material has been lifted (DAF 2016). There are no fire ant biosecurity zones within the Project impact areas.

1.9.3 Relevant plans, policies and guidelines

1.9.3.1 Great Barrier Reef Biodiversity Conservation Strategy 2013

Overview

The *Great Barrier Reef Biodiversity Conservation Strategy 2013* has been developed to respond to the pressures identified in the *Great Barrier Reef Outlook Report 2009* and biodiversity declines. The *Great Barrier Reef Biodiversity Conservation Strategy 2013* provides a context on the Reef, its biodiversity and the threats acting upon it, it provides a framework for biodiversity protection, conservation and management within the Reef. A process for determining and documenting the habitats, species and groups of species that are potentially at risk are established by the *Great Barrier Reef Biodiversity Conservation Strategy 2013*. To reduce the impacts on biodiversity, vulnerability assessments have been completed to identify actions.

Three objectives form the basis of the *Great Barrier Reef Biodiversity Conservation Strategy 2013*, including:

- Engaging communities and fostering stewardship to facilitate and support best practice approaches to ensure the long term protection and management of the Great Barrier Reef Region
- Building ecosystem resilience in a changing climate by reducing the threats to potentially at risk elements of biodiversity, especially those found in inshore areas
- Maximise the opportunities for habitats and species to adapt by improving our knowledge about habitats, species, groups of species, ecological processes and cumulative impacts, and then using this information to improve management outcomes.

Relevance to Project

The Project is located in habitats which are considered to contain potentially at risk species or group of species. As such the Project impact assessment and mitigation measures will be consistent with the objectives of the *Great Barrier Reef Biodiversity Conservation Strategy 2013.*

1.9.3.2 Reef 2050 Long-Term Sustainability Plan

Overview

Reef 2050 is a comprehensive plan developed to secure the health and resilience of the Great Barrier Reef and protect the OUV of the GBRWHA. Released by the Australian and Queensland Governments on 21 March 2015, Reef 2050 presents actions to protect the values, health and resilience of the Reef, while supporting ESD.

The Reef 2050 Plan incorporates the following four elements:

- A vision for the GBRWHA that reflects the diversity of use and interest in the property, protects the OUV of the GBRWHA, sustains its integrity and integrates the three pillars of sustainability (environmental, social and economic)
- An outcomes framework that includes desired outcomes and targets for protection of the OUV of the GBRWHA

- Adaptive management actions to deliver outcomes and targets (primarily drawn from the two strategic assessments and with a focus on critical areas of new work)
- Integrated monitoring and reporting programs to measure the success of the plan.

The Reef 2050 commits to limiting port-related capital dredging in the GBRWHA to the priority ports of Gladstone, Hay Point/Mackay, Abbot Point and Townsville. Additionally, the Reef 2050 supports the prohibition of sea-based placement of capital dredged material in the restricted area.

Draft Reef 2050 Water Quality Improvement Plan

In 2017, the Australian Government released the draft Reef 2050 Water Quality Improvement Plan. The new plan aligns with the Reef 2050 Plan and in doing so seeks to improve the water quality flowing from the catchments adjacent to the Great Barrier Reef. The draft plan seeks to achieve this through:

- Applying minimum practice standards across all industries and land uses
- Supporting industries and communities to build a culture of innovation and stewardship that takes them beyond minimum standards
- Restoring catchments through works to improve or repair riparian vegetation, streambanks, gullies, waterways and wetlands.

Relevance to Project

The Project is consistent with the objectives of Reef 2050 which are given legislative effect through the Ports Act and GBRMP Act in relation to the limiting of port-related capital dredging in the GBRWHA to priority ports such as Gladstone. Furthermore, the Project is consistent with the Reef 2050's support of the prohibition of sea-based placement of capital dredged material in the restricted area (except where placement is supported in relation to beneficial reuse, such as land reclamation).

1.9.3.3 State Planning Policy

Overview

The State Planning Policy (SPP) is a key component of the Queensland land use planning system which expresses the state's interest (as defined under the Planning Act) in land use planning and development.

The SPP defines the Queensland Government's state interests in land use planning and development which notably includes strategic ports, strategic airports and state transport infrastructure. The SPP Strategic Ports state interest not only seeks to protect key transport corridors to ports and protect ports from encroachment by incompatible development, it also seeks to protect sensitive uses from port generated emissions.

The SPP is a statutory instrument and requires that the 17 SPP state interests be integrated into local government plan making through local government planning schemes and is considered by regional plans. Additionally, some state interests in the SPP include assessment benchmarks that apply to certain types of development where a planning scheme does not appropriately integrate the relevant state interest. Importantly, the SPP does not prioritise one state interest over another at a state wide level. Instead, it acknowledges that the way in which state interests need to be applied is variable between and within regions and local government areas, and depends on environmental, economic, cultural and social factors (Queensland Government 2017).

Included within the SPP is the state interest for strategic ports, which requires that the '*operation of strategic ports and priority ports is protected and their growth and development is supported'.* The state interest applies to all local government areas that contain or are impacted by one or more of the 15 strategic ports and priority ports identified under the Ports Act. To support achievement of the strategic ports state interest, the SPP requires that all of the following state interest policies be appropriately integrated into planning and development outcomes, where relevant:

1. Strategic ports, and associated SPL and core port land, are identified
2. Development complements the role of a strategic port as an economic, freight and logistics hub, and enhances the economic opportunities that are available in proximity to a strategic port
3. Strategic ports are protected from development that may adversely affect the safety, viability or efficiency of existing and future port operations
4. Development is located and designed to mitigate adverse impacts on the environment, including emissions generated by port activities
5. Key transport corridors (including freight corridors) linking strategic ports to the broader transport network are identified and protected
6. Statutory land use plans for strategic ports and the findings of planning and environmental investigations undertaken in relation to strategic ports are considered.

Additionally, the SPP also requires that priority ports ensure:

7. Development is also consistent with the requirements of a priority port master plan and port overlay under the Ports Act.

Relevance to Project

Whilst no components of the Project are assessable under the provisions of a local government planning scheme, State approval requirements will trigger the chief executive of DSDMIP as a Referral Agency for a number of applications. As such, relevant provisions of the SPP will required to be addressed as part of the supporting application materials to be submitted, and will be considered in the assessment process.

1.9.3.4 Central Queensland Regional Plan

Overview

The Central Queensland Regional Plan (CQRP) commenced on 18 October 2013 as a statutory regional plan covering five local government areas, including the GRC LGA.

The purpose of the CQRP is to provide strategic direction and key regional policies to deliver regional outcomes which align with the State's interests in planning and development articulated through the SPP. Specifically, the regional policies seek to address the emerging regional issue of land use competition between the agricultural and resources sectors, and the need to protect areas required for the growth of towns.

Chapter 5 of the CQRP recognises that the region's freight network of roads, rail, ports and aviation are a key facilitator of economic growth, particularly for the export-based resources and agriculture sectors. It also recognises the cumulative impacts of resource projects placing increased pressure on major freight networks across all modes, and in response to this identifies priority infrastructure outcomes for infrastructure that supports economic growth which are focussed on:

- Prioritising transport programs to improve freight networks noting demand from the region's coal basins
- Improving network reliability and condition

- Developing improved modelling and the identification of future issues
- Achieving community benefits associated with improved accessibility, safety and amenity.

The CQRP identifies the Port of Gladstone as the second largest port in the State, with expansion of coal export capacity being the main opportunity for leveraging port infrastructure to boost economic growth.

Relevance to Project

The Project seeks to expand and improve maritime access and navigation, promoting and improving two-way shipping passage within the Port of Gladstone, and as such is considered to be consistent with the CQRP.

1.9.3.5 GPC Strategic Plan

Overview

The key objective of the GPC Strategic Plan is to support the development of the Port of Gladstone in a systematic and sustainable manner so as to facilitate the continued growth of trade. Originally published in 1992, the Strategic Plan has undergone a number of reviews and updates (in 2008 and 2012). The current Strategic Plan (July 2012) incorporates the full scope of the Western Basin 30 Year Master Plan, which is a statutory instrument under the SDPWO Act.

The Strategic Plan recognises the Port of Gladstone as a one of Australia's finest natural deep water harbours, and identifies the key centres and existing infrastructure within the Port, together with planned development and expansions, and key economic and environmental considerations. The Strategic Plan is not a statutory instrument, but rather a document which sets out GPC's vision for the Port of Gladstone for the next 50 years.

The Strategic Plan identifies the duplication of the Gatcombe and Golding Cutting Channels as proposed development to facilitate an increase in industrial demand and mitigate risk associated with additional and larger vessels utilising the channels.

Relevance to Project

The Project is consistent with the intent of the Strategic Plan given that the plan includes key reference to the duplication of the Gatcombe and Golding Cutting Channels. Whilst the Strategic Plan does not specify dredging volumes or dredged material placement options to support the primary dredging activity, the proposed area to be dredged is considered to be consistent with the indicative dredging footprint in the Strategic Plan.

1.9.3.6 Gladstone Ports Corporation Land Use Plan 2012

Overview

The LUP 2012 was gazetted on 9 March 2012 and has effect as an assessment benchmark under the TIA. The LUP 2012 applies to all GPC SPL within the Port of Gladstone and Port Alma, with its purpose being to provide a strategic framework for the management and assessment of development on SPL.

New development proposed on SPL is assessed by GPC as the assessment manager, in accordance with the provisions of the Planning Act and the LUP 2012. Whilst development on SPL is exempt from the provisions of local government planning schemes, the assessment of proposed development on SPL that is also within the GSDA is still required under the GSDA Development Scheme where it involves a MCU.

Development that is not assessable under the Planning Act may still be assessable under the TIA triggering a Port Development Application to be assessed under the LUP 2012 and the GPC Development Code 2012.

Relevance to Project

The Project reclamation works include a portion located on SPL and within the SPL tidal area, therefore the proposed WBE reclamation area will trigger the requirement for a Port Development Approval under the LUP 2012

The portion of the BUF and WBE reclamation area that is located on SPL is within the Fisherman's Landing Locality (Port Industry Precinct and Port Operations Support Precinct) and the proposed works are considered to be consistent with the provisions of the LUP 2012. Project approval requirements within SPL and the SPL tidal area will be confirmed during the Project detailed design phase following the finalisation of bund wall material source locations and transport routes.

Notwithstanding this, it is the intention of GPC that once any non-SPL land is reclaimed, the land will be included in an amended LUP, the amended LUP will be approved, and the additional land gazetted as SPL under the TIA. Although outside of the current scope of the Project, any future proposed uses of this reclaimed land (that becomes gazetted as SPL) will be subject to the provisions of the revised LUP.

1.9.3.7 Gladstone Regional Council Planning Scheme 2015

Overview

The Gladstone Regional Planning Scheme (GRC Planning Scheme) commenced on the 12 October 2015 and has an effect as a statutory instrument under the Planning Act. The GRC Planning Scheme sets outs GRC's intention for the future development over the next 14 years to 2031. The GRC Planning Scheme seeks to advance the State and regional policies (i.e. SPP and CQRP) through a more detailed local response. The GRC Planning Scheme provides GRC as the assessment manager, assessment benchmarks to assess development across the region.

Relevance to Project

The location and relevance of the GRC LGA in relation to the Project components is provided in Chapter 3 (land use and tenure). The Project reclamation and dredging works will not trigger approval under the GRC Planning Scheme. The need for an approval under the GRC Planning Scheme for sourcing the bund wall rock material will be confirmed during the detailed design phase of the Project.

1.9.3.8 Gladstone State Development Area Development Scheme 2015

Overview

The GSDA Development Scheme was first gazetted in 2000 and has effect as a statutory instrument under the SDPWO Act, regulating land use within the GSDA across various land use designation areas. The key objectives of the GSDA Development Scheme include, but are not limited to:

- *Use land efficiently and minimise adverse impacts on infrastructure, infrastructure corridors and future development opportunities*
- *Adequately serviced by linear infrastructure and maximise the safe and efficient use of existing and future linear infrastructure*
- *Ensure the integrity and functionality of the GSDA is maintained and protected from incompatible land uses*

- *Avoid or minimise adverse impacts on surrounding uses*
- *Ensure development recognises and protects environmental, cultural heritage and community values.*

Under the GSDA Development Scheme, no person may carry out a development that is for a MCU of premises in the GSDA without the approval of the Coordinator-General, unless an exemption applies. Where the proposed development is for development other than a MCU (e.g. operational work), the Planning Act applies.

Relevance to Project

The Project will not trigger approval under the GSDA Development Scheme.

1.9.4 List of approvals required

Table 1.16 provides a summary of the likely approvals required by the Project.

For the purpose of the Project EIS and the State Government assessment of the EIS under the SDPWO Act, the following approval types and associated draft conditions are sought by GPC within the Coordinator-General's report:

- Development Permit for a MCU involving ERA 16 (Extractive and Screening Activities) (Concurrence ERA) for threshold 1(d) dredging, in a year, more than 1,000,000t of material
- Development Permit for Operational Works involving the removal, destruction or damage of marine plants (temporary and permanent disturbance)
- EA for a prescribed ERA (ERA 16)
- Preliminary Approval for Operational Works that are Tidal Works (undertaken by a port authority) and Works within a CMD (constructing bund walls, sheet pile walls or similar earth retaining structure, and the placement of dredged material in tidal water (reclamation works))
- Allocation of Quarry Material (Allocation Notice) under the Coastal Act.

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Table 1.16 Summary of likely approvals required for the Project

Legislation	Administering authority	Development action/trigger	Approval	Portion of works
Commonwealth				
EPBC Act	DoEE	Undertaking any action which has, will have or is likely to have a significant impact on a MNES	**Controlled Action approval** under Section 130 of the EPBC Act Relevant controlling provisions include: ■ World heritage properties (Sections 12 and 15A) ■ National heritage places (Sections 15B and 15C) ■ Listed threatened species and communities (Sections 18 and 18A) ■ Listed migratory species (Section 20 and 20A) ■ Commonwealth marine areas (Sections 23 and 24A) ■ Great Barrier Reef Marine Park (Sections 24B and 24C).	All works
NT Act	Attorney-General's Department	Development on land subject to Native Title	Implementation of GPC's existing **ILUA** and associated **Cultural Heritage Protocol**	All works on land other than freehold land
Sea Dumping Act	DoEE	Placement of dredged material at sea	**Sea Dumping Permit**	Future maintenance dredged material placement
State				
SDPWO Act	DSDMIP	Undertaking a Project that is declared a 'coordinated project'	**Coordinated project approval (Coordinator-General's report)** Including stated conditions and preliminary approval for: ■ MCU for ERA 16 – Extractive Activities (Concurrence ERA) (threshold 1(d)) under the Planning Act ■ Operational Works that are Tidal Works and Works within a CMD under the Planning Act ■ EA for ERA 16 (threshold 1(d)) under the EP Act	All works
Land Act	DNRME	Proposing works on land not owned by the proponent, including USL	**Evidence of Tenure**	Reclamation works

Legislation	Administering authority	Development action/trigger	Approval	Portion of works
Coastal Act	DES	Removing quarry material from land under tidal water that is State coastal land and placement of the material on land above the high water mark	**Allocation of Quarry Material (Allocation Notice)**	Dredging works
Coastal Act and the Planning Act	DSDMIP	Works that involve activity in, above or on land under tidal water Works within a CMD (disposing of dredged material, or other solid waste material, in tidal water)	**Development Permit for Operational Works** that are Tidal Works (undertaken by a port authority) and Works within a CMD (bund wall construction, sheet pile wall or similar earth retaining structure construction, and placement of dredged material in tidal water (reclamation))	Dredging works WBE reclamation bund wall construction and BUF sheet pile wall or similar earth retaining structure construction Reclamation works
EP Act	DES	Undertaking an ERA prescribed under Schedule 2 of the EP Regulation: ■ ERA 16 – Extractive and Screening Activities (threshold 1(d))	**EA** for a prescribed ERA (ERA 16)	Dredging works Quarrying operations (to be confirmed during Project detailed design phase)
			Registered Suitable Operator (note GPC is currently registered (Ref 704915))	Dredging works Quarrying operations
EP Act and Planning Act	DSDMIP		**Development Permit for a MCU involving ERA 16 (Extractive and Screening Activities) (Concurrence ERA)** for threshold 1(d) dredging, in a year, more than 1,000,000t of material	Dredging works Quarrying operations
Fisheries Act and the Planning Act	DSDMIP	Undertaking works which involve the removal, destruction or damage of marine plants	**Development Permit for Operational Works** involving the removal, destruction or damage of marine plants (temporary and permanent disturbance)	Dredging works Reclamation works
		Constructing or raising waterway barrier works (temporary and/or permanent)	**Development Permit for Operational Works** involving the constructing or raising waterway barrier works (temporary and/or permanent). The need for this approval will be confirmed during the detailed design phase of the Project.	Reclamation works (connection structure between the southern and northern reclamation areas) To be confirmed during Project detailed design phase
ACH Act	DATSIP	Undertaking construction works	Compliance with the **Duty of Care Guidelines** to take all reasonable and practical measures not to harm Aboriginal cultural heritage and the existing registered ILUA and Protocol with the PCCC People	All works

Legislation	Administering authority	Development action/trigger	Approval	Portion of works
NC Act	DES	Taking, using, keeping or interfering with protected flora	**Exempt clearing notification**	Project is unlikely to trigger this approval requirement To be confirmed during Project detailed design phase
		Works involving the tampering of an animal breeding place	**Approved SMP**	Project is unlikely to trigger this approval requirement To be confirmed during Project detailed design phase
VM Act and Planning Act	DSDMIP	Works involving the removal of a Regional Ecosystem (RE)	**Development Permit for Operational Works** involving the clearing of native vegetation	Project is unlikely to trigger this approval requirement To be confirmed during Project detailed design phase