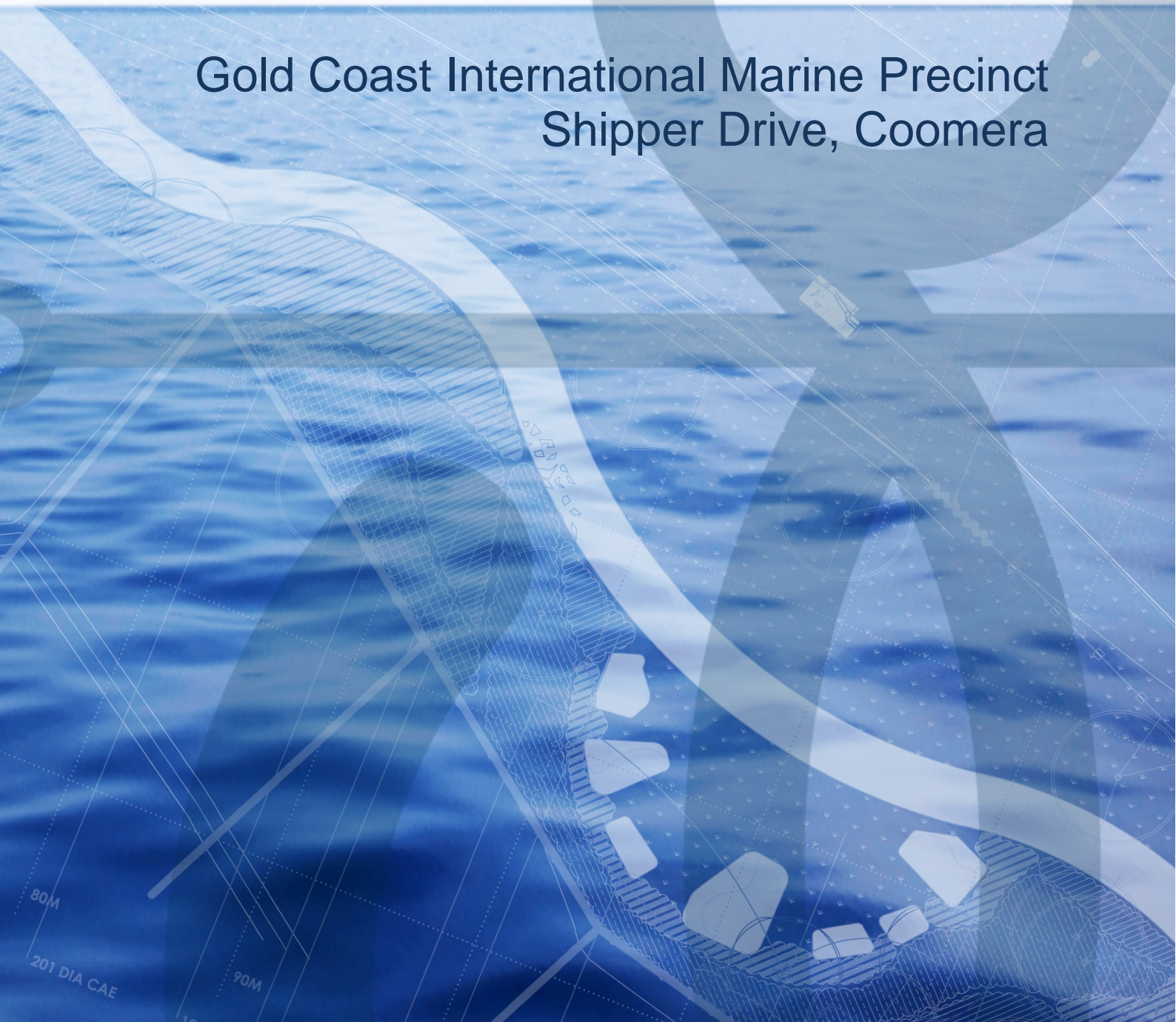




SUPPLEMENTARY ENVIRONMENTAL IMPACT STATEMENT

Gold Coast International Marine Precinct
Shipper Drive, Coomera



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SEIS GUIDE



Gold Coast International Marine Precinct

Supplementary Environmental Impact Statement Guide

This SEIS document relates to the Gold Coast International Marine Precinct (GCIMP) Project.

Details pertaining to the location of all technical reports and the contents of each SEIS Volume are provided as follows.

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GLOSSARY OF TERMS



Glossary of Terms

Government Bodies

ANZECC	Australian and New Zealand Environment Conservation Council
BOM	Bureau of Meteorology
DSDIP	Department of State Development Infrastructure and Planning
DETE	Department of Education, Training and Employment
DAFF	Department of Agriculture, Fisheries and Forestry
DNRM	Department of Natural Resources and Mines
DEWS	Department of Energy and Water Supply
DSITIA	Department of Science, Information Technology, Innovation and the Arts
DNPRSR	Department of National Parks, Recreation, Sport and Racing
DTMR	Department of Transport and Main Roads
DEHP	Department of Environment and Heritage Protection
DEED	Department of Employment and Economic Development
GCCC	Gold Coast City Council
IPCC	Intergovernmental Panel on Climate Change
MSQ	Maritime Safety Queensland
NPRSR	Department of National Parks, Recreation, Sport and Racing
QFRS	Queensland Fire and Rescue Service
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities

Acts, Legislation and Policy Documents

AWQG	<i>Australian Water Quality Guidelines 2000</i>
Building Act	<i>Building Act 1975</i>
CPM Act	<i>Coastal Protection and Management Act 1995</i>
DGSM Act	<i>Dangerous Goods Safety Management Act 2001</i>
EP Act	<i>Environmental Protection Act 1994</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPP	<i>Environmental Protection Policy</i>
EPP Noise	<i>Environmental Protection (Noise) Policy 2008</i>
EPP Waste	<i>Environmental Protection (Waste Management) Policy 2000</i>
EPP Water	<i>Environmental Protection (Water) Policy 2009</i>
EPR	<i>Environmental Protection Regulation 2008</i>
Fisheries Act	<i>Fisheries Act 1994</i>
FRS Act	<i>Fire and Rescue Service Act 1990</i>
IPA	<i>Integrated Planning Act 1997</i>
IPR	<i>Integrated Planning Regulation 1998</i>
Land Act	<i>Land Act 1994</i>
Marine Safety Act	<i>Transport Operations (Marine Safety) Act 1994</i>
MP Act	<i>Marine Parks Act 2004</i>
NC Act	<i>Nature Conservation Act 1992</i>
NCWR	<i>Nature Conservation Wildlife Regulation 1994</i>
QFA	<i>Queensland Fisheries Act 1994</i>
QFRSA	<i>Queensland Fire and Rescue Service Act 1990</i>
QGEOP	<i>Queensland Government Environmental Offsets Policy</i>
SDPWOA	<i>State Development and Public Works Organisation Act 1971</i>
SEQRP	<i>South East Queensland Regional Plan 2009-2031</i>
SPA	<i>Sustainable Planning Act 2009</i>
SPOLA	<i>Sustainable Planning and Other Legislation Amendment</i>
SPP1/13	<i>Temporary State Planning Policy 1/13 – Planning for Prosperity</i>
SPP2/02	<i>State Planning Policy 2/02 – Planning and managing development involving Acid Sulfate Soils</i>
SPP4/10	<i>State Planning Policy 4/10 - Healthy Waterways</i>
SPR	<i>Sustainable Planning Regulation 2009</i>
Supply Act	<i>Water Supply (Safety and Reliability) Act 2008</i>
TIA	<i>Transport Infrastructure Act 1994</i>
VMA	<i>Vegetation Management Act 1999</i>
Water Act	<i>Water Act 2000</i>

Other

AHD	Australian Height Datum
AMTD	Adopted Middle Thread Distance
ARI	Average Recurrence Interval
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AASS	Actual Acid Sulfate Soils
ASS	Acid Sulfate Soils
ASSA	Acid Sulfate Soils Assessment
ASSMP	Acid Sulfate Soils Management Plan
CCIS	Climate Change Impact Statement
CFL	Courant-Friedrich-Levy
CG	Coordinator General
CG Report	report prepared by the CG evaluating the EIS, pursuant to section 35 of the SDPWOA
CLR	Contaminated Land Register
COPC	Contaminants of Potential Concern
CPI	Consumer Price Index
CPTED	Crime Prevention through Environmental Design
CRS	Chromium Reducible Sulfur
CSWMP	Conceptual Stormwater Management Plan
DEM	Digital Elevation Model
DEO	Desired Environmental Outcome
EC	Electrical Conductivity
ECL	East Coast Lows
EHMP	Healthy Waterway's Ecosystem Health Monitoring Program
EIA	Environmental Impact Assessment
EIL	Environmental Investigation Levels
EIS	Environmental Impact Statement
EHMP	Ecosystem Health Monitoring Program
EMP	Environmental Management Plan
EMR	Environmental Management Register
ENSO	El Nino - Southern Oscillation
ERA	Environmentally Relevant Activity
ESCP	Erosion Sediment Control Plan
ESD	Ecologically Sustainable Development
EV	Environmental Values
FADs	Fish Attracting Devices
FHA	Fish Habitat Area
GCCM	Gold Coast City Marina and Shipyard
GCIMP	Gold Coast International Marine Precinct
GFA	Gross Floor Area
GHG	Greenhouse Gas
GIS	Geographical Information Systems

GPT	Gross Pollutant Trap
GWA	Ground Water Assessment
GWMP	Ground Water Management Plan
HAT	Highest Astronomical Tide
HIL	Health Investigation Levels
HRA	Hazard and Risk Assessment
HWP	South East Queensland Healthy Waterways Partnership
IAS	Initial Advice Statement
IDAS	Integrated Development Assessment System
IEQ	Indoor Environment Quality
IFD	Intensity Frequency Distribution
IPWEA	Institute of Public Works Engineering Australia
IRTC	Inter-Regional Transport Corridor
IUCN	International Union for the Conservation of Nature
LAP	Local Area Plan
LAT	Lowest Astronomical Tide
LUT	Land Use Theme
MBMP	Moreton Bay Marine Park
MCU	Material Change of Use
MHWS	Mean High Water Springs
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
NAGD	National Assessment Guidelines for Dredging 2009
NATA	National Association of Testing Authorities
NEPM	National Environmental Protection Measure
NGER	National Greenhouse and Energy Reporting
NLSWE	Non-Linear Shallow Water Equations
NSL	Near Surface Level
OPW	Operational Works
OSMS	Open Space Management Statement
PASS	Potential Acid Sulphate Soils
PIA	Priority Infrastructure Area
PIC	Pacific Innovation Corridor
PIP	Priority Infrastructure Plan
PMAV	Property Map of Assessable Vegetation
QASSIT	Queensland Acid Sulfate Soils Investigation Team
QUDM	Queensland Urban Design Manual 2007
RMP	Risk Management Plan
ROL	Reconfiguration of a Lot
SBMP	Site Based Management Plan
SEIS	Supplementary Environmental Impact Statement
SEQ	South East Queensland
SRES	Special Report on Emission Scenarios
SMP	Stormwater Management Plan
SMOF	Single Mode Optical Fibre
SQIDs	Stormwater Quality Improvement Devices

TAA	Titratable Actual Acidity
The Project	Gold Coast International Marine Precinct
The Proponent	Harbour Island Pty Ltd
TOD	Transit Oriented Development
TOR	Terms of Reference
TPA	Titratable Potential Acidity
TSA	Titratable Sulfidic Acidity
TSS	Total Suspended Solids
TVD	Total Variation Diminishing
USGS	United States Geological Survey
VMP	Vegetation Management Plan
WELS	Water Efficient Labelling and Standards
WQOs	Water Quality Objectives
WSAA	Water Services Association of Australia
WSUD	Water Sensitive Urban Design



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SECTION 1 INTRODUCTION



Gold Coast International Marine Precinct Supplementary Environmental Impact Statement - Section 1

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1 INTRODUCTION

This Supplementary Environmental Impact Statement (EIS) has been prepared for the Gold Coast International Marine Precinct (GCIMP) by Planit Consulting Pty Ltd, in response to submissions received during the public consultation period held during October 2012 to November 2012.

The ToR were initially prepared by the Department of Infrastructure and Planning (DIP) on behalf of the Coordinator General (CG) in March 2009. The original ToR were superseded by a new ToR in December 2011 which was produced as the original "significant project" declaration of the GCIMP lapsed on 29 March 2011. The revised ToR contained various modifications in response to legislative changes and minor modifications to the original development proposal.

The proposed project involves the development of an integrated industrial marina on the Coomera River on land located at 2, 54 and 110 Shipper Drive, Coomera. The suburb of Coomera is located on the Gold Coast within South East Queensland. Further detail pertaining to the site's location is provided in Section 1.3 below.

The site contains the following allotments:

- Lot 108 WD6404 (4.047ha)
- Lot 98 SP150731 (54.6608ha)
- Lot 146 SP150731 (4.8467ha)
- Part of Shipper Drive adjacent to Lot 98 on SP150731

This project addresses Queensland's demand pressures upon Marine Industry. As at July 2010, Queensland has approximately 240,179 registered recreational boats with continual growth rates contributing to the State being Australia's leading recreational boating centre. Furthermore, the Gold Coast is experiencing high growth and demand for facilities for the refit, manufacture and maintenance of recreational and commercial vessels inclusive of super yachts.

The existing Gold Coast Marine Precinct (GCMP) is a major marine industrial centre dedicated to manufacture, servicing/repairs and refits of recreational boats. Encompassing a total area of approximately 250 hectares (inclusive of the undeveloped GCIMP site), it is located on the Coomera River with direct water access to Moreton Bay and the Pacific Ocean. At present, approximately 60 hectares of this precinct has been developed and an estimated \$120 million invested by the private sector.

This proposal for the Gold Coast International Marine Precinct, was declared by the Coordinator-General to be a “significant project” under Section 26 of the *Queensland State Development and Public Works Organisation Act 1971* (SDPWO Act) on the 18 April 2008. The “significant project” declaration thereby initiated the statutory Environmental Impact Assessment (EIA) process as per Part 4 of the SDPWO Act which requires the preparation of this Environmental Impact Statement (EIS).

The project was re-declared as a "significant project" under Section 26 of the SDPWO Act on 7 July 2011 as the EIS was not completed within the two year statutory timeframe.

This submission is made to the Department of State Development, Infrastructure and Planning (DSDIP), the responsible authority for the Environmental Impact Assessment (EIS) Process, acting on behalf of the Coordinator General (CG).

On 17 August 2012 the EIS document was submitted and structured in accordance with the Terms of Reference (ToR) document released by the Queensland Government in December 2011.

The EIS was presented for Government Agency review and public consultation from 8 October 2012 to 5 November 2012. After evaluation of the submissions, the Coordinator General requested the preparation of a Supplementary Environmental Impact Statement (SEIS) to address items raised by in state government advisory agency and public submissions.

The SEIS provides additional information and clarification to the information provided in the EIS pertaining to the scope of environmental, social and economic impacts as a result of the design, construction and operation of the proposed GCIMP.

Please note that sections and headings of the SEIS document generally correspond with the EIS / ToR document for ease of reference and assessment. Details pertaining to the location of all technical reports appended to the SEIS are contained within the SEIS Table of Contents.

In preparing this SEIS a number of meetings and briefings with the various government agencies have been undertaken. The purpose of these was to:

- Provide an overview of the process, roles and responsibilities for the next stage/phase of the planning process;
- Clarify information requirements and outline information responses; and
- Inform government agencies on the preparation of the SEIS.

Throughout the preparation of the SEIS consultation with the wider public has continued including maintenance of the GCIMP project web site. As identified in the SEIS this site has received over 7000 individual visits.

1.1 PROPONENT

The Shipper International Marine Precinct is to be developed as a joint venture between Maritimo Pty Ltd and Property Solutions Group (Australia) Pty Ltd. These entities have established new companies to deliver this development. These new entities are Maritime Quays Pty Ltd and Harbour Island Pty Ltd respectively. The proponent for this development is Harbour Island Pty Ltd.

1.1.1 Maritimo Quays Pty Ltd

Maritimo is a well recognised brand and company that manufactures large cruise boats and contributes significantly to the local marine industry within the Gold Coast. Maritimo currently operates from two sites, one at the existing GCMP, and another site within Hope Island. The owner of Maritimo is locally renowned Bill Barry-Cotter.

Although being a relatively new company, Maritimo has achieved many successes. Maritimo currently has 90 directly employed staff and the 2010-2011 financial year saw the production of 30 vessels attracting sales of approximately \$25 million. These figures do not take into account suppliers and contractors.

In 2009, Maritimo acquired the business 'Mustang Cruisers' after it went into receivership. As such, Maritimo now manufactures these to extend its range of products.

Maritimo in response to current expansion and demand, forecasts continual strong growth in future, and thereby requires further facilities and site area to meet such consumer demands. As the project site owner, Maritimo has been involved throughout the concept design process of the project to ensure production facilities will meet the needs of the manufacturing process, and service industries integrate with the production process.

Maritimo is an award winning Queensland Company that has won acclaim both nationally and overseas. Maritimo has established a comprehensive national and international dealer network boasting authorised dealers in Queensland, New South Wales, Western Australia, Tasmania, Victoria, Kuwait, Italy, France, Puerto Rico, New Zealand, South Africa and the United States, where it has appointed nine (9) authorised dealers.

Expansion of the award- winning Maritimo production unit will occupy approximately five hectares of the proposed development. The remainder of the site is to include a range of facilities and factory units. The marina will be a full working facility complete with travel lift, slipways, marine mechanics/engineers and shipwrights to service marina

tenants and cruising vessels. Further detail pertaining to the proposed project is contained in section 1.2 below.

1.1.2 Property Solutions Group (Harbour Island Pty Ltd)

Property Solutions Group specialises in Property Development and Investment and brings expertise in industrial property development and marina ownership and design to the GCIMP Project.

Property Solutions Group is renowned for its intense development activity within Fortitude Valley and inner north side sections of Brisbane. Its projects include industrial, commercial, retail and marina developments.

Specifically, Property Solutions Group have been a key player in the development of industrial estates in the Yatala Enterprise Area through land subdivisions and both freehold and community title 'Design and Construct' projects within new estates.

With regards to marine development, Property Solutions Group collaboratively own and operate Tin Can Bay, Coffs Harbour and Pacific Harbour Marinas. The company aims to own and operate these marinas and to expand to 500-1000 berths in its control in the next couple of years.

All the company's marinas have managers and staff in place to run autonomously and efficiently.

The partnership between Maritimo and Property Solutions Group was formed specifically to develop the GCIMP at Coomera. This collaboration will ensure the delivery of an integrated industrial marine precinct of an international standard as a result of the companies' respective expertise within the joint venture partnership.

1.2 PROJECT DESCRIPTION

The GCIMP seeks to extend the existing GCMP and show case through design, a purpose built marine industry complex of international standard.

The GCIMP Master Plan presented within the EIS embodied best practice designs for a working industrial marina, supply chain management, management and control of manufacturing processes. Furthermore, the GCIMP will open new opportunities for research and design, workforce training and continual education within the Coomera Area.

As part of the EIS document, the details of the project were as follows:

- a 28.9 hectare marine industrial zone, inclusive of ship-life facilities, boat and yacht manufacturers, repairers and associated businesses;
- a dry boat stacked storage facility with gantry crane access for approximately 290 vessels;
- a 4.5 hectare internal marina incorporating approximately 110 berths, providing a calm water environment for the launch and retrieval of vessels and for the on-water display of vessels by manufacturers and retailers onsite;
- an external marina within the Coomera River incorporating 280 multiple sized berths constructed through a 7 hectare widening of the Coomera River;
- a 9.3 hectare mixed use precinct comprising sales, showrooms, display of marine parts, fittings and fixtures, corporate office space, small scale light industry and services such as a yacht club, restaurants and retail outlets; and
- an educational establishment (i.e. TAFE college) comprising a 3,000m² Centre of Excellence and a 1,500m² workshop for marine industry training;

Amendments to the preferred Master plan have occurred in response to submissions received during the public submission phase. Designs issues raised in submissions will be discussed in detail in the following sections of the SEIS. A summary of the key changes to the preferred option are presented as follows:

- Deletion of the proposed TAFE College component. Land use provisions still allow the development educational establishments, however won't be specifically for a TAFE college.
- Increase in Mixed Use area from 9.3 hectares to 10.9 hectares as a result of the deletion of the TAFE component

- Removal of the proposed pedestrian bridge to facilitate connectivity between the GCIMP with residential development to the north of the subject site. This deletion occurred as a result of discussions with Council whom requested the removal of the linkage as Council felt it may impact on the environment.
- Deletion of 16 marina berths from the external marina. These berths were proposed within unallocated state land thus would be subject to Native Title.
- Amendments to the height and density plan, 10 storey height allowance reduced to 3 storeys within mixed use area in Northern Precinct.
- Refining the extent of the dredge spoil site within Western Precinct.
- Modifications to the land use table and associated development plans have been made in response to issues and are contained within Appendix 3.

The Supplementary Preferred Master Plan is contained within Volume 1, Appendix 2 of the SEIS and is presented in Figure 1 below.

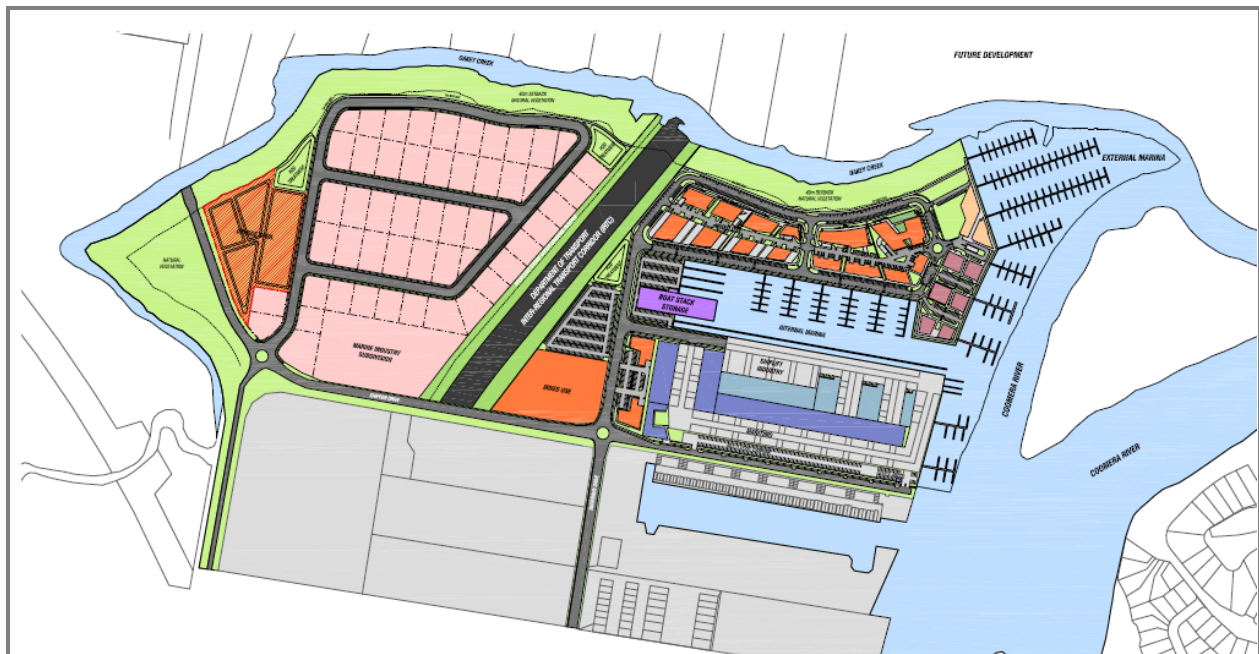


Figure 1 – Supplementary Preferred Master Plan

Table 1 presents a comparison between the Preferred Master Plan (Plan K600) and the Supplementary Preferred Master Plan.

Table 1 - Land Use Comparison Table

Preferred Master Plan (Plan K600)		Supplementary Preferred Master Plan	
Development Areas			
42.0 ha		42.0 ha	
Marina			
11.5 ha		11.5 ha	
Open Space			
4.9 ha		4.9 ha	
Mixed Use			
TAFE	1.6 ha	TAFE	0 ha
Mixed Use	9.3 ha	Mixed Use	10.9 ha
Marine Industry			
18.0 ha		18.0 ha	
Marina			
External Marina area	7.0 ha	External Marina area	7.0 ha

The proposed development is still generally reflective of the site's Marine Industry designation within the Gold Coast City Council Planning Scheme

1.3 PROJECT CONTEXT

The GCIMP site is located on the Gold Coast within South East Queensland. The Site is situated within the suburb of Coomera, which is a major new urban area in the northern Gold Coast and within the Gold Coast – Brisbane growth corridor.

The site is located on the Coomera River and is approximately 3km upstream from the Moreton Bay Marine Park, 7km from the Southern Broadwater and a further 9km to the Pacific Ocean. The site is approximately 20km north of Surfers Paradise. A proximity plan is presented within Figure 1 below.

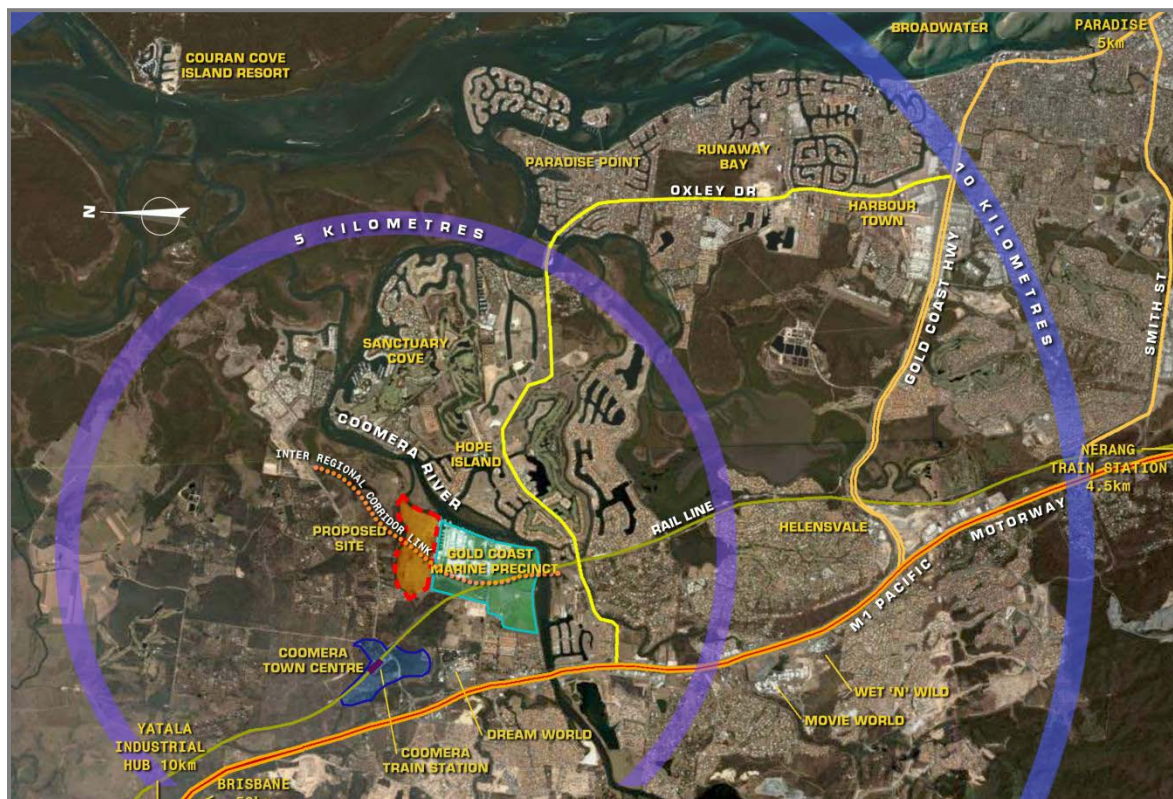


Figure 2 – Proximity Plan

As previously discussed, the subject site comprises the following allotments:

- Lot 108 WD6404 (4.047ha)
- Lot 98 SP150731 (54.6608ha)
- Lot 146 SP150731 (4.8467ha)

- Part of Shipper Drive adjacent to Lot 98 on SP150731

Historically, Lot 108 on WD6404 formed part of original Portion 71 on W3150, Parish of Coomera. Portion 71 covered an area of 60.7 ha. The original Deed of Grant (10250065), issued in June 1875 to Angus Bell over Portion 71 under clause 71 of the *Crown Land Alienation Act 1868*, was a grant of an exclusive interest. Therefore the extinguishing effect of the deed of grant can be relied upon and Native Title has been extinguished over the whole of original portion 71.

Since this time, two (2) applications have been lodged with DNRM to acquire:

1. Reserve for Park and Recreation – R 1843 (Lot 108 on WD6404)
2. Part of Shipper Drive adjacent to Lot 98 on SP150731

The proponent requests that the issue of ownership of this Crown land be resolved as part of the EIS process.

1.4 THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

1.4.1 EIS Methodology

The GCIMP project requires approvals from the Australian Government and the Queensland State Government. As previously mentioned, the proposal was referred to the Australian Government Minister for the Environment, Heritage and the Arts in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC Act*). Subsequently the project was declared to be a 'controlled action' under Section 75 of the *EPBC Act* on 27 April 2008. The controlling provisions for this proposal are Wetlands of international significance; Listed threatened species and communities; and Listed migratory species.

On the 18 April 2008 the project was declared a 'significant project' under Section 26 of the *Queensland State Development and Public Works Organisation Act 1971* (*SDPWO Act*).

The initial 'significant project' declaration for the GCIMP lapsed on 29 March 2011 as the EIS was not submitted within the two year period. As such, the project was re-declared as a 'significant project' on 7 July 2011 and a new Terms of Reference was released in December 2011.

The Department of State Development, Infrastructure and Planning (DSDIP) is responsible for managing the Environmental Impact Assessment process on behalf of the Coordinator-General.

The impact assessment process under the SDPWO Act is subject of a bilateral agreement between the Queensland and the Australian Governments in relation to environmental assessment under the EPBC Act. It was decided by the Australian Government that the assessment of the Project would be undertaken under the terms of the bilateral agreement.

The assessment was to be undertaken in accordance with Schedule 1 of the bilateral agreement. This involves, amongst other things, the provision of enough information about the proposal and its impacts to allow the relevant authority to make an informed decision regarding the approval of the action under the EPBC Act. This also includes the provision of sufficient information regarding the direct and indirect impacts of the action. The following approvals and legislation were required:

- Controlled Action under the EPBC Act;
- Significant project under the SDPWO Act;

- Development Permits and Preliminary Approvals (including s242 Varying the Affect of the Planning Scheme) under the *Sustainable Planning Act 2009*;
- Damage to Marine Plants under the *Queensland Fisheries Act 1994*;
- Works within a Coastal Management District under the *Queensland Coastal Protection and Management Act 1995*;
- Activities involving assessment against the Queensland Coastal Plan;
- Marine Vegetation and Development in or near declared Fish Habitat Areas under the *Fisheries Act 1994* and *Fisheries Regulation 1995*;
- Operation of a Marina and Industrial Development classed as Environmentally Relevant Activities (ERA's) under the *Environmental Protection Act 1994*;
- Provision of protection of native animals, plants and ecosystems which have been classified as threatened under the *Nature Conservation Act 1992*;
- Matters of Cultural Significance under the *Aboriginal Cultural Heritage Act 2003*;
- Matters of State Significant Vegetation under the *Vegetation Management Act 1999*; and
- Taking or Interfering with Water under the *Water Act 2000*.

Use of the Bilateral Agreement between the Australian Government and the Queensland State Government and the accredited process for the SDPWO Act, allows for the use a single assessment (EIS) to inform the numerous approval agencies of the proposed works and associated environmental impact.

Opportunities for consultation and public input have been provided within the Community Consultation Report prepared by Planit Consulting contained in Volume 2, Appendix 4 of the EIS. This report detailed that the consultation / public input phase will be delivered through three stages. The first stage was undertaken up until the lodgement of the EIS. This represented the most sizable portion of consultation, beginning in 2008 and continuing whilst studies and technical reports were being undertaken for the EIS.

The second consultation / public input phase took place for a period of 35 days between 8 October 2012 and 5 November 2012. The third and final phase will include consultation during the construction and operational phases of the GCIMP.

It is considered that through this community consultation process, the community and relevant stakeholders will be given numerous opportunities to participate and provide input into the project. Please refer to the Community Consultation Report contained in the EIS for more detail.

1.4.2 Public Notification Period

An extensive and appropriate public consultation process has been undertaken as part of the GCIMP project. Numerous opportunities were provided for community involvement and awareness of the proposed project through the use of numerous consultation methods. It is put forward that the optimum timing of community consultation for the proposed project should continue from the beginning of projects planning stages and be maintained until the operational phase of the GCIMP.

Prior to the submission of the EIS, Planit Consulting Pty Ltd had undertaken the first stage of the community consultation process and had prepared a Community Consultation Report. During this consultation process, Planit Consulting Pty Ltd acted as an independent consultant of the project's proponent.

In accordance with the provisions of the State Development and Public Works Organisation Act 1971 the formal public notification period commenced on Monday 8th October, 2012 and ceased close of business on Monday 5th November, 2012 in accordance with statutory requirements.

The public notification period invited the public and government agencies to comment on the EIS. During this time, the EIS was forwarded to relevant Government agencies and the electronic and hard copy versions of the EIS were made publicly available at the following locations:

- Department of Sustainability, Environment, Water and Communities Resource Library, John Gorton Building, King Edward Terrace, Parkes, Australian Capital Territory
- Gold Coast City Council Administration Centre, 135 Bundall Road, Bundall
- Helensvale Library, 31 Discovery Drive, Helensvale
- State Library of Queensland, Cultural Centre, Stanley Place, South Bank, Brisbane.

In addition to this, the EIS was able to be downloaded from the project website (www.gcintmarineprecinct.com.au) and interested parties were able to call or email the GCIMP Project Team or the Project Manager at the Office of the Coordinator General during the Public Notification Period to make enquiries, or provide submissions.

Project Phone Enquiries

The project team received a relatively low number of telephone enquires during the EIS public notification enquiries. In most cases, telephone enquiries related to requests for an electronic copy of the EIS to be provided on a DVD. The project team provided DVD copies of the EIS to all stakeholders who made such a request.

Other telephone enquiries generally related to stakeholders seeking guidance in finding technical information within the EIS reporting.

Project Website

The project website remained active during the public notification process and the entire EIS was able to be viewed by the general public from this website.

The project team has obtained data from the project website to provide quantifiable information on the visitors to the website during the notification process. This information is presented below:

Table 2– Project Website Views during the notification period

Date Range	Total Visitors	Percentage
8 th October 2012 – 14 th October 2012	166	67.78% (162)
15 th October 2012 – 21 st October 2012	131	50.23% (108)
22 nd October 2012 – 28 th October 2012	140	53.57% (75)
29 th October – 4 th November 2012	127	71.43% (110)
5 th November 2012 – 11 th November 2012	43	67.44% (29)

As evidenced from the above table, the project website was visited frequently during the public notification process, with a relatively high proportion of new visitors each week.

Since the launch of the GCIMP project website on 28 January 2012, a total of 7,157 people have visited the site, with 9,601 total visits. The frequency of visits is identified within Figure 2.

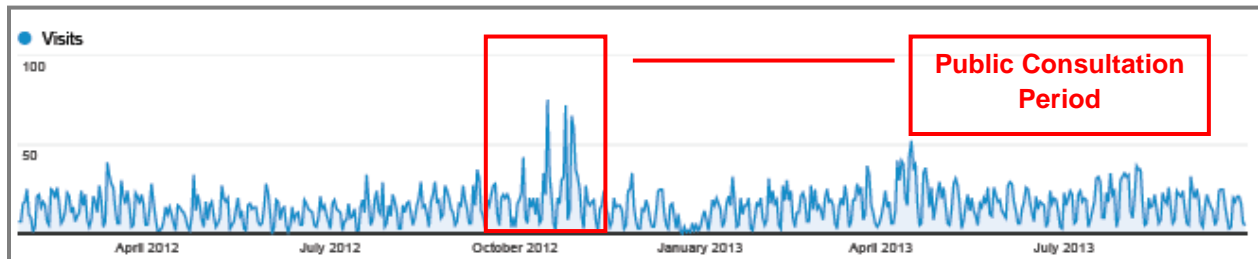


Figure 3 – Website visits

Consultation and Engagement with Specific Interest Groups

Throughout the public notification period, the project team was contacted by a number of specific interest groups, a brief summary of our engagement with these groups is provided below for your information:

- **Gold Coast Native Title Group / Jabree Limited**

The project team was contacted by the Gold Coast Native Title Group regarding cultural heritage and native title sections of the EIS. A number of meetings were held with the group during the notification period. As a result of these meetings, the project team provided the Gold Coast Native Title group with a formal notification under the *Aboriginal Cultural Heritage Act 2003* advising of the proponent's intention to prepare a Cultural Heritage Management Plan. The project team expects engagement with the Gold Coast Native Title group will continue to resolve the issues identified.

- **Hinterland Model Flying Club**

The project team was contacted by the President of the Hinterland Model Flying Club regarding the progress of the development. As outlined within the Community Consultation Report, the project team has been engaging with this key stakeholder since the projects inception. The project team provided a formal response to the club and the comments identified in their email correspondence. The project team anticipates ongoing engagement with this stakeholder as the project progresses.

Summary of Comments/Feedback

Overall the project team received limited direct contact during the public notification period. As outlined earlier, a large number of the contact made with the project team related to viewing and obtaining a copy of the EIS.

Other comments and feedback received generally related to potential employment opportunities currently available associated with the project.

Throughout this process, Planit Consulting Pty Ltd attended multiple ongoing agency briefings to respond to various queries and to provide additional information where requested.

Written submissions were forwarded to the CG within the allocated timeframe. The CG reviewed the submissions, and the CG has since requested the proponent to address any specific issues which are considered not to be identified in the EIS but which were identified during the EIS process in the format of a SEIS. As such, this SEIS has been prepared.

It is relevant to note that no submissions were received by the Australian Government Department of Sustainability, Environment, Population and Communities (SEWPaC), who have indicated that the EIS provided sufficient information to assess the proposal against Matters of National Environmental Significance.

1.5 OBJECTIVES OF THE SEIS

The purpose of the SEIS is to provide further clarification on aspects of the project that have been identified during the EIS process and/or raised through submissions received during the public notification period that are considered by the CG as to have not been addressed within the EIS document.

Where considered necessary, additional information has been provided to provide further clarity in relation to specific aspects of the project. The project received a total of 170 properly made submissions from 19 submitters including various government agencies and private submitters. The key issues raised within the submissions received were in relation to:

- Transport
- Land Uses
- Dredging
- Flooding
- Social impacts
- Acid Sulfate Soils
- Environmental and Emergency Management Plans

It is important to note that a number of issues raised within the submissions were in relation to intended land use specific development whereby issues raised through submissions will be addressed through subsequent development applications. Figure 4 demonstrates the aspects of the GCIMP that are applicable as part of the EIS process and the approvals required through subsequent development applications.

A table of all submissions received is presented within Volume 1, Appendix 1 of the SEIS. A response has been provided to each submission received. It is important to note that information provided within the SEIS should be read in conjunction with technical reports contained within the EIS.

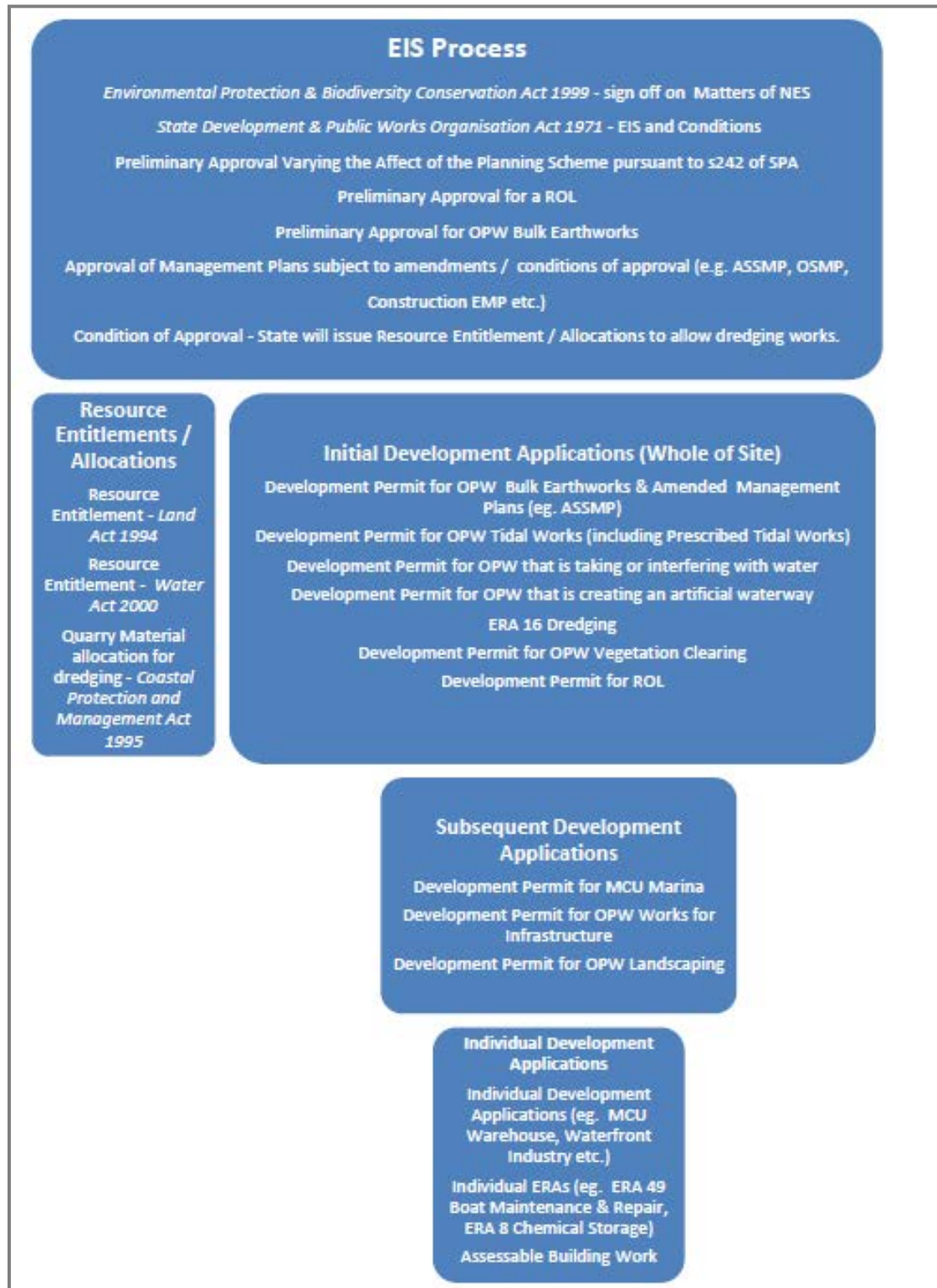


Figure 4 - GCIMP Approvals Flow Chart



SECTION 2 PROJECT DESCRIPTION



Gold Coast International Marine Precinct Supplementary Environmental Impact Statement - Section 2

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2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

Section 2 of the EIS report presented the GCIMP Master Plan being the preferred development option and three alternative development options that were considered during the design phase of the project.

The GCIMP Master Plan was the preferred development option as it embodied best practice designs for a working industrial marina, supply chain management, management and control of manufacturing processes. Furthermore, it was considered the master plan demonstrated the ability to open new opportunities for research and design, workforce training and continual education within the Coomera Area.

Specific details pertaining to the project were summarised as follows.

- a 28.9 hectare marine industrial zone, inclusive of ship-life facilities, boat and yacht manufacturers, repairers and associated businesses;
- a dry boat stacked storage facility with gantry crane access for approximately 290 vessels;
- a 4.5 hectare internal marina incorporating approximately 110 berths, providing a calm water environment for the launch and retrieval of vessels and for the on-water display of vessels by manufacturers and retailers onsite;
- an external marina within the Coomera River incorporating 280 multiple sized berths constructed through a 7 hectare widening of the Coomera River;
- a 9.3 hectare mixed use precinct comprising sales, showrooms, display of marine parts, fittings and fixtures, corporate office space, small scale light industry and services such as a yacht club, restaurants and retail outlets; and
- an educational establishment (i.e. TAFE college) comprising a 3,000m² Centre of Excellence and a 1,500m² workshop for marine industry training;

Amendments to the preferred Master plan have occurred in response to submissions received during the public submission phase. Design issues raised in submissions will be discussed in detail in the following sections of the SEIS. A summary of the key changes to the preferred option are presented as follows:

- Deletion of the proposed TAFE College component. Land use provisions still allow the development educational establishments, however won't be specifically for a TAFE college.
- Increase in Mixed Use area from 9.3 hectares to 10.9 hectares as a result of the deletion of the TAFE component
- Removal of the proposed pedestrian bridge to facilitate connectivity between the GCIMP with residential development to the north of the subject site. This deletion occurred as a result of discussions with Council whom requested the removal of the linkage as Council felt it may impact on the environment.
- Deletion of 16 marina berths from the external marina. These berths were proposed within unallocated state land thus would be subject to Native Title.
- Amendments to the height and density plan, 10 storey height allowance reduced to 3 storeys within mixed use area in Northern Precinct.
- Refining the extent of the dredge spoil site within Western Precinct.
- Modifications to the land use table and associated development plans have been made in response to issues and are contained within Volume 1, Appendix 3 of the SEIS.

Table 1 presents a comparison between the Preferred Master Plan (Plan K600) and the Supplementary Preferred Master Plan.

Table 1 - Land Use Comparison Table

Preferred Master Plan (Plan K600)		Supplementary Preferred Master Plan	
Development Areas			
42.0 ha		42.0 ha	
Marina			
11.5 ha		11.5 ha	
Open Space			
4.9 ha		4.9 ha	
Mixed Use			
TAFE	1.6 ha	TAFE	0 ha
Mixed Use	9.3 ha	Mixed Use	10.9 ha
Marine Industry			
18.0 ha		18.0 ha	

The Supplementary Preferred Master Plan is contained within Volume 1, Appendix 2 of the SEIS and is presented in Figure 1 below.



Figure 1 - Supplementary Preferred Master Plan

2.2 MASTER PLAN

2.2.1 Issues Raised within Submissions

Submissions to the EIS raised issues pertaining to specific aspects of the GCIMP Master plan. Submissions specifically relating to the TAFE component were raised with respect to the need for a college dedicated to marine Industry uses.

Concerns with respect to the loss of public park was raised by a number of submitters as the preferred master plan was seen to surrender public benefit for intended recreational uses such as a public boat ramp and waterfront park.

In addition to this, further justification for a 40 metre setback to Oakey Creek had been requested from submitters as it has been suggested that an increase to conservation buffer to 60 metres plus an additional 20 metre recreational buffer would be sufficient in preserving the environmental values associated with Oakey Creek. Concerns were also raised with respect the onsite dredge spoil facility incorporated within the Southern Precinct of the GCIMP.

In summary the main issues raised by submitters were as follows:

- Incorporation of TAFE College
- Proposed Land Uses
- Loss of Public Park
- Buffer to Oakey Creek
- Dredge Spoil Facility
- Use of unallocated State Land
- Public accessibility to the foreshore
- Specific detailed design related issues

As such, a response to the issues raised is provided below.

2.2.2 Incorporation of TAFE College

A submission received from the Gold Coast Institute of TAFE identified that the existing level of demand for marine industry training does not facilitate the need to establish an additional TAFE campus focused on Marine Industry.

Further submissions were received from other submitters identifying that the Gold Coast Institute of TAFE does not support the establishment of an additional campus within the

GCIMP. Therefore the TAFE component of the GCIMP project has been removed from the GCIMP Master Plan as a consequence of the received submissions.

However, whilst the TAFE component has been removed from the preferred Master plan, the proposed land use provisions for the GCIMP still cater for educational and training providers the development of an 'educational establishment' as defined by the Gold Coast Planning Scheme Version 1.2. This ensures that the GCIMP maintains the ability to provide onsite training of skilled workers for the Marine Industry should it be identified as a requirement in the future.

2.2.3 Proposed Land Uses

A submission from a private entity was received raising concerns with the proposal plans identifying a residential component. The submitter felt the EIS did not address the potential impacts associated with the surrounding land uses on residents within the GCIMP.

As identified within Volume 3, Appendix 5 of the EIS, The proposal does not seek a residential form of development. This is reinforced through the development codes contained within Volume 1, Appendix 3 of the SEIS.

The proposal, as identified within the EIS, seeks to include land uses for short term accommodation for potential employees / students / users of the development. Short term accommodation shall be restricted through uses such as resort hotel or hostel accommodation as defined under the GCCC Planning Scheme. Provisions have also been made for caretaker's residence.

As such, this form of development will be ancillary to the development within the site and will generally be located outside the immediate Gold Coast City Marina and Shipyard (GCCM) environment. Furthermore, to address associated amenity impacts, this can be achieved through the incorporation of design features aimed at mitigating impacts from immediate intrusive development. Again, these measures will be addressed through subsequent development applications.

Modifications to the land use table and associated development plans have been made in response to issues and are contained within Volume 1, Appendix 3 of the SEIS. The revised land use table and plans are sought for approval.

2.2.4 Loss of Public Park

Submissions were received in relation to the loss of public park land as the preferred option has included an existing park area within the development area. It is noted the

submission raised concerns in relation to the future intent of this parcel of land was for the provision of a public boat ramp and associated facilities and waterfront park area. The existing public parkland, William Guise Foxwell Park, alongside Shipper Drive is considered a key portion of land to be incorporated into the site. The requirement for adequate access to the Coomera River is of primary importance to the functionality of the Marine Industry. As noted within Section 2 of the EIS, without the inclusion of the parkland and the available river frontage, the development is severely compromised in both scale and access to the river.

GCCC are trustees of the area of land, and a part of this process has involved an application to Council with respect to utilising this area as part of the development. GCCC consideration of this application has involved a detailed assessment in relation to the social implications as a result of the loss of public park area. Particular issues with respect to the future intent of the area and the benefit to the community were raised and considered as part of this assessment process.

GCCC have since finalised their assessment of the application and have resolved to incorporate the area within the development should it be favourably considered in the EIS process.

In context of the project, the parkland will represent over 35,000m² of constructed marine industry facilities as well as 170 metres of river frontage. Without the inclusion of the parkland area, the internal marina facility will not be possible. This is considered detrimental to the project as the internal marina is a significant feature for the functionality of the overall precinct. Many marine businesses rely on this facility which is effective in increasing the overall direct river access.

Incorporating the existing public park into the proposed development is not considered to be disadvantageous to members of the public as the current preferred development option has been designed to integrate facilities such as boat access and storage within a controlled environment to be utilised by the public. In addition the Master Plan integrates the existing river front public park into this site offering 170 metres of river frontage.

Given the above, it is considered the public benefit (including the economic benefits) obtained as a result of the implementation of the GCIMP far outweighs any deemed loss of public space as the project has catered for public uses and park land areas within the development. This assumption was justified within the Social and Economic Report prepared by Norling Consulting Pty Ltd contained within Volume 5, Appendix 10 of the EIS, whereby the recreational benefit of the preferred master plan scored 7, being significantly higher when compared with the status quo option score of 2.

Within the submission it was queried whether an offset has been contemplated as a result of the loss of public park. It is considered the preferred Master plan adequately integrates public open space and will not result with a loss of public open space within the area as a result of the proposed development. Therefore it is not considered an offset is necessary in this circumstance.

As noted in the EIS, surveying / observation of the park use limits activities to:

- those of the model airplane flying club;
- occasional recreational fishing; and
- dog off leash uses.

The Supplementary Preferred Master Plan accommodates the continued ability for occasional recreational fishing.

2.2.5 Buffer to Oakey Creek

Submissions on the EIS received raised concerns with the proposed 40 metre buffer distance between the development area and Oakey Creek. GCCC raised the need for the conservation buffer to be increased to 60 metres with an additional 20 metre buffer to be incorporated for recreational purposes.

The GCIMP Master Plan incorporated a minimum 40 metre naturally vegetated setback along Oakey Creek. This area is intended to create a buffer between the built environment and the environmental values associated with Oakey Creek. No embellishments are proposed with the exception of vehicle exclusion bollards, maintenance access gates and a pedestrian/cycle path aligned parallel with the northern sections of the 40 metre vegetation buffer.

The conservation buffer area totals 4.9ha of the site and incorporates a range of mapped estuarine communities. As explained within the Terrestrial Flora and Fauna Assessment prepared Planit Consulting Pty Ltd contained within Volume 4, Appendix 8 of the EIS, the minimum dimension was derived from the former the State Coastal Management Plan—Queensland's Coastal Policy which was repealed and replaced by the Coastal Plan 2012.

The former Queensland Coastal Management Plan mapping required setback is noted as segment 2700 which identifies Mean High Water Springs (MHWS) +40m as the required setback. MHWS generally reflects top of bank along Oakey Creek and thus a 40m setback from top of bank was adopted. Ancillary and support access roads,

pedestrian linkages and open space occur adjacent to this minimum buffer and are within the Coastal Plans coastal management district.

As such, in response to GCCC's submission, an additional Alternative Option (Option 6) has been developed for consideration. Assessment of this option resulted in a reduced external marina, mixed use precinct and industrial subdivision component, when compared to the preferred Master Plan. This additional option has similar qualities / impacts to Option 4 of the EIS which considered a 100 metre setback.

A copy of this additional option “Option 6” is presented below and found in Volume 1, Appendix 2 of the SEIS. Option 6 has been included within the revised Economic study contained within Volume 2, Appendix 6 of the SEIS.



Figure 2 - Master Plan: Alternative Option 6

The following Land Use Comparison Table sets out the breakdown of various uses on the:

- preferred master plan;
- amended preferred master plan; and
- alternative master plan option 6.

Table 2 - Land Use Comparison Table

Preferred Master Plan (Plan K600)		Amended Preferred Master Plan		Alternative Option 6	
Development Areas					
42.0 ha		42.0 ha		37.1 ha	
Marina					
11.5 ha		11.5 ha		9.5 ha	
Open Space					
4.9 ha		4.9 ha		11.0 ha	
Mixed Use					
TAFE	1.6 ha	TAFE	0 ha	TAFE	0 ha
Mixed Use	9.3 ha	Mixed Use	10.9 ha	Mixed Use	8.8 ha
Marine Industry					
18.0 ha		18.0 ha		15.0 ha	
Marina					
External Marina area	7.0 ha	External Marina area	7.0 ha	External Marina area	5.0 ha
No. berths	280	No. berths	264	No. berths	122

An assessment was undertaken on the ecological gain that would be achieved through the preservation of the extended offset area. As identified in Table 3 through increasing the conservation buffer by a additional 40 metres, the benefit from a ecological sense is only minimal given the outcome results in preserving an additional 4.32 hectares of Community 2B:Low Closed Tussock (Sporobolus Virginicus) Grassland [G1d] (Salt Marsh).

Table 3 – Vegetation Clearing Comparison Table

Mapped Community	RE Nos.	Supplementary Preferred Master Plan	Alternative Option 6	Difference + / - (ha)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (<i>CASUARINA GLAUCA</i>) [T6D/M] ON TIDAL MUDFLATS	12.1.1	1.34	1.821	-0.48
COMMUNITY 1B: MID-HIGH FOREST (<i>CASUARINA GLAUCA</i>) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	0.00	0.2511	-0.25
COMMUNITY 2A: <u>VERY TALL RUSHLAND (<i>JUNCUS KRAUSII</i>)</u> [V4M]	12.1.2	0.19	0.19	0.00
COMMUNITY 2B: <u>LOW CLOSED TUSsock (<i>SPOROBOLUS VIRGINICUS</i>) GRASSLAND</u> [G1D]	12.1.2	5.27	9.59	-4.32
COMMUNITY 3: LOW-TALL OPEN FOREST/WOODLAND (<i>AVICENNIA MARINA</i> + <i>AEGICERAS CORNICULATUM</i>) [T4M/S]	12.1.3	1.82	2.2619	-0.45
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [<i>SETARIA SPHACELATA</i>] G4D/M	N/A	1.00	1	0.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/Paddock MOSAIC G1D/M	N/A	0.33	0.93	-0.60
Total	-	9.95	16.044	-6.10

As outlined within the EIS Oakey Creek has been heavily modified and additional significant modifications are proposed and approved. This includes the realignment through the Coomera Town Centre and the bank removal work to both Oakey Creek and the Coomera River associated with developing the precinct.

The ecological report illustrates that terrestrial linkages along Oakey Creek are affected by the modifications and key infrastructure. The ecological report illustrates that terrestrial linkages along Oakey Creek are affected by the modifications and key

infrastructure. The reports quantify the aquatic and fisheries values of the creek systems at a local and regional scale identifying that the loss of habitat areas does not constitute a significant impact on or a loss of these values. Figure 37 within the Terrestrial Flora and Fauna Assessment identifies the various values are preserved by the proposed minimum 40 metre setback including:

- Bank stability
- Erosion
- Shading
- Temperature
- Water Quality
- Corridor and Habitat Protection

The report also identifies that the clearing and setback aligns with planned works and filling for the IRTC which bisects the site and wetland areas.

The 40 metre setback is appropriate in the context of the development for marine dependent uses and the setback protects Oakey Creek and a buffer of this dimension is demonstrated not to have a significant impact.

An economic analysis contained within Volume 2, Appendix 6 of the SEIS was undertaken by Norling Consulting to compare both the Supplementary Preferred Master Plan and the Alternative Option 6 in order to ascertain whether there would be a benefit from increasing the conservation buffer by an additional 40 metres. As part of this assessment, Norling Consulting undertook a Multi-Criteria Analysis (MCA) for the Supplementary Preferred Master Plan and the Alternative Option 6 applying the same methodology as outlined within Chapter 5 of the Social and Economic Impact Assessment contained within Volume 5, Appendix 10 of the EIS.

The overall MCA score for the Supplementary Preferred Master Plan was higher at 73.9 in comparison to the Alternative Option 6 whereby the overall MCA score was 66.4. Figure 3 provides a comparison of the MCA results between the Supplementary Preferred Master Plan and the Alternative Option 6. The Alternative Option 6 as identified in Figure 3 is directed by an environmental objective that significantly diminishes the social and economic advantages that are able to be achieved through the Supplementary Preferred Master Plan.

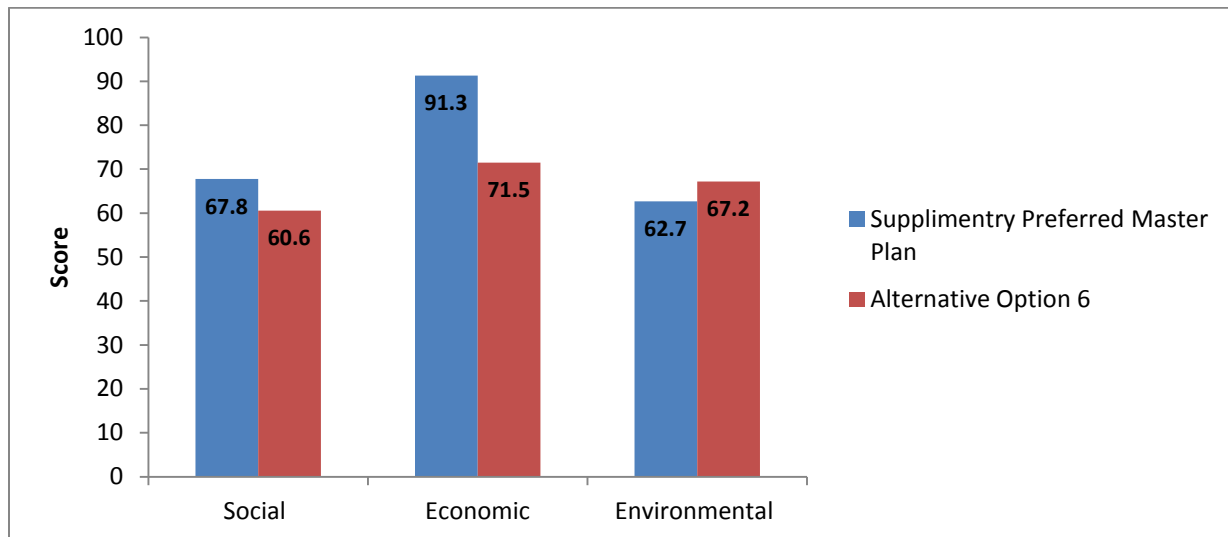


Figure 3 – MCA Results

Norling Consulting's economic modelling undertaken in comparing the Supplementary Preferred Master Plan and the Alternative Option 6 concluded that it was apparent that the Supplementary Preferred Master Plan would result in a significant economic outcome for the Gold Coast and Queensland. Norling Consulting stated that in particular, it is considered the community benefits significantly outweigh any community disbenefits as a result of moving from the Alternative Option 6 to the Supplementary Preferred Master Plan. The statement is further justified through Figure 4.

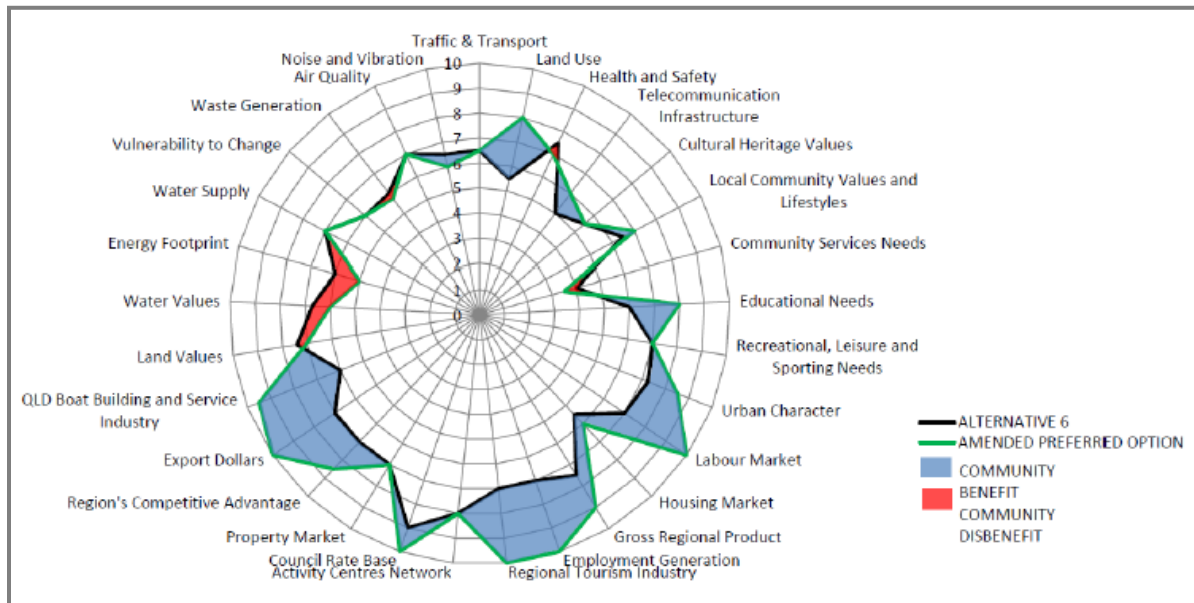


Figure 4 - Community Benefits and Disbenefits Comparison Graph

Therefore it is considered, holistically, the Supplementary Preferred Master Plan achieves an improved overall outcome when compared to Alternative Option 6.

A submitter requested discussion regarding the provision of landscaping within the Oakey Creek buffer area is used to improve or maximise the marine wetland and fish habitat environmental values. As noted above and throughout the EIS, the 40 metre setback to Oakey Creek will be naturally vegetated through 'assisted natural regeneration'.

The Open Space Management Statement (OSMS) within Volume 11 Appendix 41 of the EIS indicates the vegetation within the 40 metre buffer area is to be retained. The purpose of the buffer area is to protect retained areas of ecological significance. Weed management and rehabilitation works within the buffer area have been proposed in order to assist the enhancement of fauna habitat within the buffer zone.

As identified within the OSMS within Volume 11 Appendix 41 of the EIS, the 40m vegetation buffer consists of remnant Saltmarsh and small copses of Swamp Oak Open Forest vegetation. It has been proposed to manage the buffer area for weed evasion and enhancement of the area is intended to be achieved through assisted regeneration as well as minor reconstruction plantings to the west of the site which are in accordance with the Swamp Sclerophyll Module [RE 12.3.5].

Assisted regeneration shall consist of the continuously rehabilitation/protection via management of weeds and removal of threatening processes such as inappropriate

access, recreational vehicle exclusion etc. Whilst during recent site inspections, few areas are evident, any disturbed areas which become evident throughout the 'establishment' and 'on maintenance' period as a result of recreational vehicle damage, construction impact etc will be revegetated in accordance with the Swamp Sclerophyll Module [RE 12.3.5]. It is important to note that implementation of added reconstruction plantings will only be necessary if 'assisted natural regeneration' efforts are unsuccessful in the medium term

It is considered the proposed measures within the OSMS for the Oakey Creek buffer area, are more than adequate to improve or maximise the marine wetland and fish habitat environmental values.

Approval of the Supplementary Preferred Master Plan and OSMS are sought.

2.2.6 Dredge Spoil Disposal Area

A submitter raised concerns in relation to the proposed onsite dredge spoil disposal area and its potential impact on the environmental values of the surrounding area. The EIS had specified a number of options in relation to the potential dredge disposal methods for the GCIMP. The options ranged from an onsite disposal area and/or regional dredge spoil site facility and external dredging options for the Coomera River as outlined within the Coomera River Dredge Disposal Options prepared by Hyder Consulting contained within Volume 6 Appendix 17 of the EIS.

The Hyder report identifies a number of regional options for regional dredging requirements. The development concept provide options for onsite dredge requirements and identifies how a regional dredge spoil site if required by the Government can be accommodated within the project area. In relation to the potential onsite regional dredge facility, given the nature of the facility it is considered the proponent is not the responsible entity to develop a multi agency / multi government plan for the Dredge management for the Coomera River.

In terms of dredge disposal specific to the project, the EIS identified a preferred site for the disposal. The preferred site has an existing approval and is currently an operating Extractive Industry site. The site is capable of accepting the dredge material anticipated to be generated as a result of the proposed development.

The submitter suggested a comparative cost benefit analysis be provided in relation to options for dredge spoil disposal and appropriately considering the actual value of the remanent marine wetland habitat lost in the disposal of the dredge spoil. It was also suggested to identify the alternatives considered prior to selecting the preferred option.

Section 2 of the EIS presented a cost benefit analysis of the preferred master plan and the five (5) alternative options including a no development / status quo option. The cost benefit analysis demonstrates the land utilised for marine industry development results in a higher multi criteria value than concepts which retain the areas proposed for dredge spoil and / or industrial land (the Southern Precinct) in a natural state.

The EIS has considered to the extent necessary site requirements for dredging, regional dredging issues and potential sites for such a facility. It is understood Gold Coast Waterways Authority and GCCC are still seeking to have a regional dredge facility on the subject site. The Supplementary Preferred Master Plan has not identified a Regional Dredge Spoil Site.

2.2.7 Use of Unallocated State Land

It was noted through a submission received that further explanatory detail was required in relation to tenure history of the site with respect to Native Title. The submitter made particular reference to the matter of native title rights and interests extending to all land and waters associated with the project.

The subject site has been extinguished from Native Title Rights as Lot 108 on WD6404 formed part of original Portion 71 on W3150, parish of Coomera. Portion 71 covered an area of 60.7 ha (150 acres). The original Deed of Grant (10250065) was issued in June 1875 to Angus Bell over Portion 71 under clause 71 of the Crown Land Alienation Act 1868, was a grant of an exclusive interest. Therefore the extinguishing effect of the deed of grant can be relied upon and Native Title has been extinguished over the whole of original portion 71.

The Cultural Heritage Assessment report provided within Volume 10, Appendix 38 of the EIS had noted the Cultural Heritage Coordination Unit of the Department of Natural Resources and Water recognised the Kombumerri clans as the culturally proper caretakers for area.

Since the preparation of the initial Cultural Heritage report, a native Title Claim had been lodged and it has been identified the project falls within the claim area. As such, Jabree Limited is the registered Aboriginal Cultural Heritage Body for the project area.

Prior to amendments made to the preferred Master Plan, the proposal included 280 berths within the external marina. As part of the amendments made to the preferred Master Plan, 16 marina berths have been deleted from the external marina in order to ensure the proposal is contained wholly within allotments, whereby Native title has been extinguished.

A submission received had made reference to marina berths being proposed within unallocated state land and the requirement to obtain relevant approvals in order to facilitate this outcome. As noted above, all marina berths proposed within unallocated state land have been removed from the amended master plan.

2.2.8 Public accessibility to the foreshore

Concern regarding public accessibility to the foreshore was raised within a number of submissions received on the EIS. Submitters requested further information to demonstrate whether the development will facilitate public access to the foreshore.

As discussed within various sections of the EIS, public access to the new foreshore area is contemplated within the Northern Precinct. The Landscape Master plan contained within Volume 10, Appendix 35 of the EIS demonstrates how public accessibility to the foreshore will be achieved through the provision of pathways, boardwalks and viewing decks. Figure 5 identifies linkages within the GCIMP



Figure 5 - GCIMP Linkages

A proposed public access pedestrian zone will be constructed along the riverfront, providing a landscaped promenade alongside the marina. In addition, the Oakey Creek buffer natural vegetation zone has a perimeter 'corso' road alongside providing continuous public amenity access to the creek bank.

Pedestrian areas shall be designed to encourage pedestrian movement freely and take precedent over vehicular movements within these areas to create a sense of place. In particular the marina frontage presents an opportunity to create a strong pedestrian focused pedestrian route extending to the eastern precinct.

The area shall be designed to encourage pedestrian connection with the water's edge and the intended landscape will provide the opportunity for this interaction with a mix of spaces and landscape treatments that promote congregation.

It is considered the project has placed significant emphasis on ensuring public accessibility to the foreshore is maintained if not advanced through specific design provisions within the GCIMP.

2.2.9 Detailed Design

A number of submitters had emphasised within their submissions aspects relative to detailed design particularly in regards to the incorporation of Crime Prevention through Environmental Design Principles (CPTEDP), accessibility needs for vulnerable groups and End of Trip Facilities.

Throughout the EIS and in particular the Community Consultation Report prepared by Planit Consulting contained in Volume 2, Appendix 4 of the EIS stipulated consultation had occurred with the Queensland Police regarding CPTED principles. The suggestions made during this time included discussion of including surveillance and the provision of security guards within the GCIMP. The portion of the site east of the proposed IRTC, security will be implemented as part of the body corporate arrangement. Detailed information pertaining to this aspect will be provided through subsequent development applications.

In addition to this, the preliminary design has incorporated CPTED principles throughout the GCIMP and has reinforced CPTED principles in the GCIMP Development Code.

With respect to accessibility needs for vulnerable groups and End of Trip Facilities incorporated within the GCIMP, preliminary design has made reference to accommodating and providing these aspects.

Furthermore, provisions within the GCIMP Development Code and the Queensland Development Code cater for ensuring accessibility needs for vulnerable groups and End of Trip Facilities are provided. Specific details in relation to the design and integration of these aspects will be provided as part of subsequent development applications.

2.3 OFFSETS

2.3.1 Issues Raised within Submissions

DAFF raised concerns in relation to the calculation of offsets within the EIS. DAFF noted that the expected disturbance to sea grass has not been included in the offset calculations detailed within the Aquatic Ecology report (Volume 4, Appendix 7) and the Offset Options report (Volume 5, Appendix 9) of the EIS.

DAFF requested any loss of fish habitat is offset and included within the offset calculations. DAFF had also requested the proponent provide up to date seagrass mapping and include historic sea grass mapping in and adjacent to the development area. As such a response to the following issues is provided below:

- Fish Habitat Offset
- Seagrass Offset

2.3.2 Fish Habitat Offset

As outlined in the EIS the development for the Preferred Master Plan did impact on a number of vegetation communities identified onsite. The areas of each community were presented in Table 30. This has been updated to reflect the Supplementary Preferred Master Plan as identified in Table 4 below.

Table 4 - Mapped Vegetation Communities & Clearance Rates

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (CASUARINA GLAUCA) [T6D/M] ON TIDAL MUDFLATS	12.1.1	2.156	0.815	0	1.34	62.20
COMMUNITY 1B: MID-HIGH FOREST (CASUARINA GLAUCA) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	3.4788	3.4788	0	0.00	0.00

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 2A: VERY TALL RUSHLAND (<i>JUNCUS KRAUSII</i>) [V4M]	12.1.2	0.19	0	0	0.19	100.00
COMMUNITY 2B: LOW CLOSED TUSsock (<i>SPOROBOLUS VIRGINICUS</i>) GRASSLAND [G1D]	12.1.2	22.37	15.45	1.65	5.27	23.56
COMMUNITY 3: LOW- TALL OPEN FOREST/WOODLAND (<i>AVICENNIA MARINA</i> + <i>AEGICERAS CORNICULATUM</i>) [T4M/S]	12.1.3	2.735	0.74	0.18	1.82	66.36
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [<i>SETARIA SPHACELATA</i>] G4D/M	N/A	1	0	0	1.00	100.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/PADDOCK MOSAIC G1D/M	N/A	35.93	33.2	2.4	0.33	0.92
		67.8598	53.6838	4.23	9.95	14.66

In relation to offsets as outlined in the EIS multiple discussions with DAFF were held as the communities predominately affected were of a fisheries nature and this agency was responsible for assessing impacts and offsets. Through these discussions it was acknowledged that limited offset ability was available in the local authority area and /or Moreton Bay.

The department identified a number of other locations in Queensland for investigation. These were undertaken the sites evaluated and additional sites nominated for evaluation. Through this process liaison with NPRSR also occurred to assist in coordinating the location of sites for 'offsetting' which would maximise integrity of the national/state based reserve system via improved management or buffering of the state network and or expand this.

A supplementary offset report was produced for sites in Baffle Creek from these discussions and is contained in Volume 2, Appendix 4 of the SEIS. DAFF had identified several properties within and around the Baffle Creek declared Fish Habitat Area (FHA) as properties of interest for addition to the FHA.

The subject Baffle Creek properties as prioritised by DAFF are:

- Lot 73 FD391 and
- Lot 81 FD485 (of equal and top priority) and
- Lot 2 RP 847317 (of secondary priority).

Baffle Creek is located approximately 60km north of Bundaberg. Earthtrade has conducted an analysis of the above mentioned properties and their use to ascertain their suitability and availability for potential offsets. This supplementary offsets report details the analysis of these target properties and the progress of communications with the property owners to determine the level of interest in any potential sale.

It is important to note that these properties haven't yet been acquired they have only been identified as potential site for offsetting.

Subsequent to the report, discussions DAFF also identified works within the Tallebudgera Creek Conservation Park/David Fleay Wildlife Park for boardwalk extensions and educational material.

It is relevant to note discussions were also held with the GCCC. In discussions with Councils officers the process undertaken with state agencies was outlined. The designated Offsets Officer and an officer from the catchment management unit identified two local projects for offsetting. These included the Coomera River Tidal Weir Fish ladder and Broadwater parklands educational facility.

The Coomera River Tidal Weir Fish ladder involves an approximate \$900,000 fish ladder structure and tidal weir repairs. Refer to Volume 2, Appendix 5 of the SEIS for costing breakdown and plans. Costings and details on the education facility within the Broadwater Parklands was not provided but is understood to involve in cash contribution to equip an educational facility with audio and digital media equipment.

As illustrated above and through the EIS and attached supplementary reports, a process to identify and agree upon offsets the sites ecological impacts was undertaken. Through this process a number of offsetting options have been identified at a state and local level. These and or combinations of any of the above considered options could be undertaken and agreed upon through the approval process.

As discussed with the DSDIP Office of the CG, this matter may be conditioned to the adopted final master plan. Through this approach actual impacts can be quantified upon approval of a plan and the offsetting combination agreed to with the relevant government agencies. This combination of offsets may also be resolved through the assessment phase.

2.3.3 Seagrass Offset

Seagrass distribution proximate to the site is discussed within Volume 4, Appendix 7 of the EIS. Construction related impacts to the mapped sea grass communities and potential impact to these from construction related activities is presented within BMT WBM Water Quality Study contained in Volume 8, Appendix 28 of the EIS.

As acknowledged in both reports, the seagrass areas are small in extent and relatively sparse. Furthermore, the seagrass areas are not located in significant areas such as the Moreton Bay Marine Park. The distribution of these seagrass beds is affected by natural processes and anthropocentric activities such as development dredging.

It is identified within the Water Quality Study that up to 1.23 hectare of sea grass may be lost through turbidity related dredging impacts. In addition to this, it is acknowledged that these impacted areas would recover.

Given the external influences to the abundance and distribution of sea grass and the ability for seagrass to recover, it has been proposed that mapping and monitoring of seagrass beds be undertaken prior to works confirm extent / quality and concurrent with dredging activities to manage the activity and protect the area as best as possible and quantify impacts. These actions and activities are to be further resolved through an offset agreement.

DEHP noted in their submission that the GCIMP would involve the irreversible loss of some palustrine and intertidal wetlands and fish habitat areas. DEHP recommended that advice on the mitigation, management and offsetting of those impacts be sought from relevant agencies such as DAFF for fish habitat areas.

Offset options have been outlined within the EIS and ongoing liaison with DAFF has occurred. It is considered this issue will be resolved through agreement between the proponent, DAFF and the CG. A suitable condition to this effect can be included in the CG Report should a favourable recommendation be achieved.

A revised document to reflect ongoing discussions is to be provided. Furthermore, areas of vegetation to be removed are quantified in Table 4 above, and can be used for conditioning purposes. In addition, Palustrine wetland offsets are to be contained to

works proposed within open space areas of the project site, specifically the rehabilitation works within Lot 146 SP150731.

As discussed with the DSDIP Office of the CG, this matter may be conditioned to the adopted final master plan. Through this approach actual impacts can be quantified upon approval of a plan and the offsetting combination agreed to with the relevant government agencies. This combination of offsets may also be resolved through the assessment phase.

2.4 PROJECT APPROVALS

2.4.1 Overview of Legislation and Policy Amendments

As detailed within the Section 1 of the EIS, a number of items of State and Commonwealth legislation apply to the project. These items may impose certain restrictions and requirements on the development and were discussed in detail as part of the EIS document.

Subsequent to the submission of the EIS, a number of legislative changes, particularly Queensland legislation and policy, have occurred. A summary of the key amendments are as follows:

- Implementation of the Sustainable Planning and Other Legislation Amendment (SPOLA) Act 2012:
 - The SPOLA Act made a number of amendments to the Sustainable Planning Act (SPA) 2009 and consequential amendments to a range of other legislation. Key changes brought about by the SPOLA act and relevant to this project include:
 - Establishment of the Single State Assessment and Referral Agency (SARA) for development applications
 - Reduction in the regulatory red tape for development applications involving state resources through the removal of the requirement to submit evidence of resource entitlement when lodging a Development Application
- Implementation of Temporary SPP 1/13 Planning for Prosperity
 - The Temporary SPP 1/13 Planning for Prosperity is now reflected in relevant state and local government decision making. This Temporary was brought about by the Queensland Government's commitment to growing Queensland's economy. The purpose of this policy is to ensure that economic growth is facilitated by local and state plans and is not adversely impacted by planning processes.
- Development of the Draft Single State Planning Policy (SPP)
 - The Draft single state planning policy is being developed to replace the multiple State Planning Policies in existence. It is considered this approach will simplify and clarify state interests.

- Amendments to the Sustainable Planning Regulation (SPR) 2009 specifically the referral agency triggers
 - A reduction in the number of referral triggers and amendments to referral triggers has occurred.
- Implementation of Environmental Protection (Greentape Reduction) and Other Legislation Amendment Act 2012
 - The effect of the Environmental Protection (Greentape Reduction) and Other Legislation Amendment Act 2012 included amendments to the Environmental Protection Act 1994 and subsequent amendments to the Environmental Protection Regulation 2008. The intent of this Act was to reduce red tape by 20%. In particular, amendments have included the deletion of 20 environmentally relevant activities (ERAs) thresholds.
- Commencement of the Coastal Protection State Planning Regulatory Provision suspending Draft Coastal Protection State Planning Regulatory Provision – October 2012 (2012 DCPSRP); 2012 DCPSRP and continued the suspension of SPP 3/11.

Figure 6 demonstrates the aspects of the GCIMP that are applicable as part of the EIS process and the approvals required through subsequent development applications.

The above mentioned amendments will have an effect on the proposal in terms of approvals required for subsequent applications and in particular instances have removed the requirement to obtain certain approvals that were raised within the submissions. The effect of the above changes on the submissions received will be discussed in detail within the following section.

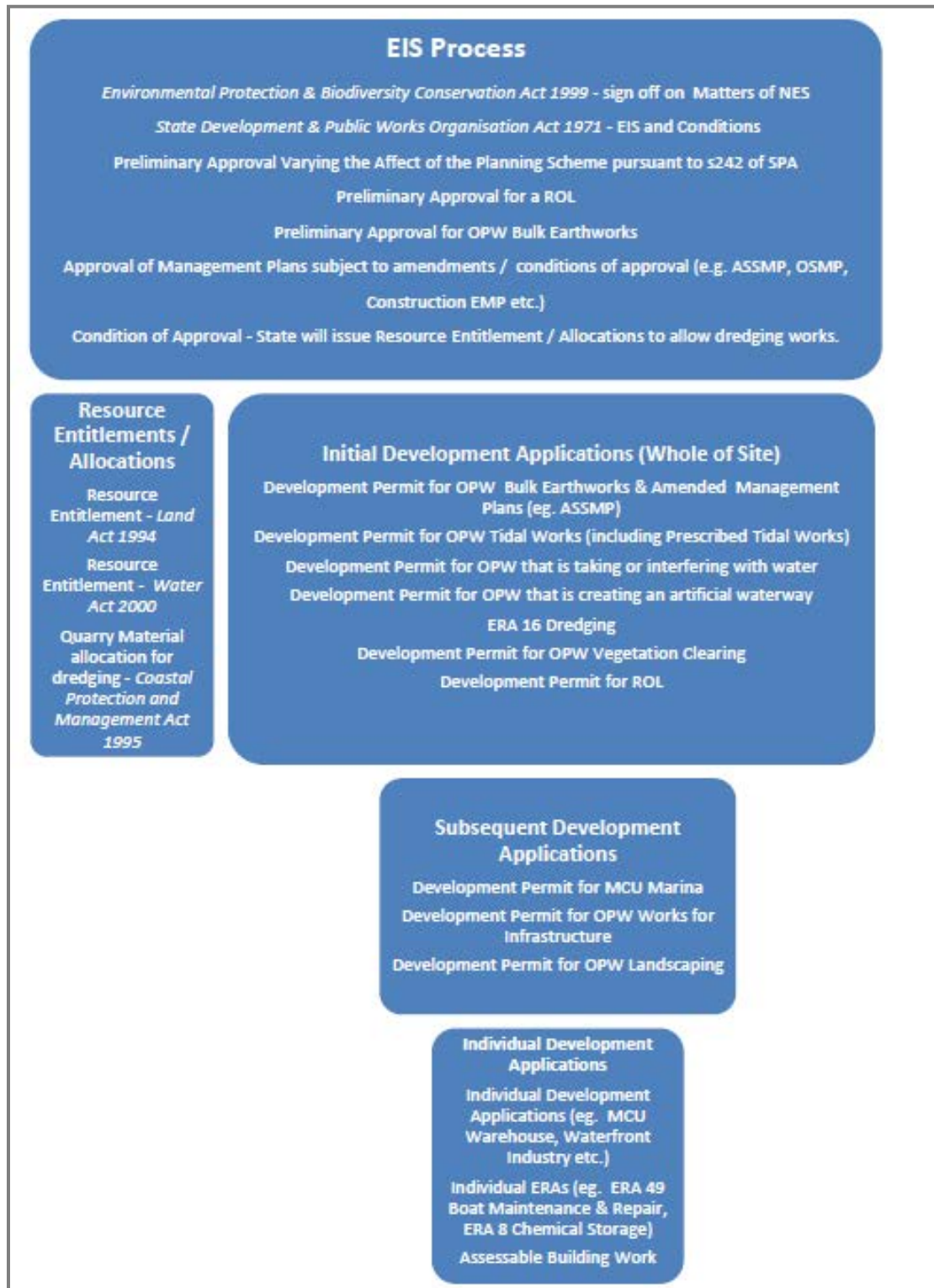


Figure 6 - GCIMP Development Approvals Flow Chart

2.4.2 Issues Raised within Submissions

A number of issues raised by submitters in relation to approvals required to facilitate the proposed project were predominantly related to land tenure aspects of the proposal and approvals for subsequent applications such as ERAs.

One submitter had advised that particular approvals in accordance with the Water Act 2000 were not required as there is no defined water course located on the subject site. Other submitters had identified the need for additional road closure / State land acquisition applications in order to facilitate the project.

Liaison was required with a number of submitters in regard to their submissions in order to ascertain the requirements with respect to obtaining particular approvals. It is noted that further liaison with relevant Government departments is required in order to address aspects of the applications process.

In summary the following issues were raised within submissions in relation to project approvals:

- Approvals required for the construction of Marina Berths within unallocated State land
- Additional and Redundant Referral Agency Triggers
- Requirements for approvals in accordance with the Land Act 1994
- Requirements for approvals in accordance with the Transport Infrastructure Act 1994
- Environmental Relevant Activities

As noted in the previous section, a number of changes have occurred since the submission of the EIS to the state's planning and environmental legislation and policies. The effect of these changes has resulted with approvals previously considered applicable to the project as no longer being required. It is noted that given the uncertainty and unpredictable nature of the planning and environmental sectors, particularly from a legislative and policy context the industry is constantly changing and evolving.

Having regard and acknowledging this reality, additional changes to the legislative frame work is likely to occur prior to the implementation of particular aspects of this project. As such, at the time of preparing and submitting subsequent applications, a detailed assessment of the relevant approvals and policies at that point in time will occur.

Further information in response to submissions received in relation to the above is provided below.

2.4.3 Approvals required for the construction of Marina Berths within unallocated State land

Prior to amendments made to the preferred Master Plan, the proposal included 280 berths within the external marina. As part of the amendments made to the preferred Master Plan, 16 marina berths have been deleted from the external marina to ensure the proposal is contained wholly within allocated land tenure, whereby Native title has been extinguished.

A submission received had made reference to marina berths being proposed within unallocated State land and the requirement to obtain relevant approvals in order to facilitate this outcome. As noted above, all marina berths proposed within unallocated State land have been removed from the amended master plan.

It is therefore considered this issue has been addressed and requires no further action.

2.4.4 Additional and Redundant Referral Agency Triggers

Section 1 of the EIS provided an overview of the approvals and referrals required for the GCIMP. A number of submitters raised aspects of the project trigger additional referral triggers than what was identified within the EIS.

Removal, destruction or damage of marine plants

One submitter highlighted that as the project will involve removal, destruction or damage of marine plants, an application for a Material Change of Use application involving Operational Works would trigger the application to be referred to the Department of Agriculture, Fisheries and Forestry (DAFF) for assessment in accordance with Schedule 7, Table 2, Item 32 of the Sustainable Planning Regulations 2009.

The advice issued from the submitter has been noted. However, since receiving the submission, as a result of the implementation of SARA as identified in the before section, the referral agency in this instance will be the Department of State Development, Infrastructure and Planning (DSDIP).

Vegetation Clearing

The EIS made reference that the proposed Clearing of native vegetation is not assessable development under schedule 3, part 1, table 4, item 1 in accordance with Schedule 24, Part 2 of the SPR 2009 as the project is for an 'urban purpose' within an 'urban area'.

A submitter raised the concern that not all areas of the project site are defined as an urban area. Therefore, the exemption under Schedule 24, Part 2 of the SPR 2009 does not apply to areas defined to be 'non urban' and the EIS should be updated to reflect areas considered to be 'urban' and 'non urban'.

The definition of an 'urban area' in accordance with Schedule 26 of the SPR 2009 and in the context of this project is:

"an area identified as an area intended specifically for urban purposes, including future urban purposes (but not rural residential or future rural residential purposes) on a map in a planning scheme that—

(i) identifies the areas using cadastral boundaries; and

(ii) is used exclusively or primarily to assess development applications."

Therefore, the extent of the site considered to be 'non urban' is identified as 'rural living / open space' within the excerpt of Coomera Local Area Plan Precinct Map below:

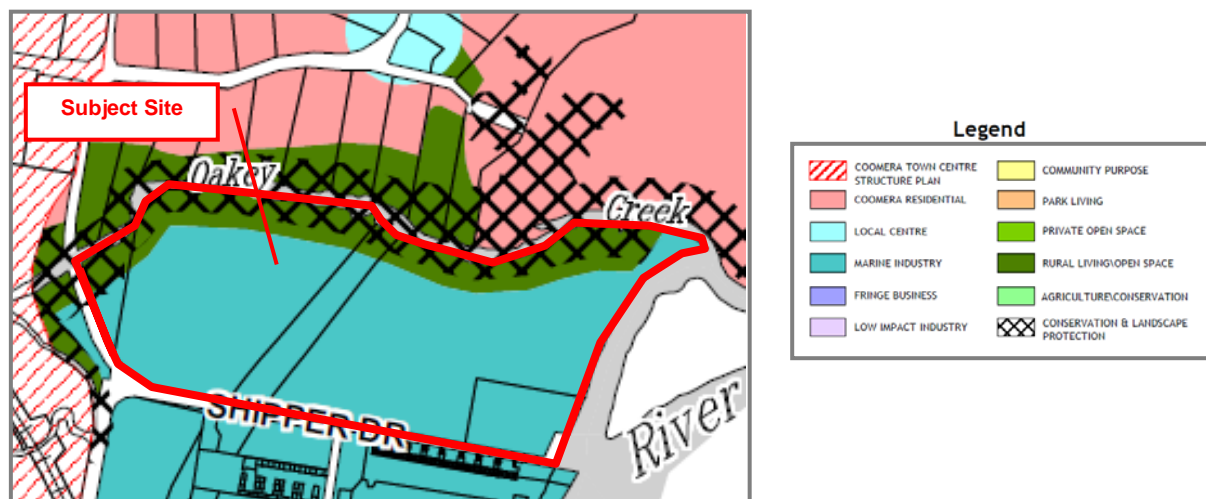


Figure 7 - Coomera LAP Precinct Map (Source: GCCC Planning Scheme 2003)

The proportion of the site within a 'non urban' area will be appropriately identified within subsequent development applications. In addition to this, applications for operational Works for Vegetation Clearing will be applied for where required.

Areas of vegetation to be removed are quantified within Table 5 below. As such, this table can be utilised for conditioning purposes.

Table 5 - Mapped Vegetation Communities & Clearance Rates

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (CASUARINA GLAUCA) [T6D/M] ON TIDAL MUDFLATS	12.1.1	2.156	0.815	0	1.34	62.20
COMMUNITY 1B: MID-HIGH FOREST (CASUARINA GLAUCA) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	3.4788	3.4788	0	0.00	0.00
COMMUNITY 2A: <u>VERY TALL RUSHLAND (JUNCUS KRAUSII) [V4M]</u>	12.1.2	0.19	0	0	0.19	100.00
COMMUNITY 2B: <u>LOW CLOSED TUSsock (SPOROBOLUS VIRGINICUS) GRASSLAND [G1D]</u>	12.1.2	22.37	15.45	1.65	5.27	23.56
COMMUNITY 3: LOW-TALL OPEN FOREST/WOODLAND (AVICENNIA MARINA + AEGICERAS CORNICULATUM) [T4M/S]	12.1.3	2.735	0.74	0.18	1.82	66.36
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [SETARIA SPHACELATA] G4D/M	N/A	1	0	0	1.00	100.00

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/PADDOCK MOSAIC G1D/M	N/A	35.93	33.2	2.4	0.33	0.92
		67.8598	53.6838	4.23	9.95	14.66

The use of the definition for an 'urban purpose' was raised by the submitter also. The submitter made reference to depositing of dredge spoil is considered to be a 'non urban purpose' thus exemptions for an 'urban purpose' in an 'urban area' do not apply in this circumstance. In accordance with Schedule 26 of the SPR an 'urban purpose' is defined as:

"purposes for which land is used in cities or towns, including residential, industrial, sporting, recreation and commercial purposes, but not including environmental, conservation, rural, natural or wilderness area purposes."

In accordance with the Gold Coast Planning Scheme 2003, the proposed Dredge Spoil Facility is included within the definition of what constitutes an Extractive Industry. As such, it is considered the disposal of dredge spoil material is a form of an industrial purpose and is therefore an 'urban purpose'. Given this justification, it is considered the exemption in accordance with Schedule 24 of the SPR is applicable to the dredge spoil site in this circumstance.

Water Act 2000

It was noted within the EIS that the jurisdiction of the Water Act (WA) 2000 was relevant to the GCIMP as the project works involve taking or interfering with water as defined under the WA 2000.

The Project Approvals report prepared by Minter Ellison Lawyers contained within Volume 2, Appendix 3 of the EIS identified the GCIMP involves works within three separate bodies or areas of water:

- wetlands located within Lot 98 SP150731;

- three other areas of water within Lot 98 SP150731 and Lot 108 WD6404; and
- part of the Coomera River and Oakey Creek.

It was noted the wetlands were considered to be captured by the WA 2000 definition of a 'lake' as it includes a 'natural collection of water, whether permanent or intermittent'.

The three (3) other areas of water within Lot 98 SP150731 and Lot 108 WD6404 are captured by the 'watercourse' definition as they are considered to be above the point to where the high spring tide normally flows. These areas were identified as:

1. the drainage line that extends roughly north south across the south eastern corner of Lot 98 SP150731;
2. the channel on the eastern side of Lot 98 SP150731 coming into the lot from the Coomera River; and
3. the channel coming onto Lot 108 WD6404 from the southern drain.

In their submission, DNRM stated there is no defined watercourse located within the subject site. As such the WA 2000 is not relevant to the GCIMP.

As noted within the Project Approvals report there will be some works in part of the Coomera River and Oakey Creek. As the relevant parts of the Coomera River and Oakey Creek affected by the GCIMP is tidal, operational works in the river are governed by the Coastal Protection and Management Act 1995 rather than the Water Act, and therefore do not involve the Water Act operational work assessment trigger in the SPR Schedule 3 Part 2 Table 4 Item 1.

Waterway Barrier Works

Prior to amendments to the preferred Master Plan within the EIS identified a pedestrian / bicycle bridge proposed across the Oakey Creek in order to improve connectivity between the project site and residential development.

A submitter raised the issue that the if any part of the proposed bridge is situated within the bank of the creek the proposed bridge may be considered to constitute a Waterway Barrier in accordance with the Fisheries Act 1994.

Through discussions with Council, Council had requested removal of the pedestrian / bicycle bridge as Council raised concerns with the potential impacts the linkage may pose on the environment. Therefore, amendments to the preferred Master Plan have

resulted with the removal of the proposed pedestrian / bicycle bridge across Oakey Creek.

2.4.5 Requirements for approvals under the Land Act 1994

As outlined within the EIS, the proposal involves the inclusion of State land to facilitate the project. As such, the proponent is required to obtain approvals in accordance with the Land Act 1994.

DNRM within their submission made reference to a number of approvals required to facilitate the project. These approvals included:

- Permanent road closure and purchase of all or part of Shipper Drive
- Purchase of all or part of Lot 108 on WD6404 being State land – Reserve for park and recreation purposes within the GCCC as trustee
- Purchase of all or part of Lot 35 on SP150730 being State land – reserve for road purposes with DTMR as trustee
- Term lease over the bed and banks of the Coomera River adjacent to Lot 98 on SP150731

Prior to the lodgement of the EIS, the proponent had lodged applications under the Land Act 1994 for the purchase of the subject State land. These applications have since closed in 2009 as there was no further correspondence received from the proponent in relation to proceeding with the application. It is intended to re-lodge the relevant applications at a later date.

A valuation report for the purchase of Lot 108 on WD6404 and a portion of Shipper Drive Road reserve was prepared and contained within Appendix I of the Coomera River Dredge Disposal options report prepared by Hyder Consulting within Volume 6, Appendix 17 of the EIS.

Lot 108 on WD6404 is currently a Reserve for Park and Recreation (RES 21701), under the control of the Gold Coast City Council as trustee. GCCC resolved to approve the purchase of Lot 108 on WD6404. As such, negotiations have commenced for the purchase of Lot 108, and will be governed by the provisions of the Land Act 1994.

It is not intended nor required to purchase any part of Lot 35 on SP150730 thus an application to this effect will not be applied for. As indicated within the EIS, in order to facilitate connectivity between the east and western portions of the development that a

pedestrian linkage be created in the form of an easement over Lot 35 on SP150730. It is considered this aspect of the development is able to be conditioned by the CG.

DNRM noted within their submission noted that resource entitlement under the Land Act 1994 is required in order to lodge a development application involving State land under the SPA 2009. The recent changes to SPA have effectively streamlined the development application process for applications involving resource entitlement. Prior to change, for an application to be considered to be properly made, an application was to be accompanied with resource entitlement if it involved State land.

The effect of the changes to SPA has now separated the SPA process from the resource entitlement process required under other legislation. Therefore, an application for a state resource entitlement can be made either prior to, concurrently with, or following the development application process.

It is understood this process does not mean that a development is able to proceed without the required resource entitlement. Prior to submitting a request for resource entitlement, the proponent will liaise with the relevant authorities in order to confirm Agency requirements.

As noted in earlier sections of the SEIS, marina berths located within unallocated State land have been deleted from the proposal. As such, resource entitlement is no longer required for this aspect of the project.

Therefore, in consideration of the above and as stated within the EIS, the proponent intends to re-lodge and apply for all relevant approvals and resource entitlements required in accordance with the Land Act 1994.

The creation of an easement across the IRTC in order to create connectivity between the Western Precinct and the remainder to the development was contemplated within the EIS. In order for this outcome to occur, further liaison with DTMR will be required to ensure the location of the easement will not impact on the construction or function of the State-controlled road corridor.

2.4.6 Requirements for approvals in accordance with the Transport Infrastructure Act 1994

The project site is severed by Lot 35 on SP150730 which is State land – reserve for road purposes for the proposed IRTC road corridor with DTMR as trustee. Given the uncertainty surrounding the timing of the construction of the IRTC, the proponent has liaised and has come to an agreement with DTMR to fill the corridor as part of the overall bulk earthworks for the project site.

DTMR had raised within their submission that they are concerned about the load-bearing capacity of existing soils over parts of the site and of the fill material to be used. It is considered poor soil conditions and/or poor quality fill materials could necessitate expensive remediation or replacement and/or more costly engineering solutions for buildings, structures and infrastructure.

It is understood and acknowledged by the proponent that in order for the filling of the IRTC corridor to occur, the proponent will be required to adhere to DTMR specifications and requirements in terms of the quality of fill permitted to be deposited within the corridor. Throughout the EIS process, the proponent has advised DTMR that they are aware and accept this requirement.

DTMR had also raised within their submission that the proponent has not provided detailed engineering investigations of existing ground conditions including geotechnical, sub-grade preparation and imported fill specifications as it relates to the IRTC.

The Construction Methodology Report prepared by Hyder Consulting, Volume 5, Appendix 13 of the EIS, outlines the construction process for the GCIMP. Section 7.2 of the report quantifies anticipated earthworks volumes and fill requirements. Details pertaining to the quantities and quality of fill will be refined through subsequent applications for OPW.

Furthermore, it is considered the Geotechnical Report prepared by Shaw Urquhart, contained within Volume 9, Appendix 29 of the EIS, provides sufficient information on geotechnical conditions of the site relative to the application. Further detailed geotechnical investigations that are required will be undertaken and submitted with subsequent OPW applications. The applicant will liaise with DTMR in this regard.

DTMR had also raised concerns in relation to the location of the proposed TAFE and its assumed impacts it may pose on the IRTC corridor. As noted within earlier section of the SEIS, the TAFE component no longer forms part of the project proposal. As such, it is considered this concern has been addressed.

In conclusion, it is considered concerns raised by DTMR in relation to OPW works within the IRTC corridor is able to be conditioned in the CG Report on the EIS.

2.4.7 Environmental Relevant Activities (ERAs)

Volume 1, Section 1 and the Project Approvals report prepared by Minter Ellison Lawyers contained within Volume 2, Appendix 3 of the EIS, identified the GCIMP will involve a material change of use for the following ERAs:

- Extractive activities (ERA 16) involving dredging a total of 1000t or more of material from the bed of naturally occurring surface waters in a year – for the capital dredging to create the marina and maintenance dredging;
- Boat maintenance or repair (ERA 49); and
- Chemical storage (ERA 8) – in respect of petroleum storage.

A number of submissions were received from DEHP requesting further detailed information specific to the above mentioned ERAs. In addition to this, DEHP raised concerns that the proposal in its current form does not meet environmental objectives prescribed within the Environmental Protection Act 1994 (EPA).

Amended Environmental Management Plans (EMPs), which address the specific aspects raised by DEHP, are to be prepared through subsequent applications. It is expected the amended EMPs would address in detail issues such as:

- Air quality
- Acoustic quality
- Water quality
- Location, type, quantity etc. of chemicals
- Emergency management
- Environmental risk management

Aspects raised in DEHP's submissions relate to various future applications and potential management issues arising from yet to be determined land uses. The EIS demonstrates that a range of issues have been considered in the development of the Master Plan and it has inbuilt various design features such as setbacks, built form requirements and a suite of management plans to ensure environmental impacts are able to be managed. These reports and plans are intended to be amended / adjusted to accommodate the final approved plan, temporal changes and reflect future actions and land uses on site.

2.5 CONSTRUCTION

2.5.1 Issues Raised within Submissions

As identified within the EIS, construction works will involve widening and deepening the channel between the Site and Foxwell Island and construction of an internal marina basin. The Site will be filled to above the 100 year ARI flood level and the channel will be deepened to -4.0m AHD.

As part of the development, dredging works are proposed, including widening and deepening of the channel between the Site and Foxwell Island and the construction of an internal marina basin. The channel will be widened by approximately 65 metres and channel will be deepened to -4.0m AHD.

A number of submissions were received in relation to construction aspects of the GCIMP. Submissions were generally in relation to requesting further detailed information of regarding aspects of the construction methodology.

The key issues raised in the submissions were:

- External Marina Construction
- Internal Marina Construction
- Acid Sulfate Soils Management
- Quantity and Quality of Fill
- Dredge Spoil Site
- Infrastructure Construction
- Construction Traffic

A response to the key issues is provided below.

2.5.2 External Marina Construction

The excavation of the marina basin will be undertaken using a combination of wet and dry excavation techniques as detailed within the Construction Methodology Report prepared by Hyder Consulting contained in Volume 5, Appendix 13 of the EIS.

The 'wet excavation' will be associated with the widening of the Coomera River and the creation of the External Marina. This activity is proposed to be undertaken in stages to

enable better monitoring and control of the sediment disturbed in the river through excavation works.

As noted within the EIS, the most suitable method for the 'wet excavation' works was considered to be undertaken by long reach excavator or dragline set up on a temporary construction bund wall or via barge. Further refinement of reports and investigations pertaining to adopted construction techniques are to be confirmed through a future development application.

As outlined within the EIS, the material from both the 'wet' and 'dry' excavation works will be placed in constructed treatment beds and then be treated in the beds for acid sulfates and conditioned by drying back for optimal use as construction fill either as compacted fill or for preload purposes.

With regards to works required offsite (e.g. erosion protection), the Construction Methodology Report details that all stormwater runoff from areas disturbed and exposed by construction, will be designed to pass through a sediment and erosion control device prior to discharging to the existing waterways. Temporary sediment control bunds are to be implemented around the extent of construction works.

Construction related considerations and methods have been included in the Construction Methodology Report prepared by Hyder Consulting contained in Volume 5, Appendix 13 of the EIS. This report details how the works will be constructed with consideration given to minimising any detrimental environmental impacts.

In addition to this, the Site Based Management Plan (SBMP) prepared by Hyder Consulting contained in Volume 6, Appendix 15 of the EIS addresses ongoing programs to monitor impacts of the project during construction and operational phases of the project on the receiving waters and marine and estuarine environment. Programs / Environmental Management Plan Elements include those specific to Water and Sediment Quality; Stormwater, Erosion and Sediment Control; and Flora and Fauna (Marine).

Further investigations and refining of details pertaining to major environmental constraints will be undertaken as part of subsequent development applications.

2.5.3 Internal Marina Construction

As clarified within Section 3 of the EIS and the Construction Methodology Report prepared by Hyder Consulting contained in Volume 5, Appendix 13 of the EIS, the construction of the GCIMP will occur using 'wet' and 'dry' excavation techniques.

The 'dry excavation' techniques will be associated with the creation of the Internal Marina. The process for constructing the internal marina involves the stripping of the topsoil to the eastern precinct with the stripped material used to construct a temporary bund along the eastern boundary fronting the Coomera River. The bund will hold back the river water thus creating dry conditions to allow the creation of the internal marina using excavators, trucks and land based machinery.

The temporary bund wall will allow for the majority of the works to be undertaken in dry conditions:

- Placement of structural fill to the foundation of the internal revetment walls;
- Placement of pre cast revetment walls;
- Detailed excavation of the bed profile of the Internal Marina;
- Placement of armour rock to the revetment banks.

The material from the internal marina will then be treated in the beds for acid sulfates and conditioned by drying back for optimal use as construction fill.

If poor material is found in the foundation of the internal marina, the material will be removed and replaced by select fill. Upon completion of the revetment walls, bulk earthworks shall proceed with the excavation of material from the internal marina.

Placement of rock armouring will occur as excavation of the internal marina profile is undertaken. Upon completion of each individual block of earthworks, the internal marina section will be flooded and water treated for ASS in accordance with the Acid Sulfate Soils Assessment and Management Plan (ASSAMP) prepared by Gilbert and Sutherland contained in Volume 10, Appendix 32 of the EIS.

The final marina entrance shall be breached using either a long arm excavator or dragline upon completion of the internal marina and stabilisation of water acidity and testing requirements. Silt curtains will be provided within the Coomera River to prevent release of silt during excavation.

A staged excavation shall be considered in this respect to ensure partial water balancing internal and external to the temporary construction bunds.

DEHP raised in their submission that the report states that sheet piling will be used as the bund for the dry excavation but will not be used for the construction of the internal marina. DEHP queried as to why sheet piling technique would not be utilised.

As noted the dry excavation technique will be utilised for the internal marina and sheet piling has not been used in this instance due to the costs associated with sheet piling and the undue noise and vibration pollution associated with sheet piling.

Whilst EMPs formed part of the EIS, specific details in relation to the treatment and monitoring of internal flood water prior to being released into the receiving environment will be addressed in amended management plans which will form part of subsequent development applications.

2.5.4 Acid Sulfate Soils Management

DEHP had raised within their submission that the EIS indicates that an acid sulphate soils assessment has been conducted, however, the report containing that information is not provided. In addition to this, DEHP identified that there is a need to assess whether decant waters from the land-based disposal of dredge material would contain unacceptable concentrations of metals and metalloids, and to include a detailed assessment of sediment contamination in the EIS.

DEHP recommended ensuring that the details and results of the Gilbert & Sutherland external sediment sampling survey are made available in the appendices of the EIS to inform development of end-of-pipe water quality monitoring and management requirements for waters decanted from land-based disposal of dredged sediments, likely to required at the development approval stage.

An Acid Sulfate Soils Assessment (ASSA) was undertaken by Gilbert and Sutherland and is contained in Volume 10, Appendix 32 of the EIS. The ASSA found acid sulfate materials would be disturbed as part of the construction process. Accordingly, an ASSAMP is required to manage excavated ASS during the stage 1 construction phase. This provides the framework to ensure the potential impacts on construction for the development are managed, treated, monitored, reported and if necessary, mitigated.

As stated in the above sections and within the EIS, the material from both the 'wet' and 'dry' excavation works will be placed in constructed treatment beds and then be treated in the beds for acid sulphates. The material will conditioned by drying back for optimal use as construction fill either as compacted fill or for preload purposes. Further to this, the flooded water within the internal marina will be treated for ASS prior to release into external waster as per the ASSA report.

It is considered adequate information has been provided in relation to acid sulphate for the purpose of this application. Additional sediment sampling will occur through subsequent development applications. It is relevant to update sediment samples prior to

construction activities to ensure associated management techniques / plans can be prepared and an appropriate monitoring program is developed.

2.5.5 Quantity and Quality of Fill

The Construction Methodology Report prepared by Hyder Consulting, Volume 5, Appendix 13 of the EIS, outlines the construction process. Section 7.2 of Hyder's report quantifies anticipated earthworks volumes and fill requirements.

As outlined, the material from both the 'wet' and 'dry' excavation works will be placed in constructed treatment beds and then be treated in the beds for acid sulfates and conditioned by drying back for optimal use as construction fill either as compacted fill or for preload purposes.

It is considered the method of construction will reduce the construction period for this phase of the works as the mechanical drying back of the excavated material will allow it to be reused as fill a lot quicker in the required areas.

The anticipated earthwork volumes and fill requirements were outlined within the Construction Methodology Report prepared by Hyder, Volume 5 Appendix 13 of the EIS. With regards to dredge material during the construction phase, approximately 655,000m³ of material is expected to be generated from the works including both wet and dry excavations.

It is anticipated that the majority of this material will be suitable to be utilised in the works as "Construction Fill" or as "Preload" material. Some of the excavated material may be suitable for engineered fill.

The precise quantities and quality of fill expected from the GCIMP shall be refined through subsequent development applications.

As identified within the EIS, it has been proposed to place fill within the IRTC corridor. As DTMR are the land holders of this parcel of land, the quality of the fill material placed within the IRTC corridor shall be in accordance with DTMR standards. This aspect of the application has been a discussion point between DTMR and the proponent throughout the EIS process, and agreements have been met on a number of occasions with DTMR in relation to this issue.

It is considered this issue can be conditioned by the CG in their report on the GCIMP.

2.5.6 Dredge Spoil Site

A submission received from DTMR Maritime Safety Division requested the proponent consult with the relevant waterways authorities and Maritime Safety Queensland (MSQ) on the proposed dredging plan for dealing with capital and maintenance dredging. MSQ suggested the preferred format in order to facilitate consultation be through the development of a 'Dredging Management Plan'.

It is noted that the development concepts provided within the EIS and the amended development concepts provide an onsite dredge spoil disposal site. In addition to this, external dredging options for the Coomera River are outlined within Hyder Consulting's Coomera River Dredge Disposal Options within Volume 6 Appendix 17 of the EIS. The Hyder report identifies a number of regional options for regional dredging requirements.

The Construction methodology Report prepared by Hyder Consulting within Volume 5, Appendix 13 within the EIS outlines capital dredging works and the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS outlines the maintenance dredging requirements.

The EIS has considered to the extent necessary site requirements for dredging, regional dredging issues and potential sites for such a facility. It is understood Gold Coast Waterways Authority and GCCC are still seeking to have a regional dredge facility on the subject site. The Supplementary Preferred Master Plan has not identified a Regional Dredge Spoil Site.

It is considered that the applicant is not the responsible entity to develop a multi agency / multi government plan for Dredge Management for the Coomera River. This issue needs to be resolved through the multiple governments and agencies involved in the decision making process for a regional dredge spoil facility.

2.5.7 Infrastructure Construction

As detailed within the Hyder Consulting's Engineering Services Report contained in Volume 7, Appendix 19 of the EIS, the development can be adequately supplied with services such as energy, telecommunications, gas services, potable and recycled water sewerage.

Infrastructure for various utilities will require placement across the IRTC corridor. Technical information pertaining to the placement of utility services across the IRTC corridor will be resolved through subsequent applications. Furthermore, this process will involve identifying the appropriate permit / lease arrangement applicable for the required infrastructure within the IRTC corridor. It is considered this component is able to be

conditioned by the CG in order to provide certainty to DTMR that the IRTC will not be compromised.

2.5.8 Construction Traffic

GCCC and DTMR raised questions within their submissions regarding construction traffic and potential impacts on the local and State road network. As noted within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 and Section 3 of the EIS over the construction period of the Gold Coast International Marine Precinct it is estimated an average of 4 to 15 truck movements per day. Some of these movements will be through trucks 'back loading' however, the extent of this is considered to be small as the majority of material delivered to the site will be used on site for the construction works. These figures are the approximate maximum daily movements.

The Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13 and Section 3 of the EIS details construction of the GCIMP will occur over two (2) stages:

- Stage 1 – Portion of Site to the East of the IRTC Corridor.
- Stage 2 – Portion of Site to the West of the IRTC Corridor.

The intention is to construct Stage 1 before Stage 2 however the timing for the commencement of Stage 2 will be confirmed at a later stage.

As identified within Hyder's report, Stage 1 will occur over 12 construction phases and Stage 2 will occur over six (6) construction phases. The construction plant and machinery likely to be used for the construction of the GCIMP is within Table 6 below. This table reflect only equipment for the construction of Stage 1 has been provided, as Stage 2 replicates several phases in Stage 1.

Table 6 – Construction Equipment

Activity	Plant and Machinery
Phase 1	<ul style="list-style-type: none"> • D6 Dozer (Swampy) • Boat/barge for silt curtain installation • Walking Floors to remove mulch from site • Water truck • Boat/barge for silt curtain installation • Tub grinder • 2 x 30t excavator • 4 x Cat 740 articulated dump truck

Activity	Plant and Machinery	
Phase 2	<ul style="list-style-type: none"> D6 Dozer Cat 740 articulated dump truck 30t excavator Water truck 	<ul style="list-style-type: none"> Cat 815 Compactor 12t Smooth Drum Roller Piling Rig
Phase 3	<ul style="list-style-type: none"> Barge (sheet piling rig) 30t excavator Cat 740 articulated dump truck D6 Dozer 	<ul style="list-style-type: none"> Dewatering pumps 65t excavator Water truck Super long reach excavator
Phase 4	<ul style="list-style-type: none"> Cat 740 40t articulated trucks Rigid Truck and Dog / Semi tipper for importation of fill Dewatering pumps 	<ul style="list-style-type: none"> Self-propelled roller Compactor Water truck
Phase 5	<ul style="list-style-type: none"> Semi Tipper Cat 740 40t articulated trucks Dewatering pumps 30t excavator 	<ul style="list-style-type: none"> D6 Dozer Water truck Lime spreader
Phase 6	<ul style="list-style-type: none"> Franna Crane Cat 740 40t articulated trucks Dewatering pumps D6 Dozer 	<ul style="list-style-type: none"> Compactor Water truck Lime spreader
Phase 7	<ul style="list-style-type: none"> Cat 740 40t articulated trucks Truck and dog / semi tipper Dewatering pumps 	<ul style="list-style-type: none"> D6 Dozer Compactor Water truck
Phase 8	<ul style="list-style-type: none"> Long Reach Excavator Boat/barge Cat 740 40t articulated trucks Dewatering pumps 	<ul style="list-style-type: none"> D6 Dozer Compactor Water truck
Phase 9	<ul style="list-style-type: none"> 100t digger Cat 740 40t articulated trucks Truck and dog 	<ul style="list-style-type: none"> Dewatering pumps D6 Dozer Water truck
Phase 10	<ul style="list-style-type: none"> Excavator 	<ul style="list-style-type: none"> Cat 740 40t articulated trucks

Activity	Plant and Machinery	
Phase 11	<ul style="list-style-type: none"> Excavators Cat 740 40t articulated trucks Truck and dog 	<ul style="list-style-type: none"> D6 Dozer Water truck
Phase 12	<ul style="list-style-type: none"> Excavators 12G grader Cat 740 40t articulated trucks 	<ul style="list-style-type: none"> Truck and dog Steel drum roller
Additional Civil Works Equipment	<ul style="list-style-type: none"> Graders Various Sized Excavators Backhoe Ditch Witch Trencher Kerb Machine Water Truck Steel Drum Roller 	<ul style="list-style-type: none"> Double Drum Roller CC10 Roller Truck and Dogs AC Placing Plant Bitumen Sprayer Rubber-Tyred Roller Impact Roller

Hyder's report identifies that construction traffic will include construction contractors and staff private vehicles and heavy vehicles used in delivery of construction materials. A worst case scenario for estimated daily traffic generated during construction is presented in Table 7.

Table 7 - GCIMP Construction Phase Likely Daily Trip Generation

Construction Phase	No. of Daily Trips
Construction Workforce	240
Heavy Vehicles	500

Table 8 represents the likely volume of heavy and oversized loads on the external road network during the construction phase.

Table 8 - GCIMP Construction Phase Likely Traffic Volumes

Construction Phase	Volume	Weight	Load	No. Movements
Importation of Structural Fill	515,000m ³	927,000t	33t	28,090
Pavement Gravels	21,623m ³	47,520t	33t	1,440

Construction Phase	Volume	Weight	Load	No. Movements
Drainage Gravels	4,000m ³	7,200t	33t	212
Construction materials		100,000t	20t	5,000
Concrete	12,000m ³	31,200t	6m ³	2,000
Total				36,742

The figures presented in the above tables represent the likely volume of heavy and oversized loads on the external road network during the construction phase.

These figures are based on the assumption fill is sourced outside the east Coomera area. The two main haulage routes available that provide access from the Pacific Motorway to the site include a northern route along Foxwell Road (Preferred Route) and a southern route along Beattie Road as shown in Figure 8.

There are a number of quarries for material supply within a short distance either north or south of the Pacific Motorway. The traffic volumes will occur at an infrequent pulse given the nature of the works.



Figure 8 - Haulage Route

However, it is important to note that the fill material may be sourced within the east Coomera locality as there are a number of potential sites that are able to source the fill required for the bulk earthworks. Should this occur, the traffic volumes identified above would significantly reduce and alleviate impacts on the State-controlled road network as the impacts would be concentrated within the local road networks in east Coomera.

The preparation of a construction management plan would be prepared and submitted as part of subsequent development applications and it is considered this management tool would address issues raised by GCCC and DTMR. As such, it is considered this issue can be conditioned by the CG.

The preparation of a construction management plan would be prepared and submitted as part of subsequent development applications and it is considered this management tool would address issues raised by GCCC and DTMR. As such, it is considered this issue can be conditioned by the CG.

2.6 OPERATION

2.6.1 Issues Raised within Submissions

A number of submissions were received in relation to the operational aspects of the GCIMP. The general theme of the submissions was in relation to the dredging aspects associated with the project.

Further information was requested by submitters with respect to the external dredge spoil options presented within the Coomera River Dredge Disposal Options report prepared by Hyder Consulting. Requests for further clarification of the method of maintenance dredging were also raised within a number of submissions.

The key issues raised in the submissions were:

- Method of Maintenance Dredging
- Dredge Spoil Disposal Site
- Dredge Spoil Disposal Method
- Dredge Spoil Material
- Extent of Dredging
- ERAs

A response to the key issues is provided below.

2.6.2 Method of Maintenance Dredging

Clarification regarding the method of dredging was requested within a submission made by DEHP. The submission stated DEHP were unclear whether the land-based backhoe or the cutter-suction dredge is considered the preferred option. DEHP recommended that the final method of dredging be clearly stated and justified within the EIS.

The preferred method of maintenance dredging as outlined within the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 is through use of a cutter-suction dredge.

It is understood Hyder's report notes various techniques are considered with the various options. Upon favourable consideration of the proposal and identification of the

approved concept, all management plans would be reviewed and updated as necessary to reflect any conditions of approvals and minor amendments.

Therefore, the final method of dredging would ultimately be specified within the management plan that would form part of a subsequent application.

DEHP had also requested further clarification as to whether Section 2.2 titled Method of Maintenance Dredging of the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18, refers to Capital Dredging or the Maintenance Dredging. This section clearly relates to the method of Maintenance Dredging. Details pertaining to the Capital Dredging works are contained within the Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13 of the EIS.

Environmental Management Plans in relation the method of dredging will be updated and submitted with subsequent applications.

2.6.3 Dredge Spoil Disposal Site

It has been acknowledged by multiple government agencies that Coomera requires a regional dredge spoil facility. A dredge Spoil facility for the GCIMP has been identified within the GCIMP project site and a number of options external to the site.

Should the CG receive advice from agencies in relation to the requirements of a regional dredge spoil site this is able to be incorporated into the GCIMP Mater Plan west of the IRTC in an area designated for Marine Industry.

Through discussions with GCCC officers, it was resolved that until such time a decision is made in terms of a site to accommodate a regional dredge spoil facility, a dredge spoil facility for the purposes of the GCIMP project shall be accommodated within the project site as identified in Figure 9.

The GCIMP maintenance dredging has been determined to be 2.02 hectares, however, 2.2 hectares of the project area has been dedicated for the dredge spoil facility. This facility as discussed with GCCC officers for just the site would be accommodated / catered for in the regional dredge facility when provided.

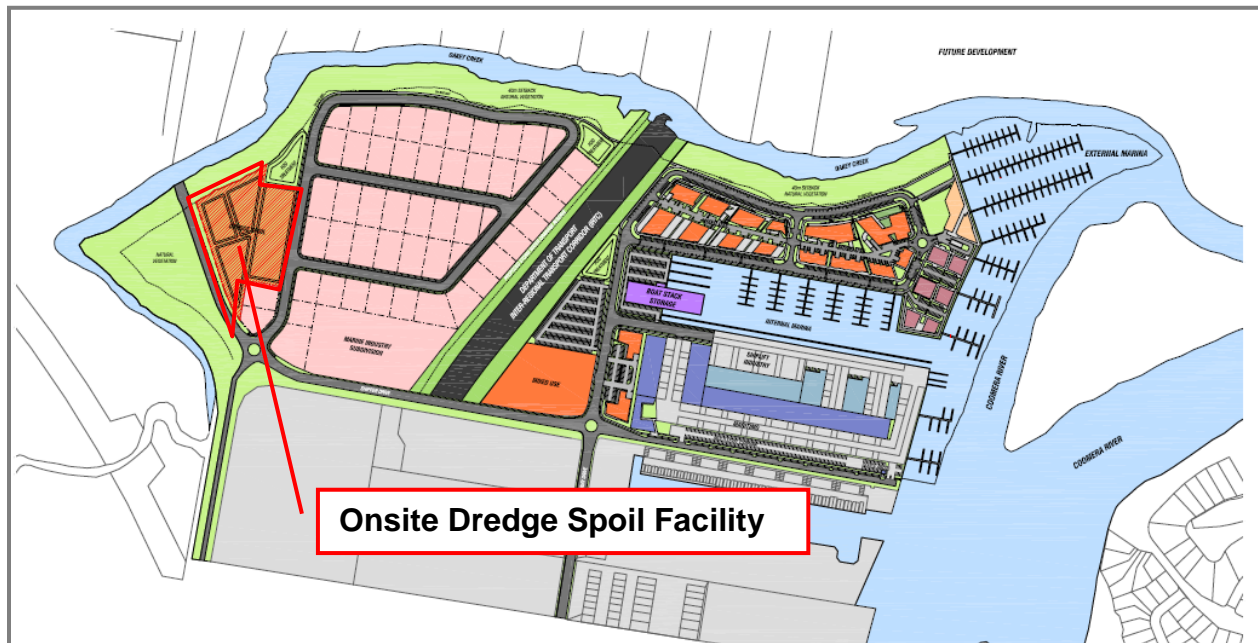


Figure 9 - Location of GCIMP Onsite Dredge Spoil Facility

A number of submissions were received requesting further details in relation to the external dredging options presented in Hyder Consulting's Coomera River Dredge Disposal Options report contained within Volume 6, Appendix 17 of the EIS.

The comments received within this context relate to potential external works and regional dredging operations. The submissions request the proponent to confirm / clarify issues various State Government Departments, the local government and associated bodies (GCWA) at this time have been unable to coordinate or agree upon.

It is noted the EIS does provide options for a regional dredge disposal facility at a site (Hart Street) that currently operating under the relevant approvals associated with its current extractive industry land use approval, however this issues is required to be resolved by the various Governmental Departments and associations as opposed to the proponent.

In relation to DEHP's request for a more detailed report in relation to the Hart Street property in terms of approvals etc, this request was considered. However, since meeting with DEHP, further discussions between the CG and GCCC in relation to the Regional Dredge Spoil options have occurred.

As such, given the context of uncertainty surrounding a Regional Dredge Spoil Facility

for the Coomera River, a report has will not be provided until such time an outcome necessitates a need to provide one.

Concerns in relation to the land based method of dredge spoil disposal and the potential impacts on marine wetlands and fish habitat were raised by DEHP. As noted in earlier sections of this SEIS and the EIS, a cost benefit analysis undertaken as part of the options analysis process identified that land utilised for marine industry development results in a higher multi-criteria value than concepts which retain the area intended for dredge spoil disposal / Industrial land (Southern Precinct) in a natural state.

As outlined in the EIS, the nearest area of seagrass is known to be approximately one (1) kilometre downstream. This is to be verified at time of works to determine the occurrence / distribution in order to implement the appropriate measures and monitor impacts.

As acknowledged, this SEIS does not address the ongoing river dredging program or potential impacts it may have. Best Management Practices such as silt curtains, scheduling of works etc. are to be employed to reduce impacts on water quality and fisheries values and those of the downstream environment. Construction of the external marina is identified as potentially impacting on these values through sediment plumes.

2.6.4 Dredge Spoil Disposal Method

DEHP made reference in one of their submissions that the dredge spoil disposal method had not been identified within the EIS. The method and area of disposal of dredge spoil from maintenance dredging for the preferred master plan and each of the project alternatives was identified within Section 3, page 11 of the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS.

In all options dredge spoil resulting from maintenance dredging will be disposed of via the use of settlement ponds. It is anticipated that dredge spoil will be pumped along Shipper Drive to the settlement ponds in the designated dredge spoil area in all options with the exception of Option 2. It was outlined with Hyder's report that Option 2's method will pump the dredge spoil along Oakey Creek to the settlement ponds. In all of the proposed settlement pond designs, the sediment will be permitted to accumulate to a height that is half of the total pond height.

The area put aside for dredge spoil in the Supplementary Preferred Master Plan is approximately 2.2 hectares as demonstrated in Figure 10. It is proposed to undertake maintenance dredging over a 10 year interval. It is anticipated at this rate, the total volume of sediment to be dredged will be approximately 50,000m³.



Figure 10 - Location of GCIMP Onsite Dredge Spoil Facility

A number of ponds have been designed for the onsite dredge spoil disposal facility. One primary pond will be utilised to treat mainly sand and a secondary pond will be utilised to treat mainly silt.

The primary pond has an area of approximately 5,000m² and is 3 metre high, giving it a total volume of approximately 15,000m³. It has the ability accommodate approximately 7,500m³ of dredged material at one time and will be required to be emptied four (4) times during the dredging campaign.

The secondary pond is approximately 4,900m² and 1 metre high, giving it a total volume of 4,900m³. It can accommodate approximately 2,450m³ of material and the entire volume of material that it has been designed to settle. Detailed dimensions of the settlement ponds can be seen in drawing, K172-AA001578 attached as Appendix B of the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS.

It is anticipated that the ponds will settle around 31,210m³ of sand and 2,236m³ of silt out of the total 50,000m³ of material dredged which equates to 67%. It is assumed that dredge slurry is 15% solids and 85% water, which indicates that there will be 150g of sediment per litre of water. Given the effectiveness of the settlement ponds approximately 100.34g will settle leaving 49.66g/L or 49,660mg/L. As outlined, the material produced from this exercise is of little commercial value.

Concerns in relation to Water Quality Objectives and Contingency Plans for the Dredge Spoil Disposal Facility were raised by DHP. The EMP prepared by Hyder Consulting contained in Volume 5, Appendix 14 of the EIS outlines for the Water Quality Management aspects of the project.

The EMP states that following settlement of the dredge spoil within the treatment pond, tail water will be immediately directed to tail water channels that connect to the tail water treatment system. The tail water will be contained within the treatment system and not be dispersed over the spoil disposal area.

The EMP outlines that no water is to be released from the tail water treatment system without prior testing. If required, physical/chemical treatment will occur, to ensure that the water quality complies with the stated performance criteria.

Tail water drains or pumps shall direct the fines immediately under water. Any build up of sediment in tail water channels will be removed as soon as possible. Testing of waters will be undertaken in accordance with Queensland Water Quality Guidelines as published by the DEHP. Monitoring of the tail water treatment system on a daily basis to ensure no overtopping occurs.

In the event that material is accidentally released at the spoil disposal areas, all measures will be taken to contain the released material, an assessment of the release will be conducted and DEHP shall be notified.

All EMP and Contingency Management Plans will be revised and submitted as part of subsequent development application required to facilitate the project. This process will involve updating Water Quality Release data to reflect the current release criteria applicable at that time.

2.6.5 Dredge Spoil Material

DEHP made reference in one of their submissions that the volumes of material likely to be dredged had not been identified within the EIS. The volumes of material likely to be dredged was identified within Section 3, page 11 of the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS.

As stated in Hyder's report, it is anticipated the total volume of sediment to be dredged will be approximately 50,000m³. The expected total of material to be dredged will be confirmed through subsequent development applications.

All EMP and Contingency Management Plans will be revised and submitted as part of subsequent development application required to facilitate the project. This process will

involve updating Water Quality Release data to reflect the current release criteria applicable at that time.

2.6.6 Extent of Dredging

DEHP requested the EIS should include further information to clarify the likely frequency of the Maintenance Dredging and the areas where maintenance dredging will be undertaken by the proponent.

As identified within Section 3 of the EIS and the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS, it is proposed to undertake maintenance dredging over a 10 year interval. It is estimated that the GCIMP will require 34 days for maintenance dredging, based on a dredge production rate of 300m³ / hour, with the dredge working 10 hours per day, with actual dredging occurring for five hours.

The extent of Maintenance Dredging is identified within the Bulk Earthworks – Master Plan (K173-AA001578) Sheet 2 of 2 prepared by Hyder Consulting dated 3 August 2011 contained within Appendix B of the Maintenance Dredging Report. An excerpt is provided in Figure 11.

The Maintenance Dredging will occur to enable boating movements to the Coomera River channel. The dredge spoil disposal facility is provided to cater for the recurrent dredging requirements.

The body corporate of the site shall be responsible for the maintenance dredging of the internal channels that service commercial areas i.e. those areas within their water leases. The Gold Coast City Council and Queensland Government/Marine Safety Queensland shall be responsible for maintaining the entrance and internal navigation channels of the Coomera River.

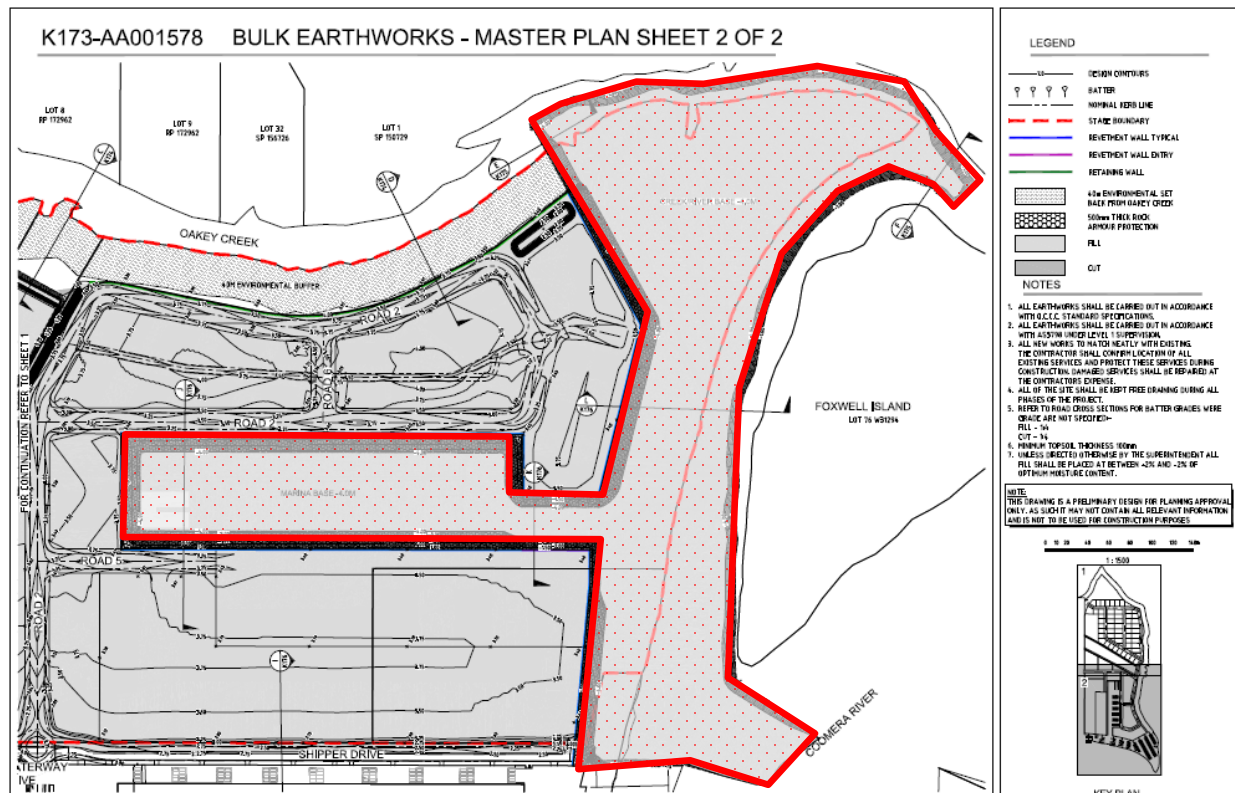


Figure 11 - Extent of GCIMP Maintenance Dredging

The proponent is seeking approval of the bulk earthwork plans contained within the EIS.

2.6.7 ERAs

A number of submissions received regarding operational aspects of the GCIMP were in relation to requests for further information in order to probably address ERAs that will likely be required.

As outlined within Section 2.4, ERAs will form part of subsequent development applications as ERAs are intended land use specific aspects of the GCIMP and are not formally being assessed as part of the EIS. It is acknowledged that amended management plans addressing the relevant provisions of the EPA will form part of subsequent development applications.

It is considered the information provided adequate for the purpose of the EIS and SEIS.

2.7 INFRASTRUCTURE REQUIREMENTS

2.7.1 Issues Raised within Submissions

Section 3 of the EIS provided a description of the requirements for constructing upgrading or relocating any infrastructure in the vicinity of the GCIMP. A number of submissions received from GCCC and DTMR requested for information in relation to the transportation requirements for the GCIMP. In summary, the queries were in relation to the following aspects:

- Traffic Data Utilised
- Project Staging and Timing
- Public and Active Transport
- Flooding Impacts
- Traffic Volumes and Mitigation Measures
- Construction Traffic

A response to the issues raised is provided below. A supplementary Traffic and Transport Impact Assessment prepared by CRG has been provided as part of this SEIS within Volume 2, Appendix 8 and addresses the various traffic and transport related issues raised within submissions received.

2.7.2 Traffic Data Utilised

A number of submissions received by GCCC and DTMR questioned the accuracy and or method of data utilised to determine the anticipated traffic generation on aspects of the GCIMP identified within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21.

Validity / Accuracy of the Existing Local Road Traffic Survey Data

Within one of DTMR's submissions, DTMR requested confirmation of validity / accuracy of the existing local road traffic data. It is unclear as to why DTMR would question the validity of data.

As stated within CRG's report a survey of all traffic movements associated with the existing development shown in Figure 12 was conducted on Tuesday 23 March,

Wednesday 24 March and Thursday 25 March 2010, between the hours of 7.00am and 6.00pm.

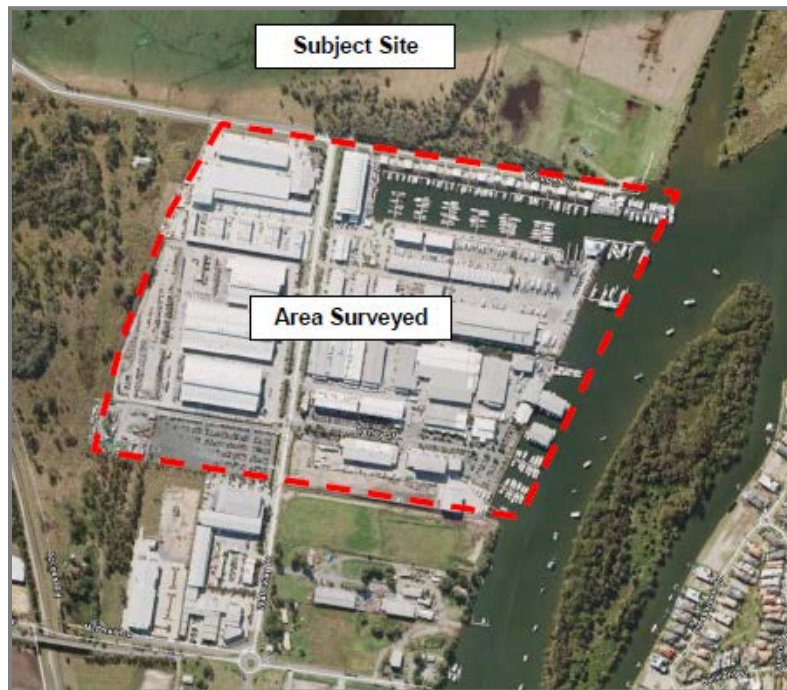


Figure 12 - Traffic Survey Area

The subject site was chosen for the survey as the existing marine precinct on Waterway Drive comprises a range of commercial, showroom, boat storage, warehouse and factory uses as well as marine berths. It was therefore considered prudent to examine the traffic generation relating to this existing marine precinct to estimate the potential traffic generation of comparable uses for the proposed development in Shipper Drive.

During consultation with DTMR, DTMR questioned the reliability of this data as DTMR felt the survey was undertaken outside of peak operating times. It is unclear as to how the survey was undertaken outside peak operating times as there is no fluctuation in peak times based upon time of year given the commercial nature of the precinct.

Furthermore, traffic generated from the surveyed development which is largely code assessable development, has been extrapolated from the adjoining and similar Waterfront Industry Precinct developments. Thus in essence, the GCIMP contemplates a development consistent with that planned for the site under the GCCC Planning Scheme and PIP.

As stated in the CRG report, the traffic count data for State-controlled Roads was provided by the DTMR. The data was collected in November 2010.

Therefore, it is considered sufficient Information is contained within the report to enable an assessment of impacts and construct reasonable and relevant conditions. This issue is able to be conditioned in the CG Report on the EIS.

Validity / Accuracy of the Marine Traffic Survey Data

DTMR also requested justification on the appropriateness of the survey / area adjustment and trip generation predictions in relation to marine traffic.

Evaluation of the existing and estimated marine traffic is contained within the Marine Vessel Activity Survey and Estimated Marine Traffic Report prepared by CRG contained within Volume 7, Appendix 22.

The surveys were carried out at the following three locations:

- Site 1 – Shipper Drive (adjacent to subject site)
- Site 2 – Beattie Road (southern end of Marina Precinct)
- Site 3 – Paradise Point (adjacent to Yacht Club)

A location map of the survey locations is provided in Figure 13.

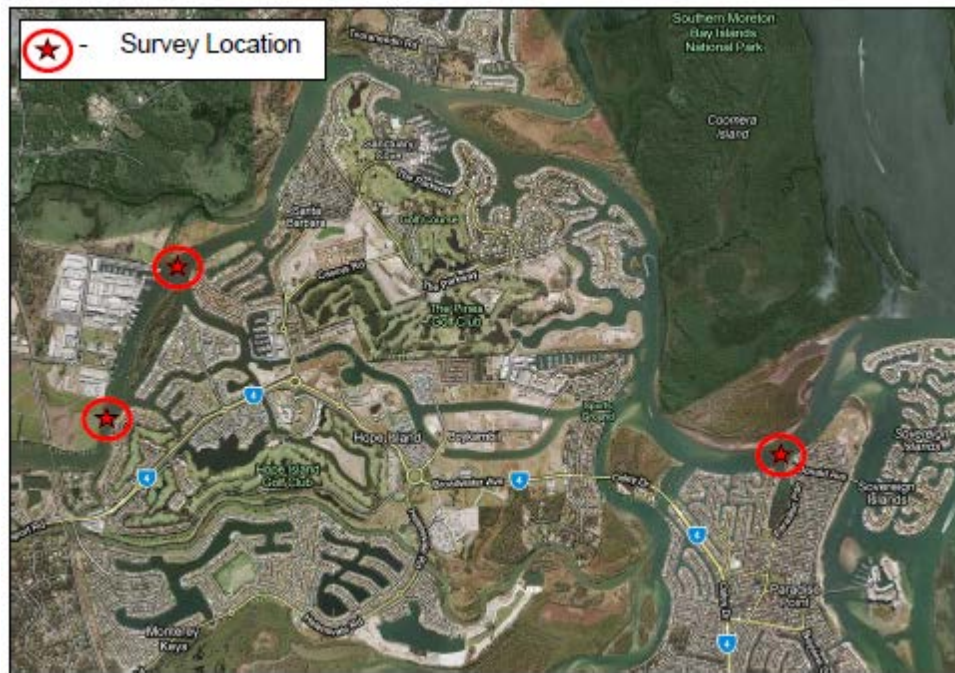


Figure 13 - Marine Traffic Survey Locations

The surveys were carried out between 7am and 5pm over five weekdays (Monday – Friday) and two weekends at the end of March 2010. The surveys were delayed so to avoid the wet weather period on the Gold Coast during the months of January, February and early March 2010. Although, it is noted that some wet weather was experienced during the survey period.

The report quantified / estimated the likely vessel traffic through a comparison of existing survey data and that generated by the existing Gold Coast City Marina development located immediately to the south.

The results concluded that the GCIMP would generate an additional 69 trips per day. This is considered to be minor given the existing number of boats present within the Gold Coast and Coomera River.

Justification for the trip generation survey of the adjoining marine industry development was provided in the CRG Traffic Report. The adjoining the marine industry development is of a similar nature and size to the proposed development. The survey of such is therefore considered to be appropriate and in accordance with various guidelines. We are unaware of alternative assessment methods or site information to vary or alter the assessment.

Therefore, it is considered sufficient Information is contained within the report to enable an assessment of impacts and construct reasonable and relevant conditions. This issue is able to be conditioned in the CG Report on the EIS.

Applied Growth Rate

GCCC stated within a submission that the growth rates per annum to be utilised to estimate future traffic volumes on the surrounding and local road are as follows:

- 6% p.a. compounded – Foxwell road, east of the Coomera Interchange and including the intersection with Shipper Drive
- 4% p.a. compounded – Shipper Drive, Waterways Drive and Beattie Road

The assessment undertaken for the GCIMP has been based on a background growth rate of 3% per annum. Given the subject site is the primary development site in the marina precinct, it will therefore account for a large proportion of traffic growth on Waterways Drive, Shipper Drive and Beattie Road.

The resultant growth rate will be at least 4% - 6% per annum based on background rate of 3% plus the proposed development. It is considered applying a background rate of 4% - 6% per annum and then adding development traffic would result in an unrealistic level of growth.

As such, it is considered the growth rate utilised for the purpose of this assessment is acceptable in this circumstance.

Foxwell Road / Shipper Drive Intersection Template

GCCC noted the adopted intersection layout for Foxwell Road / Shipper Drive used for SIDRA modelling identifies separate right, through and left lanes. Therefore, GCCC have requested the template be adjusted to reflect the existing road environment.

The intersection template adopted for SIDRA modelling purposes is shown in Figure 14. The adopted layout reflects and is consistent with the current intersection configuration that exists. As such, no amendments to the template have been made.

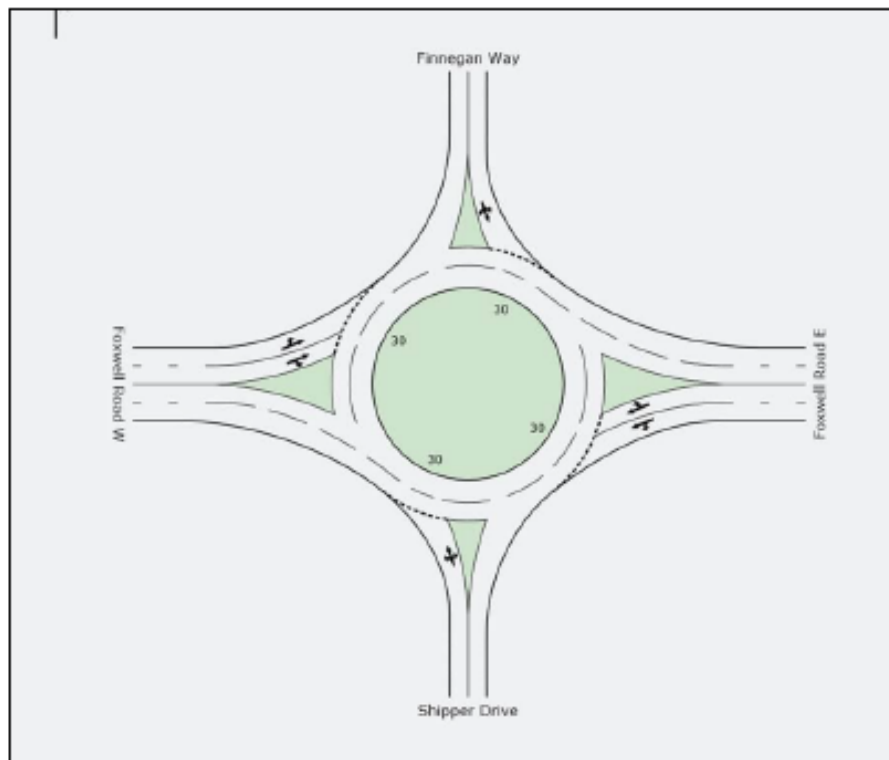


Figure 14 - Foxwell Road / Shipper Drive Intersection Template

2.7.3 Traffic Generation and Mitigation Measures

A number of submissions received by GCCC and DTMR questioned aspects pertaining to the anticipated traffic generation for GCIMP identified within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21.

The total trip generation expected for the GCIMP is identified within Table 9 and contained within the supplementary Traffic and Transport Impact Assessment prepared by CRG has been provided as part of this SEIS within Volume 2, Appendix 8.

Table 9: Total Traffic Generation Rates

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Marina Berths, Showroom, Factory, Boat, Storage & Warehouse Uses (Approximately 24.3 ha)	1,752	102	56	34	182
Industry Subdivision (81,000m ²)	5,670	454	113	113	454
Retail (5,800m ²)	1,740	70	17	87	87
Hotel (110 rooms)	220	18	4	13	9
Tavern (1,500m ²)	450	-	-	22	23
Educational Establishment	300	60	15	30	45
TOTAL	10,132	704	205	299	800

Calculation of Trip Generation and Distribution

DTMR stated within their submission that a check on the trip generation from the ultimate development can be obtained from the minimum number of car parks. DTMR requested a justification of the traffic generation estimates from the proposed development site based on this methodology.

It is considered in this circumstance that an estimate of trip generation based on car parking numbers is not appropriate given the nature of the uses. The trip generation estimates included in the assessment are based on published rates and surveys of actual similar developments.

An assessment of trip generation based on car parking numbers is generally only undertaken on development where a high turnover of traffic is expected and where published trip rates are not applicable.

DTMR have also raised within a submission that the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 presents daily traffic volumes for the development assuming the Coomera Town Centre is partially developed by 2021.

DTMR had also stated that the data presented suggests 40% of the trips generated by the full development are to/from dwellings associated within the Coomera Town Centre. DTMR requested a worst case scenario be developed should the assumptions about trip origins and destinations not be achieved.

The intention of the data presented within CRG's report was for 40% of trips to originate from the local Coomera / Pimpama community on the eastern side of the Motorway, not the Coomera Town Centre.

The traffic distribution was based on Bitzios Consulting's EMME Transport Modelling. Bitzios was engaged to undertake EMME Transport Modelling to assign the proposed development traffic to the surrounding road network.

Based on the methodology utilised by Bitzios and outlined within section 5.2 of CRG's Supplementary Traffic Impact Assessment contained in Volume 2, Appendix 8 of the SEIS, the resultant distribution of traffic through the road network is approximated in Figure 15 below.

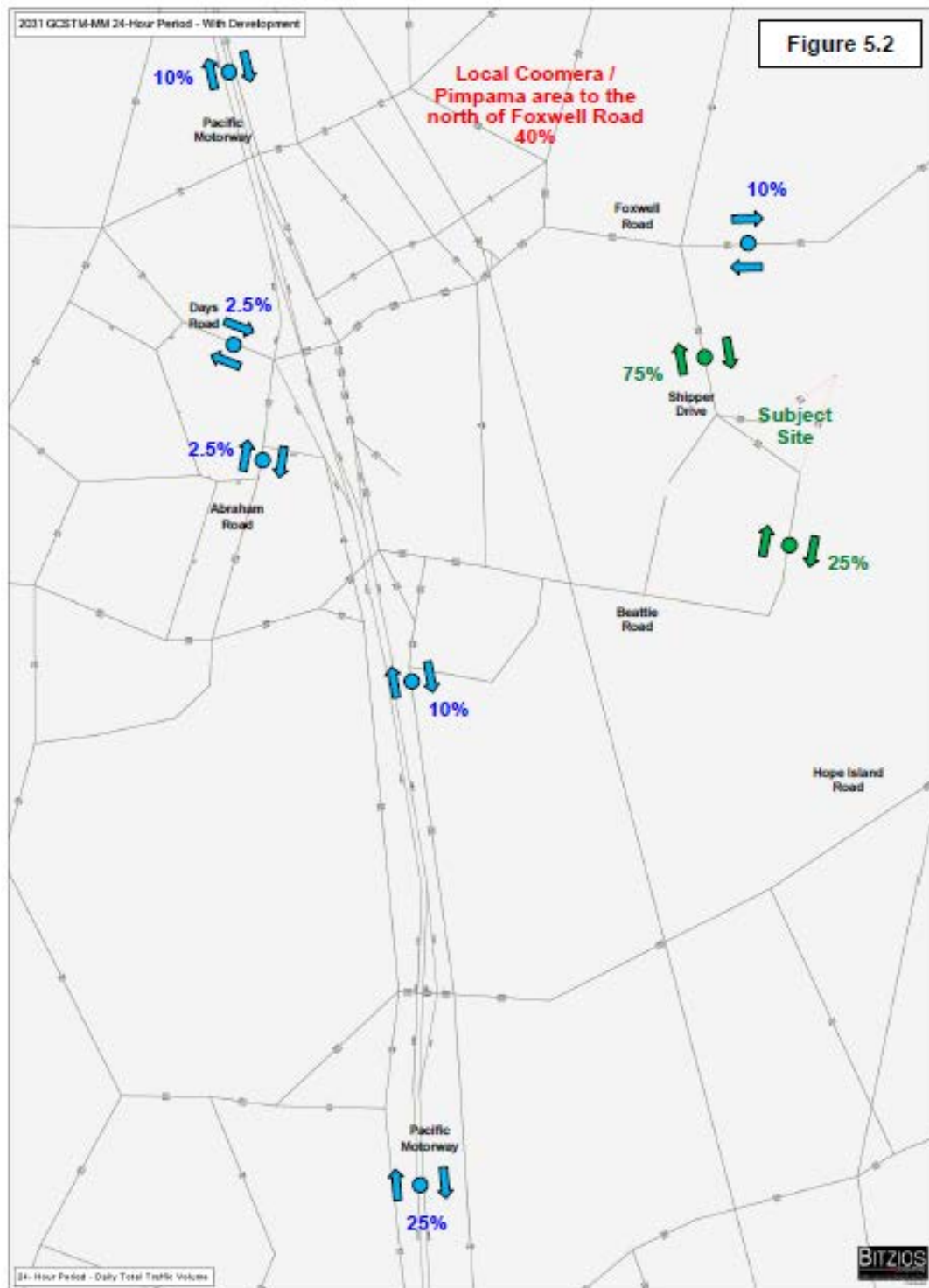


Figure 15 - GCIMP Traffic Distribution

GCCC questioned within their submission the trip generation rate applied to the Water Front Industry Use proposed within the GCIMP. GCCC stated the applicable Peak Trip generation for Waterfront Industry is 0.9 peak hour trips per 100m² GFA and Daily Trip generation is 9 trips per 100m² GFA.

In assessing the trip generation, CRG has surveyed the existing marine industry to the south and applied the surveyed rate to the proposed marine industry development and associated uses.

Given the specific nature of the proposed development being marine industry, this is a more appropriate approach than application of the standard light industrial trip generation rate. Applicable guides recommend a survey of a similar use where such is possible.

The rate adopted for the waterfront industry uses was 7 trips / 100m² GFA. The GFA of the Industry Subdivision is approximately 45% of the site area, thereby equating to 81,000m².

This rate was adopted as it has previously been adopted by DTMR when assessing industrial subdivisions likely to be a mix of light and medium – heavy industry uses.

Mitigation Methods

Within a submission received by DTMR, DTMR had recommended that further discussion in relation to impact mitigation contribution calculation methodologies with DTMR after preparing revised the traffic impact assessment in light of their submission.

Based on the trip generation provided in Table 10 below, it is estimated that the proposed development will generate 10,132 vehicles per day.

Table 10 - Total Traffic Generation Rates

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Marina Berths, Showroom, Factory, Boat, Storage & Warehouse Uses (Approximately 24.3 ha)	1,752	102	56	34	182
Industry Subdivision (81,000m ²)	5,670	454	113	113	454
Retail (5,800m ²)	1,740	70	17	87	87

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
	TOTAL	IN	OUT	IN	OUT
Hotel (110 rooms)	220	18	4	13	9
Tavern (1,500m ²)	450	-	-	22	23
Educational Facility	300	60	15	30	45
TOTAL	10,132	704	205	299	800

It has become apparent that DTMR have failed to take into account that the majority of the project site is currently designated as a Marine Industry Precinct in the Coomera LAP under the GCCC Planning Scheme as identified in Figure 16.

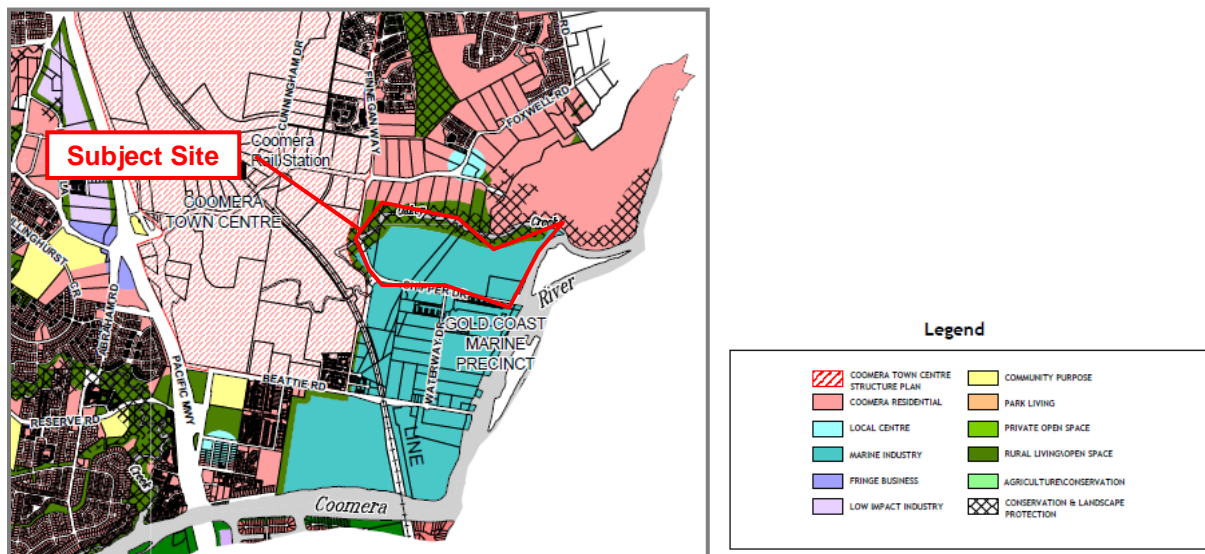


Figure 16 - Coomera LAP Precinct Map (Source: GCCC Planning Scheme 2003)

Without the creation of the GCIMP, the Marine Precinct designation allows a number of uses that have been incorporated into the GCIMP to be developed as Self Assessable or Code Assessable development as identified in Figure 17. These uses include:

- Waterfront Industry
- Warehouse

- Shop
- Convenience Store
- Restaurant
- Caretaker's Residence
- Take-Away Food Premises

Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct 3 – Marine Industry			
Agriculture Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park Public Utility	Caretaker's Residence Estate Sales Office Shop where only for marine goods and services which are used in any water based activity Manufacturer's Shop Temporary Use Warehouse where directly associated with waterfront industry	Cafe when located above ground floor level Car Park Convenience Shop Laundromat Restaurant where located above ground floor level Service Station where including the sale of fuel directly to water marine craft Shop (where the GFA is less than 100m ²) Take-Away Food Premises (where the GFA is less than 100m ²) Telecommunications Facility n.e.i. Tourist Shop (where located above ground floor level) Transport Terminal where including water based transport Waterfront Industry (excluding Fish and Seafood Processing and Storage)	Aquaculture Cafe n.e.i. Commercial Services Fuel Depot Hostel Accommodation (above ground floor level) Marina Place of Worship Restaurant n.e.i. Resort Hotel Service Industry Service Station n.e.i. Tavern Tourist Facility Tourist Shop n.e.i. Transit Centre Waterfront Industry where including Fish and Seafood Processing and Storage

Figure 17 - Coomera LAP Marine Industry Land Use Table (Source: GCCC Planning Scheme 2003)

It is understood that prior to the adoption of any planning scheme, the State including DTMR must review the planning scheme for the purpose of state infrastructure / interests and land use integration. Thus the marine industry land uses and associated traffic generation would have been accounted for within the Department's strategic planning.

In addition to this, policies are contained within the SEQRP specific to integrated transport planning and emphasis is placed on the importance of integrating transport and land use planning.

Therefore, in consideration of the above the actual traffic impacts on the State-controlled road network should be assessed on the traffic generated by uses that were not envisaged for the subject site. This figure accounts for less than 50% of the estimated traffic generation as a result of the GCIMP.

In accordance with DTMR's policy, the extent of proposed development traffic impacts must be assessed where the development proposal is likely to result in an increase of at least 5% of existing daily volumes on any State controlled road section or 5% of existing daily volumes on any individual turning movement at a State controlled intersection.

It is noted that the SIDRA analysis provided in CRG's supplementary report have identified percentage impact is greater than 5% on some turning movements at the Foxwell Road interchange as well as the Beattie Road / Service Road intersection.

However, this assessment has been based on the overall traffic generation of 10,132 vehicles per day without taking into account the uses that are currently envisaged and accounted for. The actual traffic generation not accounted for as a result of the GCIMP would be less than 4,462 vehicles per day accounting for less than 44% of the estimated traffic volume.

It is therefore considered the actual impact of the GCIMP does not necessitate the need for contributions towards the upgrading of the State-controlled road network.

2.7.4 Project Staging and Timing

Submissions received had queried the staging and timing of the project. The timing of the GCIMP will be in accordance with economic conditions. However, pending the economic constraints, the proponent does intend to proceed with the project within the imminent future.

The Survey and ROL plans prepared by Gassman Development Perspectives identified a preliminary ROL staging approach over four (4) stages. A final staging approach is yet to be adopted as it can be appreciated that the staging approach will be heavily reliant on the economic environment at that point in time.

Based on the preliminary staging approach outlined in Gassman's ROL plans, and estimate of the traffic generation for each stage of development is identified in Table 11.

As stated above, this staging approach is indicative and will be finalised through subsequent development applications

Table 11 - Traffic Generation per Stage

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Stage 1	526	102	17	10	55
Stage 2	300	60	15	30	45
Stage 3	3,636	88	60	146	246
Stage 4	5,670	454	113	113	454
TOTAL	10,132	704	205	299	800

2.7.5 Public and Active Transport

As identified within the EIS and CRG's Traffic Impact Assessments, the GCIMP has proposed to integrate public and active transportation facilities.

The level of detail requested by submitters in relation to Active Transport Facilities is unable to be supplied at this stage. In order to achieve the objectives envisaged by GCCC and DTMR, active transport outcomes have been integrated into the GCIMP development codes to ensure future uses incorporate active transport facilities.

Furthermore, requirements for Active Transport facilities such as end-of-trip facilities are governed by Building laws and codes such as the Queensland Development Code (QDC) which extends the scope of the BCA.

The creation of an easement across the IRTC in order to create connectivity between the Western Precinct and the eastern extent of the site was contemplated within the EIS. In order for this outcome to occur, further liaison with DTMR will be required to ensure the location of the easement will not impact on the construction or function of the State-controlled road corridor. This will occur at a later stage of the project, part of subsequent development applications.

DTMR had requested liaison with Translink is required in relation to the proposed bus stop. Given the extensive frontage the GCIMP has to Shipper Drive a public bus stop was proposed. However, the purpose of identifying a potential bus stop was to demonstrate the site has the capability to incorporate a bus stop into the development.

This issue is able to be addressed at a later date through liaison with Translink as the implementation of a bus stop will be reliant on the demand generated from the development.

2.7.6 Flooding Impacts on Transport Network

DTMR raised issues within a submission in relation to the potential impacts on the Gold Coast rail line as a result to the changing flood levels. DTMR requested consultation with Queensland Rail (QR) with regard to the potential impacts on the Gold Coast rail corridor in the Oakey Creek flood plain arising from changes to flood levels for the flood plain for Oakey Creek.

After liaison with QR, QR indicated that areas of concern are that the proposed GCIMP would:

- increase flood levels causing overtopping and/or increasing the Time of Submergence (TOS) of the rail line
- increase flood levels impacting on cabling (cabling typically runs alongside track but can be at ground level)
- increased flow rates and velocities through the culverts/bridges

As outlined in Page 37 of the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS, overtopping of the railway across the Oakey Creek floodplain will not occur as a result of the GCIMP, as the site analysis undertaken indicated that impacts in a 100 year ARI would be up to 0.044 metres or 0.058 metres in a 10 year event.

Furthermore, given the Oakey Creek floodplain 100 year ARI flood level is approximately 3.3 m AHD, which is approximately 1 metre below the rail embankment level an increase of 0.044 m does not cause overtopping or significantly reduce the freeboard from flood level to embankment level.

In relation to duration of inundation this issue was addressed within page 58 of BMT WBM's report when discussing impacts on houses. The same concept is able to be

applied to the rail corridor as given the rail is not overtopped, there will be no increase in duration of inundation of the rail.

In addition to this, if considering the ground level around the rail if cabling is running at ground level, the report states that at a ground level of 1.15 m AHD the inundation under existing conditions would be more than 12 hours, and that the proposed development would increase this by 20 to 30 minutes. As the general ground level at the rail corridor in the Oakey Creek floodplain is similar to this if not a little higher, the increase in duration would be less at higher levels.

Velocity impact maps Drawing No 3-8 to 3-12 in BMT WBM's report, demonstrated that there would be no change and potentially a small decrease in velocity and flow rate. However, around the rail line there is either no change or decreases in velocity through the bridges/culverts.

An addendum Flood Management Report has been prepared by BMT WBM and contained within Volume 2, Appendix 9 of the SEIS. The report outlines this discussion in more detail.

It is considered that given the above information, it can be considered that the railway infrastructure will not be significantly impacted by the proposed GCIMP.

2.7.7 Construction Traffic

GCCC and DTMR raised questions within their submissions regarding construction traffic and potential impacts on the local and State road network and the potential for mitigation works.

As noted within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 and Section 3 of the EIS over the construction period of the GCIMP it is estimated an average of 4 to 15 truck movements per day. Some of these movements will be through trucks 'back loading' however, the extent of this is considered to be small as the majority of material delivered to the site will be used on site for the construction works. These figures are the approximate maximum daily movements.

The Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13 and Section 3 of the EIS details construction of the GCIMP will occur over two (2) stages:

- Stage 1 – Portion of Site to the East of the IRTC Corridor.
- Stage 2 – Portion of Site to the West of the IRTC Corridor.

The intention is to construct Stage 1 before Stage 2 however the timing for the commencement of Stage 2 will be confirmed at a later stage. As identified within Hyder's report, Stage 1 will occur over 12 construction phases and Stage 2 will occur over six (6) construction phases.

Hyder's report identifies that construction traffic will include construction contractors and staff private vehicles and heavy vehicles used in delivery of construction materials. A worst case scenario for estimated daily traffic generated during construction is presented in Table 12.

Table 12 - GCIMP Construction Phase Likely Daily Trip Generation

Construction Phase	No. of Daily Trips
Construction Workforce	240
Heavy Vehicles	500

Table 13 represents the likely volume of heavy and oversized loads on the external road network during the construction phase.

Table 13 - GCIMP Construction Phase Likely Traffic Volumes

Construction Phase	Volume	Weight	Load	No. Movements
Importation of Structural Fill	515,000m ³	927,000t	33t	28,090
Pavement Gravels	21,623m ³	47,520t	33t	1,440
Drainage Gravels	4,000m ³	7,200t	33t	212
Construction materials		100,000t	20t	5,000
Concrete	12,000m ³	31,200t	6m ³	2,000
Total				36,742

The figures presented in the above tables represent the likely volume of heavy and oversized loads on the external road network during the construction phase. These figures are based on the assumption fill is sourced outside the east Coomera area. The two main haulage routes available that provide access from the Pacific

Motorway to the site, a northern route along Foxwell Road (Preferred Route) and a southern route along Beattie Road as shown in Figure 18.

There are a number of quarries for material supply within a short distance either north or south of the Pacific Motorway. The traffic volumes will occur at an infrequent pulse given the nature of the works.



Figure 18- Haulage Route

However, it is important to note that the fill material may be sourced within the east Coomera locality as there are a number of potential sites that are able to source the fill required for the bulk earthworks. Should this occur, the traffic volumes identified above would significantly reduce and alleviate impacts on the State-controlled road network as the impacts would be concentrated within the local road networks in east Coomera.

The preparation of a construction management plan would be prepared and submitted as part of subsequent development applications and it is considered this management tool would address issues raised by GCCC and DTMR. As such, it is considered this issue can be conditioned by the CG.

As demonstrated a contribution to the State-controlled road network would not be reasonable nor relevant to the GCIMP thus no monetary contribution is required to DTMR.

2.8 REHABILITATION

2.8.1 Issues Raised within Submissions

Submissions received on the Rehabilitation aspects of the GCIMP generally related to requests for further detailed information. These requests were in regards to:

- Pest species management approaches,
- Incorporation of CPTED and
- The entity responsible for the Open Space Management

A response to the issues is provided below.

2.8.2 Response to Issues Raised

The GCIMP involves dedication of 4.9 hectares. As detailed in the Open Space Management Statement (OSMS) prepared by Planit Consulting contained in Volume 11, Appendix 40 of the EIS, rehabilitation is to occur onsite inclusive of reconstruction and assisted regeneration of natural vegetation as well as the 40 metre vegetation buffer. As reconstruction plantings are to be in accordance with the Swamp Sclerophyll Module [RE 12.3.5].

Assisted regeneration shall consist of the continuously rehabilitation/protection via management of weeds and removal of threatening processes (inappropriate access, recreational vehicle exclusion etc).

Whilst few areas are evident (at the time of most recent site inspections) any disturbed areas which become evident throughout the 'establishment' and 'on-maintenance' period (i.e. as a result of recreational vehicle damage, construction impact etc) are to be revegetated in accordance with the Swamp Sclerophyll Module [RE 12.3.5].

Formal plantings will be restricted to the streetscapes, stormwater retention devices and general landscaping amongst open space areas. The use/location of trees and shrubs will be largely determined by CPTED principals i.e. the location of these will not impede views to pedestrian networks. A Landscape Master Plan has been prepared in this regard and is contained in Volume 10, Appendix 35 of the EIS.

Please note that implementation of added reconstruction plantings will only be necessary if 'assisted natural regeneration' efforts are unsuccessful in the medium term.

Three planting zones are provided for the open space within the Gold Coast International Marine Precinct described below (refer to Landscape Master Plan – Volume 10, Appendix 35 of the EIS):

- Public open space interfaces
 - Mixed use precinct species list
 - Streetscape Module
- Rehabilitation zones (assisted regeneration/reconstruction):
 - Swamp Sclerophyll Module [RE 12.3.5]
- Stormwater treatment devices planting including (basins)
 - Stormwater Treatment Device Planting Module.

Figure 20 below shows the location of these abovementioned zones.



Figure 19 - Planting Management Zones - Including Assisted Regeneration and Reconstruction Management Zones

The rehabilitation works will be the responsibility of the proponent and Body Corporate. The EMP contained within Volume 5, Appendix 14 of the EIS the responsible entity for Landscaping and Open Space Areas. The EMP will be updated as part of subsequent development applications.

As stated in the OSMS, a minimum 12-month establishment period is required for the living components of the open space system prior to acceptance by Council 'on-maintenance'. During the establishment period the living components are to be maintained by/at the expense of the landscape contractor.

As part of the updates to the EMP, issue of pest animal species will be addressed as part of subsequent development applications.



SECTION 3

ENVIRONMENT



Gold Coast International Marine Precinct Supplementary Environmental Impact Statement - Section 3

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3 ENVIRONMENTAL VALUES AND MANAGEMENT OF IMPACTS

3.1 CLIMATE AND NATURAL DISASTERS

3.1.1 Issues Raised within Submissions

A number of submission received raised concerns in relation to the potential flooding impacts associated with the GCIMP. The submissions received by GCCC had made comments that the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS, did not include any study report for the local catchment flooding.

GCCC had requested that additional modeling be undertaken ion the potential flooding impacts associated with the GCIMP without the construction of the IRTC. Submissions received had also asked for further information regarding potential impacts the GCIMP may have on the surrounding development that was indentified within the EIS.

In summary the items raised in submissions specifically related to the following concerns:

- Flooding Impacts associated with Transport Networks
- Local Catchment Flood Modelling
- Flooding Impacts Surrounding Development
- Climate Change

A response to the items listed above is provided below. In addition to this, further detail has been provided in an Addendum Floodplain Management Report prepared by BMT WBM contained within Volume 2, Appendix 9 of this SEIS.

3.1.2 Flooding Impacts associated with Transport Networks

Gold Coast Rail Corridor

DTMR raised issues within a submission in relation to the potential impacts on the Gold Coast rail line as a result to the changing flood levels. DTMR requested consultation with Queensland Rail (QR) with regard to the potential impacts on the Gold Coast rail

corridor in the Oakey Creek flood plain arising from changes to flood levels for the flood plain for Oakey Creek.

After liaison with QR, QR indicated that areas of concern are that the proposed GCIMP would:

- increase flood levels causing overtopping and/or increasing the Time of Submergence (TOS) of the rail line
- increase flood levels impacting on cabling (cabling typically runs alongside track but can be at ground level)
- increased flow rates and velocities through the culverts/bridges

As outlined in Page 37 of the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS, overtopping of the railway across the Oakey Creek floodplain will not occur as a result of the GCIMP, as the site analysis undertaken indicated that impacts in a 100 year ARI would be up to 0.044 metres or 0.058 metres in a 10 year event.

Furthermore, given the Oakey Creek floodplain 100 year ARI flood level is approximately 3.3 m AHD, which is approximately 1 metre below the rail embankment level an increase of 0.044 m does not cause overtopping or significantly reduce the freeboard from flood level to embankment level.

In relation to duration of inundation this issue was addressed within page 58 of BMT WBM's report when discussing impacts on houses. The same concept is able to be applied to the rail corridor as given the rail is not overtopped, there will be no increase in duration of inundation of the rail.

In addition to this, if considering the ground level around the rail if cabling is running at ground level, the report states that at a ground level of 1.15 m AHD the inundation under existing conditions would be more than 12 hours, and that the proposed development would increase this by 20 to 30 minutes. As the general ground level at the rail corridor in the Oakey Creek floodplain is similar to this if not a little higher, the increase in duration would be less at higher levels.

Velocity impact maps Drawing No 3-8 to 3-12 in BMT WBM's report, demonstrated that here would be no change and potentially a small decrease in velocity and flow rate. However, around the rail line there is either no change or decreases in velocity through the bridges/culverts.

An addendum Flood Management Report has been prepared by BMT WBM and contained within Volume 2, Appendix 9 of the SEIS. The report outlines this discussion in more detail.

It is considered that given the above information, it can be considered that the railway infrastructure will not be significantly impacted by the proposed GCIMP.

Flooding Impacts without IRTC

Submissions received from GCCC raised concerns that given the uncertainty surrounding the timing of construction of the IRTC, there may be considerable time until the IRTC is built. GCCC had made assumptions within their submission that the impact of the GCIMP on flood levels would be greater without the presence of the IRTC. This assumption was not based through the undertaking of flood modelling.

BMT WBM has undertaken further modelling with the IRTC removed from both the Base and Developed Cases in response to this submission and as such an Addendum Floodplain Management Report has been prepared and is contained within Volume 2, Appendix 9 of the SEIS.

The results from the additional modelling in Figures 3-1 to 3-5 of the addendum report when compared with the previous modelling undertaken in BMT WBM's Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS (Figure 3-2 to 3-6) demonstrates that the presence or otherwise of the IRTC does not significantly alter the impacts.

Therefore it is concluded that the results from the additional modelling without the IRTC does not alter the conclusions presented in BMT WBM's Floodplain Management Report within the EIS.

3.1.3 Local Catchment Flood Modelling

Within a submission received by GCCC, GCCC raised concerns that the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS, did not include any study report for the local catchment flooding the local catchment being the Oakey Creek catchment.

As presented in BMT WBM's report, in all flood events the changes in flood level are minor with the maximum increases typically being less than 0.01 m. An exception is upstream of the Site on Oakey Creek where there are increases of up to 0.044 m in the 100 year ARI event.

Whilst the assessment in BMT WBM report included local catchment flows, it was in combination with a longer duration regional flooding (Coomera River). However, in response to Council's submission, BMT WBM undertook an assessment of the impacts caused by the proposed GCIMP in a 100 year ARI local catchment only flooding.

In the 100 year ARI local catchment flood event the maximum change in flood level is approximately 0.081 m, and in the regional catchment flood the maximum change is approximately 0.044 m. It is important to note that though, the local catchment flood level is significantly lower than the regional flood level such that the greater increase in the local catchment flood level does not worsen the designated 100 year ARI flood level.

Under local catchment flood conditions there are localised increases in velocity of up to 0.46 m/s in the 100 year ARI event. This compares with increases in the regional event as reported in BMT WBM's report contained within the EIS of 0.3 m/s. Therefore the conclusion presented in BMT WBM's report is still valid in this circumstance, whereby BMT WBM stated that in the rare floods such as the 20 to 50 year ARI events, the increases of up to about 0.3 m/s may cause minor localized scouring of the creek bed and of the banks if bare soil is exposed.

In this regard, BMT WBM had noted that if it is determined during the detailed design stage that there is a risk of erosion at this location, then minor reshaping and/or adjustment to the fill extent at this location would minimise the impacts.

Therefore, in consideration of the above it is concluded that the results from the additional modelling of the local catchment flooding does not alter the conclusions presented in BMT WBM's report contained within the EIS.

Further detail has been provided in an Addendum Floodplain Management Report prepared by BMT WBM presenting the above finding is contained within Volume 2, Appendix 9 of this SEIS.

3.1.4 Flooding Impacts on Surrounding Development

DEHP raised concerns within a submission about the EIS identifying that 11 houses may be adversely affected by flooding as a result of the project. DEHP had stated this issue should be taken into account in future disaster management plans and mitigation strategies.

As stated in the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS it was found that for the Master Plan Option, 11 properties would likely be subjected to material damage in very specific flood events

as a result of flood level increases causing inundation of habitable floors that would otherwise not occur.

As identified within BMT WBM's report all of the 11 properties are currently subject to inundation in events up to the 100 year ARI and the increase in flood level is small (10 to 20 mm).

Therefore for each property there is a very narrow band of floods that would result in material damage, e.g., the band for one property is the 13.9 to 14.4 year ARI events – this means that material damage would not occur in floods smaller than or larger than this band. Because of these narrow bands, the probability of material damages occurring is rare, ranging from about 1 in 300 to 1 in 4000 in any given year.

If required by the proponent, an appropriate Emergency Response Plan (ERP) inclusive of potential flooding implications can be prepared through subsequent development applications.

3.1.5 Climate Change

GCCC raised concerns in relation to risk management associated with climate change and whether the priority adaptation principles being incorporated at the construction and operational phases of the GCIMP are satisfactory in a State and local policy context.

Risks associated with flood and climate change events have been identified within technical reports provided within the EIS. The Floodplain Management report prepared by BMT WBM contained within Volume 8, Appendix 26, undertook analysis of vulnerability of the proposed development to climate change influences associated with sea level rise and increased rainfall intensities.

The report concluded that 100 year ARI designated flood level at the site may increase by up to 0.35 metres at the site, but there is also a reasonable likelihood that it may remain unchanged once the current conservative assumptions are removed and allowances are made for climate change influences.

It is considered the issue of climate change risk management and adaptation principles are able to be addressed through subsequent land use applications as the outcomes will be determined by the use proposed.

3.2 LAND

3.2.1 Issues Raised within Submissions

A number of submission received raised concerns in relation to the land aspect of the GCIMP. The issues were generally requesting further details to address concerns that were land use specific. The context of the submissions received in relation to land aspects of the GCIMP was relative to:

- IRTC
- Land Uses
- Development Design Considerations
- Acid Sulfate Soils
- Oakey Creek Setback

A response to the issues stated above is provided below.

3.2.2 IRTC

The project site is severed by Lot 35 on SP150730 which is State land – reserve for road purposes for the proposed IRTC road corridor with DTMR as trustee. Given the uncertainty surrounding the timing of the construction of the IRTC, the proponent has liaised and has come to an agreement with DTMR to fill the corridor as part of the overall bulk earthworks for the project site.

DTMR had raised within their submission that they are concerned about the load-bearing capacity of existing soils over parts of the site and of the fill material to be used. It is considered poor soil conditions and/or poor quality fill materials could necessitate expensive remediation or replacement and/or more costly engineering solutions for buildings, structures and infrastructure.

It is understood and acknowledged by the proponent that in order for the filling of the IRTC corridor to occur, the proponent will be required to adhere to DTMR specifications and requirements in terms of the quality of fill permitted to be deposited within the corridor. Throughout the EIS process, the proponent has advised DTMR that they are aware and accept this requirement.

DTMR had also raised within their submission that the proponent has not provided detailed engineering investigations of existing ground conditions including geotechnical, sub-grade preparation and imported fill specifications as it relates to the IRTC.

The Construction Methodology Report prepared by Hyder Consulting, Volume 5 Appendix 13 of the EIS, outlines the construction process for the GCIMP. Section 7.2 of the report quantifies anticipated earthworks volumes and fill requirements. Details pertaining to the quantities and quality of fill will be refined through subsequent applications for OPW.

Furthermore, it is considered the Geotechnical Report prepared by Shaw Urquhart, contained within Volume 9 Appendix 29 of the EIS, provides sufficient information on geotechnical conditions of the site relative to the application. Further detailed geotechnical investigations that are required will be undertaken and submitted with subsequent OPW applications. The applicant will liaise with DTMR in this regard.

DTMR had also raised concerns in relation to the location of the proposed TAFE and its assumed impacts it may pose on the IRTC corridor. As noted within earlier sections of the SEIS, the TAFE component no longer forms part of the project proposal. As such, it is considered this concern has been addressed.

In conclusion, it is considered concerns raised by DTMR in relation to OPW works within the IRTC corridor is able to be conditioned in the CG Report on the EIS.

3.2.3 Land Uses

GCIMP Development Code

GCCC raised within a submission that GCCC have concerns with the proposed GCIMP Development Plan and Place Code. GCCC noted that the concerns were in relation to the mixture, location and scale of the proposed land uses. GCCC had also identified inconsistencies within the Development Code between the different sections of the proposed Place Code and the assessment criteria for future development as proposed.

Upon review of the changes proposed by GCCC, some amendments have been made to the proposed Development Code in relation to GCCC's comments. A copy of the amended Development Code is contained within Volume 1, Appendix 3 of the SEIS. The changes made were predominantly in relation to an increase in the level of assessment for some of the proposed uses, inclusion of additional development criteria within the place code and administrative amendments.

Other changes to Development Code occurred to strengthen the desired character and amenity of the GCIMP through the provision of:

- controls on building setbacks and requirements for architectural treatments to buildings;
- controls on signage; and
- Requirements for building treatments and boardwalks to the Coomera River.

These amendments were made to reflect comments raised by Council through discussions.

An important change to note is a reduction in the Building Height Plan, whereby previously it was proposed to have a maximum height limit of 10 storeys within a section of the Northern Precinct. However, upon review of Council's comments, the allowable building height within this area has been reduced to three (3) storeys.

Since reviewing the EIS, GCCC engaged Giles Consulting International and Urban Systems to undertake an independent Strategic Review on the Gold Coast Marine Precinct (GCMP). The purpose of the Strategic Review was to undertake an economic and land use review of the policy intent, preferred land uses and level of assessment in the GCMP. A copy of this report is contained within Volume 2, Appendix 7 of the SEIS.

It is important to note that part of the strategic review process involved reviewing the GCIMP plans and land use proposals. Upon the review of the GCIMP, the report stated that the land uses sought for the GCIMP appear to be keeping with the intent of the Marine Precinct and the changes recommended as part of the Strategic Review's findings.

Residential Land Uses

As identified within Section 2.2.3 of the SEIS, a submission was received raising concerns with the proposal plans identifying a residential component. The submitter felt the EIS did not address the potential impacts associated with the surrounding land uses on residents within the GCIMP.

As identified within Volume 3, Appendix 5 of the EIS, the proposal does not seek a residential form of development. This is reinforced through the revised development codes contained within Volume 1, Appendix 3 of the SEIS.

The proposal does, as identified within the EIS, seek to include land uses for short term accommodation for potential employees / students / users of the development. Short

term accommodation shall be restricted through uses such as resort hotel or hostel accommodation as defined under the GCCC Planning Scheme. Provisions have also been made for caretaker's residence.

As such, this form of development will be ancillary to the development within the site and will generally be located outside the immediate GCCM environment. Furthermore, to address associated amenity impacts, this can be achieved through the incorporation of design features aimed at mitigating impacts from immediate intrusive development. Again, these measures will be addressed through subsequent development applications.

Public Accessibility

As mentioned within Sections 2.2.8 of the SEIS, concern regarding public accessibility to the foreshore was raised within a number of submissions received on the EIS. Submitters requested further information to demonstrate whether the development will facilitate public access to the foreshore.

As discussed within various sections of the EIS, public access to the new foreshore area is contemplated within the Northern Precinct. The Landscape Master plan contained within Volume 10, Appendix 35 of the EIS demonstrates how public accessibility to the foreshore will be achieved through the provision of pathways, boardwalks and viewing decks. GCIMP linkages are identified within Figure 1 below.

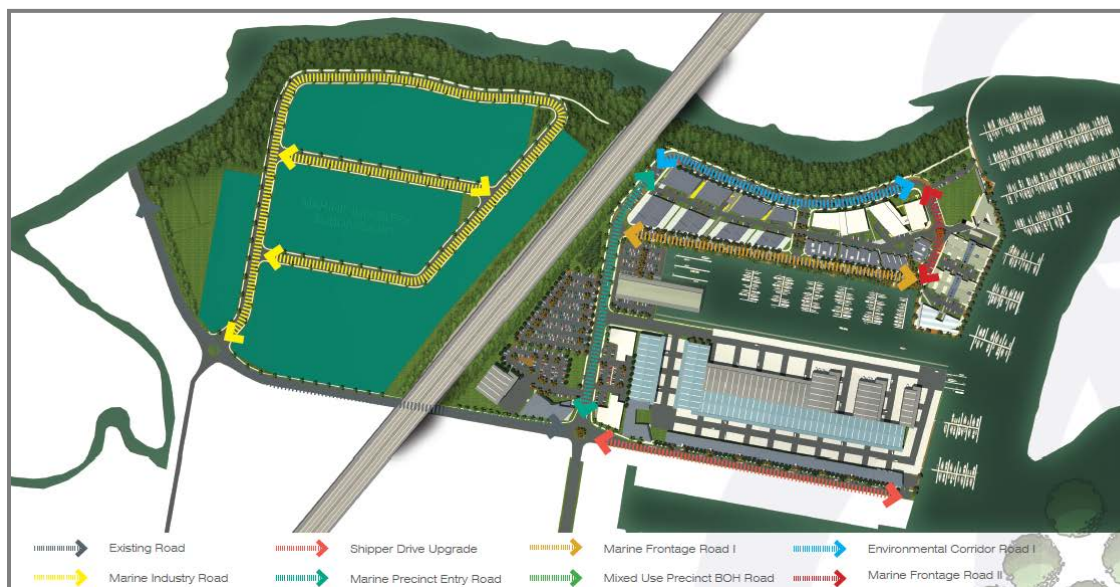


Figure 1 – GCIMP Linkages

A proposed public access pedestrian zone will be constructed along the riverfront, providing a landscaped promenade alongside the marina. In addition, the Oakey Creek buffer natural vegetation zone has a perimeter 'corso' road alongside providing continuous public amenity access to the creek bank.

Pedestrian areas shall be designed to encourage pedestrian movement freely and take precedent over vehicular movements within these areas to create a sense of place. In particular the marina frontage presents an opportunity to create a strong pedestrian focused pedestrian route extending to the eastern precinct.

The area shall be designed to encourage pedestrian connection with the water's edge and the intended landscape will provide the opportunity for this interaction with a mix of spaces and landscape treatments that promote congregation.

It is considered the project has placed significant emphasis on ensuring public accessibility to the foreshore is maintained if not advanced through specific design provisions within the GCIMP.

3.2.4 Development Design Considerations

As identified within Sections 2.2.9 and 2.7.5 of the SEIS, a number of submitters had emphasised within their submissions aspects relative to detailed design particularly in regards to the incorporation of Crime Prevention through Environmental Design Principles (CPTEDP), accessibility needs for vulnerable groups and End of Trip Facilities.

Throughout the EIS and in particular the Community Consultation Report prepared by Planit Consulting contained in Volume 2, Appendix 4 of the EIS stipulated consultation had occurred with the Queensland Police regarding CPTED principles. The suggestions made during this time included discussion of including surveillance and the provision of security guards within the GCIMP. The portion of the site east of the proposed IRTC, security will be implemented as part of the body corporate arrangement. Detailed information pertaining to this aspect will be provided through subsequent development applications.

The use/location of trees and shrubs within streetscapes, stormwater retention devices and general landscaping amongst open space areas will be largely determined by CPTED principals i.e. the location of these will not impede views to pedestrian networks. A Landscape Master Plan has been prepared in this regard and is contained in Volume 10, Appendix 35 of the EIS.

In addition to this, the preliminary design has incorporated CPTED principles throughout the GCIMP and has reinforced CPTED principles in the GCIMP Development Code.

With respect to accessibility needs for vulnerable groups and End of Trip Facilities incorporated within the GCIMP, preliminary design has made reference to accommodating and providing these aspects.

Furthermore, provisions within the GCIMP Development Code and the Queensland Development Code cater for ensuring accessibility needs for vulnerable groups and End of Trip Facilities are provided. Specific details in relation to the design and integration of these aspects will be provided as part of subsequent development applications.

3.2.5 Acid Sulfate Solis

The EIS contained an Acid Sulfate Soils Assessment and Management Plan (ASSAMP) was prepared by Gilbert and Sutherland Agriculture and Environmental Scientists within Volume 10, Appendix 32.

DNRM raised issues in relation to the ASSAMP whereby issues generally related to concerns that the extent of the site was not investigated for ASS thoroughly, the ASSAMP did not address several high risk issues including dewatering of the marina area and background levels have not sufficiently been monitored for groundwater quality testing.

ASS investigations were targeted to areas associated with the excavations related with the harbour and marina elements of the development. We note other precincts in the development are to be filled with only minor excavation and associated with infrastructure works proposed.

Further ASS investigations will be carried out as required, as part of the future OPW (Change to Ground level) application. The current investigation provides sufficient information in order to gain an understanding of the underlying geology and chemical properties which affect the construction process for excavation and filling activities including the management of ASS.

In relation to DNRM concerns that the ASSAMP did not address several high risk issues including dewatering of the marina area, the Groundwater Assessment and Management Report prepared by Gilbert and Sutherland Agriculture and Environmental Scientists contained within Volume 9, Appendix 31 was prepared after extensive monitoring of groundwater, analysis of results and was informed and used to inform the preparation of other technical reports and plans that formed part of the EIS including the Construction Methodology etc.

We note that a condition may be included in the CG report on the GCIMP for the development of a Groundwater Assessment and Management Plan which integrates

with the ASSMP. It is considered this can be developed as part of subsequent development applications.

GCCC requested within a submission to detail specific management of high to extremely high levels of chromium reducible sulphur. GCCC stated the ASSMP by Gilbert and Sutherland did not incorporate the construction methodology. As such, GCCC recommended that the ASSAMP be amended to include a discussion and description of the management of the wet and dry excavation construction methodology for the site.

The ASSAMP provided a control strategy for environmental management methods which included ASS treatment for the dry and wet excavation works. The implementation strategy included a number of treatment methods to deal with ASS. In addition to this, the Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13 made reference to the ASS treatment during wet and dry excavation works.

Furthermore, it is relevant to undertake additional sampling with future OPW (Change to Ground Level) and ERA 16 applications which would address issues raised by submitters at that time. The future report would contain management techniques, plans an appropriate monitoring program specific to the detailed works involved to facilitate the subsequent applications.

3.2.6 Oakey Creek Setback

As discussed previously in Section 2.2.5 and in the following Section 3.3.3, a number of submissions were received in relation to the Oakey Creek 40 metre setback area. GCCC raised within a submission that GCCC will not support a 40 metre setback to Oakey Creek. GCCC stated that it is considered that a conservation area greater than the proponents preferred 40 metre wide setback to Oakey Creek is necessary to provide an appropriate level of wetland protection and associated biodiversity values. As such, GCCC raised the need for the conservation buffer to be increased to 60 metres with an additional 20 metre buffer to be incorporated for recreational purposes.

The GCIMP Master Plan incorporated a 40 metre naturally vegetated setback along Oakey Creek. This area is intended to create a buffer between the built environment and the environmental values associated with Oakey Creek. No embellishments are proposed with the exception of vehicle exclusion bollards, maintenance access gates and a pedestrian/cycle path aligned parallel with the northern sections of the 40 metre vegetation buffer.

The conservation buffer area totals 4.9ha of the site and incorporates a range of mapped estuarine communities. As explained within the Terrestrial Flora and Fauna Assessment prepared Planit Consulting Pty Ltd contained within Volume 4, Appendix 8 of the EIS, the minimum dimension was derived from the former the State Coastal Management Plan—Queensland's Coastal Policy which was repealed and replaced by the Coastal Plan 2012.

The former Queensland Coastal Management Plan mapping required setback is noted as segment 2700 which identifies Mean High Water Springs (MHWS) +40m as the required setback. MHWS generally reflects top of bank along Oakey Creek and thus a 40m setback from top of bank was adopted. Ancillary and support access roads, pedestrian linkages and open space occur adjacent to this minimum buffer and are within the Coastal Plans coastal management district.

As outlined within the EIS Oakey Creek has been heavily modified and additional significant modifications are proposed and approved. This includes the realignment through the Coomera Town Centre and the bank removal work to both Oakey Creek and the Coomera River associated with developing the precinct.

The ecological report illustrates that terrestrial linkages along Oakey Creek are affected by the modifications and key infrastructure. The reports quantify the aquatic and fisheries values of the creek systems at a local and regional scale identifying that the loss of habitat areas does not constitute a significant impact on or a loss of these values. Figure 37 within the Terrestrial Flora and Fauna Assessment identifies the various values are preserved by the proposed minimum 40 metre setback including:

- Bank stability
- Erosion
- Shading
- Temperature
- Water Quality
- Corridor and Habitat Protection

The report also identifies that the clearing and setback aligns with planned works and filling for the IRTC which bisects the site and wetland areas.

The 40 metre setback is appropriate in the context of the development for marine dependent uses and the setback protects Oakey Creek and a buffer of this dimension is demonstrated not to have significant impact.

As outlined in Section 2.2.5 of the SEIS, an additional Alternative Option (Option 6) has been developed taking into account GCCC's recommendation of an additional 40 metre setback area. An assessment was undertaken on the ecological gain that would be achieved through the preservation of the extended offset area. As identified in Table 1 through increasing the conservation buffer by a additional 40 metres, the benefit from a ecological sense is only minimal given the outcome results in preserving an additional 4.32 hectares of Community 2B:Low Closed Tussock (*Sporobolus Virginicus*) Grassland [G1d] (Salt Marsh).

Table 1 - Mapped Vegetation Communities & Clearance Rates

Mapped Community	RE Nos.	Supplementary Preferred Master Plan	Alternative Option 6	Difference + / - (ha)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (<i>CASUARINA GLAUCA</i>) [T6D/M] ON TIDAL MUDFLATS	12.1.1	1.34	1.821	-0.48
COMMUNITY 1B: MID-HIGH FOREST (<i>CASUARINA GLAUCA</i>) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	0.00	0.2511	-0.25
COMMUNITY 2A: VERY TALL RUSHLAND (<i>JUNCUS KRAUSII</i>) [V4M]	12.1.2	0.19	0.19	0.00
COMMUNITY 2B: LOW CLOSED TUSsock (<i>SPOROBOLUS VIRGINICUS</i>) GRASSLAND [G1D]	12.1.2	5.27	9.59	-4.32
COMMUNITY 3: LOW-TALL OPEN FOREST/WOODLAND (<i>AVICENNIA MARINA</i> + <i>AEGICERAS CORNICULATUM</i>) [T4M/S]	12.1.3	1.82	2.2619	-0.45
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [<i>SETARIA SPHACELATA</i>] G4D/M	N/A	1.00	1	0.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/Paddock MOSAIC G1D/M	N/A	0.33	0.93	-0.60
Total	-	9.95	16.044	-6.10

An economic analysis contained within Volume 2, Appendix 6 of the SEIS was undertaken by Norling Consulting to compare both the Supplementary Preferred Master Plan and the Alternative Option 6 in order to ascertain whether there would be a benefit from increasing the conservation buffer by an additional 40 metres. As part of this assessment, Norling Consulting undertook a Multi-Criteria Analysis (MCA) for the Supplementary Preferred Master Plan and the Alternative Option 6 applying the same

methodology as outlined within Chapter 5 of the Social and Economic Impact Assessment contained within Volume 5, Appendix 10 of the EIS.

The overall MCA score for the Supplementary Preferred Master Plan was higher at 73.9 in comparison to the Alternative Option 6 whereby the overall MCA score was 66.4. Figure 2 provides a comparison of the MCA results between the Supplementary Preferred Master Plan and the Alternative Option 6. The Alternative Option 6 as identified in Figure 2 is directed by an environmental objective that significantly diminishes the social and economic advantages that are able to be achieved through the Supplementary Preferred Master Plan.

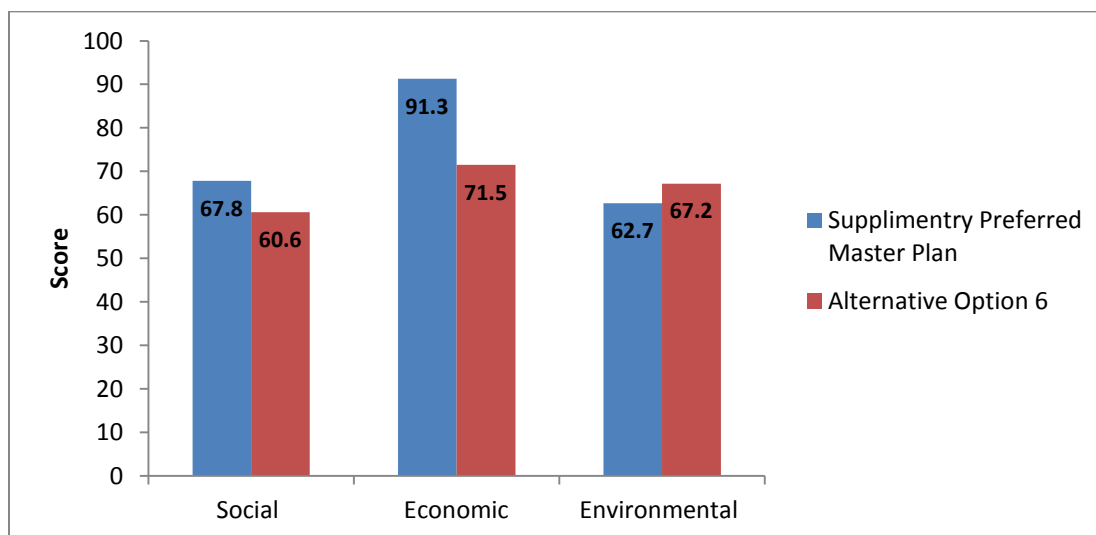


Figure 2 – Comparison of MCA Results

Norling Consulting's economic modelling undertaken in comparing the Supplementary Preferred Master Plan and the Alternative Option 6 concluded that it was apparent that the Supplementary Preferred Master Plan would result in a significant economic outcome for the Gold Coast and Queensland. Norling Consulting stated that in particular, it is considered the community benefits significantly outweigh any community disbenefits as a result of moving from the Alternative Option 6 to the Supplementary Preferred Master Plan. The statement is further justified through Figure 3.

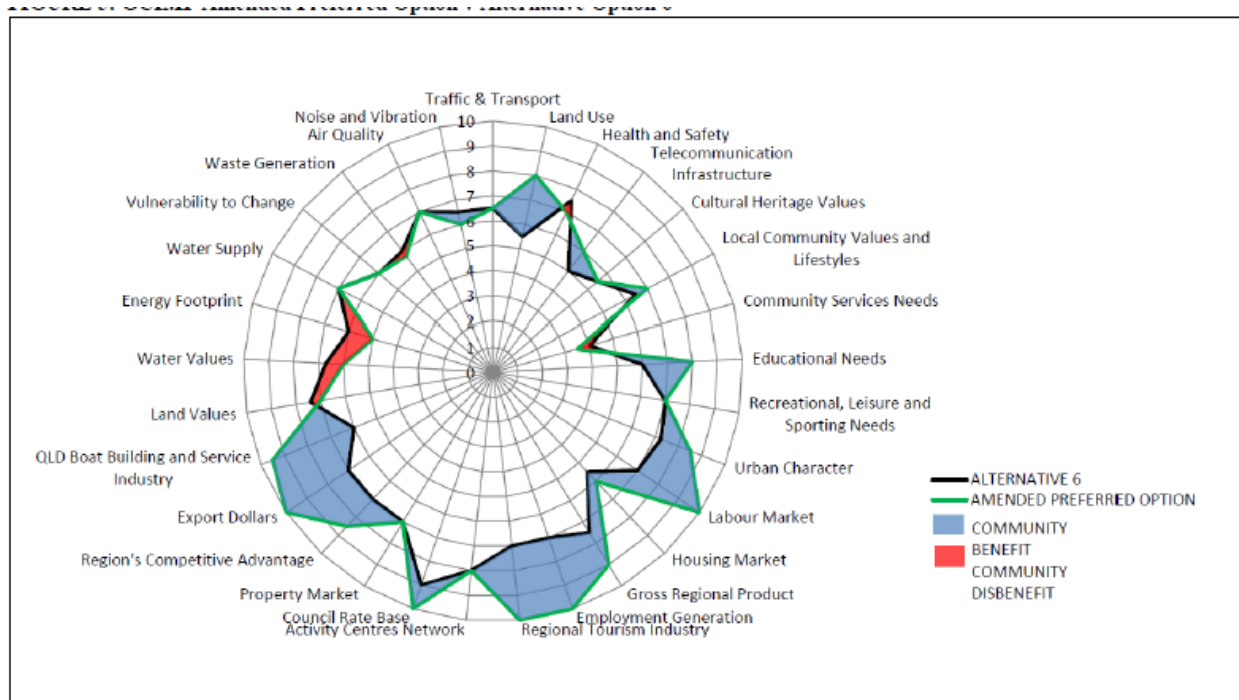


Figure 3 - Community Benefit and Disbenefit Comparison Graph

In consideration of the above findings, it is apparent that there is more than enough justification for the 40 metre setback to Oakey Creek as opposed to 80 metres as recommended by GCCC.

3.3 NATURE CONSERVATION

A number of submissions received related to the Nature Conservation section of the EIS. The submissions were generally requesting further clarification or further detailed information in relation the nature conservation aspects of the project that are unable to be provided at this stage. A number of the issues raised will be addressed through amended management plans that will form part of subsequent development applications.

In summary the issues were generally in relation to:

- Offsets
- Vegetation
- Buffer to Oakey Creek
- Fauna Boxes
- Aquatic Ecology

A response to the above issues is provided below.

3.3.1 Offsets

As detailed in Section 2.3 of the SEIS, DAFF raised concerns in relation to the calculation of offsets within the EIS. DAFF noted that the expected disturbance to sea grass has not been included in the offset calculations detailed within the Aquatic Ecology report (Volume 4, Appendix 7) and the Offset Options report (Volume 5, Appendix 9) of the EIS.

DAFF requested any loss of fish habitat is offset and included within the offset calculations. DAFF had also requested the proponent provide up to date seagrass mapping and include historic sea grass mapping in and adjacent to the development area.

Fish Habitat Offset

As outlined in the EIS the development for the Preferred Master Plan did impact on a number of vegetation communities identified onsite. The areas of each community were presented in Table 30. This has been updated to reflect the Supplementary Preferred Master Plan as identified in Table 2 below.

Table 2 - Mapped Vegetation Communities & Clearance Rates

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (CASUARINA GLAUC) [T6D/M] ON TIDAL MUDFLATS	12.1.1	2.156	0.815	0	1.34	62.20
COMMUNITY 1B: MID-HIGH FOREST (CASUARINA GLAUC) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	3.4788	3.4788	0	0.00	0.00
COMMUNITY 2A: VERY TALL RUSHLAND (JUNCUS KRAUSII) [V4M]	12.1.2	0.19	0	0	0.19	100.00
COMMUNITY 2B: LOW CLOSED TUSSOCK (SPOROBOLUS VIRGINICUS) GRASSLAND [G1D]	12.1.2	22.37	15.45	1.65	5.27	23.56
COMMUNITY 3: LOW-TALL OPEN FOREST/WOODLAND (AVICENNIA MARINA + AEGICERAS CORNICULATUM) [T4M/S]	12.1.3	2.735	0.74	0.18	1.82	66.36
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [SETARIA SPHACELATA] G4D/M	N/A	1	0	0	1.00	100.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/Paddock MOSAIC G1D/M	N/A	35.93	33.2	2.4	0.33	0.92
		67.8598	53.6838	4.23	9.95	14.66

In relation to offsets as outlined in the EIS multiple discussions with DAFF were held as the communities predominately affected were of a fisheries nature and this agency was responsible for assessing impacts and offsets. Through these discussions it was

acknowledged that limited offset ability was available in the local authority area and /or Moreton Bay.

The department identified a number of other locations in Queensland for investigation. Investigations were undertaken, whereby the sites were evaluated and additional sites were nominated for evaluation. Through this process liaison with NPRSR also occurred to assist in coordinating the location of sites for 'offsetting' which would maximise integrity of the national/state based reserve system via improved management or buffering of the state network and or expand this.

A supplementary offset report was produced for sites in Baffle Creek from these discussions and is contained in Volume 2, Appendix 4 of the SEIS. DAFF had identified several properties within and around the Baffle Creek declared Fish Habitat Area (FHA) as properties of interest for addition to the FHA.

The subject Baffle Creek properties as prioritised by DAFF are:

- Lot 73 FD391 and
- Lot 81 FD485 (of equal and top priority) and
- Lot 2 RP 847317 (of secondary priority).

Baffle Creek is located approximately 60km north of Bundaberg. Earthtrade has conducted an analysis of the above mentioned properties and their use to ascertain their suitability and availability for potential offsets. This supplementary offsets report details the analysis of these target properties and the progress of communications with the property owners to determine the level of interest in any potential sale.

It is important to note that these properties haven't yet been acquired they have only been identified as potential site for offsetting.

Subsequent to the report, discussions DAFF also identified works within the Tallebudgera Creek Conservation Park/David Fleay Wildlife Park for boardwalk extensions and educational material.

It is relevant to note discussions were also held with the GCCC. In discussions with Councils officers the process undertaken with state agencies was outlined. The designated Offsets Officer and an officer from the catchment management unit identified two local projects for offsetting. These included the Coomera River Tidal Weir Fish ladder and Broadwater parklands educational facility.

The Coomera River Tidal Weir Fish ladder involves an approximate \$900,000 fish ladder structure and tidal weir repairs. Refer to Volume 2, Appendix 5 of the SEIS for

costing breakdown and plans. Costings and details on the education facility within the Broadwater Parklands was not provided but is understood to involve in cash contribution to equip an educational facility with audio and digital media equipment.

As illustrated above and through the EIS and attached supplementary reports, a process to identify and agree upon offsets the sites ecological impacts was undertaken. Through this process a number of offsetting options have been identified at a state and local level. These and or combinations of any of the above considered options could be undertaken and agreed upon through the approval process.

As discussed with the DSDIP Office of the CG, this matter may be conditioned to the adopted final master plan. Through this approach actual impacts can be quantified upon approval of a plan and the offsetting combination agreed to with the relevant government agencies. This combination of offsets may also be resolved through the assessment phase.

Seagrass Offset

Seagrass distribution proximate to the site is discussed within Volume 4, Appendix 7 of the EIS. Construction related impacts to the mapped sea grass communities and potential impact to these from construction related activities is presented within BMT WBM Water Quality Study contained in Volume 8 Appendix 28 of the EIS.

As acknowledged in both reports, the seagrass areas are small in extent and relatively sparse. Furthermore, the seagrass areas are not located in significant areas such as the Moreton Bay Marine Park. The distribution of these seagrass beds is affected by natural processes and anthropocentric activities such as development dredging.

It is identified within the Water Quality Study that up to 1.23 hectare of sea grass may be lost through turbidity related dredging impacts. In addition to this, it is acknowledged that these impacted areas would recover.

Given the external influences to the abundance and distribution of sea grass and the ability for seagrass to recover, it has been proposed that mapping and monitoring of seagrass beds be undertaken prior to works confirm extent / quality and concurrent with dredging activities to manage the activity and protect the area as best as possible and quantify impacts. These actions and activities are to be further resolved through an offset agreement.

DEHP noted in their submission that the GCIMP would involve the irreversible loss of some palustrine and intertidal wetlands and fish habitat areas. DEHP recommended that advice on the mitigation, management and offsetting of those impacts be sought from relevant agencies such as DAFF for fish habitat areas.

Offset options have been outlined within the EIS and ongoing liaison with DAFF has occurred. It is considered this issue will be resolved through agreement between the proponent, DAFF and the CG. A suitable condition to this effect can be included in the CG Report should a favourable recommendation be achieved.

A revised document to reflect ongoing discussions is to be provided. Furthermore, areas of vegetation to be removed are quantified in Table 3 below, and can be used for conditioning purposes. In addition, Palustrine wetland offsets are to be contained to works proposed within open space areas of the project site, specifically the rehabilitation works within Lot 146 SP150731.

As discussed with the DSDIP Office of the CG, this matter may be conditioned to the adopted final master plan. Through this approach actual impacts can be quantified upon approval of a plan and the offsetting combination agreed to with the relevant government agencies. This combination of offsets may also be resolved through the assessment phase.

3.3.2 Vegetation

A number of issues were raised in relation to vegetation clearing and management aspects of the GCIMP. A response to these issues is provided below.

Vegetation Clearing

As a result of amendments made to the preferred master plan Table 3 below presents the extent of tree clearing as a result of the proposed amendments.

Table 3 - Mapped Vegetation Communities & Clearance Rates

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (CASUARINA GLAUCA) [T6D/M] ON TIDAL MUDFLATS	12.1.1	2.156	0.815	0	1.34	62.20

Mapped Community	RE Nos.	Approx. extent within site*	Approx. extent to be disturbed /cleared via development	Approx. extent to be disturbed /cleared via main roads reserve	Approx remaining (ha)	Approx remaining (%)
COMMUNITY 1B: MID-HIGH FOREST (CASUARINA GLAUCA) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	3.4788	3.4788	0	0.00	0.00
COMMUNITY 2A: VERY TALL RUSHLAND (JUNCUS KRAUSII) [V4M]	12.1.2	0.19	0	0	0.19	100.00
COMMUNITY 2B: LOW CLOSED TUSsock (SPOROBOLUS VIRGINICUS) GRASSLAND [G1D]	12.1.2	22.37	15.45	1.65	5.27	23.56
COMMUNITY 3: LOW- TALL OPEN FOREST/WOODLAND (AVICENNIA MARINA + AEGICERAS CORNICULATUM) [T4M/S]	12.1.3	2.735	0.74	0.18	1.82	66.36
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [SETARIA SPHACELATA] G4D/M	N/A	1	0	0	1.00	100.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/PADDOCK MOSAIC G1D/M	N/A	35.93	33.2	2.4	0.33	0.92
		67.8598	53.6838	4.23	9.95	14.66

DEHP raised concerns within a submission in relation to impacts associated with the proposed vegetation clearing of the project site. DEHP stated within a submission that much of the impacts on coastal resources and values from the development are associated with the proposed extent of land and vegetation removal at the site. DEHP felt there is no adequate justification in the EIS documents for the proposed extent of vegetation removal.

DEHP had requested the EIS be revised taking a number of items into consideration such as:

- results of surveys undertaken are relevant to the present-day site as DEHP noted the results that contributed to the Aquatic Ecology and Terrestrial Flora and Fauna reports were undertaken a number of years ago
- surveys are sufficiently representative of the values associated with the site across all seasons
- demonstrate that adverse ecological and biodiversity impacts, at the site and at neighbouring areas, have been prevented as far as possible in the design of the proposed development.

Surveying was conducted over an extended period, seasons and years which provide a more comprehensive assessment approach to determining the occurrence of fauna utilising the site. In addition and as outlined in the EIS, this surveying was conducted over the various habitat types occurring onsite. In preparing the survey methodology, consideration of the relevant guidelines such as the EPBCA survey guidelines and the GCCC ecological assessment guidelines. Through this surveying approach and use of surrounding survey data, the report adequately describes the sites values.

The report supplements this surveying with additional surveys / investigations and reports, prepared by others including the GCCC, specific to the immediate and local environment. The report identifies that the site is removed from terrestrial corridors by infrastructure, existing development and waterways restricting and removing opportunities for movement through the site.

The surveying and regional ecosystem mapping illustrates the site has been significantly modified limiting the potential diversity and abundance of terrestrial species on site. In this regard it is considered additional surveying would not be expected to significantly increase the number of species as identified as using the site. It is acknowledged highly mobile species i.e. aves flying mammal recordings would increase. The significance of the site to these is again influenced by available habitat and site activities.

In relation to the third point, the EIS and SEIS describes the direct impacts associated with the development. These impacts are principally contained to the site. The development has been designed to account for the sites values and planning intent. Where impacts such as removal of marine plant cannot be avoided, they are to be mitigated through agreed offsetting.

Figure 4 shows the state of the site during 2012-2013 and Figure 5 identifies the condition of the subject site during 2008-2009. The images depict that there has been no significant changes in the ecological environment since the undertaking of surveys to support the Terrestrial Flora and Fauna reports. The figures clearly depict that the

subject site has been relatively disturbed thus contributing the limited diversity and abundance of terrestrial species on site.



Figure 4 - Project Site 2012-2013



Figure 5 - Project Site 2008-2009

The terrestrial and aquatic report quantifies impacts on and offsite for all options and focuses on the preferred Master Plan option. No further reports are proposed.

Discussions with DAFF on offsets and fisheries matters are ongoing with terrestrial offsets to be delivered through aquatic offsets.

Vegetation Management

DEHP raised within a submission that the Vegetation Management Plan (VMP) in Section 2.9 of the Open Space Management Statement is not suitable to ensure efficient and comprehensive management of the open space system, particularly the buffer area.

DEHP requested that the VMP be amended to address a number of items. It is important to note that the level of detail requested by DEHP for the VMP is unable to be provided at this preliminary stage of the project. The information requested by DEHP will be addressed through amended management plans provided with subsequent development applications.

It is considered this issued is able to be conditioned by CG in the report on the GCIMP.

3.3.3 Buffer to Oakey Creek

DEHP raised a number of questions in relation to the proposed buffer to Oakey Creek. DEHP's questions were generally concerning the following points:

- Justification for the two proposed buffer areas of 40 metres and 100 metres and why no other no other buffer distance had been proposed
- Description as to whether any other buffer scenarios are suitable for the site
- Demonstrate the relative ecological costs and benefits associated with all buffer scenarios;
- Demonstrate that the findings and recommendations of all aquatic and terrestrial reports were integrated and considered in the design of the buffer.
- Demonstrate that the proposed buffer scenarios meet the desired outcomes under the Coastal SPRP (or other relevant policies in force at the time).

As discussed previously in Section 2.2.5 and 3.2.6, it was identified within the EIS, the 40 metre conservation buffer area totals 4.9ha of the site and incorporates a range of mapped estuarine communities. As explained within the Terrestrial Flora and Fauna Assessment prepared Planit Consulting Pty Ltd contained within Volume 4, Appendix 8 of the EIS, the minimum dimension was derived from the former the State Coastal Management Plan—Queensland's Coastal Policy which was repealed and replaced by the Coastal Plan 2012.

The former Queensland Coastal Management Plan mapping required setback is noted as segment 2700 which identifies Mean High Water Springs (MHWS) +40m as the required setback. MHWS generally reflects top of bank along Oakey Creek and thus a 40m setback from top of bank was adopted. Ancillary and support access roads, pedestrian linkages and open space occur adjacent to this minimum buffer and are within the Coastal Plans coastal management district.

As outlined within the EIS Oakey Creek has been heavily modified and additional significant modifications are proposed and approved. This includes the realignment

through the Coomera Town Centre and the bank removal work to both Oakey Creek and the Coomera River associated with developing the precinct.

The ecological report illustrates that terrestrial linkages along Oakey Creek are affected by the modifications and key infrastructure. T The ecological report illustrates that terrestrial linkages along Oakey Creek are affected by the modifications and key infrastructure. The reports quantify the aquatic and fisheries values of the creek systems at a local and regional scale identifying that the loss of habitat areas does not constitute a significant impact on or a loss of these values. Figure 37 within the Terrestrial Flora and Fauna Assessment identifies the various values are preserved by the proposed minimum 40 metre setback including:

- Bank stability
- Erosion
- Shading
- Temperature
- Water Quality
- Corridor and Habitat Protection

The report also identifies that the clearing and setback aligns with planned works and filling for the IRTC which bisects the site and wetland areas.

The 40 metre setback is appropriate in the context of the development for marine dependent uses and the setback protects Oakey Creek and a buffer of this dimension is demonstrated not to have a significant impact.

GCCC had also raised within a submission that GCCC will not support a 40 metre setback to Oakey Creek. GCCC stated that it is considered that a conservation area greater than the proponents preferred 40 metre wide setback to Oakey Creek is necessary to provide an appropriate level of wetland protection and associated biodiversity values. As such, GCCC raised the need for the conservation buffer to be increased to 60 metres with an additional 20 metre buffer to be incorporated for recreational purposes.

In response to DEHP and GCCC's submission, an additional Alternative Option (Option 6) has been developed for consideration and is contained within Volume 1, Appendix 2 of the SEIS. An assessment was undertaken on the ecological gain that would be achieved through the preservation of the extended offset area. As identified in Table 4 through increasing the conservation buffer by a additional 40 metres, the benefit from a ecological sense is only minimal given the outcome results in preserving an additional

4.32 hectares of Community 2B:Low Closed Tussock (*Sporobolus Virginicus*) Grassland [G1d] (Salt Marsh).

Table 4 - Vegetation Clearing Comparison Table

Mapped Community	RE Nos.	Supplementary Preferred Master Plan	Alternative Option 6	Difference + / - (ha)
COMMUNITY 1A: MID-HIGH OPEN FOREST/FOREST (<i>CASUARINA GLAUCA</i>) [T6D/M] ON TIDAL MUDFLATS	12.1.1	1.34	1.821	-0.48
COMMUNITY 1B: MID-HIGH FOREST (<i>CASUARINA GLAUCA</i>) [T6M] ON ALLUVIAL DEPOSITS	12.3.5	0.00	0.2511	-0.25
COMMUNITY 2A: <u>VERY TALL RUSHLAND (<i>JUNCUS KRAUSII</i>) [V4M]</u>	12.1.2	0.19	0.19	0.00
COMMUNITY 2B: <u>LOW CLOSED TUSOCK (<i>SPOROBOLUS VIRGINICUS</i>) GRASSLAND [G1D]</u>	12.1.2	5.27	9.59	-4.32
COMMUNITY 3: LOW-TALL OPEN FOREST/WOODLAND (<i>AVICENNIA MARINA</i> + <i>AEGICERAS CORNICULATUM</i>) [T4M/S]	12.1.3	1.82	2.2619	-0.45
COMMUNITY 4: VERY TALL CLOSED GRASSLAND [<i>SETARIA SPHACELATA</i>] G4D/M	N/A	1.00	1	0.00
COMMUNITY 5: LOW CLOSED PASTURE WITH SCATTERED TREES/Paddock MOSAIC G1D/M	N/A	0.33	0.93	-0.60
Total	-	9.95	16.044	-6.10

In addition to this, a supplementary economic analysis contained within Volume 2, Appendix 6 of the SEIS was undertaken by Norling Consulting to compare both the Supplementary Preferred Master Plan and the Alternative Option 6. As part of this assessment, Norling Consulting undertook a Multi-Criteria Analysis (MCA) for the Supplementary Preferred Master Plan and the Alternative Option 6 applying the same methodology as outlined within Chapter 5 of the Social and Economic Impact Assessment contained within Volume 5, Appendix 10 of the EIS.

The overall MCA score for the Supplementary Preferred Master Plan was higher at 73.9 in comparison to the Alternative Option 6 whereby the overall MCA score was 66.4. Figure 6 provides a comparison of the MCA results between the Supplementary Preferred Master Plan and the Alternative Option 6. The Alternative Option 6 as

identified in Figure 6 is directed by an environmental objective that significantly diminishes the social and economic advantages that are able to be achieved through the Supplementary Preferred Master Plan.

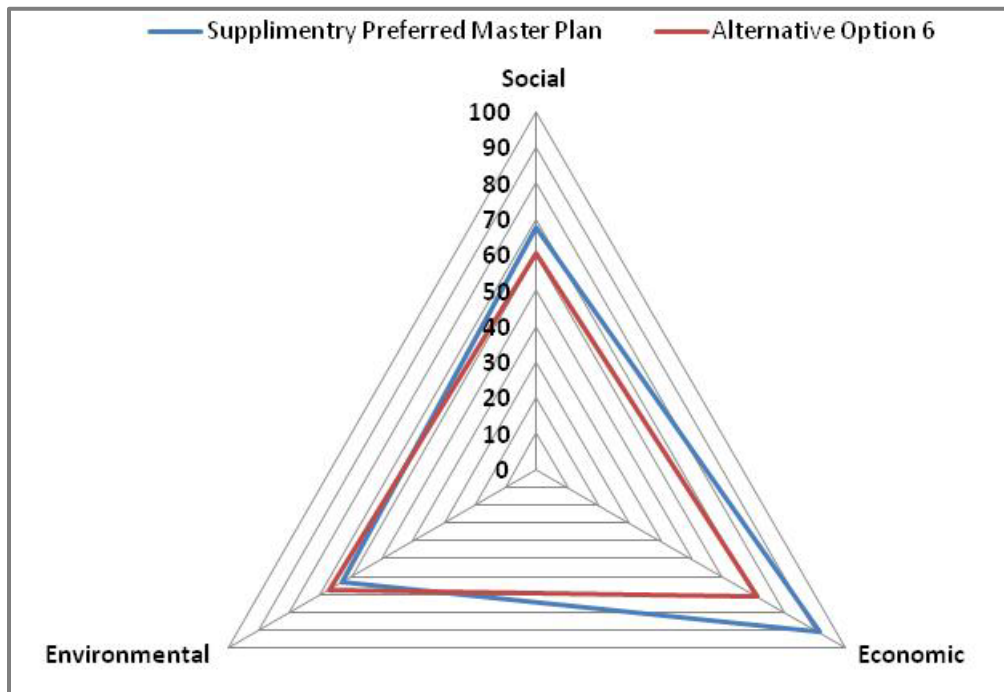


Figure 6- MCA Results Comparison Graph

Within the Supplementary Economic Analysis, it is noted that the Social and Economic Impact Assessment advocates that the MCA provides a more comprehensive assessment of the net benefit test than the Cost Benefit Analysis (CBA). In spite of this, Norling's have undertaken a CBA for the proposed GCIMP for all considered development options.

Consistent with the limitations of a CBA, this analysis incorporates quantitative values of economic benefits and costs and the quantitative values of the environmental lands gained/lost. In particular, the CBA includes:

- (a) capital costs of constructing the proposed development;
- (b) ongoing maintenance costs of the proposal;
- (c) returns to the proponent calculated by way of rents obtained on development elements;
- (d) value added economic benefits of the businesses conducted at the proposed development (which implicitly exclude rents and the potential for double counting); and

- (e) the community values of environmental lands gained/lost, as calculated by FRC Environmental.

Indirect economic impacts from other businesses likely to benefit from the proposed development have been excluded. All other social and environmental impacts, which are not able to be readily quantified have also been excluded, but are all incorporated within the MCA.

Key assumptions underpinning the CBA are as follows:

- (a) a 30 year period of cash flows, commencing in 2012;
- (b) all dollar values expressed in 2012 dollar values;
- (c) a two-year construction program for civil works commencing in 2013, with the last building being erected in 2024;
- (d) a (pre-inflationary) discount rate of 10% for economic cash flows relating to the proposed development and a (pre-inflationary) discount rate of 6% for the community value of environmental lands.

The results of the CBA are set out below in Table 5 and include the Supplementary Preferred Master Plan and Alternative Option 6.

Table 5 - Summarised CBA Results

Development Option	Net Present Value (NPV)	Cost/Benefit Ratio
Option 1 (Preferred Option)	\$1 366M	4.59
Option 2	\$1 245M	4.52
Option 3	\$1 055M	3.40
Option 4	\$1 218M	4.10
Supplementary Preferred Master Plan	\$1 364M	4.56
Alternative Option 6	\$1 266M	4.53

The high NPVs and Cost/Benefit Ratios are due to high intensity of business activity within the proposed development. It is noted that the Supplementary Preferred Master Plan results in a greater Net Present Value and higher Cost/Benefit Ratio than the Alternative Option 6, thus suggesting that the Supplementary Preferred Master Plan is more supportable than Alternative Option 6.

Norling Consulting's economic modelling undertaken in comparing the Supplementary Preferred Master Plan and the Alternative Option 6 concluded that it was apparent that the Supplementary Preferred Master Plan would result in a significant economic outcome for the Gold Coast and Queensland. Norling Consulting stated that in particular, it is considered the community benefits significantly outweigh any community

disbenefits as a result of moving from the Alternative Option 6 to the Supplementary Preferred Master Plan. This statement is further justified by Figure 7.

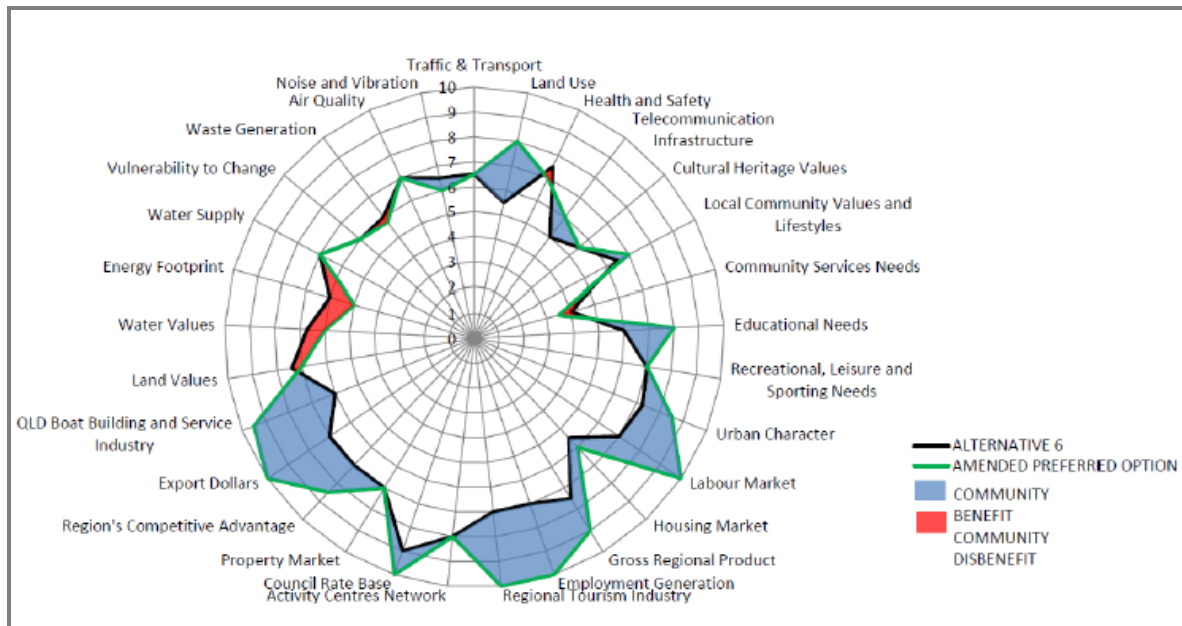


Figure 7 - Community Benefits and Disbenefits Comparison Graph

In consideration of the above findings, it is apparent that there is more than enough justification for the 40 metre setback to Oakey Creek.

3.3.4 Fauna Boxes

DEHP stated in a submission that there are a range of differing commitments for the application of fauna boxes throughout the EIS. DEHP requested the EIS be revised to address the following:

- Identify the number of fauna boxes required and justify this number under the recommendation of a suitably qualified ecologist for the entire buffer area and for specified areas within the buffer. Ensure these numbers are consistent throughout the EIS. This information should be contained within the Vegetation Management Plan (see below)
- Specify the types of fauna boxes to be used and for which species they are intended
- Specify and justify the location of the boxes within the buffer area (include maps/diagrams describing the positioning of these fauna boxes)

- Identify ongoing management of the boxes to ensure that their function is maintained.

As outlined above, amended management plans which address this specific aspect will be prepared through subsequent applications and address this issue.

This issue is more relevant with subsequent development applications such as OPW (Change to Ground Level) where impacts (removal of hollows) would occur. It should be noted that nest box installation was adopted as an approach to increase the sites faunal diversity.

It is considered this issued is able to be conditioned by CG in the report on the GCIMP.

3.3.5 Aquatic Ecology

DEHP requested within a submission that the Aquatic Ecology report prepared by FRC Environmental contained within Volume 4, Appendix 7 and Terrestrial Flora and Fauna Assessment report prepared by Planit Consulting contained within Volume 4, Appendix 8 of the EIS be updated in relation to:

- the development of a marine vertebrates management plan
- Noise management plan for marine animals
- Further information how reduction in vessel speed will be achieved
- Detailed information in relation to the monitoring of sea grass

It is important to note that the level of detail requested by DEHP for the Aquatic Ecology report and Terrestrial Flora and Fauna Assessment is unable to be provided at this preliminary stage of the project. The information requested by DEHP will be addressed through amended management plans provided with subsequent development applications. It is considered this issued is able to be conditioned by CG in the report on the GCIMP.

DEHP had also requested further justification in relation to the statement regarding the internal marina and the potential positive ecological impact through the provision of new habitat. As outlined within Section 7.3.2 of the Aquatic Ecology report, dry excavation of the land for the marina will provide new marine habitat will provide an additional 11.5 ha of subtidal marina habitat.

The Aquatic Ecology report states that the construction of the marina will result in a variety of habitats associated with pontoons, piles and other intertidal and subtidal

structures. The characteristic hard surfaces of these structures may provide substrate for many species of algae, hard and soft corals, and a variety of other invertebrate fauna such as sponges and ascidians. In turn, this hard-substrate benthic community may provide shelter and food for a variety of fish and other fauna. The structures associated with the proposed development will also provide a high degree of shade, which may be important in attracting many fish species (de la Moriniere et al. 2004; Verweij et al. 2006).

Please refer to Section 7.3.2 of the Aquatic Ecology report within the EIS for further justification.

In relation to noise monitoring and mitigation methods should turtle and/or dolphin inhabit the area, an underwater noises assessment will be undertaken as part of subsequent development applications. This issue is able to be conditioned by the CG.

The submitted EMP and environmental reports contain commitments to undertake monitoring of a range of issues including sea grass benthic organisms.

The reports note that additional surveying at time of construction activities / dredging would be undertaken to ensure 'Best Management Practices' were employed to reduce impacts.

3.4 WATER RESOURCES

3.4.1 Issues Raised within Submissions

Submissions received had raised questions regarding water resources and impacts associated with the GCIMP. The questions were generally in relation to requesting further information about water quality impacts and management methods. In summary the issues were in relation to the following aspects:

- Water Courses
- Water Quality
- Decant Waters
- Stormwater Management

A response to the above mentioned aspects is provided below.

3.4.2 Water Courses

DNRM have raised within a submission that the EIS makes reference to the subject site containing defined water courses. However, DNRM have recommended the EIS be updated to reflect that the Water Act does not apply to the proposed development as there are no water courses on the site.

As noted in Section 2.4.3 of the SEIS, the Project Approvals report prepared by Minter Ellison Lawyers contained within Volume 2, Appendix 3 of the EIS identified the GCIMP involves works within three separate bodies or areas of water:

- wetlands located within Lot 98 SP150731;
- three other areas of water within Lot 98 SP150731 and Lot 108 WD6404; and
- part of the Coomera River and Oakey Creek.

It was noted the wetlands were considered to be captured by the Water Act definition of a 'lake' as it includes a 'natural collection of water, whether permanent or intermittent'.

The three (3) other areas of water within Lot 98 SP150731 and Lot 108 WD6404 are captured by the 'watercourse' definition as they are considered to be above the point to where the high spring tide normally flows. These areas were identified as:

1. the drainage line that extends roughly north south across the south eastern corner of Lot 98 SP150731;
2. the channel on the eastern side of Lot 98 SP150731 coming into the lot from the Coomera River; and
3. the channel coming onto Lot 108 WD6404 from the southern drain.

In their submission, DNRM stated there is no defined watercourse located within the subject site. As such the Water Act is not relevant to the GCIMP.

As noted within the Project Approvals report contained within Volume 2, Appendix 3 of the EIS, there will be some works in part of the Coomera River and Oakey Creek. As the relevant parts of the Coomera River and Oakey Creek affected by the GCIMP is tidal, operational works in the river are governed by the CPM Act rather than the Water Act, and therefore do not involve the Water Act operational work assessment trigger in the SPR Schedule 3 Part 2 Table 4 Item 1.

3.4.3 Water Quality

DEHP raised within a submission that the contamination of water could occur by heavy metals such as copper, but was not included in the baseline water quality study. DEHP noted that given that copper was recognised as a chemical of potential concern, the proposed water quality baseline study (18-24 months) and ongoing water quality monitoring programs should include copper and consider including tributyl tin (TBT). It is noted that the baseline water quality will be updated at time of construction activities to ensure management methods are reflective of site conditions and current standards / requirements at that point in time thus address this issue raised.

DEHP had also requested further information demonstrating how the water quality in the internal marina will be maintained at a high level to support ecological values. As outlined above, amended management plans which address this specific aspect are to be prepared through subsequent applications and as such, would address this issue. Furthermore, it is considered this issue is more relevant with subsequent development applications such as OPW (Change to Ground Level) applications.

QPWS raised within a submission concerns regarding the potential for a range of indirect impacts on the water quality of the marine park downstream of the GCIMP during construction of the precinct. These impacts include turbidity and sedimentation from dredging and the potential disturbance of acid sulphate soils.

QPWS noted that with regard to operation of the marine precinct and ongoing use of the Coomera River for shipping, there is the potential for cumulative impacts and additional

pressure on the marine park from dredging the Coomera River to facilitate access by vessels to the GCIMP.

These comments fail to acknowledge the ongoing dredging activities which occur within the Coomera River and aligned canal systems have not resulted in significant impacts to water quality.

The issue raises concerns with the indirect impacts from land uses decisions which have been approved and are supported by both local and state planning. In addition the concerns raised by QPWS ignores the inability for consensus to be reached between agencies / governments on management responses to the indirect impacts referred to within their submission and the management of the Coomera River such as bank stabilisation and dredging.

In relation to the GCIMP, the Construction Methodology Report contained within Volume 5, Appendix 13 and The Maintenance Dredging Report contained within Volume 7, Appendix 18 of the EIS, provide detail pertaining to construction and maintenance dredging. As is outlined, the various management techniques and plans have been developed to ensure the downstream environment is not impacted upon as a result of works relative to the GCIMP. It is important to note that these plans are able to be amended and adjusted to address specific issues raised.

3.4.4 Decant Waters

As outlined within Section 2.5.4 of the SEIS, DEHP had raised within their submission that the EIS indicates that an acid sulphate soils assessment has been conducted, however, the report containing that information is not provided. In addition to this, DEHP identified that there is a need to assess whether decant waters from the land-based disposal of dredge material would contain unacceptable concentrations of metals and metalloids, and to include a detailed assessment of sediment contamination in the EIS.

DEHP recommended ensuring that the details and results of the Gilbert & Sutherland external sediment sampling survey are made available in the appendices of the EIS to inform development of end-of-pipe water quality monitoring and management requirements for waters decanted from land-based disposal of dredged sediments, likely to required at the development approval stage.

An Acid Sulfate Soils Assessment (ASSA) was undertaken by Gilbert and Sutherland and is contained in Volume 10, Appendix 32 of the EIS. The ASSA found acid sulfate materials would be disturbed as part of the construction process. Accordingly, an Acid Sulfate Soils Management Plan (ASSMP) is required to manage excavated acid sulfate soils during the stage 1 construction phase. This provides the framework to ensure the

potential impacts on construction for the development are managed, treated, monitored, reported and if necessary, mitigated.

As stated in the above sections and within the EIS, the material from both the 'wet' and 'dry' excavation works will be placed in constructed treatment beds and then be treated in the beds for acid sulphates. The material will be conditioned by drying back for optimal use as construction fill either as compacted fill or for preload purposes. Further to this, the flooded water within the internal marina will be treated for acid sulfate soils prior to release into external water as per the ASSA report.

It is considered adequate information has been provided in relation to acid sulphate for the purpose of this application. Additional sediment sampling will occur through subsequent development applications. It is relevant to update sediment samples prior to construction activities to ensure associated management techniques / plans can be prepared and an appropriate monitoring program is developed.

3.4.5 Stormwater Management

DEHP requested within a submission that the EIS should be revised to include a detailed stormwater management plan for the ERA 49 – Boat Maintenance and Repair Activities component.

The EIS provided a Stormwater Management Plan (SMP) prepared by Hyder Consulting and contained within Volume 6, Appendix 16 of the EIS. This Conceptual Stormwater Management Plan (CSWMP) had been prepared to address the aims defined by ANZECC 2000 in full compliance of the Environmental Protection (Water) Policy 2009.

The SMP was intended to demonstrate to the Coordinator General and advisory agencies that the proposed development of the Gold Coast International Marine Precinct has taken the existing environment and stormwater drainage regime into consideration throughout the preliminary design and planning phases of the development, and has taken action to include management strategies to mitigate adverse impacts resulting from changes to stormwater quantity and quality.

It is important for DEHP to note that the request information is land use specific. As identified within the GCIMP approvals process, the ERAs will form part of subsequent individual development applications for the specific land uses. As such the information requested will be addressed through this development application process.

GCCC had requested that the SMP be amended to provide alternative treatment devices and further information to address the outstanding stormwater management issues.

As outlined throughout the SEIS, amended management plans which address this specific aspect will be prepared through subsequent development applications.

3.5 COASTAL ENVIRONMENT

3.5.1 Issues Raised within Submissions

Submitters identified concerns pertaining to the GCIMP and the Coastal Environment within submissions. Concerns were in relation to impacts associated with dredging and further information in relation to erosion prone areas and erosion risk. In issues raised are summarised as follows

- Dredging Impacts
- Water Quality
- Coastal Hazards and Erosion Prone Areas

A response to the above mentioned aspects is provided below.

3.5.2 Dredging Impacts

DEHP requested the EIS should include further information to clarify the likely frequency of the Maintenance Dredging and the areas where maintenance dredging will be undertaken by the proponent.

As outlined in Section 2.6.6 of the SEIS, as identified within Section 3 of the EIS and the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS, it is proposed to undertake maintenance dredging over a 10 year interval. It is estimated that the GCIMP will require 34 days for maintenance dredging, based on a dredge production rate of 300m³ / hour, with the dredge working 10 hours per day, with actual dredging occurring for five hours.

The extent of Maintenance Dredging is identified within the Bulk Earthworks – Master Plan (K173-AA001578) Sheet 2 of 2 prepared by Hyder Consulting dated 3 August 2011 contained within Appendix B of the Maintenance Dredging Report. An excerpt is provided in Figure 8.

The Maintenance Dredging will occur to enable boating movements to the Coomera River channel. The dredge spoil disposal facility is provided to cater for the recurrent dredging requirements.

The body corporate of the site shall be responsible for the maintenance dredging of the internal channels that service commercial areas, such as areas within their water

leases. The Gold Coast City Council and Queensland Government/Marine Safety Queensland shall be responsible for maintaining the entrance and internal navigation channels of the Coomera River.

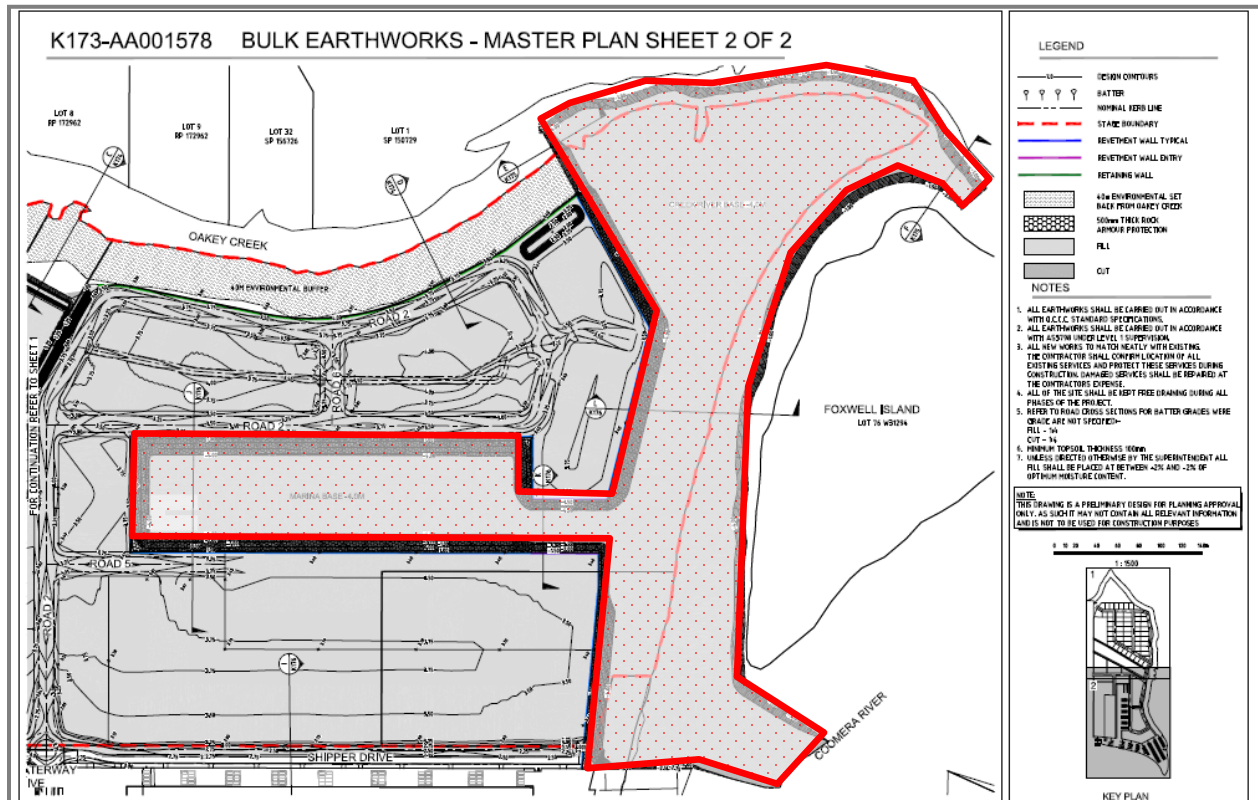


Figure 8 - Extent of GCIMP Maintenance Dredging

As specified in Section 2.6.3 of the SEIS, it has been acknowledged by multiple government agencies that Coomera requires a regional dredge spoil facility. Dredge Spoil facility for the GCIMP have been identified within the GCIMP project site and a number of options external to the site.

Should the CG receive advice from agencies in relation to the requirements of a regional dredge spoil site this is able to be incorporated into the GCIMP Mater Plan west of the IRTC in an area designated for Marine Industry as identified in Figure 9.

Through discussions with GCCC officers, it was resolved that until such time a decision is made in terms of a site to accommodate a regional dredge spoil facility, a dredge spoil facility for the purposes of the GCIMP project shall be accommodated within the project site as identified in the figure below. The GCIMP requires a dredge spoil facility of 2.02 hectares, however, 2.2 hectares of the project area has been dedicated for the dredge spoil facility.

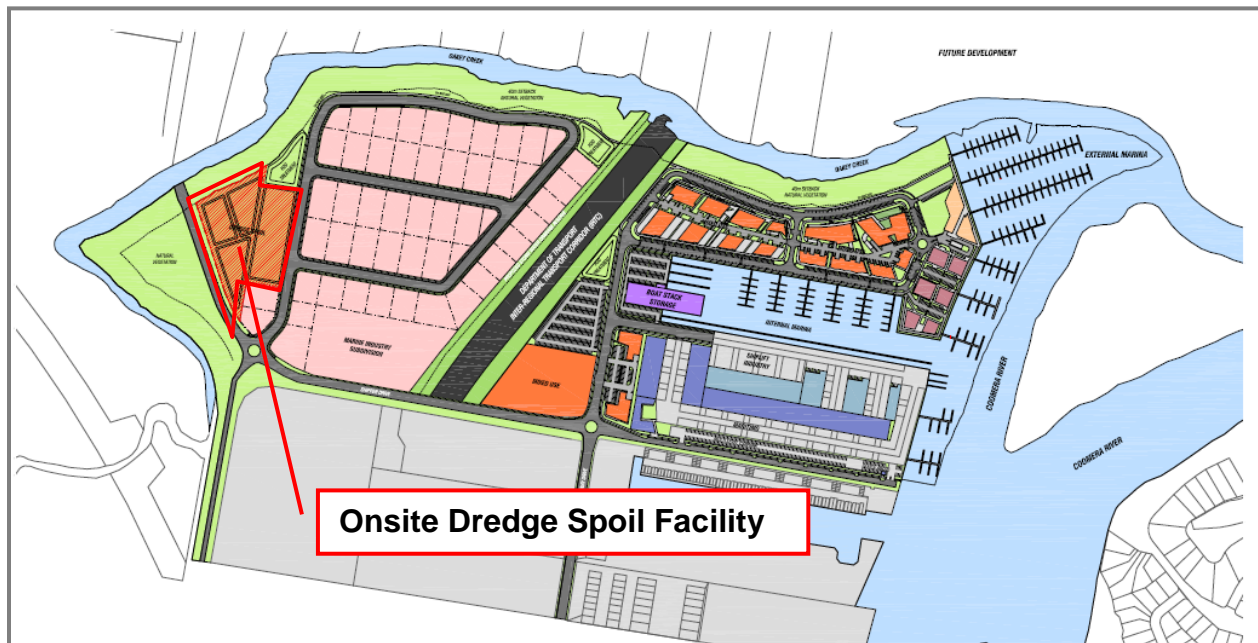


Figure 9 - GCIMP Onsite Dredge Disposal

A number of submissions were received requesting further details in relation to the external dredging options presented in Hyder Consulting's Coomera River Dredge Disposal Options report contained within Volume 6, Appendix 17 of the EIS.

The comments received within this context relate to potential external works and regional dredging operations. The submissions request the proponent to confirm / clarify issues various State Government Departments, the local government and associated bodies (GCWA) at this time have been unable to coordinate or agree upon.

It is noted the EIS does provide options for a regional dredge disposal facility at a site (Hart Street) that currently operating under the relevant approvals associated with its current extractive industry land use approval, however this issues is required to be resolved by the various Governmental Departments and associations as opposed to the proponent.

In relation to DEHP's request for a more detailed report in relation to the Hart Street property in terms of approvals etc, this request was considered. However, since meeting with DEHP, further discussions between the CG and GCCC in relation to the Regional Dredge Spoil options have occurred.

As such, given the context of uncertainty surrounding a Regional Dredge Spoil Facility

for the Coomera River, a report has will not be provided until such time an outcome necessitates a need to provide one.

Concerns in relation to the land based method of dredge spoil disposal and the potential impacts on marine wetlands and fish habitat were raised by DEHP. As noted in earlier sections of this SEIS and the EIS, a cost benefit analysis undertaken as part of the options analysis process identified that land utilised for marine industry development results in a higher multi-criteria value than concepts which retain the area intended for dredge spoil disposal / Industrial land (Southern Precinct) in a natural state.

As stated in Section 2.6.4 of the SEIS, in all options dredge spoil resulting from maintenance dredging will be disposed of via the use of settlement ponds. It is anticipated that dredge spoil will be pumped along Shipper Drive to the settlement ponds in the designated dredge spoil area in all options with the exception of Option 2. It was outlined with Hyder's report that Option 2's method will pump the dredge spoil along Oakey Creek to the settlement ponds.

In all of the proposed settlement pond designs, the sediment will be permitted to accumulate to a height that is half of the total pond height.

The area put aside for dredge spoil in the Supplementary Preferred Master Plan is approximately 2.2 hectares as demonstrated in Figure 9. It is proposed to undertake maintenance dredging over a 10 year interval. It is anticipated at this rate, the total volume of sediment to be dredged will be approximately 50,000m³

EMPs will be amended as part of subsequent development applications and as such will address issues associated with the coastal environment.

3.5.3 Water Quality

DEHP raised concerns with the Water Quality Release Criteria for the Sediment Pond Decant Water Compliance Limits. DEHP recommended that the Water Quality Release Criteria or end-of-pipe trigger values, alert levels, and/or compliance limits be developed in consultation with DEHP.

As noted throughout the SEIS, amended management plans which address this specific issue will be developed as part of subsequent development applications. If required, the proponent will liaise with DEHP.

3.5.4 Coastal Hazards and Erosion Prone Areas

Coastal Hazard Areas

DEHP raised within a submission that it is DEHP's position that coastal hazards areas must be retained undeveloped wherever possible, and vulnerability to future sea level rise must be appropriately considered. DEHP suspect that the GCIMP will increase the intensity of development in areas at risk from coastal hazards, which is generally not supported.

DEHP requested that the EIS be revised to include information that:

- Indicates the position of the erosion prone area in relation to the development footprint, pre- and post-construction;
- Thoroughly details the risk of coastal hazards impacts at the site in the construction and operational phases; and
- Details coastal hazards mitigation measures during the construction and operational phases, and demonstrates that these are suitable for the development and can withstand the predicted coastal hazards impacts for the site.

The site illustrates the minimum 40m setback as required through the erosion prone area mapping, is provided within the Hazard Risk Report contained within Volume 10 Appendix 38 of the EIS. Further to this, as explained within the Terrestrial Flora and Fauna Assessment prepared Planit Consulting Pty Ltd contained within Volume 4, Appendix 8 of the EIS, the minimum dimension was derived from the former the State Coastal Management Plan—Queensland's Coastal Policy which was repealed and replaced by the Coastal Plan 2012.

The former Queensland Coastal Management Plan mapping required setback is noted as segment 2700 which identifies Mean High Water Springs (MHWS) +40m as the required setback. MHWS generally reflects top of bank along Oakey Creek and thus a 40m setback from top of bank was adopted. Ancillary and support access roads, pedestrian linkages and open space occur adjacent to this minimum buffer and are within the Coastal Plans coastal management district.

It is important to note that the subject site is situated within a designated Waterfront Industry area under the GCCC Planning Scheme that was reviewed by State Government's as part of its adoption process. In addition, the site is within a designated Maritime Development Area under the Queensland Coastal mapping as identified in Figure 10 which is intended to provide certainty for marine related developments. The

Supplementary Preferred Master Plan is generally consistent with the Maritime Development Area

It is therefore considered that DEHP's comment is inconsistent with the relevant State and local plans.



Figure 10 - Queensland Coastal Plan Excerpt (Source: DEHP 2013)

The EIS contains details on flooding and coastal processes. A Coastal Processes Report prepared by BMT WBM is presented Volume 8, Appendix 27 of the EIS. This report presents the results of investigations undertaken by BMT WBM in order to assess the dominant coastal processes occurring in the Coomera River around Foxwell Island and to describe these processes and the likely impacts from the GCIMP.

The report included the estuarine hydraulics and the impacts on water levels and currents, an estimation of the likely maintenance dredging requirements for the marina areas of the proposed development and an assessment of bank erosion potential due to increased vessel traffic. A description of the key coastal processes affecting the site, hydrodynamic and cohesive sediment transport modeling methodologies and results, and an assessment of the impacts from increased vessel traffic are detailed as well as volume estimates for the maintenance dredging requirements.

The Coastal Process Study was undertaken on the Preferred Master Plan only as the coastal study demonstrates that impacts arising from the Preferred Master Plan are minimal or not discernible from natural processes. As such, given all other options pose less development than the Master Plan no further detailed assessment was considered relevant.

Coastal Protection State Planning Regulatory Provision

DEHP had also requested the proponent demonstrate compliance of the GCIMP with the Coastal Protection SPRP.

The development, as outlined in the EIS, was assessed against the State Coastal Management Plan, which was a statutory instrument relevant at the time of lodgement.

Recently, on 26 April 2013, the Coastal Protection State Planning Regulatory Provision – Protecting the coastal environment (CPSRP) came into effect. It superseded the Draft Coastal Protection State Planning Regulatory Provision – October 2012 (2012 DCPSRP); 2012 DCPSRP and continued the suspension of SPP 3/11.

The site is as identified in the EIS mapped Under the Coastal Plan for the large part a Maritime development area generally reflective of the GCIMP proposal. The Coastal Plan also identifies part of the site as an Area of high ecological significance. This designation generally reflects the mapped wetland communities of the site.

The CPSRP development assessment provisions in relation to such areas continue to require development and development infrastructure to be located outside of, and not to have a significant impact on, an area of high ecological significance in any coastal management district, unless it is for one or more of a number of specified purposes. The ranges of specified purposes include those in the 2012 DCPSRP.

Coastal-dependent land use means a land use that is required to be located on land adjoining the waterfront or that has access to water in order to function. This term also includes industrial and commercial facilities such as ports, harbours, jetties, pontoons, marinas, ramps and slipways, coastal or marine (boating) tourism facilities and appropriate marine service industries.

Coastal Protection State Planning Regulatory Provision states, in planning for appropriate land uses in areas adjoining the foreshore, adequate provision needs to be made for coastal-dependent land uses. Where there is competition for available land, preference should be given to coastal-dependent land uses ahead of other urban land uses.

The regulations note that for areas of high ecological significance development and development infrastructure is to be located outside of, and not have a significant impact on, an area of high ecological significance in any coastal management district, unless the development or development infrastructure is for one or more of the following, with the relevant development for GCIMP being *“any purpose within a maritime development area or aquaculture development area”*

Erosion Risk – Oakey Creek

DEHP requested to quantify the erosion risk for the banks of Oakey Creek adjacent to Lot 1 on SP150729 and Foxwell Island and the preferred option for mitigating the erosion. This issue was addressed in Section 2.4 of the Coastal Processes Report prepared by BMT WBM is contained within Appendix 27, Volume 8 of the EIS.

The proposed dredging has the potential to impact on the tidal hydrodynamics of the Coomera River system by improving the hydraulic conveyance through the dredged areas. This could result in changes in the tidal flow distribution between the main and secondary channel around Foxwell Island and associated morphological changes (shoaling and erosion of channels).

To assess the potential impacts of the proposed dredging on tidal hydrodynamics in the river, numerical modelling of the predevelopment (Base Case) and post development configuration was undertaken. The Base Case TUFLOW-FV model was then modified to represent the features of the proposed development and a full (2 week) spring-neap tidal cycle was simulated using both configurations. The impact to velocity and flow magnitude was calculated for both ebb and flood tides. The figures below show maps of the velocity magnitude impacts during the peak of ebbing and flooding respectively.



Figure 11 - Flow Velocity Impact - Peak of Ebbing Tide (Spring Tide)



Figure 12 - Flow Velocity Impact - Peak of Flooding Tide (Spring Tide)

Time series of the velocity magnitude for the Base Case and the Developed Case are compared in the Coastal Processes Report prepared by BMT WBM contained in Appendix 27, Volume 8 of the EIS.

The impacts in terms of flow discharge through the main channel of the Coomera River that passes between Foxwell Island and Hope Island and the secondary channel that passes between Foxwell Island and the proposed GCIMP site, indicates that the dredging increases the peak ebb and flood discharge through the section of Oakey Creek adjacent to Foxwell Island during spring tides by up to approximately 11.0 m³/s and approximately 6.5 m³/s respectively (This equates to a increase of approximately 50% and 36% respectively).

In addition, the modelled peak ebb and flood discharge through the main channel increase by about 1.4 m³/s and 2.0 m³/s respectively (This is equivalent to a relative increase of approximately 0.7% and 1.7% respectively).

Although the tidal flows increase, the modelled peak flow velocities within the dredged areas decrease significantly due to the profile enlargement (peak ebb flow velocities are predicted to reduce from approximately 0.25m/s to approximately 0.04m/s). Between the dredged area and the downstream edge of the secondary channel, peak flow velocities are predicted to increase due to the dredging. The peak ebb flow velocity through the section of Oakey Creek adjacent to Foxwell Island (during spring tides) is

predicted to increase from approximately 0.30m/s to approximately 0.47m/s and the peak flood flow velocity from approximately 0.22m/s to approximately 0.34m/s.

These increases would only occur at peak velocities during spring tides and as such are of short duration. Of initial concern were the increased flows and velocities in the section of Oakey Creek adjacent to Foxwell Island. The modelling indicated that the increase in conveyance in the secondary channel of the Coomera River (due to the dredging) caused the peak velocities in Oakey Creek to increase to levels which may result in local redistribution of sediments. This is likely to be in the form of bed changes and slight movement of shoals in the area of highest velocity changes. It is expected that this would not translate into increased bank erosion.

Various options to reduce these peak velocities back to predevelopment levels were investigated.

Mitigation options that involved dredging within the section of Oakey Creek adjacent to Foxwell Island or implementation of constriction within the marina area were found to be ineffective as measures to reduce the flow velocity impacts.

The modelling of the option with a constriction in the section of Oakey Creek adjacent to Foxwell Island showed that the increased flow discharges through the northern channel can be mitigated by implementing a lateral constriction within this section. However, the implementation of such constriction would result in a further increase in peak flow velocities in the vicinity of the constriction. In addition, the construction works required for the implementation of such constriction is likely to cause environmental disturbance.

The increased velocities in the vicinity of the constriction could be mitigated through bed protection works. The exact extent would need further investigation and would require further assessment of ecological impacts. The disturbances associated with these works are considered to be greater than the effects they are intending to mitigate. At this stage, implementation of any mitigation option is not recommended.

Based on the assessment of a range of potential mitigation options, it is recommended that the increased velocities, including the local minor redistribution of sediments in the bed of Oakey Creek, be tolerated and no immediate structural mitigation works be undertaken to reduce these impacts. It is recommended that a monitoring program be implemented to establish the baseline conditions and monitor the effects of the development on erosion within the section of Oakey Creek adjacent to Foxwell Island.

Should this monitoring program indicate that unacceptable bank erosion has occurred due to the development, implementation of the constriction mentioned above or bank stabilisation measures could be investigated further.

Please refer to the Coastal Processes Report prepared by BMT WBM contained in Volume 8, Appendix 27 of the EIS.

3.6 AIR QUALITY

3.6.1 Issues Raised within Submissions:

A small number of submissions received requested amendments to the Air Quality Assessment. DEHP requested further detailed information to be included in the Air Quality Assessment in order to determine impacts or mitigation methods. It is noted that DEHP's request was land use specific. Queensland Health had requested the proponent provide a commitment that any / all assumptions made within the Air Quality Assessment contained within Volume 10, Appendix 33 of the EIS at a minimum adopted by any operator of the site.

3.6.2 Response to Issues Raised

As part of the SEIS a revised Air Quality Assessment has been prepared by Simtars and is contained within Volume 2, Appendix 10 of the SEIS. The revised Air Quality Assessment addressed issues raised within subsequent meetings with submitters. The following modifications to the report occurred:

- Updated references within Table 2.2
- Expansion of detail regarding how vehicle and boat emissions were derived from the SEQ inventory
- Inclusion of all sources in reference list
- Inclusion of limitations from Section 2.7 into the Discussion.
- Comparison of modelled styrene with measurements in Section 2.8
- Description of the source of data in Table 3.3.
- Inclusion of the inventory of new sources in Table 3.3.
- Changes to the background concentrations to be the 70th percentile of measured values and include in Table 3.5.

It is noted DEHP had requested further details to assist assessment of the air quality impacts associated with subsequent ERA's. As noted the Air Quality Assessment has been updated however, as DEHP request is land use specific, this item will be addressed through amended EMPs that will form part of subsequent development applications.

3.7 NOISE AND VIBRATION

3.7.1 Issues Raised within Submissions:

A number of submissions were received in relation to noise and vibrations aspects relating to the GCIMP. The information requested by submitters was primarily in relation to details that would be addressed through subsequent development applications as they were land use specific. Other submitters had raised concerns that noise issues had not been adequately addressed in relation to potential impacts on marine life. The following points summarise the general issues identified within submissions:

- Land Uses
- Noise Standards and Noise Modelling
- Marine Life

A response to the issues raised in submissions is provided below.

3.7.2 Land Uses

As outlined within Section 2.2.3 of the SEIS, a submission from a private submitter was received raising concerns with the proposal plans identifying a residential component. The submitter felt the EIS did not address the potential impacts associated with the surrounding land uses on residents within the GCIMP.

As identified within Volume 3, Appendix 5 of the EIS, The proposal does not seek a residential form of development. This is reinforced through the development codes contained within Attachment 3.

As acknowledged within the EIS, the GCIMP seeks to include land uses for short term accommodation for potential employees / students / users of the development. Short term accommodation shall be restricted through uses such as resort hotel or hostel accommodation as defined under the GCCC Planning Scheme. Provisions have also been made for caretaker's residence.

As such, this form of development will be ancillary to the development within the site and will generally be located outside the immediate GCCM environment. Furthermore, to address associated amenity impacts, this can be achieved through the incorporation of design features aimed at mitigating impacts from immediate intrusive development.

Again, these measures will be addressed through subsequent development applications.

DEHP had requested that a more detailed noise assessment is undertaken addressing issues relative to land use specific development. Given acoustics are dependent upon individual uses, this information will be provided at the DA phase. As outlined through various sections of the SEIS, amended EMPs which address this specific aspect will be prepared through subsequent applications.

3.7.3 Noise Standards and Noise Modelling

DEHP raised concerns that the Noise and Vibration Assessment prepared by Hyder Consulting contained within Volume 10, Appendix 34 of the EIS lacked direction and method. DEHP are unclear of the objective of the assessment to determine the likely aggregate noise impact on sensitive receptors from the development, or the noise impact from each individual noise source.

DEHP noted that whilst the GCIMP will inherently exhibit a number of noises generated by various activities in its normal operation, DEHP felt the noise assessment presented has not considered more than one noise source at a time. DEHP recommended that likely noise sources should be assessed simultaneously to obtain a representative noise level at sensitive receivers.

GCCC had also raised concerns regarding the noise assessment. GCCC stated within their assessment, GCCC found that current background noise levels had not been measured accurately as previous background noise levels (from 2008) had been used.

GCCC stated that given the close proximity of the nearest sensitive receptors, GCCC is concerned that the separation distance of only approximately 130 metres is not significant enough to prevent noise nuisance.

It is important to note, the submitted Noise and Vibration Assessment, clearly states that the assumptions within the acoustic assessment have been made in relation to the activities that may be carried out on the premises in addition to noise sources that may be associated with the development.

The issues outlined above are not considered to be appropriate at the Supplementary EIS phase given that noise generation is dependent upon individual uses. The assessment has identified the relevant acoustic requirements for subsequent evaluations of individual development applications. These future applications would identify the use noise source and any attenuation required. As outlined above amended management plans, which address this specific aspect, are to be prepared through subsequent applications.

3.7.4 Marine Life

DEHP raised the issue that if turtle, dugong and/or dolphin inhabit the area, an underwater noise assessment will be required to provide the contractor with the correct protocol for piling operations. DEHP noted that this process would involve monitoring as well as mitigation methods such as bubble curtains around the pile driving and ramping up procedure.

As outlined throughout various sections of the SEIS, and amended EMP which will address this specific aspect shall be prepared through subsequent development applications. It is considered this issue is able to be conditioned by the CG.

3.8 NATIVE TITLE AND INDIGENOUS CULTURAL HERITAGE

3.8.1 Issues Raised within Submissions:

A submission was received that relate to both Native Title and Aboriginal Cultural Heritage for the GCIMP. The submission raised issues that the EIS did not satisfy the requirements of both the *Native Title Act* (Cth) and the *Aboriginal Cultural Heritage Act* (Qld). The submitter stated that the EIS had wrongly confused native title (commonwealth legislation relating to tenure history) with Aboriginal cultural heritage (Queensland legislation which relates to past ground use/disturbance and proposed ground use/disturbance activities).

As such this section will respond to the following issues:

- Native Title
- Cultural Heritage

It is important to note that upon receipt of the submission, meetings have taken place with the native title group and registered Aboriginal Cultural Heritage Body for the project area. A response to the above issues is provided below.

3.8.2 Native Title

The submitter requested the EIS to be restructured so that Native Title is considered in terms of the history of the tenure of the project site stating that resolving Native Title is critical to ensuring project rights and access to the project site.

The submitter stated that the EIS did not explain the tenure history of the site in sufficient detail to form an opinion as to whether or not native title has been extinguished. It was identified within the submission that native title rights and interests extend to all land and waters associated with the project. As such, the Gold Coast Native Title Group requested that the proponent provide clarification on this matter.

The subject site has been extinguished from Native Title Rights as Lot 108 on WD6404 formed part of original Portion 71 on W3150, parish of Coomera. Portion 71 covered an area of 60.7 ha (150 acres). The original Deed of Grant (10250065) was issued in June 1875 to Angus Bell over Portion 71 under clause 71 of the Crown Land Alienation Act 1868, was a grant of an exclusive interest. Therefore the extinguishing effect of the deed of grant can be relied upon and Native Title has been extinguished over the whole of original portion 71.

As noted within Section 2.2.7 of the SEIS, prior to amendments made to the preferred Master Plan, the proposal included 280 berths within the external marina. As part of the amendments made to the preferred Master Plan, 16 marina berths have been deleted from the external marina in order to ensure the proposal is contained wholly within allotments, whereby Native title has been extinguished.

As raised within the submission received, marina berths being proposed within unallocated state land and the requirement to obtain relevant approvals in order to facilitate this outcome. As noted above, all marina berths proposed within unallocated state land have been removed from the amended master plan.

3.8.3 Cultural Heritage

The submitter raised concerns that EIS does not comply with the *Aboriginal Cultural Heritage Act* stating that under the *Aboriginal Cultural Heritage Act* an 'approved' Cultural Heritage Management Plan ('CHMP') is required under Part 7 of that Act wherever there is an EIS.

The submitter stated that no effort had been made to engage with the correct entity with regard to Aboriginal cultural heritage and instead engaged the wrong people. The Gold Coast Native Title Group requested that the proponent engage with the registered Aboriginal Cultural Heritage Body for the project area and develop a CHMP as required by *Aboriginal Cultural Heritage Act*.

The Cultural Heritage Assessment report provided within Volume 10, Appendix 38 of the EIS had noted the Cultural Heritage Coordination Unit of the Department of Natural Resources and Water recognised the Kombumerri clans as the culturally proper caretakers for area.

Since the preparation of the initial Cultural Heritage report, a Native Title Claim had been lodged and it has been identified the project falls within the claim area. As such, Jabree Limited is the registered Aboriginal Cultural Heritage Body for the project area.

The project team was contacted by the Gold Coast Native Title Group regarding cultural heritage and native title sections of the EIS. A number of meetings were held with the group during the notification period. As a result of these meetings, the project team provided the Gold Coast Native Title group with a formal notification under the *Aboriginal Cultural Heritage Act 2003* advising of the proponent's intention to prepare a Cultural Heritage Management Plan. The project team expects engagement with the Gold Coast Native Title group will continue to resolve the issues identified.

As such, Jabree Limited as the Registered Aboriginal Cultural Heritage Body for the Queensland portion of the claim area of the Gold Coast Native Title Group

QUD346/2006 prepared an amended Cultural Heritage Report and Draft CHMP. The amended Cultural Heritage Report is contained within Volume 2, Appendix 11 and the Draft CHMP is contained within Volume 2, Appendix 12 of the SEIS.

The Cultural Heritage Report stated that the traditional owners (as represented by Jabree Limited) consider the GCIMP site to be of high Aboriginal cultural heritage significance. In particular, the waterways of Oaky Creek and the Coomera River are considered to have high cultural and spiritual value for the present as well as past occupation and usage.

As stated within the Cultural Heritage Report, Jabree Limited further cultural heritage assessment of the GCIMP site is recommended. This is due to the nature and extent of significant Aboriginal Cultural Heritage sites within the project vicinity, the findings of previous archaeological surveys and excavations and the relatively undisturbed nature of the ground surface.

The project is considered a Category 5 high risk activity to Aboriginal cultural heritage in the area. Therefore, in consideration of the Act and the assessment's findings, the following recommendations were made:

- Jabree Limited and Harbour Island Pty Ltd are required to develop a Cultural Heritage Management Plan that addresses the potential impacts to Aboriginal cultural heritage associated with further ground disturbing activities related to the construction and operation of the GCIMP.
- The CHMP will detail the approach to further cultural heritage assessment and archaeological excavations at the GCIMP that will include:
 - Test trenches dug with the aid of a small excavator at intervals within the project area
 - Material from the test trenches to be "wet sieved" using a water truck and 5mm sieve
 - Charcoal located within the trenches may be used to date the site using radio-carbon dating technology
 - The archaeological excavations will be supported by a report that outlines the methodology used, details the cultural heritage finds located on site, provides mapping of the finds and outlines further cultural heritage assessment of the site (if required).
- Jabree Limited request assistance in identifying the on-ground project boundary as part of the further cultural heritage assessment
- The CHMP will include a schedule for the delivery of Cultural Heritage awareness and induction sessions to project personnel.

3.9 INFRASTRUCTURE IMPACTS

3.9.1 Issues Raised within Submissions

Section 4 of the EIS provided a summary of the infrastructure impacts associated with the GCIMP. A number of submissions received from GCCC and DTMR requested for information in relation to the presumed infrastructure for the GCIMP. In summary, the queries were in relation to the following aspects:

- Traffic Data Utilised
- Project Staging and Timing
- Public and Active Transport
- Flooding Impacts
- Traffic Volumes and Mitigation Measures
- Construction Traffic

A response to the issues raised is provided below. A Supplementary Traffic and Transport Impact Assessment prepared by CRG has been provided as part of this SEIS within Volume 2, Appendix 8 and addresses the various traffic and transport related issues raised within submissions received.

3.9.2 Traffic Data Utilised

A number of submissions received by GCCC and DTMR questioned the accuracy and or method of data utilised to determine the anticipated traffic generation on aspects of the GCIMP identified within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21.

Validity / Accuracy of the Existing Local Road Traffic Survey Data

Within one of DTMR's submissions, DTMR requested confirmation of validity / accuracy of the existing local road traffic data. It is unclear as to why DTMR would question the validity of data.

As stated within CRG's report a survey of all traffic movements associated with the existing development shown in Figure 13 was conducted on Tuesday 23 March,

Wednesday 24 March and Thursday 25 March 2010, between the hours of 7.00am and 6.00pm.

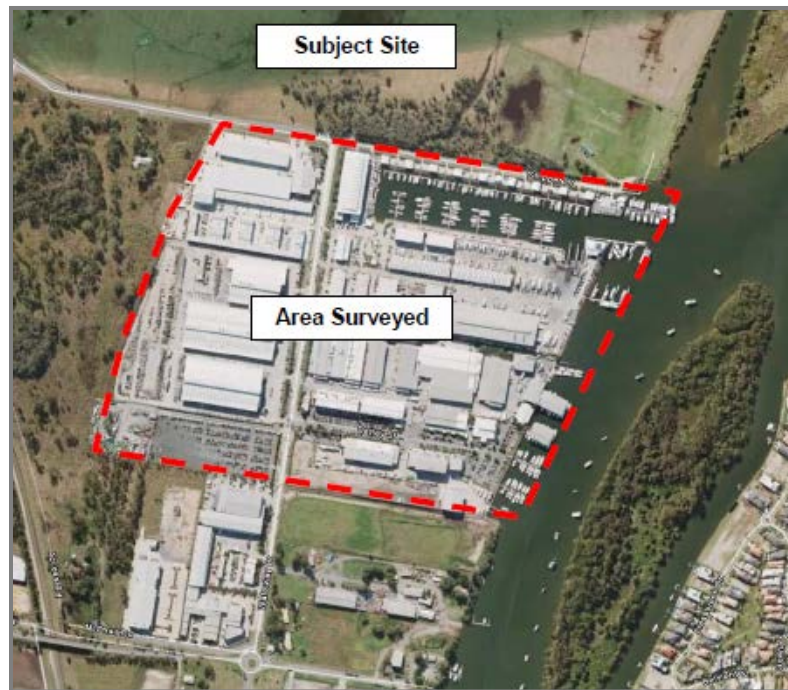


Figure 13 - Traffic Survey Area

The subject site was chosen for the survey as the existing marine precinct on Waterway Drive comprises a range of commercial, showroom, boat storage, warehouse and factory uses as well as marine berths. It was therefore considered prudent to examine the traffic generation relating to this existing marine precinct to estimate the potential traffic generation of comparable uses for the proposed development in Shipper Drive.

During consultation with DTMR, DTMR questioned the reliability of this data as DTMR felt the survey was undertaken outside of peak operating times. It is unclear as to how the survey was undertaken outside peak operating times as there is no fluctuation in peak times based upon time of year given the commercial nature of the precinct.

Furthermore, traffic generated from the surveyed development which is largely code assessable development, has been extrapolated from the adjoining and similar Waterfront Industry Precinct developments. Thus in essence, the GCIMP contemplates a development consistent with that planned for the site under the GCCC Planning Scheme and PIP.

As stated in the CRG report, the traffic count data for State-controlled Roads was provided by the DTMR. The data was collected in November 2010.

Therefore, it is considered sufficient Information is contained within the report to enable an assessment of impacts and construct reasonable and relevant conditions. This issue is able to be conditioned in the CG Report on the EIS.

Validity / Accuracy of the Marine Traffic Survey Data

DTMR also requested justification on the appropriateness of the survey / area adjustment and trip generation predictions in relation to marine traffic.

Evaluation of the existing and estimated marine traffic is contained within the Marine Vessel Activity Survey and Estimated Marine Traffic Report prepared by CRG contained within Volume 7 Appendix 22.

The surveys were carried out at the following three locations:

- Site 1 – Shipper Drive (adjacent to subject site)
- Site 2 – Beattie Road (southern end of Marina Precinct)
- Site 3 – Paradise Point (adjacent to Yacht Club)

A location map of the survey locations is provided in Figure 14

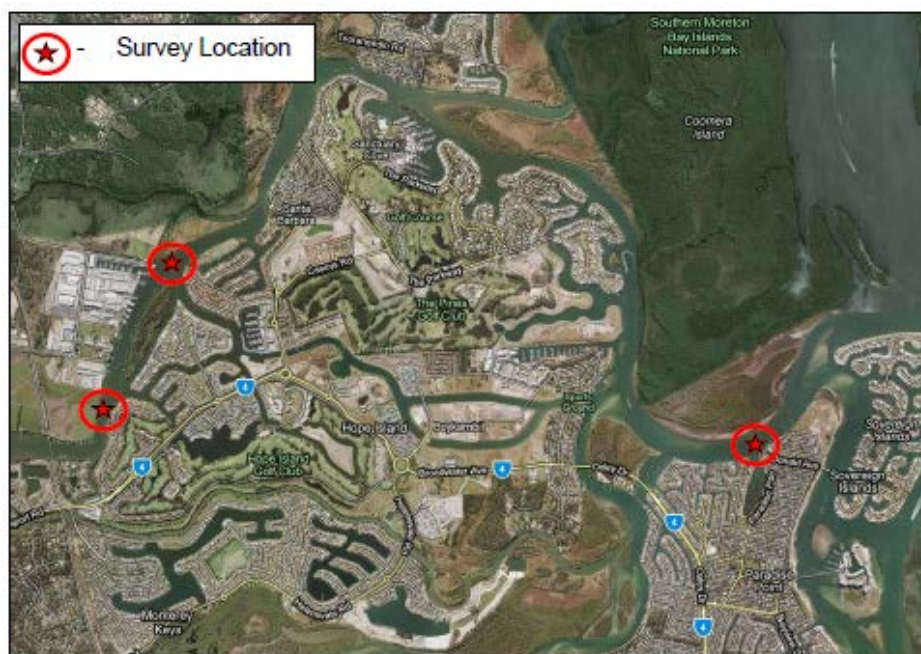


Figure 14 - Marine Traffic Survey Locations

The surveys were carried out between 7am and 5pm over five weekdays (Monday – Friday) and two weekends at the end of March 2010. The surveys were delayed so to avoid the wet weather period on the Gold Coast during the months of January, February and early March 2010. Although, it is noted that there was some wet weather during the survey period.

The report quantified / estimated the likely vessel traffic through a comparison of existing survey data and that generated by the existing Gold Coast City Marina development located immediately to the south.

The results concluded that the GCIMP would generate an additional 69 trips per day. This is considered to be minor given the existing number of boats present within the Gold Coast and Coomera River.

Justification for the trip generation survey of the adjoining marine industry development was provided in the CRG Traffic Report. The adjoining the marine industry development is of a similar nature and size to the proposed development. The survey of such is therefore considered to be appropriate and in accordance with various guidelines. We are unaware of alternative assessment methods or site information to vary or alter the assessment.

Therefore, it is considered sufficient Information is contained within the report to enable an assessment of impacts and construct reasonable and relevant conditions. This issue is able to be conditioned in the CG Report on the EIS.

Applied Growth Rate

GCCC stated within a submission that the growth rates per annum to be utilised to estimate future traffic volumes on the surrounding and local road are as follows:

- 6% p.a. compounded – Foxwell Road, east of the Coomera Interchange and including the intersection with Shipper Drive
- 4% p.a. compounded – Shipper Drive, Waterways Drive and Beattie Road

The assessment undertaken for the GCIMP has been based on a background growth rate of 3% per annum. Given the subject site is the primary development site in the marina precinct, it will therefore account for a large proportion of traffic growth on Waterways Drive, Shipper Drive and Beattie Road.

The resultant growth rate will be at least 4% - 6% per annum based on background rate of 3% plus the proposed development. It is considered applying a background rate of

4% - 6% per annum and then adding development traffic would result in an unrealistic level of growth.

As such, it is considered the growth rate utilised for the purpose of this assessment is acceptable in this circumstance.

Foxwell Road / Shipper Drive Intersection Template

GCCC noted the adopted intersection layout for Foxwell Road / Shipper Drive used for SIDRA modelling identifies separate right, through and left lanes. Therefore, GCCC have requested the template be adjusted to reflect the existing road environment.

The intersection template adopted for SIDRA modelling purposes is shown in Figure 15. The adopted layout reflects and is consistent with the current intersection configuration that exists. As such, no amendments to the template have been made.

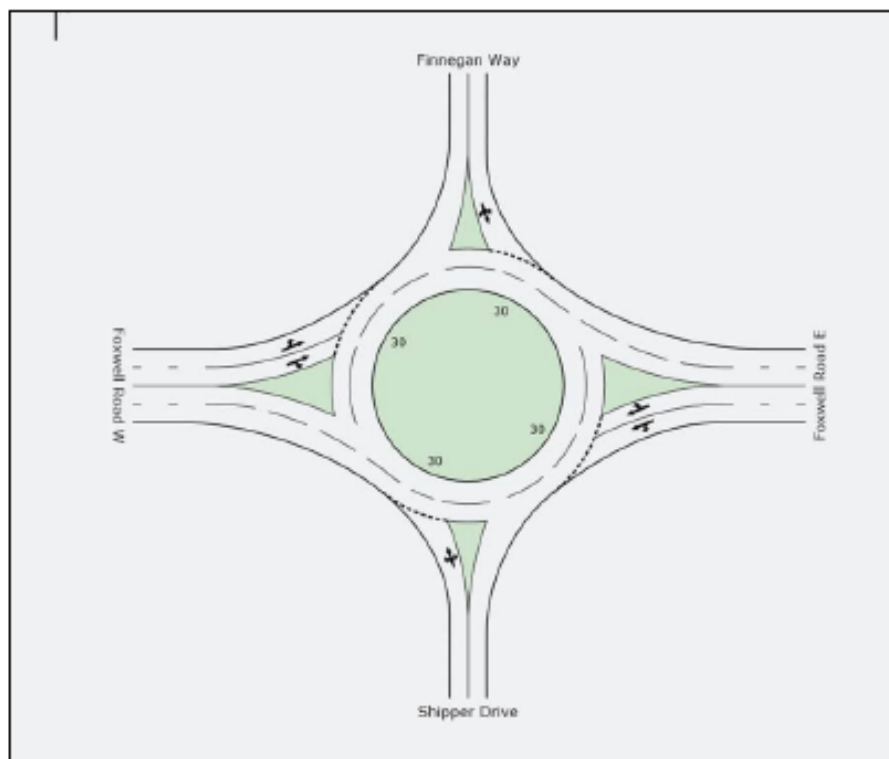


Figure 15 - Foxwell Road / Shipper Drive Intersection Template

3.9.3 Traffic Generation and Mitigation Measures

A number of submissions received by GCCC and DTMR questioned aspects pertaining to the anticipated traffic generation for GCIMP identified within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21.

The total trip generation expected for the GCIMP is identified within Table 6 and contained within the supplementary Traffic and Transport Impact Assessment prepared by CRG has been provided as part of this SEIS within Volume 2, Appendix 8.

Table 6 - Total Traffic Generation Rates

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Marina Berths, Showroom, Factory, Boat, Storage & Warehouse Uses (Approximately 24.3 ha)	1,752	102	56	34	182
Industry Subdivision (81,000m ²)	5,670	454	113	113	454
Retail (5,800m ²)	1,740	70	17	87	87
Hotel (110 rooms)	220	18	4	13	9
Tavern (1,500m ²)	450	-	-	22	23
Educational Establishment	300	60	15	30	45
TOTAL	10,132	704	205	299	800

Calculation of Trip Generation and Distribution

DTMR stated within their submission that a check on the trip generation from the ultimate development can be obtained from the minimum number of car parks. DTMR

requested a justification of the traffic generation estimates from the proposed development site based on this methodology.

It is considered in this circumstance that an estimate of trip generation based on car parking numbers is not appropriate given the nature of the uses. The trip generation estimates included in the assessment are based on published rates and surveys of actual similar developments.

An assessment of trip generation based on car parking numbers is generally only undertaken on development where a high turnover of traffic is expected and where published trip rates are not applicable.

DTMR have also raised within a submission that the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 presents daily traffic volumes for the development assuming the Coomera Town Centre is partially developed by 2021.

DTMR had also stated that the data presented suggests 40% of the trips generated by the full development are to/from dwellings associated within the Coomera Town Centre. DTMR requested a worst case scenario be developed should the assumptions about trip origins and destinations not be achieved.

The intention of the data presented within CRG's report was for 40% of trips to originate from the local Coomera / Pimpama community on the eastern side of the Motorway, not the Coomera Town Centre.

The traffic distribution was based on Bitzios Consulting's EMME Transport Modelling. Bitzios was engaged to undertake EMME Transport Modelling to assign the proposed development traffic to the surrounding road network.

Based on the methodology utilised by Bitzios and outlined within section 5.2 of CRG's Supplementary Traffic Impact Assessment contained in Volume 2, Appendix 8 of the SEIS the resultant distribution of traffic through the road network is approximated in Figure 16 below.

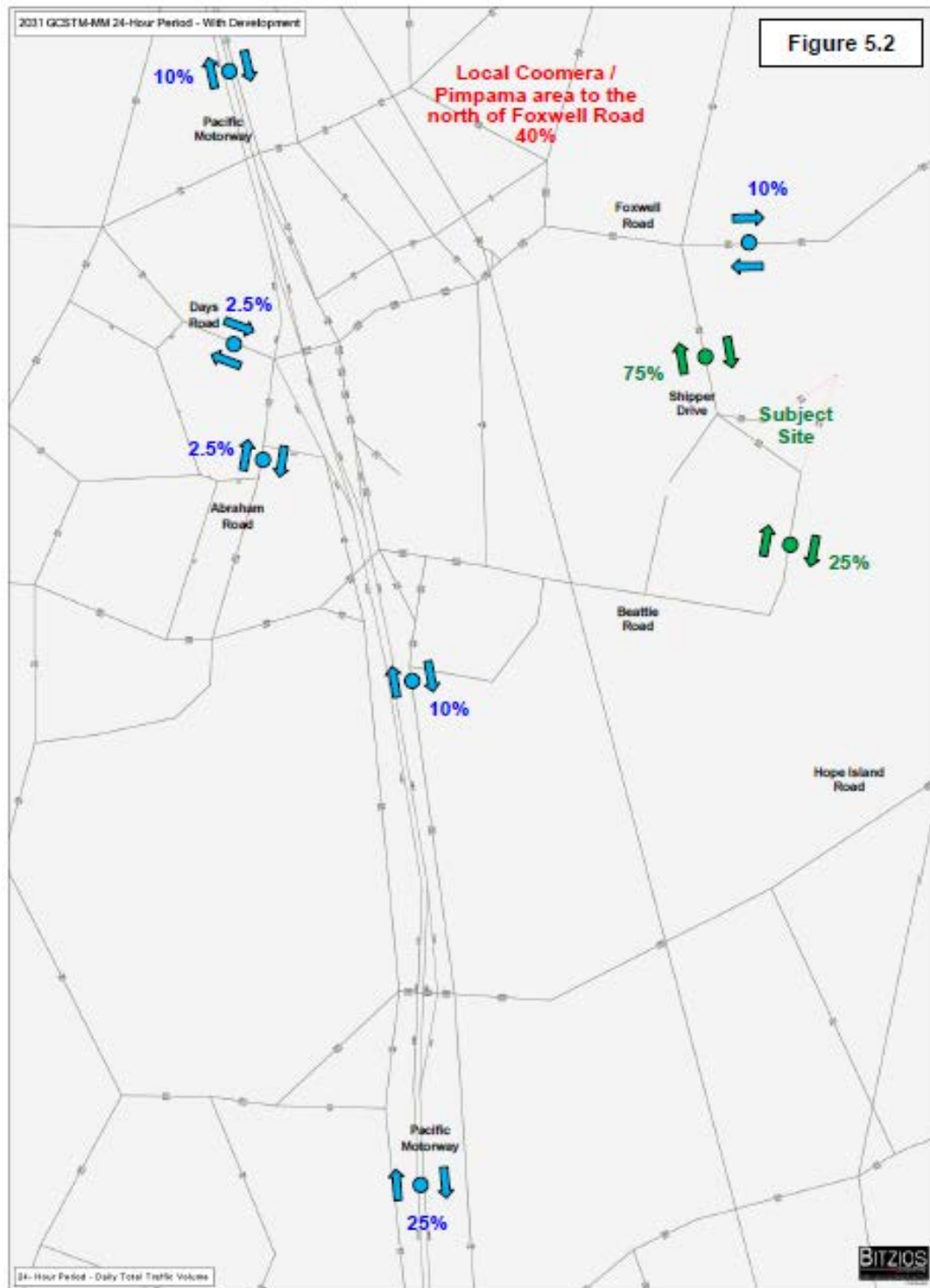


Figure 16 - GCIMP Traffic Distribution

GCCC questioned within their submission the trip generation rate applied to the Water Front Industry Use proposed within the GCIMP. GCCC stated the applicable Peak Trip generation for Waterfront Industry is 0.9 peak hour trips per 100m² GFA and Daily Trip generation is 9 trips per 100m² GFA.

In assessing the trip generation, CRG has surveyed the existing marine industry to the south and applied the surveyed rate to the proposed marine industry development and associated uses.

Given the specific nature of the proposed development being marine industry, this is a more appropriate approach than application of the standard light industrial trip generation rate. Applicable guides recommend a survey of a similar use where such is possible.

The rate adopted for the waterfront industry uses was 7 trips / 100m² GFA. The GFA of the Industry Subdivision is approximately 45% of the site area, thereby equating to 81,000m².

This rate was adopted as it has previously been adopted by DTMR when assessing industrial subdivisions likely to be a mix of light and medium – heavy industry uses.

Mitigation Methods

Within a submission received by DTMR, DTMR had recommended that further discussion in relation to impact mitigation contribution calculation methodologies with DTMR after preparing revised the traffic impact assessment in light of their submission.

Based on the trip generation provided in Table 7 below, it is estimated that the proposed development will generate 10,132 vehicles per day.

Table 7 - Total Traffic Generation Rates

Traffic Generation Rate	Daily Trips	AM		PM	
		Peak Hour		Peak Hour	
	TOTAL	IN	OUT	IN	OUT
Marina Berths, Showroom, Factory, Boat, Storage & Warehouse Uses (Approximately 24.3 ha)	1,752	102	56	34	182
Industry Subdivision (81,000m ²)	5,670	454	113	113	454
Retail (5,800m ²)	1,740	70	17	87	87

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
		TOTAL	IN	OUT	IN
Hotel (110 rooms)	220	18	4	13	9
Tavern (1,500m ²)	450	-	-	22	23
Educational Establishment	300	60	15	30	45
TOTAL	10,132	704	205	299	800

It has become apparent that DTMR have failed to take into account that the majority of the project site is currently designated as a Marine Industry Precinct in the Coomera LAP under the GCCC Planning Scheme as identified in Figure 17.

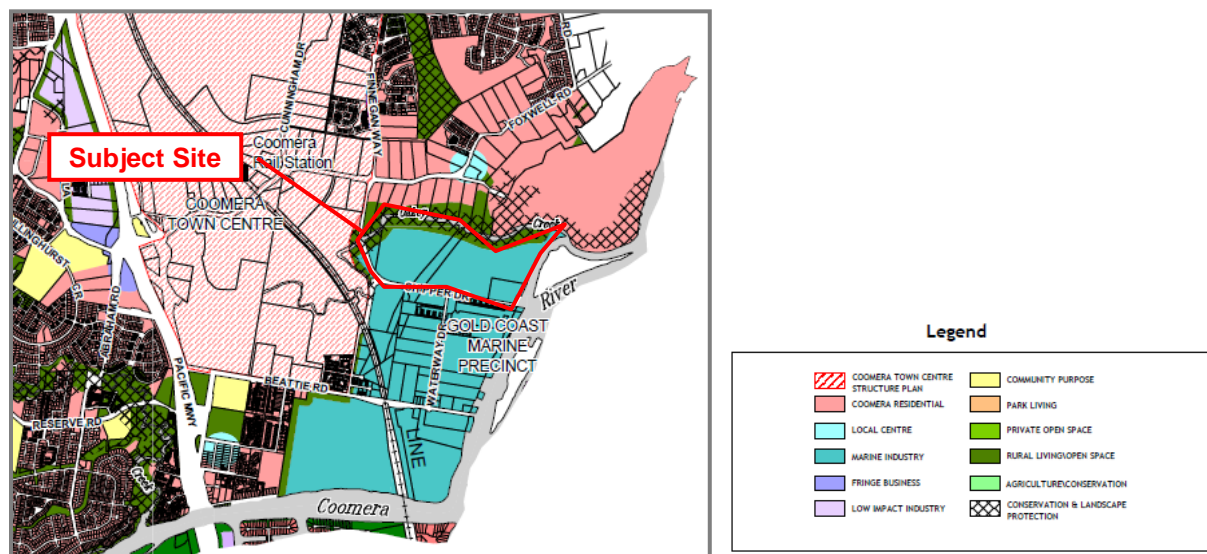


Figure 17 - Coomera LAP Precinct Map (Source: GCCC Planning Scheme 2003)

Without the creation of the GCIMP, the Marine Precinct designation allows a number of uses that have been incorporated into the GCIMP to be developed as Self Assessable or Code Assessable development as identified in Figure 18. These uses include:

- Waterfront Industry
- Warehouse
- Shop

- Convenience Store
- Restaurant
- Caretaker's Residence
- Take-Away Food Premises

Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct 3 – Marine Industry			
Agriculture Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park Public Utility	Caretaker's Residence Estate Sales Office Shop where only for marine goods and services which are used in any water based activity Manufacturer's Shop Temporary Use Warehouse where directly associated with waterfront industry	Cafe when located above ground floor level Car Park Convenience Shop Laundromat Restaurant where located above ground floor level Service Station where including the sale of fuel directly to water marine craft Shop (where the GFA is less than 100m ²) Take-Away Food Premises (where the GFA is less than 100m ²) Telecommunications Facility n.e.i. Tourist Shop (where located above ground floor level) Transport Terminal where including water based transport Waterfront Industry (excluding Fish and Seafood Processing and Storage)	Aquaculture Cafe n.e.i. Commercial Services Fuel Depot Hostel Accommodation (above ground floor level) Marina Place of Worship Restaurant n.e.i. Resort Hotel Service Industry Service Station n.e.i. Tavern Tourist Facility Tourist Shop n.e.i. Transit Centre Waterfront Industry where including Fish and Seafood Processing and Storage

Figure 18 - Coomera LAP Marine Industry Land Use Table

It is understood that prior to the adoption of any planning scheme, the State including DTMR must review the planning scheme for the purpose of state infrastructure / interests and land use integration. Thus the marine industry land uses and associated traffic generation would have been accounted for within the Department's strategic planning.

In addition to this, policies are contained within the SEQRP specific to integrated transport planning and emphasis is placed on the importance of integrating transport and land use planning.

Therefore, in consideration of the above the actual traffic impacts on the State-controlled road network should be assessed on the traffic generated by uses that were not envisaged for the subject site. This figure accounts for less than 50% of the estimated traffic generation as a result of the GCIMP.

In accordance with DTMR's policy, the extent of proposed development traffic impacts must be assessed where the development proposal is likely to result in an increase of at least 5% of existing daily volumes on any State controlled road section or 5% of existing daily volumes on any individual turning movement at a State controlled intersection.

It is noted that the SIDRA analysis provided in CRG's supplementary report have identified percentage impact is greater than 5% on some turning movements at the Foxwell Road interchange as well as the Beattie Road / Service Road intersection.

However, this assessment has been based on the overall traffic generation of 10,132 vehicles per day without taking into account the uses that are currently envisaged and accounted for. The actual traffic generation not accounted for as a result of the GCIMP would be less than 4,462 vehicles per day accounting for less than 44% of the estimated traffic volume.

It is therefore considered the actual impact of the GCIMP does not necessitate the need for contributions towards the upgrading of the State-controlled road network.

3.9.4 Project Staging and Timing

Submissions received had queried the staging and timing of the project. The timing of the GCIMP will be in accordance with economic conditions. However, pending the economic constraints, the proponent does intend to proceed with the project within the imminent future.

The Survey and ROL plans prepared by Gassman Development Perspectives identified a preliminary ROL staging approach over four (4) stages. A final staging approach is yet to be adopted as it can be appreciated that the staging approach will be heavily reliant on the economic environment at that point in time.

Based on the preliminary staging approach outlined in Gassman's ROL plans, and estimate of the traffic generation for each stage of development is identified in Table 8. As stated above, this staging approach is indicative and will be finalised through subsequent development applications.

Table 8 - Traffic Generation per Stage

Traffic Generation Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
	TOTAL	IN	OUT	IN	OUT
Stage 1	526	102	17	10	55
Stage 2	300	60	15	30	45
Stage 3	3,636	88	60	146	246
Stage 4	5,670	454	113	113	454
TOTAL	10,132	704	205	299	800

3.9.5 Public and Active Transport

As identified within the EIS and CRG's Traffic Impact Assessments, the GCIMP has proposed to integrate public and active transportation facilities.

The level of detail requested by submitters in relation to Active Transport Facilities is unable to be supplied at this stage. In order to achieve the objectives envisaged by GCCC and DTMR, active transport outcomes have been integrated into the GCIMP development codes to ensure future uses incorporate active transport facilities.

Furthermore, requirements for Active Transport facilities such as end-of-trip facilities are governed by Building laws and codes such as the Queensland Development Code (QDC) which extends the scope of the BCA.

The creation of an easement across the IRTC in order to create connectivity between the Western Precinct and the eastern extent of the site was contemplated within the EIS. In order for this outcome to occur, further liaison with DTMR will be required to ensure the location of the easement will not impact on the construction or function of the State-controlled road corridor. This will occur at a later stage of the project, part of subsequent development applications.

DTMR had requested liaison with Translink is required in relation to the proposed bus stop. Given the extensive frontage the GCIMP has to Shipper Drive a public bus stop was proposed. However, the purpose of identifying a potential bus stop was to demonstrate the site has the capability to incorporate a bus stop into the development.

This issue is able to be addressed at a later date through liaison with Translink as the implementation of a bus stop will be reliant on the demand generated from the development.

3.9.6 Flooding Impacts on Transport Network

DTMR raised issues within a submission in relation to the potential impacts on the Gold Coast rail line as a result to the changing flood levels. DTMR requested consultation with Queensland Rail (QR) with regard to the potential impacts on the Gold Coast rail corridor in the Oakey Creek flood plain arising from changes to flood levels for the flood plain for Oakey Creek.

After liaison with QR, QR indicated that areas of concern are that the proposed GCIMP would:

- increase flood levels causing overtopping and/or increasing the Time of Submergence (TOS) of the rail line
- increase flood levels impacting on cabling (cabling typically runs alongside track but can be at ground level)
- increased flow rates and velocities through the culverts/bridges

As outlined in Page 37 of the Floodplain Management Report prepared by BMT WBM contained within Volume 8, Appendix 26 of the EIS, overtopping of the railway across the Oakey Creek floodplain will not occur as a result of the GCIMP, as the site analysis undertaken indicated that impacts in a 100 year ARI would be up to 0.044 metres or 0.058 metres in a 10 year event.

Furthermore, given the Oakey Creek floodplain 100 year ARI flood level is approximately 3.3 m AHD, which is approximately 1 metre below the rail embankment level an increase of 0.044 m does not cause overtopping or significantly reduce the freeboard from flood level to embankment level.

In relation to duration of inundation this issue was addressed within page 58 of BMT WBM's report when discussing impacts on houses. The same concept is able to be applied to the rail corridor as given the rail is not overtopped, there will be no increase in duration of inundation of the rail.

In addition to this, if considering the ground level around the rail if cabling is running at ground level, the report states that at a ground level of 1.15 m AHD the inundation under existing conditions would be more than 12 hours, and that the proposed development would increase this by 20 to 30 minutes. As the general ground level at

the rail corridor in the Oakey Creek floodplain is similar to this if not a little higher, the increase in duration would be less at higher levels.

Velocity impact maps Drawing No 3-8 to 3-12 in BMT WBM's report, demonstrated that here would be no change and potentially a small decrease in velocity and flow rate. However, around the rail line there is either no change or decreases in velocity through the bridges/culverts.

An addendum Flood Management Report has been prepared by BMT WBM and contained within Volume 2, Appendix 9 of the SEIS. The report outlines this discussion in more detail.

It is considered that given the above information, it can be considered that the railway infrastructure will not be significantly impacted by the proposed GCIMP.

3.9.7 Construction Traffic

GCCC and DTMR raised questions within their submissions regarding construction traffic and potential impacts on the local and State road network and the potential for mitigation works.

As noted within the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 and Section 3 of the EIS over the construction period of the GCIMP it is estimated an average of 4 to 15 truck movements per day. Some of these movements will be through trucks 'back loading' however, the extent of this is considered to be small as the majority of material delivered to the site will be used on site for the construction works. These figures are the approximate maximum daily movements.

The Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13 and Section 3 of the EIS details construction of the GCIMP will occur over two (2) stages:

- Stage 1 – Portion of Site to the East of the IRTC Corridor.
- Stage 2 – Portion of Site to the West of the IRTC Corridor.

The intention is to construct Stage 1 before Stage 2 however the timing for the commencement of Stage 2 will be confirmed at a later stage. As identified within Hyder's report, Stage 1 will occur over 12 construction phases and Stage 2 will occur over six (6) construction phases.

Hyder's report identifies that construction traffic will include construction contractors and staff private vehicles and heavy vehicles used in delivery of construction materials. A worst case scenario for estimated daily traffic generated during construction is presented in Table 9.

Table 9 - GCIMP Construction Phase Likely Daily Trip Generation

Construction Phase	No. of Daily Trips
Construction Workforce	240
Heavy Vehicles	500

Table 10 represents the likely volume of heavy and oversized loads on the external road network during the construction phase.

Table 10 - GCIMP Construction Phase Likely Traffic Volumes

Construction Phase	Volume	Weight	Load	No. Movements
Importation of Structural Fill	515,000m ³	927,000t	33t	28,090
Pavement Gravels	21,623m ³	47,520t	33t	1,440
Drainage Gravels	4,000m ³	7,200t	33t	212
Construction materials	-	100,000t	20t	5,000
Concrete	12,000m ³	31,200t	6m ³	2,000
Total				36,742

The figures presented in the above tables represent the likely volume of heavy and oversized loads on the external road network during the construction phase.

These figures are based on the assumption fill is sourced outside the east Coomera area. The two main haulage routes available that provide access from the Pacific Motorway to the site include a northern route along Foxwell Road (Preferred Route) and a southern route along Beattie Road as shown in Figure 19.

There are a number of quarries for material supply within a short distance either north or south of the Pacific Motorway. The traffic volumes will occur at an infrequent pulse given the nature of the works.



Figure 19 - Haulage Route

However, it is important to note that the fill material may be sourced within the east Coomera locality as there are a number of potential sites that are able to source the fill required for the bulk earthworks. Should this occur, the traffic volumes identified above would significantly reduce and alleviate impacts on the State-controlled road network as the impacts would be concentrated within the local road networks in east Coomera.

The preparation of a construction management plan would be prepared and submitted as part of subsequent development applications and it is considered this management tool would address issues raised by GCCC and DTMR. As such, it is considered this issue can be conditioned by the CG.

As demonstrated a contribution to the State-controlled road network would not be reasonable nor relevant to the GCIMP thus no contribution is required to DTMR.

3.10 EMERGENCY RESPONSE PLANS AND ENVIRONMENTAL MANAGEMENT PLANS

A range of submissions were received requesting further details in relation to Emergency Response Plans and Environmental Management Plans. The EIS provided a number of Emergency Response Plans and Environmental Management Plans to address specific aspects pertaining to the GCIMP, these include the Environmental Management Plan prepared by Hyder Consulting and contained within Volume 5, Appendix 14 and the Site Based Management Plan prepared by Hyder Consulting contained within Volume 6, Appendix 15.

Predominantly, the submission received in relation to the management plans had requested further information or amendments to be made to the management plans that are considered to be land use orientated. Thus, the level of detail requested is unable to be provided at this stage of the process.

Therefore, it is considered the management plans contained within the EIS are adequate for the purpose of the EIS process. All management plans will be updated as part of subsequent development applications.

It is considered that the issue pertaining management plans is able to be conditioned by the CG.



SECTION 4

SOCIAL



Gold Coast International Marine Precinct Supplementary Environmental Impact Statement - Section 4

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4 SOCIAL VALUES AND MANAGEMENT OF IMPACTS

4.1 Issues Raised within Submissions

A number of submissions were received whereby concerns in relation to the social impacts associated with the GCIMP

GCCC had raised within a submission that the submitted Social Impact Assessment does not comprehensively consider the issues and/or identify any solutions to overcome these issues. GCCC requested that the proponent engage the services of an appropriately qualified and experienced professional to undertake a social impact assessment in accordance with the Terms of Reference for the GCIMP.

A number of submissions had raised concerns in relation to the public accessibility to the foreshore and whether this would be compromised as a result of the GCIMP. The issue regarding the loss of public park was also raised within submissions. As such, this section will provide a response to:

- Social Impact Assessment
- Loss of Public Park
- Public Accessibility to the Foreshore

A response to the above identified issues is provided below.

It is relevant to note extensive consultation on the proposal has occurred. This was conducted onsite, at local transport hubs, community events, specialist briefings and online. The overwhelming response to the proposal was positive with 94% of respondents to the questionnaire indicating the GCIMP was a good concept.

4.2 Social Impact Assessment

A Social and Economic Impact Assessment Report prepared by Norling Consulting contained within Volume 5, Appendix 10 of the EIS, provided details of existing social values. Furthermore, the Community Consultation Report prepared by Planit Consulting contained in Volume 2, Appendix 4 of the EIS included details pertaining to social values as a result of the consultation undertaken for the GCIMP project. These values were summarised within Section 5 of the EIS. The extent of the social impact assessment has been commensurate with the size of the impacts.

As noted above, GCCC raised concerns within a submission that the Social and Economic Impact Assessment Report did not adequately address the social impacts associated with the GCIMP.

At present, the subject site is designated as a Marine Industry Precinct within the Coomera LAP of the GCCC Planning Scheme. In addition to the proposed Marine Industry uses, the GCIMP intends to incorporate retail and commercial facilities including showrooms, retail, commercial offices, tavern and hotel. As the intended role and function of the GCIMP is Marine Industry, the proposed showrooms would generally be marine specific. Furthermore, the proposed retail uses are intended to also be marine-related and predominantly cater to the Marine Precinct workforce and the visitors to the GCIMP.

The GCIMP does not preclude use of the area for recreational activities such as fishing etc as the area is currently being utilised for. In hindsight, the GCIMP is enhancing recreational uses through the provision of extended foreshore accessibility, boardwalks, improved accessibility and commercial uses. As noted community consultation undertaken as part of the GCIMP project, majority of the individuals interviewed were supportive of the project in its entirety.

Furthermore, the GCIMP supports the emerging community of Coomera through the provisions of an increase in jobs for the community and the opportunity for economic growth.

As noted within Section 2.1, in response to the submissions received on the EIS amendments to the preferred Master Plan have occurred. As such, the preferred Master Plan is now referred to as the Supplementary Master Plan. As such, an addendum to the Social and Economic Impact Assessment Report has been prepared by Norling Consulting and is contained within Appendix 6. The addendum report documents the findings of an economic assessment undertaken on the Supplementary Preferred Master Plan and an Alternative Option 6.

The overall MCA score for the Supplementary Preferred Master Plan was higher at 73.9 in comparison to the Alternative Option 6 whereby the overall MCA score was 66.4. Table 1 presents the MCA results between the Supplementary Preferred Master Plan and the Alternative Option 6. The Alternative Option 6 as identified in Table 1 is directed by an environmental objective that significantly diminishes the social and economic advantages that are able to be achieved through the Supplementary Preferred Master Plan.

Table 1 - MCA Results Comparison

Development Option	Social	Economic	Environmental	Overall
Supplementary Preferred Option	67.8	91.3	62.7	73.9
Alternative Option 6	60.6	71.5	67.2	66.4

The score associated with the Social values of the MCA was derived from a range of social criteria as identified within Table 2.

Table 2 - MCA Social Values Comparison

Social Criteria (Value)	Development Option		
	Supplementary Preferred Option	Alternative Option 5 (Status Quo)	Alternative Option 6
Traffic & Transport			
(a) Impact on existing State and Local Government Roads	6.5	2	6.5
Land Use			
(a) Amenity impacts on surrounding land use	7	7	7
(b) Compatibility with planning intent for the site	9	2.2	7.6
(c) Local Community Values	8	4	2
Health and Safety			
(a) Use of public safety emergency and medical facilities	8	5	7
(b) Vulnerability to natural disasters	6	9	8
Telecommunication Infrastructure	6	3	5
Cultural Heritage Values			
(a) Indigenous values	5	6	5
(b) Non-indigenous values	6	5	6
Local Community Values and Lifestyles	7	1	6.5
Community Service Needs	3.5	1	4
Educational Needs	8	0	6
Recreational, Leisure and Sporting Needs	7	2	7
Urban Character			

Social Criteria (Value)	Development Option		
	Supplementary Preferred Option	Alternative Option 5 (Status Quo)	Alternative Option 6
(a) Built Form	9	0	8
(b) Visual Amenities	8	6	6.5

As demonstrated the Supplementary Preferred Option achieves the highest Social Criteria Value. As per the previous findings in the EIS, Alternative 5 (Status Quo option) scores relatively low in terms of Social Criteria Value.

As identified within the EIS, the purchase of the existing public parkland, William Guise Foxwell Park, alongside Shipper Drive proposed to be incorporated into the project was assessed by GCCC as GCCC are trustees of the area. It is important to note that as part of this process GCCC's consideration of this application has involved a detailed assessment in relation to the social implications as a result of the loss of public park area. Particular issues with respect to the future intent of the area and the benefit to the community were raised and considered as part of this assessment process.

As such, in consideration of the social implications GCCC have since finalised their assessment of the application and have resolved to incorporate the area within the development should it be favourably considered in the EIS process.

4.3 Loss of Public Park

Submissions were received in relation to the loss of public park land as the preferred option has included an existing park area within the development area. It is noted the submission raised concerns in relation to the future intent of this parcel of land was for the provision of a public boat ramp and associated facilities and waterfront park area. The existing public parkland, William Guise Foxwell Park, alongside Shipper Drive is considered a key portion of land to be incorporated into the site. The requirement for adequate access to the Coomera River is of primary importance to the functionality of the Marine Industry. As noted within Section 2 of the EIS, without the inclusion of the parkland and the available river frontage, the development is severely compromised in both scale and access to the river.

GCCC are trustees of the area of land, and a part of this process has involved an application to Council with respect to utilising this area as part of the development. GCCC consideration of this application has involved a detailed assessment in relation to the social implications as a result of the loss of public park area. Particular issues with

respect to the future intent of the area and the benefit to the community were raised and considered as part of this assessment process.

GCCC have since finalised their assessment of the application and have resolved to incorporate the area within the development should it be favourably considered in the EIS process.

In context of the project, the parkland will represent over 35,000m² of constructed marine industry facilities as well as 170 metres of river frontage. Without the inclusion of the parkland area, the internal marina facility will not be possible. This is considered detrimental to the project as the internal marina is a significant feature for the functionality of the overall precinct. Many marine businesses rely on this facility which is effective in increasing the overall direct river access.

Incorporating the existing public park into the proposed development is not considered to be disadvantageous to members of the public as the current preferred development option has been designed to integrate facilities such as boat access and storage within a controlled environment to be utilised by the public. In addition the Master Plan integrates the existing river front public park into this site offering 170 metres of river frontage.

iven the above, it is considered the public benefit (including the economic benefits) obtained as a result of the implementation of the GCIMP far outweighs any deemed loss of public space as the project has catered for public uses and park land areas within the development. This assumption was justified within the Social and Economic Report prepared by Norling Consulting Pty Ltd contained within Volume 5, Appendix 10 of the EIS, whereby the recreational benefit of the preferred master plan scored 7, being significantly higher when compared with the status quo option score of 2.

Within the submission it was queried whether an offset has been contemplated as a result of the loss of public park. It is considered the preferred Master plan adequately integrates public open space and will not result with a loss of public open space within the area as a result of the proposed development. Therefore it is not considered an offset is necessary in this circumstance.

As noted in the EIS, surveying / observation of the park use limits activities to:

- those of the model airplane flying club;
- occasional recreational fishing; and
- dog off leash uses.

The Supplementary Preferred Master Plan accommodates the continued ability for occasional recreational fishing.

4.4 Public Accessibility to the foreshore

As outlined within Sections 2.2.8 and 3.2.3, concern regarding public accessibility to the foreshore was raised within a number of submissions received on the EIS. Submitters requested further information to demonstrate whether the development will facilitate public access to the foreshore.

As discussed within various sections of the EIS, public access to the new foreshore area is contemplated within the Northern Precinct. The Landscape Master plan contained within Volume 10, Appendix 35 of the EIS demonstrates how public accessibility to the foreshore will be achieved through the provision of pathways, boardwalks and viewing decks. Figure 1 demonstrates the linkages within GCIMP.

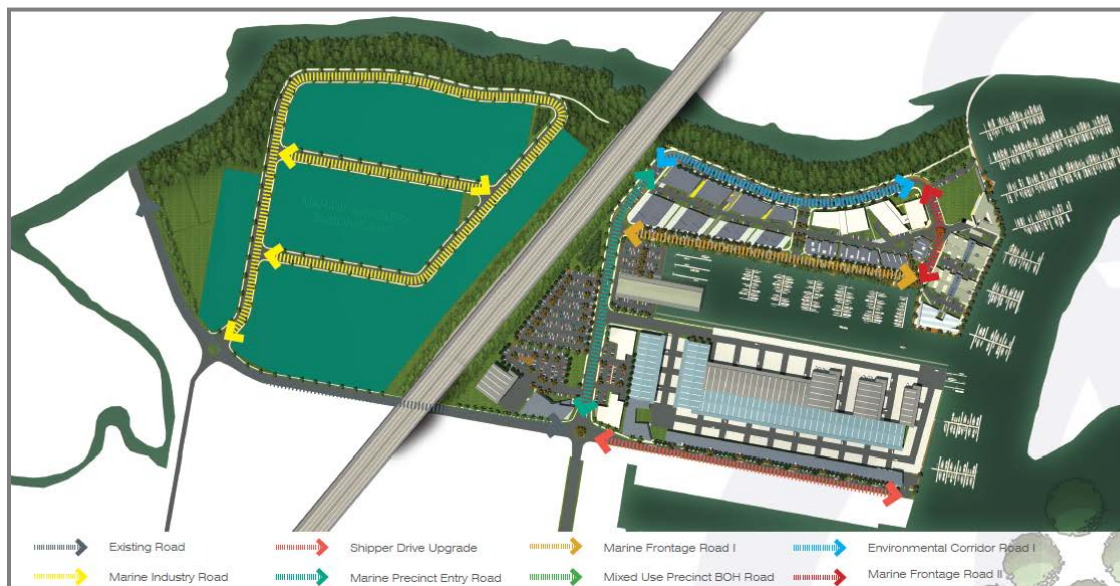


Figure 1- GCIMP Linkages

A proposed public access pedestrian zone will be constructed along the riverfront, providing a landscaped promenade alongside the marina. In addition, the Oakey Creek buffer natural vegetation zone has a perimeter 'corso' road alongside providing continuous public amenity access to the creek bank.

Pedestrian areas shall be designed to encourage pedestrian movement freely and take precedent over vehicular movements within these areas to create a sense of place. In

particular the marina frontage presents an opportunity to create a strong pedestrian focused pedestrian route extending to the eastern precinct.

The area shall be designed to encourage pedestrian connection with the water's edge and the intended landscape will provide the opportunity for this interaction with a mix of spaces and landscape treatments that promote congregation.

It is considered the project has placed significant emphasis on ensuring public accessibility to the foreshore is maintained if not advanced through specific design provisions within the GCIMP.



SECTION 5 ECONOMICS



Gold Coast International Marine Precinct Supplementary Environmental Impact Statement - Section 5

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5 ECONOMIC VALUES AND MANAGEMENT OF IMPACTS

5.1 Issues Raised within Submissions:

A number of submissions were received in relation to the economic aspects of the GCIMP. The submissions were generally requesting further justification and / or further information on the finding presented in Norling Consulting's Social and Economic Impact Assessment contained within Volume 5, Appendix 10 of the EIS.

The following items will be addressed in response to the submissions received in relation to the economic aspects of the GCIMP:

- Addendum to the Social and Economic Impact Assessment
- GCCC Strategic Review on the Gold Coast Marine Precinct (GCMP)

A response to the above items is provided below.

5.2 Addendum to the Social and Economic Impact Assessment

As noted within Section 2.1 of the SEIS, a Supplementary Preferred Master Plan and an Alternative Option 6 had been developed in response to submissions received during the public submission phase of the EIS and are contained within Appendix 2, Volume 1 of the SEIS. As such, an addendum to the Social and Economic Impact Assessment was undertaken by Norling Consulting to compare both the Supplementary Preferred Master Plan and the Alternative Option 6 and is contained within Appendix 6, Volume 2 of the SEIS. As part of this assessment, Norling Consulting undertook a Multi-Criteria Analysis (MCA) for the Supplementary Preferred Master Plan and the Alternative Option 6 applying the same methodology as outlined within Chapter 5 of the Social and Economic Impact Assessment contained within Volume 5, Appendix 10 of the EIS.

For the purpose of undertaking the economic assessment, Norling Consulting utilised the valued added multipliers derived from the Queensland Regional Input-Output Tables 1996-1997, 34 Industries, published by the Office of Government Statistician in conjunction with Norling Consulting's previous experience. These were utilised to derive the additional value generated from the GCIMP from an economic and employment perspective. That is, the flow-on benefits to the Gold Coast and Queensland economy.

It is acknowledged that these tables are dated, however, Norling Consulting understands that these are the most recent input-output tables that are derived from a reputable source at the regional level. Norling Consulting are not aware of any more recent input-output tables produced at the regional level. Notwithstanding, Norling Consulting believes that they are still a relevant source in assessing the flow-on effects of a project.

The overall MCA score for the Supplementary Preferred Master Plan was higher at 73.9 in comparison to the Alternative Option 6 whereby the overall MCA score was 66.4. Table 1 presents the MCA results between the Supplementary Preferred Master Plan and the Alternative Option 6. The Alternative Option 6 as identified in Table 1 is directed by an environmental objective that significantly diminishes the social and economic advantages that are able to be achieved through the Supplementary Preferred Master Plan.

Table 1 - MCA Results Comparison

Development Option	Social	Economic	Environmental	Overall
Supplementary Preferred Option	67.8	91.3	62.7	73.9
Alternative Option 6	60.6	71.5	67.2	66.4

Within the Supplementary Economic Analysis, it is noted that the Social and Economic Impact Assessment advocates that the MCA provides a more comprehensive assessment of the net benefit test than the Cost Benefit Analysis (CBA). In spite of this, Norling's have undertaken a CBA for the proposed GCIMP for all considered development options.

Consistent with the limitations of a CBA, this analysis incorporates quantitative values of economic benefits and costs and the quantitative values of the environmental lands gained/lost. In particular, the CBA includes:

- (a) capital costs of constructing the proposed development;
- (b) ongoing maintenance costs of the proposal;
- (c) returns to the proponent calculated by way of rents obtained on development elements;
- (d) value added economic benefits of the businesses conducted at the proposed development (which implicitly exclude rents and the potential for double counting); and

- (e) the community values of environmental lands gained/lost, as calculated by FRC Environmental.

Indirect economic impacts from other businesses likely to benefit from the proposed development have been excluded. All other social and environmental impacts, which are not able to be readily quantified have also been excluded, but are all incorporated within the MCA.

Key assumptions underpinning the CBA are as follows:

- (a) a 30 year period of cash flows, commencing in 2012;
- (b) all dollar values expressed in 2012 dollar values;
- (c) a two-year construction program for civil works commencing in 2013, with the last building being erected in 2024;
- (d) a (pre-inflationary) discount rate of 10% for economic cash flows relating to the proposed development and a (pre-inflationary) discount rate of 6% for the community value of environmental lands.

The results of the CBA are set out below in Table 2 and include the Supplementary Preferred Master Plan and Alternative Option 6.

Table 2 - Summarised CBA Results

Development Option	Net Present Value (NPV)	Cost/Benefit Ratio
Option 1 (Preferred Option)	\$1 366M	4.59
Option 2	\$1 245M	4.52
Option 3	\$1 055M	3.40
Option 4	\$1 218M	4.10
Supplementary Preferred Master Plan	\$1 364M	4.56
Alternative Option 6	\$1 266M	4.53

The high NPVs and Cost/Benefit Ratios are due to high intensity of business activity within the proposed development. It is noted that the Supplementary Preferred Master Plan results in a greater Net Present Value and higher Cost/Benefit Ratio than the

Alternative Option 6, thus suggesting that the Supplementary Preferred Master Plan is more supportable than Alternative Option 6.

The addendum report undertook an assessment of the Supplementary Preferred Master Plan and the Alternative Option 6 in terms of the potential economic and employment generation. The total construction costs for both options were estimated as identified in Table 3. Value Added Multipliers were utilised to determine the additional value generated from every dollar invested during the construction phase for the Supplementary Preferred Master Plan and the Alternative Option 6 as summarised in Table 3.

Table 3 - Total Construction Costs

Development Option	Construction Cost	Value Added	
		Gold Coast	Qld
Supplementary Preferred Master Plan	\$405.7M	\$426.1M	\$466.6M
Alternative Option 6	\$328.2M	\$344.6M	\$377.4M

As identified within the above Table 3, The Supplementary Preferred Master Plan would generate greater indirect flow-on effects to the Gold Coast and Queensland economy in comparison to Alternative Option 6.

Table 4 below, provides a summary of estimated full-time equivalent (FTE) positions that would be generated as a result of both development options. In addition, Table 4 summarises the flow-on benefits of this employment in full-time equivalent position years to the Gold Coast and Queensland during construction and operational phases of the GCIMP.

Table 4 - Estimated FTE Positions

Development Option	Construction			Operational		
	No. of Jobs	Gold Coast	State	No. of Jobs	Gold Coast	State
Supplementary Preferred Master Plan	2,353	4,354	5,178	2,706	4,831	5,476
Alternative Option 6	1,903	3,521	4,188	2,254	4,090	4,665

As demonstrated in Table 4 the Supplementary Preferred Master Plan is estimated to result in a greater number of full-time equivalent positions to the Gold Coast and Queensland in comparison to the Alternative Option 6.

In consideration of the information presented above, Figure 1 reveals that when the Supplementary Preferred Master Plan and Alternative Option 6 are compared in relation to community benefit and community disbenefit, the overall Community Benefit achieved by the Supplementary Preferred Master Plan far outweighs any community disbenefit associated with the Supplementary Preferred Master Plan.

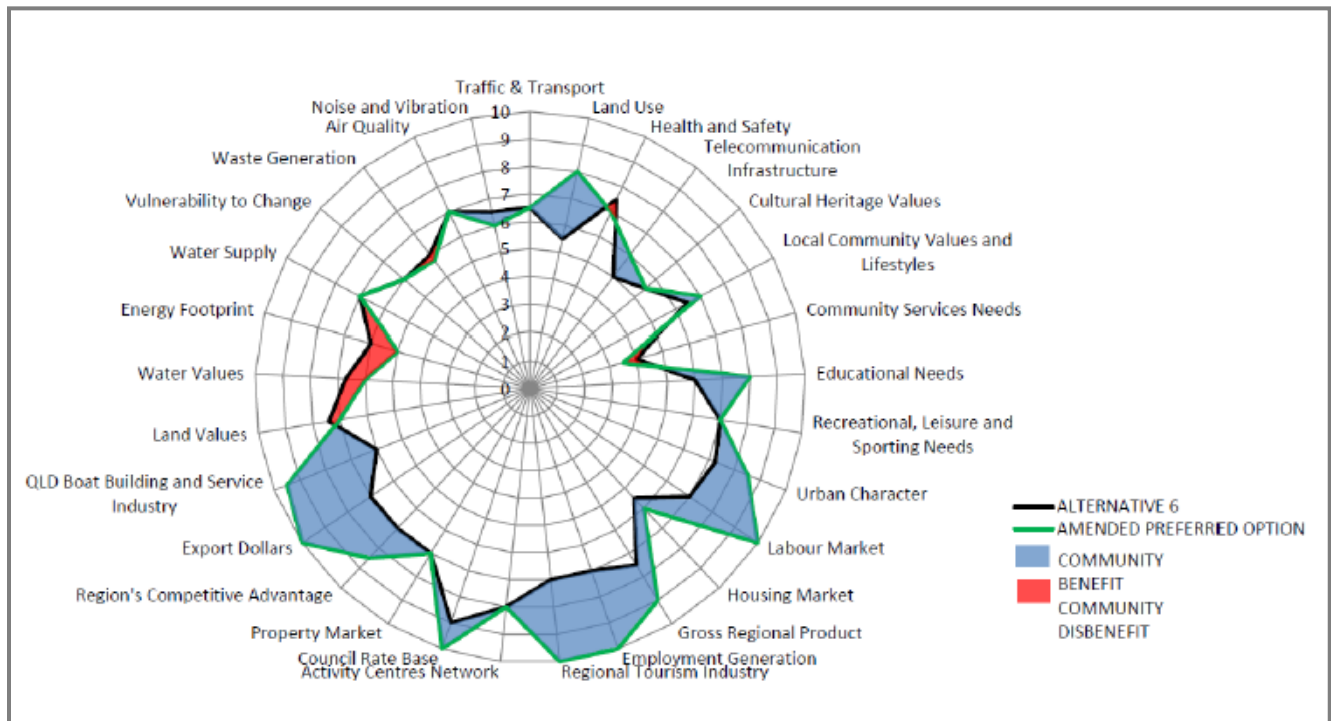


Figure 1 - Community Benefit and Disbenefit Comparison Graph

Norling Consulting's economic modelling undertaken in comparing the Supplementary Preferred Master Plan and the Alternative Option 6 concluded that it was apparent that the Supplementary Preferred Master Plan would result in a significant economic outcome for the Gold Coast and Queensland. Norling Consulting stated that in particular, it is considered the community benefits significantly outweigh any community disbenefits as a result of moving from the Alternative Option 6 to the Supplementary Preferred Master Plan.

5.3 GCCC Strategic Review on the Gold Coast Marine Precinct (GCMP)

Since reviewing the EIS, GCCC engaged Giles Consulting International and Urban Systems to undertake an independent Strategic Review on the Gold Coast Marine Precinct (GCMP). The purpose of the Strategic Review was to undertake an economic and land use review of the policy intent, preferred land uses and level of assessment in

the GCMP. A copy of this report was obtained through the Right to Information process as the report has not been endorsed by Council. A copy of the report is contained within Volume 2, Appendix 7 of the SEIS.

The Strategic Review acknowledged that the GCMP is the Gold Coast's major marine industry area and is a valuable sector.

The report noted that it is evident there is uncertainty in relation to the scope of uses permitted within the GCMP. This specifically relates to uses that support the marine industry but are not fundamentally a marine industry use.

The report notes that uncertainty surrounding permitted land uses has consequently adversely affected investment and employment within the Marine Precinct. The report recommends that this issue would be best resolved through the provisions of a broader range of uses. However, it is important to ensure an overall balance is found to ensure the core marine industry uses are preserved and yet enable sufficient flexibility to enhance the strength of businesses in the Precinct.

Significantly, as part of the Strategic Review process, the GCIMP plans and land use proposals was reviewed. Upon the review of the GCIMP, the report stated that the land uses sought for the GCIMP appear to be keeping with the intent of the Marine Precinct and the changes recommended as part of the Strategic Review's findings.

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1. DEPARTMENT OF TRANSPORT AND MAIN ROADS						
1.1	Intra-Regional Transport Corridor (IRTC)	Further information on filling was to be provided through the EIS process and approved prior to approvals and excavation.	<p>Further detailed information is required in relation to the proposed filling of the site, including proposals for the IRTC.</p> <p>Any material to be deposited into the IRTC must be quality fill approved by a qualified TMR engineer for preloading.</p>	<p>EIS Volume 1</p> <p>Construction Activities Page xxii</p> <p>Tidal Compartment & Site Filling Appendix 20 Section 3.2 Site Filling Calculations</p>	The Construction Methodology Report prepared by Hyder, Volume 5 Appendix 13, outlines the construction process. Section 7.2 quantifies anticipated earthworks volumes and fill requirements. Quantities and quality of fill to be refined through subsequent application for OPW. Fill material for the IRTC shall meet TMR specifications. This issue is able to be conditioned in the CG Report of the EIS.	<p>2.5 - Construction</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>
1.2	IRTC	Proponent has not provided the relevant technical information for the proposed placement of utility services across the IRTC Oakey Creek Bridge or the location of the pedestrian/cycle easement	<p>TMR will work with the proponent towards entering into an appropriate permit or volumetric lease arrangement, in accordance with the Transport Infrastructure Act 1994, to approve and maintain pedestrian/access across the IRTC road reserve.</p> <p>Proponent should provide further technical information for the proposed placement of utility services and bicycle easement across the IRTC.</p>	Note – General Comment	<p>Details pertaining to appropriate permit / lease arrangement, and placement of utility services are able to be resolved through subsequent applications.</p> <p>This issue is able to be conditioned in the CG Report of the EIS.</p>	<p>2.4 - Project Approvals</p> <p>2.5 - Construction</p> <p>2.7 - Infrastructure Requirements</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.3	IRTC	<p>TMR is concerned about the load-bearing capacity of existing soils over parts of the site and of the fill material to be used. It is considered poor soil conditions and/or poor quality fill materials could necessitate expensive remediation or replacement and/or more costly engineering solutions for buildings, structures and infrastructure.</p> <p>proponent is yet to provide a detailed engineering investigation of existing ground conditions, including geotechnical, sub-grade preparation and imported fill specifications as it relates to the IRTC.</p> <p>proposed location of the TAFE site in close proximity to the IRTC is of concern with long term risks considered high; without further detailed information to demonstrate mitigation impacts are minimised.</p>	It is recommended that the proponent for the GCIMP undertake assessment of the currently proposed embankment arrangement in consideration of the above issues	<p>Volume 2</p> <p>Appendix 3</p> <p>Project Approvals</p> <p>1.4.10 Transport Infrastructure Act 1994 ('TIA')</p> <p>Relevance to the GCIMP</p>	<p>The Construction Methodology Report prepared by Hyder, Volume 5 Appendix 13, outlines the construction process. Section 7.2 quantifies anticipated earthworks volumes and fill requirements. Quantities and quality of fill to be refined through subsequent application for OPW. Fill material for the IRTC shall met TMR specifications. This issue is able to be conditioned in the CoG Report ofn the EIS.</p> <p>The Geotechnical Report prepared by Shaw Urquhart, Volume 9 appendix 29, provides sufficient information on geotechnical conditions of the site relative to the application. Further detailed geotechnical investigations required with subsequent OPW applications.</p> <p>The proponent will liaise with DTMR in this regard. We note a TAFE will not be developed on the site. This issue is able to be conditioned in the CG Report on the EIS.</p>	<p>2.4 - Project Approvals</p> <p>2.5 - Construction</p> <p>2. 7 - Infrastructure Requirements</p> <p>3.2 - Land</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>
1.4	Traffic	Proponent needs to confirm validity/accuracy of the existing local road traffic data.		<p>Volume 7</p> <p>Traffic and Transport Impact Assessment</p> <p>Appendix 21</p> <p>Section 3.2</p> <p>Page 17</p> <p>Figure 3.5</p>	<p>The Traffic and transport Impact Assessment prepared by CRG Traffic Pty Ltd, Volume 7 Appendix 21, contains both locality traffic counts and supporting traffic data provided by TMR. Traffic generation from this largely Code assessable development has been extrapolated from the adjoining and similar Waterfront Industry Precinct developments, refer section 5.1.</p> <p>The proposal contemplates a development consistent with that planned for the site under the GCCC Planning Scheme and PIP.</p> <p>Sufficient Information is contained within the report to enable an assessment of impacts and construct reasonable and relevant conditions. This issue is able to be conditioned in the CG Report on the EIS.</p>	<p>2. 7 - Infrastructure Requirements</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.5	Traffic	Proponent needs to outline the rate or staging of development with predicted traffic requirements for each stage of development		Traffic and Transport Impact Assessment Appendix 21 Section 5	Details pertaining to traffic on a stage-by-stage basis are to be provided based upon proposed RAL. This is to form a guide for development and verified through subsequent Development Applications.	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.6	Marine Traffic	Proponent needs to justify the appropriateness of their survey/area adjustment and trip generation predictions for the proposed marina development		Traffic and Transport Impact Assessment Appendix 21 Section 5.1 Page 29	<p>Evaluation of the existing and estimated marine traffic is contained within the CRG Pty Ltd Marine Vessel Activity Survey and Estimated Marine traffic report Volume 7 Appendix 22.</p> <p>Within this report marine vessel traffic volumes, as outlined in Section 2, are obtained from surveying traffic movements along the river.</p> <p>Section 4 of the report quantifies / estimates likely vessel traffic through a comparison of existing survey data and that generated by the existing Gold Coast City Marina development located immediately to the south. We are unaware of alternative assessment method or site information to vary or alter the assessment.</p>	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.7	Traffic		<p>Proponent needs to explain and correct the inconsistencies in stated traffic generation from each part of the development as shown in Figure 5.5.</p> <p>Proponent must not assume any traffic connectivity between the west and east precincts of the proposed development. No roads between these precincts will be permitted over, under or within the IRTC corridor.</p>	Traffic and Transport Impact Assessment Appendix 21 Section 5.2 Page 36 Figure 5.5	Refer to updated report within Appendix 8. No road linkage across the IRTC has been proposed within the EIS.	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.8	Traffic	<p>The proponent has presented the daily traffic volumes for the development assuming the Coomera Town Centre is partially developed by 2021.</p> <p>The data presented suggests that 40% of the trips generated by the full development are to/from dwellings associated with the Coomera Town Centre. Should the proposed development proceed quickly in the short term (i.e. before the Coomera Town Centre dwellings have been developed) then those trips will have different origin/destinations.</p>	Proponent needs to confirm the predicted impact on the state-controlled network for each development stage. In addition to the scenarios outlined, the proponent should also include a "worst case" scenario, to assess impacts if the assumptions about trip origins and destinations are not achieved.	Traffic and Transport Impact Assessment Appendix 21 Section 5.2 Page 36 Figure 5.5	Data was representative of traffic generated within whole of East Coomera area as opposed to specifically Coomera Town Centre.	<p>2. 7 - Infrastructure Requirements</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>
1.9	Traffic	Proponent needs to confirm the impacts on the state-controlled road network through all stages of development, considering the varying trip generation from the Coomera Town Centre.		Traffic and Transport Impact Assessment Appendix 21 Section 6.2 Page 40 Figure 6.1	Details pertaining to traffic on a stage-by-stage basis are to be provided based upon proposed RAL. This is to form a guide for development and verified through subsequent Development Applications.	<p>2. 7 - Infrastructure Requirements</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>
1.10	Traffic	Proponent needs to review the proposed upgrading option taking into account TMR's comments on the timing and staging of the various developments affecting the proposed development site traffic generation.	This is required to confirm the feasibility of the proposed signal metering for all stages of development scenarios, to show it forms an acceptable basis for determining proposed contributions to TMR.	Traffic and Transport Impact Assessment Appendix 21 Section 6.3 Pages 41 and 42	<p>The subject site is currently designated as Marine Industry Precinct in accordance with the GCCC Planning Scheme thus a number of land uses sought within GCIMP are currently Self or Code Assessable.</p> <p>In consideration of the above the actual traffic impacts on the State-controlled road network should be assessed on the traffic generated by uses that were not envisaged for the subject site. This figure accounts for less than 50% of the estimated traffic generation as a result of the GCIMP.</p> <p>It is therefore considered the actual impact of the GCIMP does not necessitate the need for contributions towards the upgrading of the State-controlled road network.</p>	<p>2. 7 - Infrastructure Requirements</p> <p>3.9 - Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport Impact Assessment Addendum</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.11	Public Transport	The proposed indented bus stop arrangement and facilities are considered acceptable for the proposed development.	Proponent should have undertaken liaison with Translink and Gold Coast City Council in relation to future public transport services to the proposed development site.	Traffic and Transport Impact Assessment Appendix 21 Section 7 Page 44	The purpose of identifying a potential bus stop was to demonstrate the site has the capability to incorporate a bus stop into the development. This issue is able to be addressed at a later date through liaison with Translink as the implementation of a bus stop will be reliant on the demand generated from the development.	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.12	Traffic	A check on trip generation from the ultimate development can be obtained from the minimum number of car parks. 2.5 x 2537 equals a predicted 6,343 trips generated per day from the eastern precinct, compared to the stated estimate of 4,462 trips per day	Proponent needs to justify the traffic generation estimates from the proposed development site in light of TMR's comments.	Traffic and Transport Impact Assessment Appendix 21 Section 8.2 Page 50	It is considered in this circumstance that an estimate of trip generation based on car parking numbers is not appropriate given the nature of the uses. The trip generation estimates included in the assessment are based on published rates and surveys of actual similar developments. An assessment of trip generation based on car parking numbers is generally only undertaken on development where a high turnover of traffic is expected and where published trip rates are not applicable.	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.13	Active Transport	The proponent has addressed Active Transport needs and it is considered a reasonable approach has been used	Proponent needs to confirm the 'end of trip' cycle facility to be provided in each of the precincts.	Traffic and Transport Impact Assessment Appendix 21 Section 8.4 and 8.5 Pages 52 and 53	End of trip facility requirements are dependent on land use types. As such, this will be provided in the DA phase.	2.2 – Master Plan 2. 7 - Infrastructure Requirements 3.2 - Land 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.14	IRTC	Proponent needs to be clear on the Active Transport connectivity proposed over the IRTC corridor.	Proponent needs to provide details on the work proposed over or within the planned IRTC corridor to TMR for consideration.	Traffic and Transport Impact Assessment Appendix 21 Section 8.4 and 8.5 Pages 52 and 53	Detail pertaining to work within or over the IRTC corridor will be provided at the DA phase.	2.4 - Project Approvals 2.5 - Construction 2.7 - Infrastructure Requirements 3.2 - Land 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.15		The proponent recognises the proposed development causes significant impacts on the state-controlled road network and concludes/recommends a contribution towards the cost of works to mitigate these impacts should be made. The EIS suggests the contributions should be based on the Gold Coast Priority Infrastructure Plan. Whilst an impact mitigation contribution is warranted, TMR is not able to agree to these contributions being based on the Gold Coast Priority Infrastructure Plan. This is because the plan does not include a current schedule of State works or recent cost estimates for these works.	It is recommended the proponent further discuss impact mitigation contribution calculation methodologies with TMR after the proponent has revised the traffic impact assessment in light of the various comments provided above.	Traffic and Transport Impact Assessment Appendix 21 Section 9 Page 54 8th bullet point	The subject site is currently designated as Marine Industry Precinct in accordance with the GCCC Planning Scheme thus a number of land uses sought within GCIMP are currently Self or Code Assessable. In consideration of the above the actual traffic impacts on the State-controlled road network should be assessed on the traffic generated by uses that were not envisaged for the subject site. This figure accounts for less than 50% of the estimated traffic generation as a result of the GCIMP. It is therefore considered the actual impact of the GCIMP does not necessitate the need for contributions towards the upgrading of the State-controlled road network.	2.7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.16	Flooding Impacts	The Gold Coast rail line is an important transport link in the SEQ region. Changes to flood levels arising from the GCIMP project and the potential impact on the integrity of this infrastructure should be fully understood.	Proponent is advised to consult with Queensland Rail with regard to the potential impacts to the Gold Coast rail corridor in the Oakey Creek flood plain arising from changes to flood levels for the flood plain for Oakey Creek due to the GCIMP project. To discuss this issue the proponent is advised to contact Mark Batstone of Queensland Rail at: Mark.Batstone@qr.com.au	Volume 1 Page 157 3.7 Infrastructure Requirements Railway	Details relating to flood levels are contained within the BMT WBM Floodplain management report contained in Volume 8 Appendix 26. Details relating to upstream impacts are presented in Drawing 3-2 for the Peak 100 Year ARI Flood levels. An addendum Flood Management Report has been prepared by BMT WBM and contained within Appendix 9 of the SEIS which address this issue.	2.7 - Infrastructure Requirements 3.1 – Climate and Natural Disasters 3.9 - Infrastructure Impacts Appendix 9 – Floodplain Management Addendum Report

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.17	Construction Traffic	Proponent's response to the Terms of Reference's requirement to describe the freight associated with the project is insufficient. The EIS does not provide adequate information regarding project-related freight transport tasks to enable an assessment of the potential impacts of these tasks on local and regional transport networks.	Proponent is requested to respond in the S-EIS to those requirements of s3.7 Infrastructure Requirements in the TOR related to describing the freight transport tasks associated with the project.	Volume 1 Page 157 3.7 Infrastructure Requirements Transported Materials and Oversize Loads and Appendix 21	Details in relation to expected construction traffic was contained within the Construction Methodology Report prepared by Hyder Consulting contained within Volume 5, Appendix 13, the Traffic Impact Assessment prepared by CRG Traffic and Acoustics contained in Volume 7, Appendix 21 and Section 3 of the EIS.	2.5 - Construction 2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.18	Maritime Safety	Proposed development will contribute to impacts on the provision of maritime services and waterways management in the Coomera River and surrounding waterways.	Additional consultation should be undertaken with the relevant waterways authorities (in the first instance the Regional Director (Gold Coast) of Maritime Safety Queensland) to ensure that the configuration of the proposed development and associated waterways impacts are managed appropriately.	Volume 1 EIS Section 3	The applicant will liaise with Maritime Safety Queensland to ensure the configuration of the proposed development and waterway impacts are appropriately managed through subsequent development applications.	2. 7 - Infrastructure Requirements 3.9 - Infrastructure Impacts Appendix 8 – Traffic and Transport Impact Assessment Addendum
1.19	Dredging	The TOR for this EIS included the following (s.4.5, p.44): A strategy for dealing with capital and maintenance dredge spoil should be developed in the context of local and regional dredging requirements, particularly any maintenance dredging requirements of navigation channels necessary to facilitate vessel access to the project. However the proponent has allocated areas of dredging responsibility that carry financial liability in isolation and without consultation with the Queensland Gov.	Proponent must consult with the relevant waterways authorities and Maritime Safety Queensland on the dredging plan. The preferred format for the outcome of this consultation is a 'Dredge Management Plan'.	Volume 1 EIS Section 3 Dredging Responsibility	External dredging options for the Coomera River are outlined within Volume 6 appendix 17 of the EIS. The Hyder report identifies a number of regional options for regional dredging requirements. The Supplementary Preferred Master Plan provides an onsite dredge spoil facility for site dredge requirements. Through discussions with GCCC officers, it was resolved that until such time a decision is made in terms of a site to accommodate a regional dredge spoil facility, a dredge spoil facility for the purposes of the GCIMP project shall be accommodated within the project site	2.2 – Master Plan 2.5 – Construction 2.6 – Operation

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
1.20	Maritime Safety	In consultation with the relevant waterways authorities (in the first instance the Regional Director (Gold Coast) of Maritime Safety Queensland) the proponent should prepare an 'Aids to Navigation Management Plan'.	The aids to navigation management plan would address elements such as: <ul style="list-style-type: none"> • changes to existing aids to navigation; • new aids to navigation required; • infrastructure required for all stages of the project lifecycle; • funding schedule. 	Volume 1 EIS Section 3	Aids to Navigation Management Plan are acknowledged as being of importance, and will be addressed within subsequent DA's.	2.4 - Project Approvals 3.10 - Emergency Response Plans and Environmental Management Plans
2. PRIVATE SUBMITTER (NON GOVERNMENT AGENCY)						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
2.1	Land Uses	Proposal plans illustrate a residential component to the development (whether this will be part-time/holiday accommodation only is unclear). It is noted that such uses may experience detrimental amenity impacts from the 24-hour operations approved and currently undertaken at GCCM	<p>Proponent should demonstrate through detailed assessments of issues such as acoustics, odour and visual amenity that impacts will not be generated on the proposed development from existing activities (i.e. any approval granted on the site should not have the potential to curtail existing approved activities).</p> <p>The staged construction of the proposal is also considered be critical in this regard (i.e. need for intervening industrial buildings to be constructed prior to any residential related uses)</p>	EIS Section 3 and Appendix 34	<p>As identified in Volume 3 Appendix 5 the Town Planning Package, specifically section 5, the proposal does not seek a residential form of development. This is reinforced through the proposed Codes of development outlined in Appendix 3 of SEIS.</p> <p>The proposal does, as identified, seek to include short term accommodation for potential workers / students / users of the development.</p> <p>The proposed Code seeks to restrict this short term accommodation to either a resort hotel or hostel accommodation as defined under the GCCC Planning Scheme. Provision has also been made for caretaker accommodation.</p> <p>These short term non permanent accommodation options are ancillary to the site activities. As the accommodation is for occupants of the site engaged in site uses and activities it is considered that potential for conflict with onsite or those of adjacent activities is minimal. In addition to this the forms of accommodation are generally removed from the immediate GCCM environment. Through design the potential accommodation options are able to be provided to meet relevant air and noise criteria.</p> <p>Amenity issues are able to be addressed and adequately conditioned concurrent with applications for these uses, should they be perused.</p>	<p>2.2 – Master Plan</p> <p>3.2 – Land</p> <p>3.7 – Noise and Vibration</p> <p>Appendix 3 –GCIMP Development Code and Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
2.2	Economic Impacts	Proposal represents a significant expansion of marine related facilities with regard to GFA of factories/industrial uses as well as boat berths (both wet and dry).	It is considered appropriate that the proponent demonstrate the need for a facility of this scale relative to current developments and if necessary a critical date or other trigger for development of the facility.	Appendix 10	<p>The proposal is generally consistent with the land use designations for the site as outlined in the Planning package Report (Volume 3 Appendix 5) of the EIS and Appendix 3 of the SEIS.</p> <p>The Social and Economic Impact Assessment quantifies a net positive impact through development of the site for the uses identified for the site through various state and local government planning documents and strategies.</p> <p>A supplementary Social and Economic Impact Assessment in relation to the Supplementary Master Plan and the Alternative 6 Option is contained within Appendix 6.</p> <p>Further to this, an independent economic and land use review on the GCMP was undertaken by GCCC. The findings were supportive of the GCIMP and the proposed land uses. A copy of this report is within Appendix 7 of the SEIS.</p>	<p>5 – Economic Values and Management of Impacts</p> <p>Appendix 6 – Supplementary Social and Economic Impact Assessment</p> <p>Appendix 7 – Gold Coast Marine Precinct Strategic Review</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
2.3	Loss of Public Park	<p>The preferred development layout for the site relies on the conversion of an existing public park to private use regards:</p> <ul style="list-style-type: none"> - it is understood that the long-term intent for this parcel of land was for the development of a public boat ramp and associated facilities and also public waterfront parkland (it is noted that such a proposal is shown on the Alternative 2 Plans). Such a facility is critical for numerous business within the Precinct that require ready access to the River for testing etc. At present such businesses typically use the private facilities within GCCM - the plans do not clearly identify an offset for the loss of this high quality riverfront land - community groups utilise the land for recreation activities and again the plans do not clearly identify an offset for the loss of space - the ability of the current land owners/trustee to dispose of the land is also questioned 		Appendix 2	<p>This issue was assessed by GCCC as trustee for the reserve. GCCC have resolved that the reserve is able to be incorporated into the development should the development be favorably considered through the EIS process.</p> <p>The Supplementary Preferred Master Plan incorporates facilities for boat access and storage within a controlled harbour environment. In addition to this, public access to the waterfront is significantly enhanced through design features of the master plan i.e marina boardwalk and harbour</p>	<p>2.2 – Master Plan</p> <p>3.2 – Land</p> <p>4 – Social Values and Management of Impacts</p> <p>Appendix 6 – Supplementary Social and Economic Impact Assessment</p>
3. DEPARTMENT OF COMMUNITY SERVICES						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
3.1	Flooding	Proposed development site is located within a defined flood area under the planning scheme.	<p>It is essential to ensure that the proposed development will maintain the safety of people on the development site from all floods up to and including the DFE.</p> <p>The proposed development must ensure that essential services infrastructure is either:</p> <ul style="list-style-type: none"> - located above the defined flood event; - designed and constructed to exclude floodwater intrusion/infiltration; and - designed and constructed to resist hydrostatic forces as a result of inundation by the appropriate flood immunity level. <p>Should hazardous materials be stored in bulk, there are provisions in the SPP1/03 which must be followed to ensure that storage of hazardous materials in bulk are provided appropriate levels of flood immunity.</p>	General comment	<p>Details relating to flood levels are contained within the BMT WBM Floodplain management report contained in Volume 8 Appendix 26.</p> <p>A Floodplain Management Addendum Report is contained within Appendix 9 of the SEIS.</p> <p>Hazardous material storage if proposed through subsequent development applications would be in accordance with the relevant planning policies at time of submission.</p>	<p>2.4 – Project Approvals</p> <p>3.1 – Climate and Natural Disasters</p> <p>3.10 - Emergency Response Plans and Environmental Management Plans</p> <p>Appendix 9 – Floodplain Management Addendum Report</p>
3.2	Emergency Services	The QAS South Eastern Region advises that the establishment of the Gold Coast International Marine Precinct at Coomera should not have any direct impact on ambulance stations in the area, however, any prolonged road closures or hazards created by the movement of heavy vehicles or the setting up of access to the new precinct may impact on response capability to the community	<p>Proponent of note that should any road closures occur due to the upgrading and/or development of roads in the precinct, QAS should be notified in advance to enable review of alternative routes as required.</p> <ul style="list-style-type: none"> - During construction, to enable access to work sites should an accident occur, QAS requests a copy of the Emergency Response Plan, - Upon completion of the project, QAS requests an updated Emergency Response Plan and detailed maps regarding mooring and buildings, identifying appropriate evacuation 	General comment	An appropriate Emergency Response Plan (ERP) can be prepared and provided to QAS, through relevant OPW applications.	<p>2.4 – Project Approvals</p> <p>3.1 – Climate and Natural Disasters</p> <p>3.10 - Emergency Response Plans and Environmental Management Plans</p> <p>Appendix 9 – Floodplain Management Addendum Report</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
3.3	Flooding	The EIS indicates that 11 houses may be adversely affected by flooding as a result of the project.	This should be noted by the LMDG/DDMG, and taken into account in future disaster management plans and mitigation strategies.	General comment	The houses identified are already subject to flooding and as such, they should be included in the GCCC / SES Emergency Response Plan for the Area. If required by the proponent, an appropriate Emergency Response Plan (ERP) inclusive of potential flooding implications can be prepared concurrent with development applications for OPW(Change to Ground Level).	2.4 – Project Approvals 3.1 – Climate and Natural Disasters 3.10 - Emergency Response Plans and Environmental Management Plans Appendix 9 – Floodplain Management Addendum Report
3.4	Flooding	Dredging for the project may increase flow through parts of the Coomera River, which may mitigate some aspects of riverine flooding.	Additional modelling of this should be conducted, with results provided to the LDMG/DDMG.	General comment	As outlined in Volume 8 Appendix 26 Section 3.2 'changes in flood level are minor with the maximum increases typically being less than 0.01 m'. Modelling for the EIS included the proposed dredging and hence changes to the flow patterns as a result of the dredging have already been assessed.	3.1 – Climate and Natural Disasters Appendix 9 – Floodplain Management Addendum Report
4. DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY						
4.1	Weeds and Pests	While weeds and exotic marine species appear to be addressed in the relevant sections of the EIS, terrestrial pest animal issues are not always included.	Proponent must ensure that terrestrial pest animal risks and issues including preventing the entry of pest animals not present and the management of existing pest animals is addressed in relevant sections of the EIS (e.g. construction, operations, rehabilitation, EMP). This should include goals and strategies for preventing the introduction of pest animals not present and the management of existing pest animals to ensure numbers do not increase	All EIS	Prevention and management of terrestrial pest fauna species is able to be address in a update to the Environmental Management Plan (EMP) - CEMP Element 8 prior to the commencement of OPW (Change to Ground Level).	2.4 – Project Approvals 2.8 - Rehabilitation 3.10 - Emergency Response Plans and Environmental Management Plans
4.2	Fisheries	Proponent to edit pages xxx and 53 to include in the list of species "bream, estuary cod, flathead, jewfish, mangrove jack, school mackerel, sea mullet, snapper, tailor, whiting, luderick, gar fish, eastern king prawns, bay prawns, oysters, mud and sand crabs".		Vol 1 pxxx	Species were identified within relevant sections of the EIS report and Technical Reports contained within the EIS.	N/A

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.3	Fisheries	Figure 1 (Preferred Master Plan Option 1) shows that a bike and pedestrian bridge is proposed to cross Oakey Creek. It is possible that this bridge may be considered a waterway barrier under the <i>Fisheries Act 1994</i> if any component of the bridge is situated within the bank of the creek.	Bridge no longer relevant	Vol 1, s2.1, p72	The bike and pedestrian bridge no longer forms part of the proposal.	2.1 – Project Overview
4.4	Offsets	Disturbance to seagrass has not been included in offset calculations detailed in Appendix 7, Aquatic Ecology and Appendix 9 - Offset Options Report. Note: Impacts to seagrass should be avoided	<p>3.1 proponent must ensure that any loss of fish habitat is offset and included and detailed in the offset calculations.</p> <p>3.2 proponent must provide up to date seagrass mapping in and adjacent to the development area along with any historic mapping of seagrass from these areas.</p>	Vol 1, s3	<p>Sea Grass distribution proximate to the site is discussed in the Aquatic Ecology Report contained in Volume 4, Appendix 7 of the EIS, construction related impacts to the mapped seagrass communities and potential impact to these from construction related activities is presented in Volume 8 Appendix 28 - BMT WBM Water Quality Study.</p> <p>As acknowledged in both reports the seagrass areas are small in extent and relatively sparse and not located in significant areas such as the Moreton Bay Marine Park. The distribution of these seagrass beds is affected by natural processes and anthropogenic activities i.e development, dredging.</p> <p>It is identified in Appendix 28 that up to 1.23ha of sea grass may be lost through turbidity related dredging impacts. It is also acknowledged that these impacted areas would recover. Given external influences to the abundance and distribution of seagrass and ability for recovery, it has been proposed that mapping and monitoring of the seagrass beds be undertaken concurrent with dredging activities and longer term monitoring activities.</p> <p>These actions and activities are to be further resolved through an offset agreement.</p>	<p>2.3 – Offsets</p> <p>3.3 – Nature Conservation</p> <p>Appendix 4 – Addendum to Offset Options Report</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.5	TBD		<p>1. Proponent must determine if the temporary bunds are for the purposes of the <i>Fisheries Act 1994</i> considered to be waterway barriers. proponent must also ensure that arrangements are put in place for any such works, to be authorised (either through the use of a self assessable code or through a development permit for operational works that is the constructing or raising of waterway barrier works).</p> <p>3.1 Proponent must provide details of alternative options to allow continued public fishing access at, or nearby, the development site.</p> <p>3.2 Proponent must establish the extent of any impact on any affected commercial fisher's entitlements and the potential need for a fisheries adjustment process to be undertaken.</p> <p>4. proponent must provide a revised Offsets Options Report for the unavoidable disturbance to fish habitats (FQ).</p>	Vol 1, s4	<p>1. DAFF to draft a condition relating to these subsequent works.</p> <p>3.1 public access to the new waterway edge is provided for and opportunities for recreational fishing to be catered for.</p> <p>3.2 the proposal is to be constructed wholly within the master plan site area which is not included within any commercial license area.</p> <p>4 Offset options have been outlined within the EIS and ongoing liaison with DAFF has occurred. This it is proposed, will be resolved through agreement between the proponent DAFF and the CG and suitable condition included in the CG Report should a favourable recommendation be achieved.</p> <p>A revised offset report has been prepared and is contained within Volume 2, Appendix 4 of this EIS</p>	<p>2.1 – Project Overview</p> <p>2.2 – Master Plan</p> <p>2.4 – Project Approvals</p> <p>4 – Social Values and Management of Impacts</p> <p>Appendix 6 – Supplementary Social and Environmental Impact Assessment</p>
4.6	Forestry	<p>Concerning s1.4 (<i>Sustainable Planning Act 2009</i>), the Project requires the following tenure and allocations:</p> <ul style="list-style-type: none"> • To construct the marina berths on land that is currently unallocated State land – seabed lease under the <i>Land Act 1994</i> and quarry material allocation notice under the <i>Water Act 2000</i>. • To do capital and maintenance dredging – quarry material allocation notice under the <i>Coastal Protection and Management Act 1995</i>. 	<p>Proponent to note and seek approvals - to construct the marina berths on land that is currently unallocated State land – seabed lease under the <i>Land Act 1994</i> and quarry material allocation notice under the <i>Water Act 2000</i>; and to do capital and maintenance dredging – quarry material allocation notice under the <i>Coastal Protection and Management Act 1995</i>.</p>	Vol 1, s 4	<p>Changes to the preferred Master Plan have occurred whereby all marina berths that were proposed within areas of unallocated State land have been deleted.</p> <p>In relation to approvals required for dredging works, Section 1.5 of the EIS and Project Approvals Report prepared by Minter Ellison Lawyers is presented within Volume 2, Appendix 3 of the EIS detailed all relevant information relating to required project approval. The approvals mentioned by DAFF were noted within this report.</p>	<p>2.1 – Project Overview</p> <p>2.2 – Master Plan</p> <p>2.4 – Project Approvals</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.7	Fisheries	Note: Under the current systems outlined in the <i>Sustainable Planning Act 2009</i> the development application for the Material Change of Use will see DAFF as a concurrence agency to assess the operational works (i.e. the removal, destruction or damage of marine plants etc).		Vol 2, Appendix 3, s 1.4	<p>It is understood that since receipt of this submission, as a result of the implementation of SARA through enactment of SPOLA, the referral agency in this instance would be the Department of State Development, Infrastructure and Planning (DSDIP).</p> <p>However, because of the manner in which the SDPWO Act EIS process modifies the IDAS process, Referral Agencies will instead undertake this assessment as an advisory agency during the EIS process.</p>	2.4 – Project Approvals
4.8	Fisheries	The scientific name of snapper has since changed to <i>Pagrus aerates</i> .		Vol 4, Appendix 7, s 1.4.5	Noted	N/A
4.9	Offsets	Proponent must provide a revised Offsets Options Report for the unavoidable disturbance to fish habitats. This report must provide detail on the unavoidable impacts from the removal, destruction or damage of marine plants (impacts on tidal fish habitats) and constructing and/or raising of waterway barrier works	Further consultation with Fisheries Queensland is recommended to ensure the proposed offsets are adequate and appropriate.	Vol 5, Appendix 9	<p>Offset options have been outlined within the EIS and ongoing liaison with DAFF has occurred. This it is proposed, this will be resolved through agreement between the proponent DAFF and the CG and suitable condition included in the CG Report should a favourable recommendation be achieved.</p> <p>A revised offset report has been prepared and is contained within Volume 1, Appendix 4 of this SEIS.</p>	<p>2.3 – Offsets</p> <p>3.3 – Nature Conservation</p> <p>Appendix 4 – Addendum to Offset Options Report</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.10	Weeds and Pests	<p>1. Sections 5, 5.1, 6, 7, 10, 11 and 12, do not adequately mention the actions and strategies necessary to prevent the introduction and spread of weeds, pest animals and disease to the site through earthworks, machinery or construction materials. Note: Any monitoring, prevention and mitigation approaches for invasive marine pests should be developed in accordance with the National System for the Prevention and Management of Marine Pest Incursions (2010).</p> <p>2. In sections 5.4, 6 and 7, the potential for the introduction of marine pests need be adequately explained (and cross-referenced to other parts of the EIS).</p>	<p>1. Proponent must include the objective to ensure that no weeds, pest animals or disease are introduced to the site. This includes the development of a systematic program for the inspection of machinery; building and construction materials to prevent the introduction of weeds and pest animals (e.g. fire ants, yellow crazy ants) should be developed and implemented. The Proponent must ensure that infill brought to the site does not contain propagules or other contaminants. A monitoring regime must be developed to ensure Project infrastructure does not provide suitable conditions for pest species to establish. Invasive marine pest risks need to be adequately recognised and assessed.</p> <p>2. Proponent must consider Invasive marine pest risks adequately acknowledged these risks and mitigation strategies in relevant sections of the EIS. This needs to be cross-referenced to other sections of the EIS (e.g. Vol 6 s1.14.3 and Appendix 7, s7.6.5).</p>	Vol 5, Appendix 13, s 5, 6, 7, 10, 11, 12	Prevention and management of terrestrial pest fauna / weed plant species is able to be addressed in an update to the Environmental Management Plan (EMP) - CEMP Element 8 prior to the commencement of OPW (Change to Ground Level).	3.10 – Emergency Response Plans and Environmental Management Plans
4.11	Weeds and Pests	Proponent must update this section and include the managing biosecurity risks is an additional objective. The Proponent must detail the actions necessary to prevent the entry of new pest animals (e.g. fire ants, yellow crazy ants). The Proponent must detail the actions necessary to prevent increased numbers of pest animals present at the site.	Proponent must include a pest management indicator for the rehabilitated landform to demonstrate that no declared pests are present.	Vol 5, Appendix 14, s1.2, 1.7.1, 1.17.8, 1.17.5	Prevention and management of terrestrial pest fauna / weed plant species is able to be addressed in an update to the Environmental Management Plan (EMP) - CEMP Element 8 prior to the commencement of OPW (Change to Ground Level).	3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.12	Weeds and Pests	A comprehensive mitigation and management approach to exotic marine pests should be developed and implemented	Proponent must undertake a survey for the presence (or absence) of marine pests in advance of further Project development. This must include: <ul style="list-style-type: none"> the development and implementation of an approved targeted invasive marine species monitoring design; and that any monitoring, prevention and mitigation approaches for invasive marine pests are developed in accordance and consistent with the National System for the Prevention and Management of Marine Pest Incursions (2010); the Australian marine pest monitoring manual, DAFF; Australian marine pest monitoring guidelines, DAFF or latest additions. 	Vol 6, Appendix 15, s 1.14.3	Prevention and management of terrestrial pest fauna / weed plant species is able to be address in a update to the Environmental Management Plan (EMP) - CEMP Element 8 prior to the commencement of OPW (Change to Ground Level).	3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
4.13	Weeds and Pests	There is no statement of outcome or strategies to ensure that numbers of pest animals will not increase as a result of the Project, or for the prevention of introduction of pest species not currently present in the area.	Proponent must address its obligations under Land Protection) Pest and Stock Route Management) Act 2002. The Proponent must provide additional information consistent with recommended best practice for the prevention of weeds and pest animals. Details need to be provided on: <ul style="list-style-type: none"> • clean down regimes to ensure that vehicles, machinery and construction materials are free from pest matter and disease; • that inspection regimes are conducted by trained officers; • that clean down bays are located away from waterways; • that staff and operators are adequately trained in clean down and weed identification; • there is a systematic process for the inspection of building and construction materials to prevent the introduction of pest animals such as exotic ants (e.g. fire ants, yellow crazy ants, electric ants); • that the inspection processes and materials inspected are documented and recorded; and • that all and any Class 1 or suspect species are timely reported to DAFF (by phone on 13 25 23). 	Vol 11, Appendix 40	Prevention and management of terrestrial pest fauna / weed plant species is able to be address in a update to the Environmental Management Plan (EMP) - CEMP Element 8 prior to the commencement of OPW (Change to Ground Level).	3.10 – Emergency Response Plans and Environmental Management Plans
5. QUEENSLAND HEALTH						
5.1	Air quality	To allow Queensland Health to make an appropriate evaluation of the health impact of the Gold Coast International Marine Precinct project it is requested that the proponent addresses this concern in any future Supplementary Environmental Impact Statement	Queensland Health recommends that the proponent provides a commitment that any / all assumptions made within the Air Quality Chapter (Appendix 33) of the report will be, at a minimum, adopted by any operator at the site. This would ensure that resultant emissions would be below the health and well-being goals of the Environmental Protection (Air) Policy 2008, as modelled within the EIS	Appendix 33	An amended Air Quality Assessment has been undertaken and is contained within Volume 2, Appendix 10 of this Supplementary EIS.	3.6 – Air Quality Appendix 10 – Air Quality Assessment

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
5.2	Noise	Queensland Health recommends that the proponent provides a commitment that any / all assumptions made within the Noise and Vibration Assessment Chapter (Appendix 34) of the report will be, at a minimum, adopted by any operator at the site.	This would be to ensure that resultant emissions would be below the health and well-being goals of the Environmental Protection (Noise) Policy 2008, as modelled within the EIS	Appendix 34	The Noise and Vibration Assessment recommendations will be adopted.	3.7 – Noise and Vibration
6. QUEENSLAND POLICE SERVICE						
6.1	Volume 7 • Traffic and Transport Impact Assessment • Marine Vessel Activity and Estimated Marine Traffic • Electricity and Telecommunications Services	<p>It is acknowledged that this development will place increased demands on service delivery in areas such as traffic management and marine enforcement. Specific impacts can be categorised as follows:</p> <ul style="list-style-type: none"> • Construction and development phase: <ul style="list-style-type: none"> ○ Increased demands for traffic management (including water police services and special services) applicable to the movement of heavy equipment and building materials ○ Traffic management demands will also most likely include service provision for electrical installation and critical incident responses. • Operational phase: <ul style="list-style-type: none"> ○ Increased demands for traffic management relating to movement of over-sized plant/equipment and vessels to slipways and between different construction/engineering locations. ○ Increased requirement for general patrolling of the marine precinct. ○ Response requirements in relation to major incidents and emergent situations such as industrial accidents, gas/fuel leaks, fires, etc. ○ Increased demands on managerial time to participate in pre-planning, construction and development phases of the project and subsequently in the operational phase for ongoing community engagement forums and crime prevention strategies. 	<p>Request involvement of Coomera District management in the planning for construction and operational phases of the precinct plan relating to:</p> <ul style="list-style-type: none"> • Security provision • Traffic management • Marine activity management • Major incident planning and response • Significant infrastructure planning and implementation for both construction movement planning and support and counter-terrorism planning and coordination. 	<p>Volume 7 • Traffic and Transport Impact Assessment • Marine Vessel Activity and Estimated Marine Traffic • Electricity and Telecommunications Services</p>	<p>Information to this sub mission is to be provided during the DA phase.</p> <p>Ongoing liaison with QPS is proposed.</p>	<p>2.5 – Construction</p> <p>2.7 – Infrastructure Requirements</p> <p>3.9 – Infrastructure Impacts</p> <p>Appendix 8 – Traffic and Transport</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
6.2	Volume 11 • Open Space Management Plan	Coomera is recognised in the South East Queensland Regional Plan 2009-2031 as a regional development area for residential and employment growth. The area is expected to provide approximately 25,000 new dwellings for approximately 50,000 people. The growth being experienced within the division is substantial, and impacts on the ability of current police resources to meet first response responsibilities and calls for service. It is anticipated that with the increased business premises, vehicle traffic and employment base there will consequently be increased crime and traffic issues.	Request involvement of QPS Crime Prevention advisors in planning and development meetings, and the application of Crime Prevention Through Environmental Design principles.	Volume 11 • Open Space Management Plan	Details pertaining to CPTED principles have been included in the GCIMP Development Code and incorporated into the Landscape Master Plan contained in Volume 10, Appendix 35 of the EIS.	2.2 – Master Plan 3.2 – Land Appendix 3 – GCIMP Development Code and Plans
7. DEPARTMENT OF NATURAL RESOURCES AND MINES						
7.1	Approvals	Two applications under the <i>Land Act 1994</i> involving the subject State land were lodged in 2007 Both applications were lodged by Gassman Development Perspectives in March 2007 however both applications were closed on 24 March 2009 due to no response from the lodger	DNRM recommends the EIS be updated to reflect the status of the previous applications involving State land, and re-lodge any necessary applications under the <i>Land Act 1994</i> .	Vol 1, s 1 Introduction Vol 2, Appendix 3 - project approvals	All applications required in accordance with the <i>Land Act 1994</i> are to be lodged prior to the commencement of the GCIMP.	2.4 – Project Approvals

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
7.2	Approvals	<p>The proposed development site includes State land. Based on the EIS, DNRM has identified the following approvals under the <i>Land Act 1994</i> which may be required:</p> <ol style="list-style-type: none"> 1. Evidence of Resource Entitlement under the <i>Land Act 1994</i> is required to lodge a development application involving State land under the <i>Sustainable Planning Act 2009</i>. 2. Permanent road closure and purchase of all or part of Shipper Drive, Coomera. 3. Purchase of all or part of Lot 108 on WD6404 being State land – Reserve for Park and Recreation purposes with Gold Coast City Council (GCCC) as trustee. 4. Purchase of all or part of Lot 35 on SP150730 being State land – Reserve for Road purposes with the Department of Transport and Main Roads (DTMR) as trustee. 5. Term lease over the bed and banks of the Coomera River adjacent to Lot 98 on SP150731. 	<ol style="list-style-type: none"> 2. Please note: this application must be made by the adjoining land owner to Shipper Drive, Coomera to ensure compliance with section 99 of the <i>Land Act 1994</i>. 3. Please note: GCCC as trustee are required to advise DNRM that they no longer require the subject land for a public purpose and wish to relinquish their trusteeship. 4. Please note: DTMR as trustee are required to advise DNRM that they no longer require the subject land for road purposes and wish to relinquish their trusteeship. 	<p>Vol 1, s 1 Introduction</p> <p>Vol 2, Appendix 3 - project approvals</p>	<ol style="list-style-type: none"> 1 Proponent will confirm with the Department the requirements for Resource Entitlement and submit. 2 The proponent will Liaise with DNRM in relation to the proposed road closure. 3 A valuation report for the purchase of Lot 108 has been included in the EIS. This is contained within Volume 6 Appendix 17 of the EIS. 4 Purchase of all or part of Lot 35 on SP150730 has not been proposed as it is not required for the GCIMP. 5 Liaison with DNRM over lease arrangements to occur. 	2.4 – Project Approvals
7.3	Approvals	<p>The EIS states that the 'urban purpose' in an 'urban area' exemption under Schedule 24 of the <i>Sustainable Planning Regulation 2009</i> applies to all vegetation clearing as part of the proposed development. As part of the site is non urban, this exemption does not apply to clearing remnant vegetation in this part of the proposed development site.</p>	<p>DNRM recommends the EIS be updated to reflect that part of the proposed development site is a non urban area. This means that the 'urban purpose' in an 'urban area' exemption does not apply to clearing over this part of the site.</p>	<p>Vol 2, Appendix 3 - Project Approvals</p> <p>Section 1.0 - project approvals</p> <p>Subsection 1.4 State legislation 1.4.12 - VMA</p>	<p>The portion of site within a non-urban area will be appropriately identified within subsequent DA's and applications for OPW Vegetation Clearing applied for as required.</p> <p>Areas of vegetation to be removed are quantified within Table 5 contained within Section 2 of the SEIS. As such, this table can be utilised for conditioning purposes.</p>	2.4 – Project Approvals

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
7.4	Approvals	The EIS states that the 'urban purpose' in an 'urban area' exemption under Schedule 24 of the <i>Sustainable Planning Regulation 2009</i> applies to all vegetation clearing as part of the proposed development. As depositing of dredge spoil is a non urban purpose, this exemption does not apply to clearing remnant vegetation for this purpose.	DNRM recommends the EIS be updated to reflect that the depositing of dredge spoil is a non urban purpose meaning the 'urban purpose' in an 'urban area' exemption does not apply to clearing remnant vegetation for this purpose.	Vol 2, Appendix 3 - Project Approvals Section 1.0 - project approvals Subsection 1.4 State legislation 1.4.12 - VMA	In accordance with Schedule 26 of the SPR an 'urban purpose' is defined as: <i>"purposes for which land is used in cities or towns, including residential, industrial, sporting, recreation and commercial purposes, but not including environmental, conservation, rural, natural or wilderness area purposes."</i> In accordance with the Gold Coast Planning Scheme 2003, the proposed Dredge Spoil Facility is included within the definition of what constitutes an Extractive Industry. As such, it is considered the disposal of dredge spoil material is a form of an industrial purpose and is therefore an 'urban purpose'. Given this justification, it is considered the exemption in accordance with Schedule 24 of the SPR is applicable to the dredge spoil site in this circumstance.	2.4 – Project Approvals

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
7.5	Acid Sulfate Soils	The acid sulfate soils (ASS) investigation in the EIS, while only partially satisfying the requirements of SPP 2/02 and related guidelines ⁴ , does indicate however that there are significant environmental risks associated with disturbing ASS at the proposed development site. Given the potential risks posed by disturbing ASS on this site, the EIS does not provide justification for the reduced level of ASS investigation.	ASS investigation address the following matters: 1. The ASS investigations to date have focused on areas of the site that will be associated with deep excavation. While a number of samples were selected for laboratory analysis, an analysis of all samples taken as prescribed in the Queensland sampling guidelines would ensure that any suggested ASS management provisions are appropriate. 2. The remaining areas of the site have not been characterised for ASS, including areas where there will be proposed works for infrastructure trenching, sediment basins or other miscellaneous disturbances. In particular, the investigation needs to include those areas that will be potentially exposed by any dewatering, particularly the soils adjacent to the proposed marina area and any other excavated areas. 3. Characteristics and impacts on surrounding soils arising from the proposed dewatering and excavation of the marina area.	Vol 10 Appendix 32 ASS and ASSMP Part 2 - Existing site characteristics Part 3 - ASS assessment	The EIS contained an Acid Sulfate Soils Assessment and Management Plan (ASSAMP) was prepared by Gilbert and Sutherland Agriculture and Environmental Scientists within Volume 10, Appendix 32. Acid Sulfate Soil (ASS) investigations were targeted to areas associated with the excavations related with the harbour and marina elements of the development. We note other precincts in the development are to be filled with only minor excavation and associated with infrastructure works proposed. Further ASS investigations will be carried out as required, as part of the future OPW (Change to Ground level) application. The current investigation provides sufficient information in order to gain an understanding of the underlying geology and chemical properties which affect the construction process for excavation and filling activities including the management of ASS.	3.2 – Land
7.6	Acid Sulfate Soils	The ASS Management Plan provided in the EIS does not fully address the management of disturbance of ASS associated with the proposed development. In particular, the EIS does not address several high risk activities in relation to ASS including the dewatering of a marina area to allow dry excavation down to RL-8m AHD, and wet excavation of the Coomera River.	DNRM further recommends the ASSMP consider incorporating the management techniques outlined at Annex A.	Vol 10 Appendix 32 ASS and ASSMP	The Groundwater Assessment and Management Report prepared by Gilbert and Sutherland Agriculture and Environmental Scientists contained within Volume 9, Appendix 31 was prepared after extensive monitoring of groundwater, analysis of results and was informed and used to inform the preparation of other technical reports and plans that formed part of the EIS including the Construction Methodology etc.	3.2 - Land

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
7.7	Acid Sulfate Soils	Groundwater quality has been monitored, although not sufficiently to identify background levels. While predicted groundwater drawdown associated with the dewatering has been modelled, this modelling has not addressed the likely impacts on the surrounding soils that will be dewatered. As such, the EIS does not propose adequate groundwater management measures which will be effective in minimising the effects of groundwater drawdown on ASS oxidation adjacent to the proposed development.	The Coordinator-General may wish to consider conditioning any approval of the development on the basis of the proponent developing an adequate Groundwater Assessment and Management Plan that integrates with the ASSMP (see above). Additional technical advice to assist the Coordinator General to fully consider this matter is provided at Annex A.	Vol 10 Appendix 32 ASS and ASSMP Part 4 ASSMP Vol 9, Appendix 31 - Groundwater assessment and Management Plan Vol 6, Appendix 17 - Coomera River Dredge Disposal Options	We note that a condition may be included in the CG report on the GCIMP for the development of a Groundwater Assessment and Management Plan which integrates with the ASSMP. It is considered this can be developed as part of subsequent development applications.	3.2 - Land
7.8	Water	The jurisdiction of the <i>Water Act 2000</i> (including taking or interfering with water and taking quarry material) does not apply.	DNRM recommends the EIS be updated to reflect that the <i>Water Act 2000</i> does not apply to the proposed development as there are no watercourses on the site.	Vol 10 Appendix 32 ASS and ASSMP Vol 9, Appendix 31 - Groundwater assessment and Management Plan	It is noted there are no water courses within the subject site.	2.4 – Project Approvals
8. DEPARTMENT OF STATE DEVELOPMENT, INFRASTRUCTURE AND PLANNING						
8.1	Economic Impacts	The Gold Coast Marine Industry has generally been in decline since 2008 with several large companies (e.g. Horizon Shores, Riviera etc.) suffering huge staff and financial losses in the past 4 years. However, the sector has shown some signs of improvement and investment (e.g. the restructuring of Riviera in March 2012) and the sector continues to generates over \$400M annually on the Gold Coast.	If developed according to plans, the GCIMP will play a critical role in the re-birth or resurrection of the GC Marine Industry and its associated supply chain opportunities.	General comment	Noted. Amendments to the Preferred Master Plan have occurred as a result of the submissions. However, the outcome is consistent with the original preferred Master Plan. A supplementary Social and Economic Impact Assessment has been undertaken on the Supplementary Preferred Master Plan.	1.2 – Project Description Appendix 6 – Supplementary Social and Economic Impact Assessment Appendix 7 – Gold Coast Marine Precinct Strategic Review
9. DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9	Surface Water Quality, aquatic ecosystem health	It is noted that the proposal would involve the irreversible loss of some palustrine and intertidal wetlands and fish habitat areas.	That being the case, EHP recommends that advice on the mitigation, management and offsetting of those impacts be sought from relevant agencies (e.g. DAFF for fish habitat areas).	General Comments	<p>Offset options have been outlined within the EIS and ongoing liaison with DAFF has occurred.</p> <p>This it is proposed, this will be resolved through agreement between the proponent DAFF and the CG and suitable condition included in the CG Report should a favourable recommendation be achieved.</p> <p>Areas of vegetation to be removed quantified in Table 4 of Volume 1, Section 2 to be used for conditioning purposes.</p> <p>Palustrine wetland offsets to be contained to works proposed within on site open space areas, specifically rehabilitation works within Lot 146 SP150731.</p>	<p>2.3 – Offsets</p> <p>3.3 – Nature Conservation</p> <p>Appendix 4 – Addendum Offset Options Report</p>
9.1	Water Courses and Drainage	Section 4.3, Potential Impacts on Ecological Values and Mitigation Measures, Contamination by Heavy Metals, paragraph 4 (page 322), but was not included in the baseline water quality study.	Given the recognition that copper is a chemical of potential concern, it is recommended that the proposed water quality baseline study (18-24 months) and ongoing water quality monitoring programs include copper and consider including tributyl tin (TBT).	Volume 1 Executive Summary Principle Impacts and Proposed Mitigation and Management Water Course and Drainage	<p>Baseline water quality to be updated at time of construction activities to ensure management methods are reflective of the site conditions and current standards / requirements.</p> <p>Copper to be included into monitoring requirements.</p>	3.4 – Water Resources
9.2	Coastal Process	Frequency of Maintenance Dredging	The EIS should include further information to clarify the likely frequency of maintenance dredging campaigns, the volumes of material likely to be dredged, and the anticipated dredge spoil disposal method(s) and location(s), so that the associated environmental risks can be properly assessed and managed in a way which adequately protects sensitive environmental areas.	Coastal Processes	<p>This detail is provided in the EIS within Volume 7 Appendix 18 - Maintenance Dredging Report prepared by Hyder Consulting.</p> <p>An onsite dredge disposal facility has been proposed and is identified within the Supplementary Preferred Master Plan.</p>	2.6 - Operation

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.3	Risk assessment for decant waters	The EIS indicates that an acid sulphate soils assessment has been conducted, however, the report containing that information is not provided. In addition, there is a need to assess whether decant waters from the land-based disposal of dredge material would contain unacceptable concentrations of metals and metalloids, and to include a detailed assessment of sediment contamination in the EIS.	The EIS should include a detailed assessment of contaminant concentrations and properties for the material to be excavated by dredging, as well proposing a monitoring program for decant water discharge from land-based disposal areas. It is recommended ensure that the Coordinator-General ensure that the details and results of the Gilbert & Sutherland external sediment sampling survey are made available in the appendices of the EIS to inform development of end-of-pipe water quality monitoring and management requirements for waters decanted from land-based disposal of dredged sediments, likely to required at the development approval stage.	3.5 Construction Impacts of Dredging	<p>The Acid Sulphate Soils Assessment has been prepared by Gilbert and Sutherland and is included within Volume 9, Appendix 32 to the EIS.</p> <p>It is relevant to update sediment samples prior to construction activities to ensure associated management techniques / plans can be prepared and an appropriate monitoring program developed. Additional sediment sampling to occur through subsequent development applications i.e OPW , ERA 16</p>	<p>2.4 – Project Approvals</p> <p>2.5 – Construction</p> <p>3.4 – Water Resources</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.4	Coastal Environment	Poor recognition of contaminant management issues Section 4.5, Capital and Maintenance Dredging, page 394, paragraph 2, sentence 6	Amend or remove the statement from the EIS or require the proponent to provide and assess sound sediment and water quality monitoring data.	4.5 Coastal Environment	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>2.4 – Project Approvals</p> <p>2.5 – Construction</p> <p>2.6 - Operation</p> <p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.5	Coastal Environment	Table 22 and Sedimentation Pond Decant Water Compliance Limits	It is recommended that Water Quality Release Criteria (or end-of-pipe trigger values, alert levels, and/or compliance limits) be developed in consultation with EHP.	4.5 Coastal Environment	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 2.6 - Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.7	Internal Marina (dry excavation)	The concentration of dissolved metals and metalloids would need to be confirmed prior to permitting a discharge. Where toxicant concentrations still exceeded their relevant trigger values, the dewatering mechanism and/or regime for waters in the flooded internal marina area would need to be managed so as to minimise impacts in receiving waters.	It is recommended that additional detail be provided in the body of the EIS of how the post-excavation internal marina flood water will be treated and monitored before being released to the receiving environment.	Volume 5 Appendix 13 5.4.2 Internal Marina (Dry Excavation)	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 2.6 - Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.8	Adopted Construction Method	unclear outcome	The clarity of the statement could be improved by adopting the suggested wording: "Following detailed geotechnical investigation of the underlying river bed, the Coomera River and Oakey Creek dredging component of construction option 1 for the GCIMP (i.e. the barge mounted clamshell or cutter head dredge methods) was discounted. The apparent high content of 'dredge material fines' would make dredging (and material reuse) difficult."	5.6 Adopted Construction Method	Comments relate to proposed future construction techniques to be confirmed through a future application. As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.9	Dewatering	Referencing - The EIS refers to two reports: "Geotechnical Report and the Water Quality Report." These reports were not provided.	The EIS should provide the reports referred to in Section 13.4.	13.4 Dewatering	Volume 8 Appendix 28 of the EIS contains the Water Quality Report and Volume 9 Appendix 29 of the EIS contains the Geotechnical Report.	N/A
9.10	Proposed Development Master Plan	<p>Land-based dredge spoil disposal areas and 'setback' (buffer zone) distances from Oakey Creek.</p> <p>A comparative cost benefit analysis should be provided around options for dredge spoil disposal that appropriately considers the natural value of the remnant marine wetland habitat lost in disposing of the dredge spoil and what alternatives were considered before selecting that option.</p> <p>In regards to the setback distances from Oakey Creek, the EIS should discuss how landscaping works can be used to improve or maximise the marine wetland and fish habitat area environmental values.</p>	<p>The EIS should detail the options assessed for dredge spoil disposal including appropriately consider the natural value of the remnant marine wetland habitat lost in disposing of the dredge spoil and what alternatives were considered before selecting that option.</p> <p>Develop impact mitigation benefits when designing landscaping works for the setback distances from Oakey Creek, present and commit in the EIS to actions that can be used to improve or maximise the marine wetland and fish habitat area environmental values.</p>	Appendix A Proposed Development Master Plan	<p>The Supplementary Preferred Master Plan identifies an area to be utilised for onsite dredge spoil disposal. A Supplementary Social and Economic Impact Assessment has been undertaken and is contained within Volume 2, Appendix 6.</p> <p>Discussions with DAFF have occurred, and an addendum Offset Options Report has been prepared and is contained within Volume 2, Appendix 4 of this SEIS.</p> <p>In addition, external dredging options for the Coomera River were outlined within Volume 6 appendix 17. The Hyder report identifies a number of regional options for regional dredging requirements.</p> <p>The development concepts provide options for site dredge requirements and /or regional dredge facilities. The applicant is not the responsible entity to develop a multi agency / multi government plan for Dredge management for the Coomera River.</p>	<p>2.2 – Master Plan</p> <p>2.3 – Offsets</p> <p>2.6 – Operation</p> <p>2.8 – Rehabilitation</p> <p>3.3 – Natural Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p> <p>Appendix 4 – Addendum Offset Options Report</p> <p>Appendix 6 – Supplementary Social and Economic Impact Assessment</p>
9.11	EMP - Water & Sediment Quality OEMP Element 5 Environmental Objectives	Absence of reference to the Queensland Water Quality Guidelines – version 3 September 2009 (DERM, 2009)".	It is recommended that the EMP identify measure to achieve compliance with statutory requirements, not just with Water Quality Objectives (WQOs), as stated in the most relevant local State guidelines.	Volume 5 Appendix 14 Environmental Management Plan 1.17.5 Water & Sediment Quality OEMP Element 5 Environmental Objectives	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.12	Water & Sediment Quality OEMP Element 5 Wet Excavation	<p>Mention of only one [turbidity] data logger The page that this part of the table appears on is unnumbered, but it appears as page 438 in the overall PDF.</p> <p>The receiving environment is tidally influenced and therefore water flows both in the upstream and downstream directions. Separate data loggers should be situated upstream and downstream of the dredging and dewatering activity on the Coomera River, and another upstream and downstream of the dredging and dewatering activity on Oakey Creek. One data logger downstream of the Coomera River-Oakey Creek confluence could serve both purposes and therefore it appears that a minimum of three data loggers would be required.</p>	Develop an appropriate turbidity monitoring program for the works in conjunction with EHP	1.17.5 Water & Sediment Quality OEMP Element 5 Wet Excavation	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.13	Water & Sediment Quality OEMP Element 5 Tail Water Treatment System	<p>The EIS states that the testing of waters shall be undertaken by the Contractor in accordance with Queensland Water Quality Guidelines as published by the DERM.</p> <p>However, the QWQG (DERM, 2009) doesn't provide advice on how waters should be tested. Furthermore, there is no recognition of the monitoring requirements under ANZECC & ARMCANZ (NWQMS, 2000) even though this guideline was stated under the heading "Environmental Objectives" of the same (Element 5) table.</p>	<p>It is therefore recommended that the sentence above be modified to the following: "Testing Sampling of waters shall be undertaken by the Contractor in accordance with <u>the Monitoring and Sampling Manual (DERM, 2009) for the water quality parameters identified as relevant by the administering authority. Release limits will be subject to considerations of trigger values in the Australian and New Zealand Fresh and Marine Water Quality Guidelines (ANZECC & ARMCANZ, NHMRC, 2000) and the water quality objectives in the Queensland Water Quality Guidelines version 3 as published by the DERM (2009).</u>"</p>	1.17.5 Water & Sediment Quality OEMP Element 5 Tail Water Treatment System	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.14	Water & Sediment Quality OEMP Element 5 Monitoring: Pre-construction	<p>As discussed in Issue 1, copper should be included and sulfate (SO₄²⁻) is identified as a COPC under "Monitoring: Construction" of this same table and should be included. Also, dissolved oxygen (DO), pH, Conductivity, Temperature, and Turbidity are not "additional"; they are already monitored as part of EHMP (see Table 1.17.5.1 below), which means the true list of "additional" water quality parameters is column 2 "Laboratory Analysed Parameters" of Table 1.17.5.2 (i.e. TSS, Fe, Al [and Cu]).</p> <p>Fortnightly sampling frequency is not necessary as there is sufficient time to collect 18+ samples prior to the commencement of works, providing a good level of reliability – monthly sampling is therefore preferred and recommended. The proposed sampling sites (reflecting the EHMP monitoring sites) are appropriate for describing the water quality in the Coomera River, however due to the likely more restricted flow in Oakey Creek, it is considered not only appropriate but essential that another sampling location be situated upstream of the proposed works site on Oakey Creek.</p> <p>It should be noted that in Issue 3 it was noted that the sediment quality studies might identify other metals and metalloids as Chemicals of Potential Concern (COPC). A metal or metalloid is recognised as a COPC if they are likely to exceed the ANZECC and ARMCANZ (NWQMS, 2000) estuarine trigger values at the 95% species protection level as dissolved concentrations, in which case they should also be included in base line studies. Note that the guideline doesn't stipulate a list of 'estuarine' trigger values, but states that in estuaries, it is the lowest of the freshwater and marine trigger values that should be adopted.</p>	<p>It is therefore recommended that the pre-construction water quality base line study be modified as follows:</p> <ol style="list-style-type: none"> 1. Include an additional monitoring location upstream of the proposed works area on Oakey Creek; 2. Conduct water quality monitoring surveys monthly for 18 months; 3. For the Coomera River (EHMP) monitoring sites, only measure those parameters not currently measured by EHMP (i.e. TSS, SO₄²⁻, Fe, Al, Cu – as a minimum - see point 5 below); 4. For the Oakey Creek monitoring sites, measure all the EHMP plus additional parameters as identified above, and 5. Review the list of metals (and metalloids) on the sampling list in the light of the sediment quality study to identify other COPC for base line gathering purposes. 	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Pre-construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>2.4 – Project Approvals</p> <p>2.5 – Construction</p> <p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.15	Water & Sediment Quality OEMP Element 5 Monitoring: Construction	The page that this part of the table appears on is unnumbered, but it appears as page 445 in the overall PDF. In Table 1.17.5.3: Water Quality Monitoring Requirements – Construction Phase, in the column headed “Parameters” – revise these parameters according to Recommendation 14 above.	It is recommended that in Table 1.17.5.3: Water Quality Monitoring Requirements that: 1. The water quality parameters list include all previously identified COPC, and 2. That the rainfall event-based monitoring requirement identifies the location of the rainfall monitoring station and be allotted a time interval.	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.16	Water & Sediment Quality OEMP Element 5 Monitoring: Construction	The page that this part of the table appears on is unnumbered, but it appears as page 446 in the overall PDF.	Amend as described in Recommendation 12.	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.17	Water & Sediment Quality OEMP Element 5 Monitoring: Construction	Developing a TSS vs. turbidity correlation for better on-site decant water management page 446 in the overall PDF. Given that turbidity can be measured in situ using a hand-held meter, it is recommended that a site specific TSS vs. Turbidity correlation be developed to better facilitate site water quality and discharge management.	It is recommended that a site-specific TSS vs. turbidity correlation be developed to better facilitate more expeditious site water quality and discharge management, and be conducted in a scientifically robust manner.	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.18	Water & Sediment Quality OEMP Element 5 Monitoring: Construction	Additional end-of-pipe water quality release criteria page 446 in the overall PDF. In Table 1.17.5.4: Water Quality Release Criteria – Construction Phase, it is recognised that metals and metalloids are not included. Refer to Issue 5.	Refer to Recommendation 5. There is a need to demonstrate the level of environmental risk due to metals and metalloids before release. Refer to the areas of Issue and Recommendation 13 that address identifying metal and metalloid-based COPC. A turbidity monitoring program should be developed in conjunction with EHP including the appropriate end of pipe criteria, consideration of tidal current flow rather than just up or down stream, monitoring frequency and comparative release values related to control values.	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.19	Water & Sediment Quality OEMP Element 5 Monitoring: Post Construction	Continuing monitoring water quality parameters in Table 1.17.5.5: Water Quality Monitoring Requirements – Post Construction Phase would need to be updated according to the list of identified COPC	It is recommended that the final list of water quality parameters for post-construction be informed by previous monitoring results and those parameters which were not found to exceed the adopted criteria removed from the list (other than those required for general interpretative needs, such as the in situ physiochemical parameters).	1.17.5 Water & Sediment Quality OEMP Element 5 Monitoring: Post Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.20	Flora and Fauna (including Marine) OEMP Element 7 Monitoring	page 457 in the overall PDF. Various monitoring programs are proposed for marine plant communities including seagrasses, and benthic macroinvertebrates.	It is recommended that a biological monitoring and other surveys processes be developed in conjunction with the appropriate government agencies and presented in the EMP. The monitoring program should include procedures for event monitoring, particularly where there is a failure of containment systems.	1.17.7 Flora and Fauna (including Marine) OEMP Element 7 Monitoring	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.21	Flora and Fauna (including Marine) OEMP Element 7 Post Construction	It is recommended that the EIS consistently state that monitoring of sediment to be dredged will occur.		1.17.7 Flora and Fauna (including Marine) OEMP Element 7 Post Construction	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 2.6 – Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.22	Site Based Management Plan Water Quality OEMP Element 14	Water quality parameters and monitoring	It is recommended that relevant comments regarding water quality parameters and monitoring from Element 5 be reflected in Element 14.	Volume 6 Appendix 15 Site Based Management Plan 1.14.14 Water Quality OEMP Element 14	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.5 – Construction 2.6 – Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.23	Maintenance Dredging Report prepared by Hyder Consulting Executive Summary	Conflicting statement It is unclear whether the land-based backhoe or the cutter-suction dredge is considered the preferred (and final) option.	It is recommended that the final method of dredging be clearly stated and justified in the EIS.	Volume 7 Appendix 18 Maintenance Dredging Report prepared by Hyder Consulting 1.0 Executive Summary	The preferred method of maintenance dredging as outlined in the Dredging Report (volume 7 Appendix 18) as identified in the executive statement is through use of a cutter-suction dredge. The report does note various techniques are considered with various options. Upon favourable consideration of the proposal and identification of the approved concept all management plans would be reviewed and updated as necessary to reflect any conditions of approvals and minor amendments. A management plan which addresses this specific aspect would be prepared through subsequent applications.	2.6 – Operation

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.24	Method and Area of Disposal of Dredge Spoil from Maintenance Dredging	<p>Land disposal of dredge spoil from maintenance dredging</p> <p>The various options describe land-based disposal over areas which are currently identified as marine wetlands and fish habitat areas. Refer to Issue 10.</p> <p>Loss of marine habitat for this purpose is not discussed under Section 6.0 Alternative Methods of Dredge Spoil Disposal and Beneficial Reuse Options.</p>	Refer to Recommendation 10	3 Method and Area of Disposal of Dredge Spoil from Maintenance Dredging	<p>The Supplementary Preferred Master Plan identifies an area to be utilised for onsite dredge spoil disposal. A Supplementary Social and Economic Impact Assessment has been undertaken and is contained within Volume 2, Appendix 6.</p> <p>Discussions with DAFF have occurred, and an addendum Offset Options Report has been prepared and is contained within Volume 2, Appendix 4 of this SEIS.</p>	<p>2.2 – Master Plan</p> <p>2.3 - Offsets</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.3 – Nature Conservation</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p> <p>Appendix 4 – Addendum Offset Options Report</p> <p>Appendix 6 – Supplementary Social and Economic Impact Assessment</p>
9.25	Water Quality Monitoring	<p>Potentially inadequate Water Quality Release Criteria</p> <p>Refer to previous comments made for determining COPC in dredge spoil (Issue 14).</p>	Refer to relevant components of Recommendation 14.	4 Water Quality Monitoring	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>2.4 – Project Approvals</p> <p>3.4 – Water Resources</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
	General Comments	<p>General Comments</p> <p>In its current form the EIS did not demonstrate that all of the potential environmental risks associated with the proposal 'can' and 'will' be managed appropriately. Some risks such as those associated with air quality may be able to be managed through the implementation of best practice and appropriate air control technologies. However, in practice, other impacts, such as those associated with noise, are more difficult to manage and despite the use of mitigation measures; at times cannot be managed to an acceptable level. For this reason, EHP requires that the proponent supply an adequate level of detail up front to determine whether the objectives of the EP Act and its subordinate legislation can be complied with.</p>		<p>PART 2: ENVIRONMENTALLY RELEVANT ACTIVITIES (ERA's) General Comments</p>	<p>As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue. Aspects raised in the agency comment relate to various future applications and potential management issues arising from yet determined land uses.</p> <p>The EIS demonstrates that a range of issues have been considered in the development of the Master Plan and it has inbuilt various design features such as setbacks, built form requirements and a suite of management plans to ensure environmental impacts are able to be managed.</p> <p>These reports and plans are intended to be amended / adjusted to accommodate the final approved plan, temporal changes and reflect future actions and land uses on site.</p>	<p>2.4 – Project Approvals</p> <p>2.6 – Operation</p> <p>3.2 – Land</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.26	ERA 49 – Boat Maintenance and Repair activities (and associated marina-related activities) - Air	Air The air impact assessment presented in the Air Quality Assessment does not demonstrate the likely impacts of the proposed facility on the surrounding environment, nor how any impacts will be mitigated to achieve compliance with the EP Act with regards to managing environmental harm, or to the EPP Air	That the EIS be revised to: • correctly identify the full range of air emissions and potential impacts from the proposal, including cumulative impacts • provide details on the proposed air control measures to be implemented at the site and supply evidence demonstrating that appropriate measures can and will be implemented to achieve the Air Quality Objectives and compliance with the EP Act. The following additional information is required: 1. Updated ambient air quality monitoring conducted in close proximity to the proposed site and the resulting maximum background concentrations of each contaminant; 2. The location and description of each air emission discharge point (point source and fugitive); 3. Description of all potential air contaminants and their expected concentrations; 4. Quantity of each contaminant released each day; 5. Rate of release of each contaminant; 6. Detailed description of the best practice pollution control equipment (including stack release points, emission exit velocity and heights) proposed for the activity; 7. Air dispersion modelling investigating the effectiveness of the proposed pollution control equipment. Modelling must account for existing ambient, projected ambient based on 100% occupancy of existing boat maintenance and repair facilities adjacent to the site, and 100% occupancy of the proposed boat maintenance and repair facilities; 8. An assessment of the likely impact of the air emission discharges to the environment (sensitive receptors and natural environment).	ERA 49 – Boat Maintenance and Repair activities (and associated marina-related activities)	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue. An amended Air Quality Assessment has been undertaken and contained within Volume 2, Appendix 10.	2.4 – Project Approvals 2.6 – Operation 3.2 – Land 3.10 – Emergency Response Plans and Environmental Management Plans Appendix 10 – Air Quality Assessment

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.27	Noise	The EIS does not demonstrate that noise attenuation / control measures will be effective in achieving the acoustic quality objectives stated within the EPP Noise 2008. The information provided is inadequate for EHP to assess an application for ERA 49.	That the EIS be revised to include evidence demonstrating that appropriate measures can and will be implemented to achieve the Acoustic Quality Objectives. Thus would include: 1. Detailed description of the industry proposed at the site including location of each industry and the type of noise generated by each; 2. Detailed description of each noise source including overall sound power level in dB, preferably in octave bands with centre frequencies 31.5Hz to 8kHz; alternatively, the operation sound pressure level in dB(A) and octave bands at a specified distance is acceptable 3. Hours of operation for each industry / noise source; 4. The specific noise attenuation devices to be used for each industry; 5. Updated acoustic modelling and assessment demonstrating that the acoustic quality objectives will be met through the adoption of the proposed noise attenuation measures. Note that that the assessment should consider the impact of increasing background noise levels with respect to the anticipated increase in occupancy of the adjacent facilities, as well as the proposed facility.	ERA 49 – Boat Maintenance and Repair activities (and associated marina-related activities)	As acoustics are dependent upon individual land uses. As such, this information will be provided at the DA phase. As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.4 – Project Approvals 2.6 – Operation 3.2 – Land 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.28	Water	Stormwater Management Plan	<p>That the EIS be revised to include:</p> <ol style="list-style-type: none"> 1. Identification of all water quality contaminants associated with boat maintenance and repair activities (including all chemical contaminants associated with the activity); 2. Baseline study (18-24 months) for existing water quality adjacent to the site. The baseline study should include all contaminants of concern with respect to activities conducted at the site; 3. Proposed pollution control equipment to be installed to prevent the release of contaminants (or minimise the release if prevention is unachievable); 4. Location, quantity, and concentration of each contaminant proposed to be released including: <ul style="list-style-type: none"> • rate of release of each contaminant; and • maximum and background concentrations of each contaminant. 5. Location (including a plan) of the discharge points specifically related to boat maintenance and repair activities; 6. Where it is proposed that contaminants (water discharges other than clean uncontaminated stormwater) are to be released to the environment from the boat maintenance and repair facility, an assessment should be undertaken to determine the impact of those contaminants on the environment. 7. Monitoring regime proposed for contaminants released to waters in association with boat maintenance and repair facility. 	ERA 49 – Boat Maintenance and Repair activities (and associated marina-related activities)	This submission is land use specific and as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>2.4 – Project Approvals</p> <p>2.6 – Operation</p> <p>3.2 – Land</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.29	Waste	That the EIS be revised to provide more detail on the management (collection, treatment, storage, removal and disposal) of wastes generated from ship building and boat maintenance / repair industry / operation of the marina.			This submission requests details that are land use specific and will be addressed through subsequent development applications and ERAs.	2.4 – Project Approvals 2.6 – Operation 3.2 – Land 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.30	ERA 8 – Chemical Storage	ERA 8 - Chemical storage	<p>Detailed information is required regarding the storage of fuels and chemicals at the site including:</p> <ul style="list-style-type: none"> • Type and quantity of materials stored; • Location of chemical / fuel storage facilities; • Details on the site's proposed refuelling facility; • Storage facility details, including bunding, roofing, maintenance, compatibility of chemical stored etc; • Type, operation and location of spill response kits to be deployed at the site; • Details of unloading / loading areas – including the type of spills capture system. The EHP recommends that all unloading areas are bunded to contain and potential spills in the event of an incident; • Emergency management system for fuel / chemical related incidents including but not limited to fire, flood, spills, leaks, tanker roll-over etc; • The site's land-based spill containment system – EHP recommends that the site be designed to include a spills containment system to ensure that all chemical or fuel spills are captured in the event of an incident, to ensure that there is no release of chemicals or fuels to the environment. • The site's water-based refuelling spill containment system (including the spill containment measures used during regular refuelling operations); 	ERA 8 – Chemical Storage	<p>Detail pertaining to chemical and fuel storage is land use dependant, and will therefore be provided at the DA phase.</p> <p>As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>2.4 – Project Approvals</p> <p>2.6 – Operation</p> <p>3.2 – Land</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.31	ERA 16 – Extractive and Screening activities	The projected impacts of the wet excavation indicate that a potential loss of seagrass downstream from the site that may occur due to increased turbidity and release of suspended solids. Details of measures that will be taken to prevent this occurring should be described.	The proponent should describe how it will prevent the release of contaminants to the environment, during both the construction and operational phase of the project. Before EHP can assess ERA applications for the project the proponent will be required to provide information that identifies the potential contaminants to be released to waters; the concentration, location and discharge rates of each contaminant; ambient water quality conditions for each contaminant; water quality control measures to be implemented; assessment of the release of each contaminant on the environment; and evidence supporting that the environmental values of the Coomera River will not be adversely impacted.	ERA 16 – Extractive and Screening activities	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.3 - Offsets 2.4 – Project Approvals 2.6 – Operation 3.2 - Land 3.10 – Emergency Response Plans and Environmental Management Plans Appendix 4 – Addendum Offset Options Report
	General Comments	<p>Comments Regarding Excavation and Dredging Documents</p> <p>Hyder - Environmental Impact Study - Gold Coast International Marine Precinct Maintenance Dredging Report General Comments</p> <ul style="list-style-type: none"> • This document does not contain page numbers. Page numbers need to be inserted. • A plan at the beginning of the document would be useful to outline the proposed location of the maintenance dredging works. • The document is hard to follow and is not clear on what works are being addressed within each section of the document due to the number of options proposed. • Further information is required regarding the management and treatment of acid sulphate soils including the liming rates, mixing methodology and water treatment measures proposed. 		<p>Comments Regarding Excavation and Dredging Documents</p> <p>Hyder - Environmental Impact Study - Gold Coast International Marine Precinct Maintenance Dredging Report General Comments</p>	<p>Aspects raised in the agency comment relate to various future applications and potential management issues arising from yet determined land uses.</p> <p>The EIS demonstrates that a range of issues have been considered in the development of the Master Plan and it has inbuilt various design features such as setbacks, built form requirements and a suite of management plans to ensure environmental impacts are able to be managed.</p> <p>These reports and plans are intended to be amended / adjusted to accommodate the final approved plan, temporal changes and reflect future actions and land uses on site.</p>	<p>2.4 – Project Approvals</p> <p>2.5– Construction</p> <p>3.2 - Land</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.32	ToR	This report addresses maintenance dredging for the internal and external marina. It is unclear as to whether this report addresses both the marina dredging and the navigation channels. Also unclear if the 'navigational channels' are the DTMR declared navigation channels or if the report is referring to the channels from the proposed development to the declared navigational channels of the Coomera River.	Further clarification is required of the matters described.	Section 1.0 Terms of Reference	Section 2.1 of the Maintenance Dredging report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS, defines the area of the internal and external areas requiring maintenance dredging.	2.6 – Operation 3.5 – Coastal Environment
9.33	Area of Dredging	This section refers to plan K124 – AA001578 Construction Sequence Stage 1 – Phase 12. This plan is not attached to the document.	<ul style="list-style-type: none"> - Include the report of the deposition rates for this section of the Coomera River. - provide clarification regarding who will conduct the dredging works for the navigation channels of the Coomera River and who will be responsible for the disposal of the dredge spoil including information regarding who will be responsible for applying for the development approval and registration certificate for these works. 	Section 2.1 Area of Dredging	<p>This detail is provided within the Maintenance Dredging Report prepared by Hyder Consulting contained within Volume 7, Appendix 18 of the EIS.</p> <p>In addition, options for Regional Dredge Spoil sites are presented in The Coomera River Dredge Disposal Options report contained within Volume 6 Appendix 17 of the EIS.</p> <p>However, Regional Dredging activities are unable to be specified through the EIS as the proponent is unable to commit timing and costs to state or local authorities /agencies.</p>	2.6 – Operation 3.5 – Coastal Environment
9.34	Method of Dredging	• Clarification is required as to whether this section refers to the capital dredging or the maintenance dredging.	Provide further information regarding the water quality management measures that will be utilised.	Section 2.2 Method of Dredging	<p>This section is clearly referring to Maintenance Dredging.</p> <p>Capital dredging is discussed within the Construction Methodology Report contained within Volume 5, Appendix 13.</p>	2.5 – Construction 2.6 – Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.35	Method and Area of disposal of dredge spoil from maintenance dredging	Revise the EIS to provide information about risk management of settlement ponds and any contingency plan if the water quality release criteria cannot be met		Section 3.0 Method and Area of disposal of dredge spoil from maintenance dredging	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction 2.6 – Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.36	Flocculation Assessment	The report proposes to use flocculants, aluminium sulphate, in the secondary pond (for the finer material) of up to 100 – 150mg/L.	Provide information on the proposed use of flocculants and consequential impact management for water quality and marine habitats.	Section 5.0 Flocculation Assessment	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction 2.6 – Operation 3.4 – Water Resources 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
	General Comments	<p>General Comments</p> <ul style="list-style-type: none"> • A plan at the beginning of the document would be useful to outline the proposed location of the dredging works. • It is unclear how this document interacts with the Maintenance Dredging Report. • Further detail is required regarding the dredge disposal locations 	The document is hard to follow and is not clear on what works are being addressed within each section of the document.	Hyder - Environmental Impact Study - Gold Coast International Marine Precinct Coomera River Dredge Disposal Options General Comments	<p>The Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility.</p> <p>The EIS presented options for Regional Dredge Spoil sites in The Coomera River Dredge Disposal Options report contained within Volume 6 Appendix 17 of the EIS as it has been identified by local and state authorities a regional dredge spoil site is required for the Coomera River.</p> <p>However, Regional Dredging activities are unable to be specified through the EIS as the proponent is unable to commit timing and costs to State or Local authorities /agencies.</p>	2.2 – Master Plan 2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.37	Executive Summary	The report states that the Pipeline Route and Onsite Facility Evaluation Report addresses the deposition methods associated with the marina sections of the proposed development. It is not clear if these are the same areas addressed in the Maintenance Dredging Report.	Clarification is required of what this report is about.	Executive Summary	Dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment
9.38	Pipeline Route 5 – The Coomera River	The report states that the section of the Coomera River, from the GCIMP to the M1 Bridge, is part of the 'regular maintenance dredging regime'. It is unclear what regime is being referred to. The current DTMR ERA approval for maintenance dredging of the Coomera River extends from the mouth of the Coomera River to Sanctuary Cove only.	Further information is required regarding how the pipelines will be managed to ensure that the pipelines do not fail during pumping of slurry to the deposition location.	Section 1.5 Pipeline Route 5 – The Coomera River	Comments relate to potential external works and regional dredging operations. The department requests the proponent to confirm clarify what various Departments' Government, State and Local Government and associated bodies (GCWA) have been unable to coordinate or agree upon. The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment
9.39	Coomera River Stage Pumping System	EHP's preference would be to keep any clean sand suitable for beach nourishment within the active beach system. It appears that this report only addresses piping dredged material off site.	Please provide clarification whether this report addresses dredging works for the entire 20km section. In addition, provide information regarding DTMR / GCCC involvement in these proposed works.	Section 2.0 Coomera River Stage Pumping System	Comments relate to potential external works and regional dredging operations. The department requests the proponent to confirm clarify what various Departments' Government, State and Local Government and associated bodies (GCWA) have been unable to coordinate or agree upon. The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.40	Dredge Spoil Deposition – Sand Resource Area	Further information is required regarding the Sand Resource Area in Coomera. Please provide information regarding whether this site has an ERA in place for the proposed extraction of 700,000m3 of material.		Section 2.4 Dredge Spoil Deposition – Sand Resource Area	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>
9.41	Hart Street Lake Disposal	This report assumes that all relevant approvals are in place for the proposed operation at Hart Street.	Further investigations required	Section 3.0 Hart Street Lake Disposal	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.42	Hyder Dredge and Spoil Study - Scope & Methodology	Stage 2 – Preferred Pipeline Route Selection refers to drawing R016 in Appendix C. This plan does not appear to be attached.	Provide plan	Hyder Dredge and Spoil Study Section 2.6 Scope & Methodology	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>
9.43	Pipeline to existing Neumann's Sand Washing Facility	Insufficient detail regarding the location of the pipeline within the Coomera River particularly in relation to the navigation channel and the banks of the river?	Provide more detail	Section 5 Pipeline to existing Neumann's Sand Washing Facility	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.44	Spoil Treatment and Disposal	The report assumes that the material requiring disposal is uncontaminated material and this material is to be deposited at landfill. Where the material is deemed uncontaminated, could there be a more appropriate location that will accept the material, other than landfill.	Further investigation is required.	Section 7.9 Spoil Treatment and Disposal	Appropriate treatment of material will be undertaken, and detail pertaining to the suitability for use as landfill will be determined during the DA phase.	2.2 – Master Plan 2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.45	Conclusion and Recommendation	The report states that the preferred pipeline route is Route 4 – Nautical Edge. In section 3.1.4 it states that the pipeline follows Kerkin Road to Pimpama River. There is no information regarding where the material to be placed once it reaches Pimpama River. It is assumed that it is not being placed into the Pimpama River.	Further information must be provided regarding the disposal location. RJ Robbins & Associates Coomera River Stage Pumping System – System Proposal Please provide further information regarding how this document relates to the proposed works.	Section 8 Conclusion and Recommendation	At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent. As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.46	Dredge Methodology & Recommendations	The report states that the dredge spoil will be pumped ashore to the disposal site during the evening.	Details are required regarding the noise mitigation measures to be implemented in order to meet the Acoustic Quality Objectives of the EPP Noise 2008.	RJ Robbins & Associates Coomera River Stage Pumping System - System Proposal 3.0 Dredge Methodology & Recommendations	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>
9.47	System Design & Description	Details are not provided regarding whether the dredged material is treated for ASS or only the waste water from the processing is treated.	Provide details	4.0 System Design & Description	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility.</p> <p>Appropriate treatment of material will be undertaken, and detail pertaining to ASS management will be determined during the DA phase.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.2 - Land</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.48	Hyder – Environmental Impact Study – Gold Coast International Marine Precinct Construction Methodology Report	Table 5 -1 Preliminary Bulk Earthworks Volumes	Please provide information regarding whether all material excavated during the preliminary bulk earthworks phase will be used as fill on the site. If not, provide further information regarding the quantity of material proposed to be sent off site or disposed of in any other way.	Hyder – Environmental Impact Study – Gold Coast International Marine Precinct Construction Methodology Report	<p>As identified within the Construction Methodology Report contained within Volume 5, Appendix 13 of the EIS, it is intended to utilise all excavated material as fill on site. However, the extent of the fill to be utilised will be dependent upon the suitability of the fill.</p> <p>This issue will be addressed through subsequent development applications.</p>	2.5 – Construction
9.49	Internal Marina (Dry Excavation)	The report states that sheet piling will be used as the bund for the dry excavation however sheet piling will not be used for the construction of the internal marina.	Please provide information detailing why sheet piling will not be used in this instance.	Section 5.4.2 Internal Marina (Dry Excavation)	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.50	River Widening and External Marina	Silt curtains are proposed to be used for the river widening and external marina. Plan K114-AA001578 in Appendix B depicts silt curtains across some sections of the proposed dredging operations.	Please provide information and justification as to why silt curtains are not proposed to the east of the dredge works. In addition, information is requested regarding the specifications of the silt curtains including the curtain material, the depth of the curtains and the durations that the silt curtains will be in place post-extractive works. In addition, should turbidity be an issue during the dredging works, measures proposed to manage the water quality within the section between the works and the silt curtains should be described.	Section 5.5.1 River Widening and External Marina	The detail of information requested within this submission is unable to be provided at the EIS stage and will be addressed through subsequent development applications. Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction
9.51	Hyder – Environmental Impact Study – Gold Coast International Marina Precinct Site Based Management Plan (SBMP – Operational) - Maintenance Dredging	No information is provided regarding the control of dust from the screening / stockpiling / transferring of extracted material.	Provide information on dust control and information regarding noise mitigation measures proposed for the screening plant/s.	Hyder – Environmental Impact Study – Gold Coast International Marina Precinct Site Based Management Plan (SBMP – Operational) Section 1.14.19 Maintenance Dredging	Detail pertaining to dust control etc. resulting from extracted material is contained in the Environmental Management Plan (EMP - Construction) contained within Volume 5, Appendix 14 of the EIS. Further detail can be provided concurrent with a future OPW application. Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
9.52		The SBMP states 'maintenance works shall be undertaken during daylight hours' however within the Coomera River Stage Pumping System – System Proposal prepared by RJ Robbins and Associates states that the dredge spoil will be pumped ashore to the disposal site during the evening.	Please clarify when these works are expected to be undertaken.	1.14.19	The EIS presented options for both onsite dredge spoil and a range of regional dredge spoil sites. At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility. Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.2 – Master Plan 2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.53		The SBMP states that silt curtains will be used during maintenance dredging.	Please clarify what management or mitigation measures will be utilised to prevent and/or minimise the release of contaminants to waters during maintenance dredging.	1.14.19	Detail pertaining to specific construction techniques is to be detailed concurrent with a future OPW application. Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans
	General Comments	<ul style="list-style-type: none"> The EIS does not provide full mapping of tidal limits. Reports are mostly tailored to the Masterplan option, and lack detail on the alternative options. 	<ul style="list-style-type: none"> Overall, from the information presented in the EIS, it is evident that 'Alternative 3' will have the least adverse impacts on coastal resources and values and is therefore EHP's preference considering coastal management. 	Part 3: Coastal Protection and Management ACT 1995 and Subordinate Legislation	The site is within the estuarine environment of both the Coomera River and Oakey Creek. Preference is noted.	2.4 – Project Approvals 3.5 – Coastal Environment 3.10 – Emergency Response Plans and Environmental Management Plans

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.54	Coastal hazards and erosion prone area	It is the department's position that coastal hazards areas must be retained undeveloped wherever possible, and vulnerability to future sea level rise must be appropriately considered. The proposed development will increase the intensity of development in areas at risk from coastal hazards, which is generally not supported.	Revise the EIS to include information that: <ul style="list-style-type: none"> Indicates the position of the erosion prone area in relation to the development footprint, pre- and post-construction; Thoroughly details the risk of coastal hazards impacts at the site in the construction and operational phases; and Details coastal hazards mitigation measures during the construction and operational phases, and demonstrates that these are suitable for the development and can withstand the predicted coastal hazards impacts for the site. 	Coastal hazards and erosion prone area	<p>The site illustrates the minimum 40m setback as required through the erosion prone area mapping, is provided within the Hazard Risk Report contained within Volume 10 Appendix 38 of the EIS. Further to this, as explained within the Terrestrial Flora and Fauna Assessment prepared Planit Consulting Pty Ltd contained within Volume 4, Appendix 8 of the EIS, the minimum dimension was derived from the former the State Coastal Management Plan—Queensland's Coastal Policy which was repealed and replaced by the Coastal Plan 2012.</p> <p>The former Queensland Coastal Management Plan mapping required setback is noted as segment 2700 which identifies Mean High Water Springs (MHWS) +40m as the required setback. MHWS generally reflects top of bank along Oakey Creek and thus a 40m setback from top of bank was adopted. Ancillary and support access roads, pedestrian linkages and open space occur adjacent to this minimum buffer and are within the Coastal Plans coastal management district.</p> <p>It is important to note that the subject site is situated within a designated Waterfront Industry area under the GCCC Planning Scheme that was reviewed by State Government's as part of its adoption process. In addition, the site is within a designated Maritime Development Area under the Queensland Coastal mapping which is intended to provide certainty for marine related developments. The Supplementary Preferred Master Plan is generally consistent with the Maritime Development Area</p> <p>It is therefore considered that DEHP's comment is inconsistent with the relevant State and local plans.</p>	<p>2.4 – Project Approvals</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.55	Nature Conservation General	Much of the impacts on coastal resources and values from the development are associated with the proposed extent of land and vegetation removal at the site. There is no adequate justification in the draft EIS documents for this proposed extent.	<p>That the EIS is revised to address the:</p> <ul style="list-style-type: none"> • Many of the surveys whose results contributed to the Aquatic Ecology and Terrestrial Flora and Fauna reports were undertaken a number of years ago. Information must be submitted with the EIS demonstrating that the results of these surveys are relevant to the present-day site; • The EIS must demonstrate that the surveys are sufficiently representative of the values associated with the site across all seasons. It is noted that in the Matters of National Environmental Significance report it is stated that the entire seasonal fauna assemblage is unlikely to be recorded, however no draft EIS documents justify that the survey periods are suitable for their intended purposes; • A report prepared by a suitably qualified professional must be submitted with the EIS which quantifies the relative overall impacts on coastal ecological and biodiversity values (aquatic and terrestrial) from the Masterplan proposal and all alternatives. This must consider impacts at the site, as well as neighbouring areas (for example, a large section of land situated immediately to the north of Oakey Creek is land that is due to be dedicated to the State, under the trusteeship of Gold Coast City Council, and managed as a coastal management reserve). This must consider the findings of all relevant studies and recommendations; • The EIS should demonstrate that adverse ecological and biodiversity impacts, at the site and at neighbouring areas, have been prevented as far as possible in the design of the proposed development. Where impacts cannot be avoided, a thorough justification must be provided demonstrating that avoidance was considered but is not feasible; and • Where impacts cannot feasibly be avoided, the EIS must demonstrate that all impacts, at the site and at neighbouring areas, will be suitably mitigated and offset (see next section) to achieve a net gain in coastal resources and values. The EIS must demonstrate consideration for the following: 	Nature Conservation General	<p>Surveying was conducted over an extended period, seasons and years which provides a more comprehensive assessment approach to determining the occurrence of fauna utilising the site. The report supplements this surveying with additional surveys / investigations and reports, prepared by others including the GCCC, specific to the immediate and local environment.</p> <p>The report identifies that the site is removed from terrestrial corridors by infrastructure, existing development and waterways restricting and removing opportunities for movement through the site. The surveying and regional ecosystem mapping illustrates the site has been significantly modified limiting the potential diversity and abundance of terrestrial species on site. In this regard it is considered additional surveying would not significantly increase species likely to utilise the site. It is acknowledged highly mobile species i.e. aves flying mammal recordings would increase.</p> <p>The significance of the site to these is again influenced by available habitat and site activities. The MNESR does identify that for species listed under the EPBCA Surveying undertaken is considered to be generally consistent with the various guidelines under the EPBCA Act.</p> <p>The third point relates to 'overall' impacts' including neighbouring sites. The Terrestrial and Aquatic Report, quantifies impacts on and off site with the options and focus on the preferred Master Plan no further reports are proposed. Discussions with DAFF on offsets and fisheries matters are ongoing.</p> <p>In relation to points 4 and 5, as identified offsets have been subject to ongoing discussions with terrestrial offsets to be delivered through aquatic offsets.</p> <p>An addendum Offset Options Report is contained within Volume 2, Appendix 4 of the SEIS and Appendix 5 contains the Coomera River Tidal Weir Fish Ladder Costings.</p>	<p>2.3 - Offsets</p> <p>3.3 – Nature Conservation</p> <p>Appendix 4 – Addendum Offset Options Report</p> <p>Addendum 5 – The Coomera River Tidal Weir Fish Ladder Costings</p>
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Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.56	Ecological Offsets	The offsets report provided with the EIS does not demonstrate that coastal values and resources lost by the development can and will be appropriately offset. The EIS does not seek to offset values in local areas, and/or consider why this is not feasible. The EIS does not provide any detail as to how the offset will be achieved at the proposed offset site.	It is recommended that the EIS is revised to provide a suitable offset strategy that meets the requirements of the Queensland Biodiversity Offset Policy and specifically address: <ul style="list-style-type: none"> • options for local offsets • coastal resource (not just marine plants) offsets • offset management including during the initial rehabilitation/offset and ongoing maintenance phases 	Ecological Offsets	Discussions have been held with DAFF and GCCC to revise and secure appropriate offsets as necessary. An addendum Offset Options Report is contained within Volume 2, Appendix 4 of the SEIS and Appendix 5 contains the Coomera River Tidal Weir Fish Ladder Costings.	2.3 - Offsets 3.3 – Nature Conservation Appendix 4 – Addendum Offset Options Report Addendum 5 – The Coomera River Tidal Weir Fish Ladder Costings

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.57	Buffer to Oakey Creek	The most critical component of nature conservation at the site is establishment and management of an appropriate buffer at the site. It is evident that the proposed development does not allow for a buffer to the Coomera River. Therefore, the buffer to Oakey Creek must be demonstrated as suitable in achieving the desired ecological outcomes for the site. The EIS failed to demonstrate that the buffer will be appropriately rehabilitated and managed into the future. The EIS must address how the buffer will be rehabilitated initially, how it will be maintained into the future and by whom the maintenance and management will be undertaken.	<p>It is recommended that the following points are addressed in the EIS documents:</p> <ul style="list-style-type: none"> • No information is provided in the draft EIS as to why only two buffer scenarios (40 metres in the Masterplan, and alternatives 1 and 2; and 100 metres in alternative 3) have been described. Justification for these buffers is insufficient. The following points must be addressed in the EIS: <ul style="list-style-type: none"> o Describe whether any other alternative buffer scenarios are suitable for the site. This must consider the width of the buffer, as well as its configuration. For example, a buffer of less than 100 metres width that has a greater length of frontage to Oakey Creek (i.e. reduce area of land to be removed from the Oakey Creek/Coomera River confluence) may be more suitable than the option presented in alternative 3; o Demonstrate the relative ecological costs and benefits associated with all buffer scenarios; and o Demonstrate that the findings and recommendations of all aquatic and terrestrial reports were integrated and considered in the design of the buffer. • Demonstrate that the proposed buffer scenarios meet the desired outcomes under the Coastal SPRP (or other relevant policies in force at the time). Specifically, the buffer must be of sufficient width to provide for a self-sustainable linked network. The width of the corridor must be determined from the size, values and functions of the vegetation and the nature of potential threats to its functions and integrity from the proposed development. The width must be sufficient to maintain bank stability, water quality, maintain aquatic and wildlife habitats and movement corridors for native animals, and long-term viability of existing isolated stands of vegetation. 	Buffer to Oakey Creek	Please refer to relevant sections of the SEIS for a response to this submission item, particularly Sections 2.2.5, 3.2.6 and 3.3.4.	<p>2.2 – Master Plan</p> <p>2.4 – Project Approvals</p> <p>3.2 - Land</p> <p>3.3 – Nature Conservation</p> <p>3.5 – Coastal Environment</p> <p>Appendix 6 - Supplementary Social and Economic Impact Assessment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.58	Fauna boxes	There are a range of differing commitments for the application of fauna boxes throughout the EIS.	<p>Revise the EIS to address the following:</p> <ul style="list-style-type: none"> • Identify the number of fauna boxes required and justify this number under the recommendation of a suitably qualified ecologist for the entire buffer area and for specified areas within the buffer. Ensure these numbers are consistent throughout the EIS. This information should be contained within the Vegetation Management Plan (see below) • Specify the types of fauna boxes to be used and for which species they are intended • Specify and justify the location of the boxes within the buffer area (include maps/diagrams describing the positioning of these fauna boxes) • Identify ongoing management of the boxes to ensure that their function is maintained. 	Fauna boxes	<p>This issue is more relevant with subsequent development applications i.e OPW (Change to Ground Level) where impacts (removal of hollows) would occur. It should be noted that nest box installation was adopted as an approach to increase the sites faunal diversity.</p> <p>As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>3.3 – Nature Conservation</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.59	Vegetation Management Plan	Vegetation Management Plan in Section 2.9 of the Open Space Management Statement is not suitable to ensure efficient and comprehensive management of the open space system, particularly the buffer area.	<p>That the Vegetation Management Plan is prepared by a suitably qualified and experienced person and that it contains the following:</p> <ul style="list-style-type: none"> • Define all project tasks, how each task will be carried out and the duration of each task; • Clearly demonstrate that due consideration has been given to the results and recommendations of the aquatic and terrestrial surveys in the design of the buffer's management; • Identify each person/party responsible for the carrying out of each of the identified tasks; • Contain a clear time frame in which all tasks are to be carried out; • Details on all vegetation species to be used in revegetation/rehabilitation and justification for selection of these species. Demonstrate that the buffer area will be appropriately rehabilitated to its Regional Ecosystem (i.e. not necessarily RE 12.3.5 through the entire buffer); • Include maps/diagrams with a description of the existing vegetation to be retained and that to be removed, proposed revegetation and rehabilitation areas, vegetation zoning and sediment and erosion controls. • Describe the planting program/method and detail how the planting will be staged; • Describe how the different stages of the development will affect the identified existing fauna at the site, and mitigation measures to be put in place to reduce disturbance and retain fauna within the open space system; • Describe the site and vegetation maintenance program, including sediment and erosion control measures (specifically within the foreshore area), watering, replacement of plant losses; weed and pest control and disease and insect control. • Describe how the site will be protected from disturbance (for example; public access, vandalism, fire etc.) • Describe the monitoring and review process for the site and the criteria against which the success of the rehabilitation will be measured; • Prepare a costing for the implementation of the plan. 	Vegetation Management Plan	<p>This issue is more relevant with subsequent development applications i.e OPW (Change to Ground Level) application</p> <p>Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>3.3 – Nature Conservation</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
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Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.60	Open Space Management	<ul style="list-style-type: none"> Identify each stage of management for the open space system and the person/s responsible for each stage of management (this should be contained within the Vegetation Management Plan); and Provide evidence of council's acceptance of 'on maintenance' of the open space system, and the responsibility of council in relation to this maintenance. 		Open Space Management	<p>Volume 11 Appendix 40 of the EIS provides a comprehensive Open Space Management Plan addressing the points raised and is able to be approved.</p> <p>Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>2.10 – Rehabilitation</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.61	Public Use Land for coastal management purposes	Proponent should discuss options for surrender of Public Use Land for coastal management purposes with the appropriate agencies and report on options or decisions in a revised EIS.		Public Use Land for coastal management purposes	A 40 metre setback to Oakey Creek will be surrendered for public use land.	<p>2.2 – Master Plan</p> <p>2.4 – Project Approvals</p> <p>3.2 – Land</p> <p>3.3 – Nature Conservation</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.62	Fauna and Flora	Revise the Aquatic Ecology Report	<p>Revise the EIS to address:</p> <ul style="list-style-type: none"> • The Aquatic Ecology report recommends the forming of a marine vertebrates management plan. If this is to be incorporated in the development, this plan must be included in the EIS • The Aquatic Ecology report states that the construction of the internal marina may have a positive ecological impact through the provision of new habitat. The EIS should justify that statement and if appropriate quantify the relative benefit of such provisions, in relation to the adverse impacts associated with the development • The Terrestrial Flora and Fauna report discusses that a noise management plan for marine mammals should be developed. If this is to be incorporated in the development, this plan must be included in the EIS. • The Terrestrial Flora and Fauna report mentions that vessel speed will be restricted to mitigate impacts on fauna, however no information is provided as to how this will be achieved. Further information about how this will be achieved must be included in the EIS. • The Terrestrial Flora and Fauna report states the marine plants and seagrass communities will be monitored before and after dredging to determine the level of impacts and whether remediation needs to be implemented. No information is provided as to how this will be achieved. To demonstrate this as a feasible mitigation measure, the EIS must provide the following information: <ul style="list-style-type: none"> o How the monitoring will be undertaken; o By whom the monitoring will be undertaken; o The frequency of monitoring; o The criteria against which the need for remediation will be assessed; o What remediation measures will be implemented; 	Fauna and Flora	<p>This issue is more relevant with subsequent development applications i.e OPW (Change to Ground Level) application</p> <p>Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>3.3 – Nature Conservation</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
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Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.63	Water quality management	<p>It is recommended that the following points are addressed in the EIS documents:</p> <ul style="list-style-type: none"> Decreasing the requirements for maintenance dredging as far as possible is a key component of minimising adverse ecological impacts. From the EIS documents, it is clear that alternative 3 will have the lowest amount of maintenance dredging of the four options presented. The EIS must justify the amount and impacts of the maintenance dredging required for the proposed development. This should consider the relative impacts of the Masterplan and all alternatives; The Aquatic Ecology report states that, to mitigate impacts of the development on aquatic ecological values, the design of the internal marina must ensure adequate flushing in order to maintain water quality. Further information demonstrating how the water quality in the internal marina will be maintained at a high level to support aquatic ecological values must be provided in the EIS. The EIS must demonstrate that the environmental values and water quality objectives of the Coomera River will not be adversely affected, as per the Environmental Protection (Water) Policy 2009. 		Water quality management	<p>This issue is more relevant with subsequent development applications i.e. OPW (Change to Ground Level) application</p> <p>Furthermore, as outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>2.5 – Construction</p> <p>2.6 - Operation</p> <p>3.3 – Nature Conservation</p> <p>3.4 – Water Quality</p> <p>3.5 – Coastal Processes</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.64	Dredging and dredge spoil disposal options	<p>The dredging disposal options report provided in the draft EIS considers 8 options for the disposal of dredge spoil.</p> <p>It is the department's preference that, as far as possible, dredge spoil is maintained in the active sediment transport system of the Coomera River. The draft EIS documents fail to demonstrate that maintaining the spoil within the active sediment transport system was considered.</p>		Dredging and dredge spoil disposal options	<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.65	Public access to the foreshore	It is recommended that the following point is addressed in a revised EIS: • Describe whether the proposed development will facilitate public access to the foreshore.		Public access to the foreshore	<p>As discussed within various sections of the EIS, public access to the new foreshore area is contemplated within the Northern Precinct. The Landscape Master plan contained within Volume 10, Appendix 35 of the EIS demonstrates how public accessibility to the foreshore will be achieved through the provision of pathways, boardwalks and viewing decks.</p> <p>A proposed public access pedestrian zone will be constructed along the riverfront, providing a landscaped promenade alongside the marina. In addition, the Oakey Creek buffer natural vegetation zone has a perimeter 'corso' road alongside providing continuous public amenity access to the creek bank.</p> <p>It is considered the project has placed significant emphasis on ensuring public accessibility to the foreshore is maintained if not advanced through specific design provisions within the GCIMP.</p>	<p>2.2 – Master Plan</p> <p>3.2 – Land</p> <p>4 – Social Values and Management of Impacts</p>
9.66	Coastal Processes Study	It is noted that the coastal processes study has been based on the master plan for the development presented in Appendix A of the report. However, there are three other alternative versions of the master plan presented in other studies associated with this EIS.	The proponent is requested to justify why a similar level of assessment has not been undertaken for the alternative proposals associated with this development.	Coastal Processes Study	<p>The Coastal Processes Report prepared by BMT WBM contained within Volume 8, Appendix 27, demonstrates that impacts arising from the preferred master plan are minimal or not discernible from natural process.</p> <p>Given all other options pose less development than the Master Plan no further detailed assessment was considered relevant.</p>	3.5 – Coastal Environment
9.67	Coastal Process Study	The proponent is requested to quantify the erosion risk for the banks of Oakey Creek adjacent to Lot 1 on SP150729 and Foxwell Island and the preferred option for mitigating the erosion.		Coastal Process Study	Section 2.4 of the Coastal Processes Report prepared by BMT WBM contained within Volume 8, Appendix 27 addresses this issue.	3.5 – Coastal Environment
9.68		The proponent is requested to demonstrate compliance of the development with the SPRP.		Section 1.3	Compliance with the SPRP can be provided within the DA phase.	<p>2.4 – Project Approvals</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.69	Revetment Walls	Demonstrate that revetment walls have been designed so as to dissipate wave energy and minimise wave deflection as much as practicable.		Revetment Walls	Detail design issues are to be addressed through subsequent OPW (Civil) application.	2.5 – Construction
	Overview	<p>The assessment is lacking direction and method. It appears unclear if the objective of this assessment is to determine the likely aggregate noise impact on sensitive receptors from the development, or the noise impact from each individual noise source.</p> <p>While the marina precinct will inherently exhibit a number of noises generated by various activities in its normal operation, the noise assessment presented has not considered more than one noise source at a time. It is recommended that likely noise sources should be assessed simultaneously to obtain a representative noise level at sensitive receivers.</p>		Part 4 Noise and Vibration	<p>The submitted Noise and Vibration Assessment, contained within Volume 10 Appendix 34 of the EIS, states acoustic assessment, assumptions have been made in relation to the activities that may be carried out on the premises in addition to noise sources that may be associated with the development.</p> <p>The assessment has identified the relevant acoustic requirements for subsequent evaluations of individual development applications.</p> <p>These future applications would identify the use noise sources and any attenuation required. As outlined above amended management plans, which address this specific aspect are to be prepared through subsequent applications would address this issue.</p>	<p>2.4 – Project Approvals</p> <p>3.7 – Noise and Vibration</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.70	Marine Life	If turtle, dugong and/or dolphin inhabit the area, an underwater noise assessment will be required to provide the contractor with the correct protocol for piling operations.	This would involve a monitoring as well as mitigation methods such as bubble curtains around the pile driving and ramping up procedure.	Section 12 Marine Life	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>3.3 – Nature Conservation</p> <p>3.7 – Noise and Vibration</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
9.71	Noise and Modelling inputs	Clarify by confirming which sections form the content of Section 15. To aid clarity, consider renumbering Sections 16 and 17 to Section 15.1 and Section 15.2 respectively. Most of the document would need similar rework.		Section 15 Noise and Modelling inputs	As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.	<p>3.7 – Noise and Vibration</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
9.72	Noise Modelling - Outline	Is this section missing or are Section 20 and Section 21 the content of this section.	Clarify by confirming which sections form the content of Section 19. To aid clarity consider renumbering sections 20 and 21 to Section 19.1 and Section 19.2 respectively.	Section 19 Noise Modelling - Outline	Point 20 and 21 relate to Noise modelling under the heading of Noise modelling.	3.7 – Noise and Vibration
9.73	Operational Stage Noise Models	It is unclear if Section 20 represents the worse case scenario or a likely scenario based on a similar development. Again it is not clear if the noise assessment consisting of a number of activities running simultaneously or solely activity by activity. The results of the modelling are likely to be different to those sated if all activities were considered simultaneously.	While running a model based on individual activities (or noise sources) may help to determine the effect of one specific activity, in a real situation there will be a combination of several activities. The approach used should consider all activities running simultaneously.	Section 20 Operational Stage Noise Models	Details will be provided with subsequent development applications / ERA's as this issue is land use specific.	2.4 – Project Approvals 2.6 – Operation 3.7 – Noise and Vibration 3.10 – Emergency Response Plans and Environmental Management Plans
10. DEPARTMENT OF COMMUNITIES, CHILD SAFETY AND DISABILITY SERVICES						
10.1	Disability Access	The EIS recognises the inclusion of the access needs of vulnerable groups, such as people with a disability and older people. Disability Services supports these elements and urges further work in some instances	Provide information to ensure disability access throughout the site	General comment	Appropriate access and services will be provided and detailed within subsequent applications.	2.2 – Master Plan 2.4 - Project Approvals 3.2 – Land
11. GOLD COAST CITY COUNCIL						
11.1	Flood	IRTC - Any filling will require a comprehensive flood impact assessment which cannot be part of this current EIS			A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report
11.2	Flood	The massive fill on the site will reduce the creeks conveyance capacity resulting adverse impacts external to the site. Since the response time of the local catchment is much shorter than the Coomera River Catchment, it is apparent that the area adjacent and upstream of the site will be more frequently (adversely) affected by the local catchment floods. Proponent's submitted document does not include any study report for the local catchment flooding.			A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.3	Flood	Modelling files for other alternative layouts are not provided, which are equally important to be assessed prior to making any informed decision Flood impact assessment report did not provide information of flood storage calculations. Council officer did the in-house calculation of storage for the Master Plan layout which shows more than 800 000m ³ loss of flood storage without the IRTC embankment.			Files for the modelling were provided to Council on disk and uploaded to a server by both Planit and BMT WBM. A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report
11.4	Flood	Since the IRTC inclusion, according to submitted model results, is contributing the major part of the total impacts, Council believes it will be too risky for Council to accept the IRTC inclusion on the flood model which is contributing up to 100mm impacts			A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report
11.5		Council did an in-house comparison of the proponents base case model (with IRTC) results with Council's Coomera River model results to determine the impact of the IRTC embankment. The Council officer also determined the impact of the proposed marine precinct development including ITRC in relation to Council's base model. Through this exercise the Council officer determined approximate impacts of the proposed marine precinct only (without IRTC) which is found to be up to 15mm on both side of the Coomera River section between the Pacific Motorway and the Railway Corridor where the Riverlinks development is located. (more than 300 properties will be affected in this area as a result of the proposed development of the Master Plan layout). Many other properties on both sides of the Saltwater Creek will also be adversely affected with similar impacts.			A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report
11.6	Flood	Council will not support any adverse impacts as a result of the proposed development that can cause actionable damage to any private property			This aspect is addressed in detail within Volume 8 appendix 8 in the Floodplain Management report Specifically Section 3.7 and in appendix c of the report which provides correspondence dated 14 August 2012 from Minter Ellison Lawyers.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.7	Flood	From the location of the subject site and considering the proposed marine industry development will result in a significant adverse impact on the Oakley Creek flood characteristics.			A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.	3.1 – Climate and Natural Disasters Appendix 9 - Floodplain Management Addendum Report

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.8	Flood	<p>The proposal has not been examined for the Oakey Creek local catchment flood events. It is worth mentioning that the area of the Coomera River catchment is 442 km², which is significantly larger than the Oakey Creek catchment. As such, it is likely that the proposal will cause more and frequent adverse impacts external to the site from the local catchment flooding. Therefore, Council is unable to accept any flood management report without adequately addressing the local catchment flooding issues.</p> <p>In summary:</p> <ul style="list-style-type: none"> - Council does not accept the flood management report in its current form; - Flood management report and associated modelling should exclude IRTC from base case model and all iteration of developed case models. It is to be noted that IRTC is not part of Council's current Coomera River flood model. - The proposed development has not examined the local catchment (Oakey Creek) floods. - Net loss of flood storage without IRTC embankment is more than 800,000 m³. - The flood report did not quantify the actual impact of the development only. However in-house assessment by Council reveals that the marine precinct alone will causes up to 15 mm afflux external to the site during the regional floods. - The flood report tried to justify the impacts with their own interpretation of Council's flood codes and 'Real Damage' test. However, the ToR (Section 4.1) clearly states that a full description of mitigation measures should be provided for any potential adverse impacts external to the site. The ToR does not refer to any such 'Real Damage' test. - The flood report did not demonstrate how the proposal meets the requirements of Council's Planning Scheme Constraint Code for Flood Affected Areas. 			<p>A Floodplain Management Addendum Report has been prepared by BMT WBM and is contained within Volume 2, Appendix 9. This report addresses this item.</p>	<p>3.1 – Climate and Natural Disasters</p> <p>Appendix 9 - Floodplain Management Addendum Report</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.9	Climate Change	<p>The EIS satisfactorily identifies the meteorological and climate conditions that affect the site and proposed development in accordance with the relevant sections of the ToR.</p> <p>The site is also identified as being at risk from flood and climate change events, such as a sea level rise and inundation from storm surge and storm tide (ie coastal hazards). The risks are categorised as high.</p> <p>The management of risks, however, does not make reference to the water management at the project site.</p>			<p>Risks associated with flood and climate change events have been identified within technical reports provided within the EIS. The Floodplain Management report prepared by BMT WBM contained within Volume 8, Appendix 26, undertook analysis of vulnerability of the proposed development to climate change influences associated with sea level rise and increased rainfall intensities.</p> <p>The report concluded that 100 year ARI designated flood level at the site may increase by up to 0.35 metres at the site, but there is also a reasonable likelihood that it may remain unchanged once the current conservative assumptions are removed and allowances are made for climate change influences.</p> <p>It is considered the issue of climate change risk management and adaptation principles are able to be addressed through subsequent land use applications as the outcomes will be determined by the use proposed.</p>	<p>3.1 – Climate and Natural Disasters</p> <p>Appendix 9 - Floodplain Management Addendum Report</p>
11.10	Climate Change	<p>It is difficult to ascertain if the general adoption of the priority adaptation principles will satisfactorily minimise or reduce risks to a level that satisfies the relevant policy context at a State and local level for the construction and operation of the proposal (which is difficult given that the policy context has changed and will change in the future).</p>			<p>Risks associated with flood and climate change events have been identified within technical reports provided within the EIS. The Floodplain Management report prepared by BMT WBM contained within Volume 8, Appendix 26, undertook analysis of vulnerability of the proposed development to climate change influences associated with sea level rise and increased rainfall intensities.</p> <p>The report concluded that 100 year ARI designated flood level at the site may increase by up to 0.35 metres at the site, but there is also a reasonable likelihood that it may remain unchanged once the current conservative assumptions are removed and allowances are made for climate change influences.</p> <p>It is considered the issue of climate change risk management and adaptation principles are able to be addressed through subsequent land use applications as the outcomes will be determined by the use proposed.</p>	<p>3.1 – Climate and Natural Disasters</p> <p>Appendix 9 - Floodplain Management Addendum Report</p>

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11.11	Geology and Soils		After reviewing the geotechnical report, Council advises that the key geotechnical issues as specified in the ToR have been satisfactorily addressed in the report.		Noted	N/A
11.12	Acid Sulfate Soils	The ASSAMP is requested to detail specific management of high to extremely high levels of CRS. The ASMP by Gilbert & Sutherland did not incorporate the construction methodology as outlined in 7.1.3 Construction of the Aquatic Ecology report by FRC Environmental.	recommended that the ASSAMP be amended to include a discussion and description of the management of the wet and dry excavation construction methodology for the site.		<p>The Acid Sulphate Soils Assessment has been prepared by Gilbert and Sutherland and is included as Volume 10, Appendix 32 to the EIS.</p> <p>It is relevant to undertake additional sampling with future OPW (Change to Ground Level) / ERA 16 applications which would address this issue at that time.</p> <p>The future report would contain management techniques / plans and an appropriate monitoring program.</p>	<p>2.4 - Approvals</p> <p>2.5 – Construction</p> <p>3.2 – Land</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
11.13	Land Use	Council have concerns with the proposed GCIMP Development Plan and Place Code. These concerns are relation to the mixture, location and scale of the proposed land uses, the Code's framework including inconsistencies between the different sections of the proposed Place Code, and the assessment criteria for future development as proposed within the Place Code.	Council recommends modifications be made to planning intent statements		<p>GCIMP Development Code and Plan has been amended.. Not all proposed changes have been accepted.</p> <p>The amended GCIMP Development Code is contained within Volume 1, Appendix 3 of this SEIS.</p>	<p>2.2 – Master Plan</p> <p>3.2 – Land</p> <p>Appendix 3 - GCIMP Development Code and Plans</p>
11.14	Offsets / Setbacks	<p>The major disagreement associated with Section 4.3 Nature Conservation is the proponent's determination to provide a site conservation area based primarily on coastal engineering requirements for a 40m setback to Oakey Creek MHWS. Therefore, the majority of the sites ecological value is offset to Central Queensland.</p> <p>It should be noted that Council will not support a 40m setback to Oakey Creek MHWS even if offsetting was undertaken within GCCC boundaries.</p>	It is considered that a conservation area greater than the proponents preferred 40m wide setback to Oakey Creek is necessary to provide an appropriate level of wetland protection and associated biodiversity values.		<p>Please refer to relevant sections of the SEIS for a response to this submission item, particularly Sections 2.2.5, 3.2.6 and 3.3.4.</p>	<p>2.2 – Master Plan</p> <p>3.2 - Land</p> <p>3.3 – Nature Conservation</p> <p>4 – Social Values and Management of Impacts</p> <p>5 – Economic Values and Management of Impacts</p> <p>Appendix 6 - Supplementary Social and Economic Impact Assessment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.15	Offsets / Setbacks	Council consider that the proponent has determined the conservation area for the site on minimum coastal engineering requirements and not on conservation issues. The determination of offsets for this site should be based on both a balance of ecological protection/restoration requirements and economic requirements. Council requests that local offset is considered in the interest of local community benefit.	Council has conceptual detailed designs for a number of projects. Example of offset marine habitat intertidal work include construction of the Broadwater Parklands Mangrove Wetlands, in conjunction with the State Government.		Discussions have been held with DAFF and GCCC to revise and secure appropriate offsets as necessary. An addendum Offset Options Report is contained within Volume 2, Appendix 4 of the SEIS and Appendix 5 contains the Coomera River Tidal Weir Fish Ladder Costings.	2.3 - Offsets 3.3 – Nature Conservation Appendix 4 – Addendum Offset Options Report Appendix 5 – The Coomera River Tidal Weir Fish Ladder Costings
11.16	Stormwater management		SMP is required to be amended to provide alternative treatment device. Proponent to provide further information to address the outstanding stormwater management issues. Further information is requested.		As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications (OPW) would address this issue.	2.4 - Approvals 3.4 – Water Resources 3.10 – Emergency Response Plans and Environmental Management Plans
11.17	Dredging	The EIS appears to contain conflicting studies on expected sedimentation rates. There is not sufficient grounds to accept Hyder's navigation channel sedimentation rates (20,160m ³ /5 years) relative to the findings of KBR (77,000m ³ /5 years) and Riparian Engineering (~90,000m ³ /5 years) and WBM studies. Sedimentation rates are a key input to determine the appropriate dredging program, scale of facilities and disposal methodology required.			For assessment purposes at the EIS stage, adequate information has been provided . As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications (OPW) would address this issue.	2.5 – Construction 2.6 – Operation 3.5 – Coastal Environment

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.18	Dredge Spoil Material	Hyder also submitted an alternative "Neumann's Dredge Assessment" as an option for pumping dredge spoil up to Coomera River to Neumann's "sand washing facility" at Lot 2 RP82635 and Lot 1 RP199873. It is claimed that a survey of the waterbody has been undertaken and that approximately 610,000m ³ of material can be deposited into the quarry's lake. This survey has not been provided with the study and is necessary information to identify the basis on which this capacity has been determined and the depth at which material will be placed to prevent it re-entering the Coomera River during flood.			<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>
11.19	Dredge Spoil Material	There is a lack of consistency and coordination within the EIS technical studies which makes comparing suggested dredge spoil management options very difficult.	In the absence of sufficient and up to date analysis by the proponent's consultant Hyder, it is recommended that the KBR estimated sedimentation rates continue as the basis for determining the appropriate scale of a dredging and spoil management solution for Zone 2 and 3 of the Coomera River unless further up to date and comprehensive study is undertaken to justify and alternative sedimentation baseline.		<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.20	Dredge Spoil Material	<p>Management of dredge spoil is a significant and increasingly complex issue facing government and private developments in the vicinity. The developer has sought exclusive access to waterfront community parkland (William Guise Foxwell Park) and in term Council has requested that resolving this dredge spoil management issues be facilitated through the EIS for the development.</p> <p>Hyder has provided a high level "Constraints Rating Summary" that considers environmental and social constraints against economic considerations and have included a "constructability" criteria.</p>			<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>
11.21	Dredge Spoil Material	<p>The net benefit assessments outlined by the proponent has not provided sufficient grounds to support a pipeline to Jacobs Well/Norwell over a rehandling facility located at the western precinct of the Gold Coast International Marine Precinct, as a solution to the dredge spoil management issue.</p>			<p>At this time, dredge spoil deposition is proposed to occur onsite. As such, the Supplementary Preferred Master Plan has an area designated for an onsite dredge spoil facility</p> <p>The EIS does provide options for a regional disposal facility at an approved site which operates under various crushing screening ERA's associated with its extractive industry and dredging approvals. This issue is to be resolved by the various Departments/Government not the proponent.</p> <p>As such no further investigation into potential regional dredge spoil facilities will be undertaken until such time it is required.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.22	Dredge Spoil Material	A net present value assessment of the dredge spoil management options put forward by the proponent has not been undertaken as requested. The proponent has included a very high level, NPV evaluation of the master plan development alternatives in the economic report rather than the dredge spoil management options specifically requested in the Terms of Reference.			<p>The Social and Economic Impact Assessment prepared by Norling, Volume 5, Appendix 10, has included an NPV assessment of the master plan development as a whole, as opposed to the dredge spoil management options.</p> <p>In addition, a Supplementary Social and Economic Impact Assessment contained within Volume 2, Appendix 6 of this SEIS has been undertaken to incorporate the Supplementary preferred Master Plan and Alternative Option 6.</p> <p>The Coomera River Dredge Disposal Options prepared by Hyder, Volume 6, Appendix 17 details the various dredge spoil management options. Issue of dredge spoil site requires resolution before additional works to be undertaken.</p>	<p>2.2 – Master Plan</p> <p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.5 – Coastal Environment</p> <p>Appendix 6 - Supplementary Social and Economic Impact Assessment</p>
11.23	Waste	The ToR states that the proposals for waste avoidance, reuse, recycling, treatment and disposal should be described.	<p>Waste management strategies, and the potential impact of all wastes to be generated during construction and operation also should be considered and discussed.</p> <p>The Waste Management Plan submitted with the EIS as has provided sufficient technical details to demonstrate that the proposal meets the relevant waste management requirements.</p>		Noted	N/A
11.24	Air Quality	The report concludes that predicted levels of particles and engine gases are well within acceptable limits.			An amended Air Quality Assessment has been undertaken and is provided within Volume 2, Appendix 10 of this SEIS.	<p>3.6 – Air Quality</p> <p>Appendix 10 – Air Quality Assessment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.25	Noise and Vibration	<p>A noise and vibration assessment report has been prepared by 'Hyder Consulting' dated August 2012. Noise from both the operational stage and construction works has been addressed in the Report. Council Officers have assessed operational noise only.</p> <p>Council assessment found that current background noise levels have not been measured. Previous background noise levels (from 2008) have been used.</p> <p>Given the close proximity of the nearest sensitive receptors, Council is concerned that the separation distance of only approximately 130 metres is not significant enough to prevent noise nuisance.</p>	<p>It is likely that background noise levels would have increased over the last four years therefore providing a conservative assessment.</p> <p>Given the close proximity of existing sensitive receptors, and the predicted borderline compliance with the day-time legislative noise criteria, an amended Report is recommended to be submitted at the application for development permit stage.</p>		<p>This is not considered to be appropriate at the Supplementary EIS phase given that noise generation is dependent upon individual uses.</p> <p>The Noise and Vibration Assessment prepared by Hyder, Volume 10 Appendix 34, will be appropriately updated during the DA phase</p>	<p>2.4 – Project Approvals</p> <p>2.6 – Operation</p> <p>3.7 – Noise and Vibrations</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
11.26	Traffic	Council have assessed the CRG Traffic Impact Assessment and raise concerns			<p>Please refer to the relevant sections of the SEIS for a response to issues raised within submission.</p> <p>In addition, a Traffic and Transport Impact Assessment Addendum report has been prepared by CRG and is contained within Volume 2, Appendix 8 of this SEIS.</p> <p>The report addresses issues raised by GCCC and DTMR.</p>	<p>2.5 - Construction</p> <p>2.7 – Infrastructure requirements</p> <p>3.9 – Infrastructure Impacts</p> <p>Appendix 8 - Traffic and Transport Impact Assessment Addendum</p>
11.27	Hazard and Risk	- An Emergency Action Plan (as outlined in Appendix 15) should be developed as a condition of development , and be expanded from a cyclone plan to an all-hazards plan that covers preparedness and response to ensure safety of tenants and visitors to the site	<p>information provided, Council considers that:</p> <p>- Tsunami events should be considered due to the frequency of marine-based events</p>		<p>The Site Based Management Plan prepared by Hyder, Volume 6 Appendix 15 details Emergency Action Plans.</p> <p>This is to be updated to include tsunami events within future land use applications.</p>	<p>2.4 – Project Approvals</p> <p>3.1 – Climate and Natural Disasters</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.28	Approvals	The Environmental Management Plan generally meets the concepts of the ToR (4.14), however the level of detail required to have a functional EMP is not yet available.	It is strongly recommended that the EMP is not approved as insufficient detail is available at this stage of the process, furthermore, approval of the EMP may conflict and restrain future Management Plans and development concepts.		<p>The EMP prepared by Hyder, Volume 5, Appendix 14 of the EIS, is able to be updated as required within the DA phase. This will ensure the EMP is of sufficient detail for future assessment.</p> <p>As outlined above amended management plans, which address this specific aspect to be prepared through subsequent applications, would address this issue.</p>	<p>2.4 – Project Approvals</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
11.29	Social Impacts	The submitted Social Impact Assessment does not comprehensively consider the issues and/or identify any solutions to overcome these issues.	Council Officers request that the proponent engage the services of an appropriately qualified and experienced professional to undertake a social impact assessment in accordance with the Terms of Reference for the Gold Coast International Marine Precinct.		<p>Social and Economic Impact Assessment prepared by Norling Consulting contained within Volume 5 Appendix 10 of the EIS is sufficient in addressing social considerations.</p> <p>Furthermore, extensive public consultation has been undertaken.</p> <p>Due to the size and nature of the project, a Social Impact Assessment is not required.</p>	<p>4 – Social Values and Management of Impacts</p> <p>Appendix 6 - Supplementary Social And Economic Impact Assessment</p>

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
11.30	Economic Impacts	Information lacks the link between the economic values and the evidence to support stated findings and conclusions.	<p>The Social and Economic Impact Assessment requires further detail on key regional markets relevant to the project and also a description of the regional economy's key industries and their contribution to regional economic income.</p> <p>Need to describe, with supportive evidence, the existing economic environment that might be affected by the concept proposal.</p>		<p>Since reviewing the EIS, GCCC engaged Giles Consulting International and Urban Systems to undertake an independent Strategic Review on the Gold Coast Marine Precinct (GCMP). The purpose of the Strategic Review was to undertake an economic and land use review of the policy intent, preferred land uses and level of assessment in the GCMP. A copy of this report is contained within Appendix 7.</p> <p>The Strategic Review acknowledged that the GCMP is the Gold Coast's major marine industry area and is a valuable sector.</p> <p>The report noted that it is evident there is uncertainty in relation to the scope of uses permitted within the GCMP. This specifically relates to uses that support the marine industry but are not fundamentally a marine industry use.</p> <p>Significantly, as part of the Strategic Review process, the GCIMP plans and land use proposals was reviewed. Upon the review of the GCIMP, the report stated that the land uses sought for the GCIMP appear to be keeping with the intent of the Marine Precinct and the changes recommended as part of the Strategic Review's findings.</p> <p>In addition, Supplementary Social And Economic Impact Assessment has been undertaken.</p> <p>Thus, the proposal has clear social and economic benefits to the immediate local and regional economies. Therefore, additional investigations and reports are considered not reasonable.</p>	<p>5 – Economic Values and Management of Impacts</p> <p>Appendix 6 - Supplementary Social and Economic Impact Assessment</p> <p>Appendix 7 - Gold Coast Marine Precinct Strategic Review</p>
12. SKILLS QUEENSLAND						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
12.1	Employment	Specialist skills are required however the proponent has identified that there are several Civil Construction companies established on the Gold Coast who could competently complete the project.	<p>As this is primarily a construction project across different phases with contractors identified with capacity to complete the project. Skills Queensland would see no need for future workforce data to be provided.</p> <p>The Gold Coast would have the capacity to supply any workforce for any retail opportunities from the completed project.</p>		Noted	Appendix 6 - Supplementary Social and Economic Impact Assessment
13. DEPARTMENT OF ABORIGINAL AND TORRES STRAIT ISLANDER AND MULTICULTURAL AFFAIRS						
13.1	Cultural Heritage		<p>As this report was developed prior to the registration of Gold Coast Native Title Group's native title claim (QC06/10) on 23/09/2010, this initial consultation is fitting</p> <p>Traditional Owners currently proposed is not compliant with the ACHA and cannot be approved if provided to the chief executive. Therefore the CHMP would not meet the conditions set by the Coordinator-General</p>		<p>In response to this submission, Jabree Limited as the Registered Aboriginal Cultural Heritage Body for the Queensland portion of the claim area of the Gold Coast Native Title Group QUD346/2006 prepared an amended Cultural Heritage Report and Draft CHMP.</p> <p>The amended Cultural Heritage Report is contained within Appendix 11 and the Draft CHMP is contained within Appendix 12.</p>	<p>3.8 – Native Title and Indigenous Cultural Heritage</p> <p>Appendix 11 - Cultural Heritage Assessment</p> <p>Appendix 12 - Draft Cultural Heritage Management Plan</p>
13.2	Employment	<p>The Final TOR state that the proponent will in the EIS address policies for recruitment of employment equity target groups including Indigenous People</p> <p>The EIS does not explain how the proponent will address this action</p>			<p>The proposed GCIMP is anticipated to generate significant employment opportunities for the local community and wider Gold Coast region during construction and operation. This includes employment equity target groups.</p> <p>This issue shall be addressed through relevant industrial relations legislation.</p>	<p>Appendix 11 - Cultural Heritage Assessment</p> <p>Appendix 12 - Draft Cultural Heritage Management Plan</p>
14. DEPARTMENT OF JUSTICE AND ATTORNEY-GENERAL						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
14.1	Hazard and Risk		<p>Hazardous Industries and Chemicals Branch within the Department of Justice and Attorney-General can comment on the EIS as it pertains to the safe management of hazardous chemicals.</p> <p>There are no major hazard facilities as defined under the WHS Act proposed in this development which would require detailed assessment.</p>		Noted	N/A
15. DEPARTMENT OF HOUSING AND PUBLIC WORKS						
15.1	Housing		Department of Housing and Public Works has reviewed the EIS documentation for the Gold Coast International Marine Precinct and considers that issues of concern have been adequately addressed		Noted	N/A
16. HON JOHN-PAUL LANGBROEK (MP) - MINISTER FOR EDUCATION, TRAINING AND EMPLOYMENT						
16.1	TAFE	The media statement included a number of plans for the international marine precinct project including 'a TAFE college, including a Centre of Excellence and a workshop devoted to marine-industry training'.	The Gold Coast Institute of TAFE has advised that due to the level of demand for marine training, it does not see merit in establishing an additional campus focused in the marine industry		The TAFE component has been removed from the Supplementary Preferred Master Plan. However retention of and provision for an Educational Establishment is still retained in the Place Codes to cater for other education and training providers.	<p>1.2 – Project Description</p> <p>2.2 – Master Plan</p> <p>3.2 - Land</p> <p>Appendix 3 - GCIMP Development Code and Plans</p>
17. QUEENSLAND PARKS AND WILDLIFE SERVICES						

Issue No.	Issue - Topic	Issue - Details	Submitter Recommendations / Suggested Mitigation	Relevant EIS Section	Proponent Response	Relevant SEIS Section
17.1	Marine Park	<p>QPWS does have concerns regarding the potential for a range of indirect impacts on the water quality of the marine park downstream of the development during construction of the precinct including turbidity and sedimentation from dredging and the potential disturbance of acid sulphate soils</p> <p>With regard to operation of the marine precinct and ongoing use of the Coomera River for shipping there is the potential for cumulative impacts and additional pressure on the marine park from dredging the Coomera River to facilitate access by vessels to the precinct area</p>	<p>Liaise with QPWS staff to facilitate input by NPRSR to any such proposal in the future if the dredging is being undertaken in the waters of the marine park.</p> <p>The proposed development will therefore not directly impact on the QPWA estate ad NPRSR will not be making a formal written submission on the EIS</p>		<p>The issue raises concerns with the indirect impacts from land uses decisions which have been approved and are supported by both local and state planning. In addition the statement ignores the inability for consensus to be reached between agencies / governments on management responses to the indirect impacts referred and management of the Coomera River such as bank stabilisation and dredging.</p> <p>In relation to this application the Construction Methodology Report Volume 5 Appendix 13 and The Maintenance Dredging Report Volume 7 Appendix 18 OF THE eis, provide detail pertaining to construction and maintenance dredging.</p> <p>As is outlined in the various management techniques and plans have been developed to ensure the downstream environment is not impacted upon. These plans are able to be amended and adjusted to address specific issues raised.</p>	<p>2.5 – Construction</p> <p>2.6 – Operation</p> <p>3.3 – Nature Conservation</p> <p>3.5 – Coastal Environment</p> <p>3.10 – Emergency Response Plans and Environmental Management Plans</p>
18. THE DEPARTMENT OF ENERGY AND WATER SUPPLY						
18.1	Water and Energy	It is noted that the water, sewerage and power requirements are being addresses under commercial arrangement between the developer and the Gold Coast City Council and Energex respectively	The Department of Energy and Water Supply has no issues with the proposed development		Noted	N/A
19. DEPARTMENT OF LOCAL GOVERNMENT						
19.1	Planning	Department of Local Government will not be making a submission in respect of the EIS			Noted	N/A



APPENDIX 2

Plans and Drawings

Prepared By

Planit Consulting





DEVELOPMENT SCHEDULE

TOTAL SITE AREA:	63.6ha
TOTAL LAND DEVELOPMENT AREAS:	42.0ha
MARINA:	11.5ha
OPEN SPACE:	4.9ha
IRTC AREA:	5.2ha

MIXED USE (GROSS AREA)	10.9ha
MIXED USES	
TOTAL:	10.9ha
DREDGE SPOIL AREA	4.9ha
REQUIRED DREDGE SPOIL AREA	2.2ha
TOTAL DREDGE SPOIL AREA	2.2ha

INDUSTRIAL USE (GROSS AREA)	
MARITIMO:	4.9ha
BOAT STACK STORAGE:	0.8ha
SHIP LIFT INDUSTRY:	5.2ha
MARINE INDUSTRY:	18.0ha
TOTAL:	28.9ha

MARINA USE:	7.0ha
EXTERNAL:	264 BERTHS
INTERNAL:	4.5ha
110 BERTHS	
TOTAL:	11.5ha

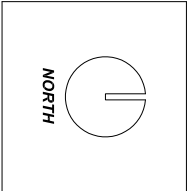
PROJECT TITLE:	Gold Coast International Marine Precinct
DRAWING TITLE:	Supplementary Preferred Master Plan
BASE PROVIDED BY:	Push Architects

NO	DATE	REVISION	BY

SCALE:	1:5000 @ A3	DATE:	09/12
DESIGNER:	ZP / BS	CHECKER:	BS / CH
DRAWN:	ZP	DRAW NO:	GCMP_MASTERPLAN

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admin@planticonsulting.com.au





DEVELOPMENT SCHEDULE

TOTAL SITE AREA:	63.6ha	MIXED USE (GROSS AREA)	8.8ha	INDUSTRIAL USE (NET AREA)	4.9ha	MARINA USE:	5.0ha
TOTAL LAND DEVELOPMENT AREAS:	37.1ha	MIXED USES		MARTIMO:		EXTERNAL:	
MARINA:	5.0ha	TOTAL:	8.8ha	[BUILDING GFA: 1.3ha]	0.8ha	INTERNAL:	4.5ha
OPEN SPACE:	11ha	DREDGE SPOIL AREA		SHIP LIFT INDUSTRY:	5.2ha	110 BERTHS	
IRTC AREA:	5.2ha	REQUIRED DREDGE SPOIL AREA	2.2ha	MARINE INDUSTRY:	15.0ha	TOTAL:	9.5ha
		TOTAL DREDGE SPOIL AREA	2.2ha				

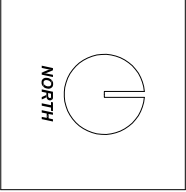
PROJECT TITLE:	Gold Coast International Marine Precinct
DRAWING TITLE:	Master Plan - Option 6 Alternative
BASE PROVIDED BY:	Paul Architects

NO	DATE	REVISION	BY

SCALE:	1:5000 @ A3	DATE:	09/13
DESIGNER:	ZP / BS	CHECKER:	BS / CH
DRAWN:	ZP	DRAWN NO:	GCMF_OPTION6_00

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APPENDIX 3

GCIMP Development Code and Plans

Prepared By

Planit Consulting



GOLD COAST INTERNATIONAL MARINE PRECINCT DEVELOPMENT CODE

1.0 Introduction

This development code has been established to support a Preliminary Approval to Override the Gold Coast Planning Scheme made pursuant to Section 242 of the *Sustainable Planning Act 2009* (SPA). The site related to this Preliminary Approval involves land located at 2, 54 and 110 Shipper Drive, Coomera. This land comprises a total area of 63,554.5m² which can be described as:

- Lot 108 on WD6406 (4.047ha);
- Lot 98 on SP150731 (54.6608ha);
- Lot 146 on SP150731 (4.8467ha); and
- Part of Shipper Drive adjacent to Lot 98 on SP150731.

This Development Code applies to all development located within the bounds of the Gold Coast International Marine Precinct as shown on *GCIMP Map 1: Boundary*.

It is intended that the provisions of the Gold Coast International Marine Precinct (GCIMP) development code will replace the specific provisions of the Coomera Local Area Plan (LAP) and associated Place Code of the Gold Coast 'Our Living City' Planning Scheme 2003 (Planning Scheme). This is essential in ensuring that the development responds to the unique characteristics and constraints of the site, integrates well with existing and proposed future development, and details development provisions catering specifically to the various development intent/s and uses envisaged for the site.

The structure and format as provided for in the Planning Scheme has been reflected throughout this development code.

2.0 Intent

The purpose of this development code is to provide detailed planning provisions for the future development of the site. The GCIMP is a highly valuable resource for the City. The area is to be dedicated to become a market leader in terms of innovative and integrated marine industry development that would facilitate growth in employment in the marine industrial and supporting sectors. The purpose of this development code is therefore to promote economic development of the GCIMP area as a major marine industrial employment district both locally and at an international level.

This development code incorporates the provisions of the Coomera Local Area Plan except where varied within this document. It supports the requirements to establish a world class marine precinct to be accommodated in Coomera. The GCIMP focuses on establishing a high quality, innovative, and diversified precinct catering not only to the core boat building industry, but also facilitating other ancillary and associated business/industry (i.e. supply chain) to become an integrated marine industry precinct.

The development code provides locational and assessment criteria for the establishment of a range of marine industry and complimentary land uses in the defined GCIMP area (refer to the *GCIMP Map 2: Precincts*). It has been designed to adopt the most appropriate level of assessment for industrial and commercial uses in an existing marine industry zone, in order to facilitate the efficient development of the land and ensure that development requirements are proportionate to risk.

3.0 Desired Environmental Outcomes

- 3.1 A variety of employment opportunities is provided within Coomera, ranging from skilled jobs within local and neighbourhood level activity centres to light industrial and marine industry employment (refer to **DEO Soc.2**).
- 3.2 The water quality of Oakey Creek is improved and the creek is located in a wide natural riparian corridor (refer to **DEO Ecol.2**).
- 3.3 The Gold Coast Marine Precinct is developed and promoted as a world class waterfront industry area (refer to **DEO Econ.3**).

4.0 Objectives

The objectives of this development code are:

- 4.1 To establish a world class marine precinct area within Coomera providing a marina, marine industry and ancillary activities that are related to the establishment and ongoing viability of the marine development;
- 4.2 Protection of water quality, watercourses and marine environments that interface with the marine uses;
- 4.3 Protection of adjacent environmental areas, particularly in regard to JAMBA, CAMBA and Ramsar sites, to allow for the safeguard of ecological values;
- 4.4 Provision of residential, tourist and retail activity within the precinct will not compromise the viability of existing or future marine industry development;
- 4.5 Development will maintain or enhance opportunities for public access and use of the foreshore in a way that protects public safety and coastal resources;

- 4.6 Provision of a distinctive built form that promotes the marine and nautical character of the GCIMP through design principles that create a sense of place for the locality.

5.0 Precincts

The preferred pattern for development within the GCIMP development code is further defined by precinct boundaries in which common activities are placed within the same precinct. The *GCIMP Map 2: Precincts* depicts the distribution and location of each precinct. Such precincts are divided as follows:

- Precinct 1: Western Precinct
- Precinct 2: Northern Precinct
- Precinct 3: Southern Precinct
- Precinct 4: Natural Conservation / Open Space Precinct

Discussion in regard to the development intent and characteristics of each precinct provided in the below sections.

5.1 Precinct 1: Western Precinct – Preferred Character and Intended Land Use

The main purpose of the Western Precinct is to accommodate a broad range of Waterfront Industry, industrial and complimentary uses that broaden and support the development and functionality of the marine precinct, Coomera and the broader economy.

Preferred activities will typically focus on the production, manufacture, construction, distribution or servicing of marine industry and associated goods generating high levels of long term employment.

Overall, this precinct is separated from intended retail, restaurant, short term accommodation and entertainment areas at the east of the GCIMP, and also provides separation from surrounding residential areas.

Specific examples of uses in this Precinct include industry, manufacturers shops, motor vehicle repairs, warehouses, waterfront industry and car parking. Storage facilities, service stations and service industries in support of the Marine Industry are to be included where necessary. Food and convenience facilities are to be adequately provided to allow amenities to the employees of the Precinct. A dredge spoil facility is to be provided to allow for the ongoing maintenance and functionality of the marina.

The Precinct is intended to include uses to meet the needs of the boat building industry. High quality landscape treatment is anticipated throughout the precinct.

5.2 Precinct 2: Northern Precinct – Preferred Character and Intended Land Use

This precinct is intended for an integrated and interactive built form incorporating land uses of a marine, commercial and leisure nature. A variety of land uses relating to commercial, industrial, leisure, and tourist accommodation activities that support the marine industry are envisaged within this Precinct.

Land located to the south of Oakey Creek, along the northern boundary of the Gold Coast International Marine Precinct is to be developed in majority for commercial and showrooms in support of the surrounding marine industrial precinct and development. This portion of land within the Northern Precinct is to comprise buildings with substantial showrooms, workshops, service and storage areas.

Land fronting the external marina within the Northern Precinct is envisaged to be developed as a vibrant, lively centre for the Gold Coast International Marine Precinct. Tourist and entertainment uses such as restaurants, shops, cafes, taverns, tourist accommodation and eateries are encouraged in order to promote the area as a vibrant centre that facilitates interaction between workers, locals, tourists and boat users.

The area is envisaged to incorporate commercial and retail facilities required by workers of the Marine Precinct. Tenancy size and total retail floor space restrictions are incorporated to preclude full line supermarket department stores. The amalgamation of use within this area may result in multiple tenancies constituting a shopping centre as defined under the Planning Scheme. A character and form similar to Sanctuary Cove Marine Village is contemplated. Development is to be generally in accordance with the Gold Coast International Marine Precinct Master Plan.

Importantly, the Northern Precinct will facilitate boat activities and access to the water body / watercourse. Marine product fabrication, marinas, slipways, berths, boat stacks and storage areas, transport terminals, warehouses and waterfront industry are essential to the viability of the internal and external marina.

Education facilities are intended to be established within this precinct which support the industries and workforce. Shared use of facilities, inclusive of information technology, networks and marine industry workshop areas are encouraged. Offices, short term accommodation for students and facilities related to activities within the GCIMP are encouraged.

The Precinct is intended to be a high activity area of an urban nature comprising of high quality streetscapes, built form and landscape treatment. View corridors will be created to overlook the marina and water areas and a high level of visual amenity is intended in this Precinct.

A strong sense of place will be established through contemporary and nautical architecture incorporated throughout the Precinct along with shady pedestrian pathways and street furniture/public art located along road ways and adjoining the waterfront areas.

5.3 Precinct 3: Southern Precinct – Preferred Character and Intended Land Use

This Southern Precinct is to be developed for marine focused and related industries with direct access provided to the Coomera River and via the internal marina.

Boat building, repairs and storage, warehouses, waterfront industry, manufacturing, associated industry, marinas, boat stacks, transport terminals, wharves and docks are anticipated to be developed within this Precinct.

Development is to be appropriately designed and landscaped using a nautical theme. Visual appeal and pedestrian friendly access is encouraged along the marina, however pedestrian conflict with industrial activity will be managed accordingly.

5.4 Precinct 4: Natural Conservation / Open Space Precinct – Preferred Character and Intended Land Use

This Precinct is intended to conserve the natural vegetation and environmental qualities of Oakey Creek along the northern and western boundary of the Gold Coast International Marine Precinct.

The intent of this Precinct is to prohibit encroachment of urban activity and to provide permanent areas of land for the protection of natural conservation values through the conservation of wildlife and wildlife habitat areas of ecological significance. It also seeks to conserve local native plant species and indigenous vegetation and wildlife habitat areas of significance whilst enhancing the provision of open space.

This Precinct also contributes to an important buffer separating the industrial functions of the Coomera Marine Precinct from residential areas to the north of

Oakey Creek. Subsequently no urban development is anticipated within this buffer area.

6.0 Tables of Development

'Gold Coast International Marine Precinct' Table of Development

Note: This table must be read in conjunction with the explanation provided in Part 6, Division 1, Chapter 2 - Using Local Area Plans.

A: Material Change of Use

Precinct 1 – Western Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Caretaker's Residence Extractive Industry (Dredge Spoil Facility*) Estate Sales Office Manufacturer's Shop Substantial Structure Temporary Use Warehouse Waterfront Industry (where excluding fish and seafood processing)	Café** Car Park Industry Motor Vehicle Repairs Office where above ground level Outdoor Storage Facility Service Industry Service Station Storage (for boats and/or marine products) Take-Away Food** Premises where the GFA is less than 100m ² Telecommunications Facilities n.e.i. Waterfront Industry n.e.i.	Aquaculture Brothel Fuel Depot Office Shop** where GFA is less than 100m ² Take-Away Food Premises** n.e.i. Storage n.e.i.

* Dredge Spoil Facility is defined as any land used or intended to be used for the storage and / or treatment of sediment and material that has been dredged (removed) from the bottom of a harbour, river or lake.

** The total resulting GFA for Cafes, Shops, Take Away Food Premises and Service Stations (retail/food components only) within the precinct area is not permitted to exceed 1,000m².

A: Material Change of Use

Precinct 2 – Northern Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Agriculture Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park Public Utility	Caretaker's Residence Car Park Estate Sales Office Kiosk Manufacturers Shop Office** Shop* Showroom where ancillary to a waterfront industry Storage Take Away Food Premises Temporary Use Transport Terminal where including water based transport Warehouse where directly associated with waterfront industry Waterfront Industry where excluding fish and seafood processing and storage	Café Childcare Centre Commercial Services Convenience Shop Educational Establishment Laundromat Marina Market Motel Motor Vehicle Repairs Reception Room Resort Hotel Restaurant Service Industry Shop* Substantial Structure Tavern Telecommunications Facility n.e.i. Tourist Shop Vehicle Hire Office (only where hiring marine craft) Vehicle Hire Premises (only where hiring marine craft) Vehicle Sales Premises (only where selling marine craft) Warehouse n.e.i.	Fuel Depot Helipad Hostel Accommodation Indoor Recreation Facility Industry Medical Centre Place of Worship Shopping Centre Development* Showroom n.e.i. Transit Centre n.e.i. Vehicle Hire Office n.e.i. Vehicle Hire Premises n.e.i. Vehicle Sales Premises n.e.i.

**the total resulting GFA for café, shops, takeaway food premises, tourist shop or shopping centre development within the precinct area is not greater than 3,000m² with no individual tenancy exceeding 300m²*

*** the total resulting GFA for offices within the precinct area is not greater than 2,000m²*

A: Material Change of Use

Precinct 3 – Southern Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Agriculture Conservation (natural area management) Low Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park	Caretakers Residence Manufacturer's Shop Outdoor Storage Facility Storage (for boats and/or marine products) Temporary Use Transport Terminal where including water based transport Waterfront Industry Warehouse where directly associated with waterfront industry	Car Park Marina Motor Vehicle Repairs Office Service Industry Showroom where ancillary to a waterfront industry Storage n.e.i. Substantial Structure Telecommunications Facility n.e.i.	Hostel Accommodation where located above ground level Industry Vehicle Hire Office Vehicle Hire Premises Vehicle Sales Premises

A: Material Change of Use

Precinct 4 – Natural Conservation / Open Space Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Conservation (natural area management) Low-Impact Telecommunications Facility Public Utility		Telecommunications Facility n.e.i.	

B: Material Change of Use Overlay Provisions

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Material Change of Use involving Building Work that:			
		Exceeds two storeys due to the inclusion of a partial third storey and the GFA of the partial third storey does not exceed 50% of the GFA of the storey immediately below, and the site is not in an area where a maximum building height exceeding 2 storeys is identified on GCIMP Map 3 - Maximum Building Height	exceeds two storeys (except for a partial third storey with less than 50% of the GFA of the storey immediately below), where the site is not in an area where a maximum building height exceeding two storeys is identified on GCIMP Map 3 - Maximum Building Height OR exceeds the maximum number of storeys indicated for the site identified on GCIMP Map 3 - Maximum Building Height .
			Exceeds the residential density for the subject land as shown on GCIMP Map 4 - Residential Density
	is on a site identified on Overlay Map OM13 – Building Setback Line from Canals and Waterways as being affected by a waterway building setback, and is in compliance with the Acceptable Solutions of Constraint Code 3 – Canals and Waterways	is on a site identified on Overlay Map OM13 – Building Setback Line from Canals and Waterways as being affected by a waterway building setback, and alternative solutions to the Acceptable Solutions of Constraint Code 3 – Canals and Waterways are proposed	
		is on or adjoins a site listed on the Queensland Heritage Register (Queensland Heritage Act 1992) or the Register of the National Estate (Australian Heritage Commission Act 1975) or the National Trust of Queensland list	
		is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes	

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
		Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR is located on land that is known to the owner and/or the developer to be of indigenous cultural heritage value	
	is on a site identified on the Domain Maps as being affected by Future Road Requirement and complies with the Acceptable Solutions of Constraint Code 4 – Car Parking, Access and Transport Integration	is on a site identified on the Domain Maps as being affected by Future Road Requirement and alternative solutions to the Acceptable Solutions of Constraint Code 4 – Car Parking, Access and Transport Integration are proposed	

C: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Operational Work that involves extraction, excavation or fill that:			
		exceeds a volume of 100 cubic metres of fill or excavation, or is closer than two metres from the site boundary	
		is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR is located on land that is known to the owner and/or the developer to be of indigenous cultural	

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
		heritage value	

D: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Advertising Device			
	Advertising Device that is: a) not illuminated, nor animated, and where the total area of signage per street frontage does not exceed the following for each precinct: Precinct 1 20m ² Precinct 2 20m ² Precinct 3 20m ² Precinct 4 2m ² b) not visible from any State-controlled road	Advertising Device n.e.i.	

E: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Infrastructure and Landscape Work			
Minor Landscape Work		Landscape Work n.e.i	
Landscape Work associated with a Detached Dwelling or a Caretakers Residence		Works for Infrastructure	

F: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Vegetation Clearing that:			
	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and complies with the Acceptable Solutions of Specific Development	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and alternative solutions to the Acceptable Solutions of Specific Development	results in the removal of, or damage to, vegetation over which a Vegetation Protection Order has been made by Council

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
	Code 36 – Vegetation Management or results in the removal of or damage to, vegetation that is equal to, or in excess of, four metres in height (Precinct 4), and complies with the Acceptable Solutions of Specific Development Code 36 - Vegetation Management .	Code 36 – Vegetation Management are Proposed or results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height (Precinct 4), and alternate solutions to the Acceptable Solutions of Specific Development Code 36 - Vegetation Management are proposed.	

G: Reconfiguring a Lot

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Reconfiguring a Lot that:			
		Precinct 1, 2 & 3 Results in no lots with an area less than 1,000m ² OR Entails only a Community Title Subdivision (Including Standard Format Plans and / or volumetric lots) or a volumetric lot within a building, or a leasehold subdivision of an existing or approved development. Precinct 4 Results in no lots with an area less than 20,000m ²	Precinct 1, 2 & 3 Results in one or more lots with an area less than 1,000m ² . Precinct 4 Results in one or more lots with an area less than 20 hectares.

7.0 Relevant Codes

Codes relevant for development assessment in the 'Gold Coast International Marine Precinct' are listed below. The GCIMP Development Code applies in all cases. A Specific Development Code will only apply if that specific development is proposed. A Constraint Code will only apply where the proposed development is directly impacted by the constraint that is the subject of that code.

7.1 Self Assessable Development

The following codes apply to development that is self assessable in the 'Gold Coast International Marine Precinct' Development Area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	2 Advertising Devices 10 Caretaker's Residence 14 Display Homes and Estate Sales Offices 24 Office 27 Retail and Related Establishments 34 Temporary Use 36 Vegetation Management	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 10 Nature Conservation 13 Road Traffic Noise Management 14 Sediment and Erosion Control

7.2 Material Change of Use

The following codes apply to development that is code or impact assessable **Material Change of Use** in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	5 Aquaculture 6 Attached Dwellings and Medium Density Detached Dwellings 8 Brothels 12 Child Care Centres 19 High Rise Residential and Tourist Accommodation 22 Low Rise Apartment Building 24 Office 27 Retail and Related Establishments 31 Service Stations	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 10 Nature Conservation 13 Road Traffic Noise Management 14 Sediment and Erosion Control

Place Code	Specific Development Codes	Constraint Codes
	33 Telecommunications Facility 37 Vehicle Sales 38 Working from Home	

7.3 Operational Work – Changes to Ground Level

The following codes apply to development that is code or impact assessable **Operational Work – Changes to Ground Level** (extracting gravel, rock, sand or soil from the place where it occurs naturally, or excavating or filling that materially affects premises or their use) in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	11 Changes to Ground Level and Creation of New Waterbodies	3 Canals and Waterways 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 16 Steep Slopes or Unstable Soils

7.4 Operational Work – Advertising Devices, Landscape Work and Infrastructure

The following codes apply to development that is code assessable **Operational Work – Advertising Devices** (placing an Advertising Device on premises), **Landscape Work** (undertaking Landscape Work in, on, over or under premises that materially affects premises or their use) or **Infrastructure** (undertaking Works for Infrastructure) in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Place Code	2 Advertising Devices 21 Landscape Work 39 Works for Infrastructure	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation

Place Code	Specific Development Codes	Constraint Codes
		14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

7.5 Operational Work – Vegetation Clearing

The following codes apply to development that is code assessable **Operational Work – Vegetation Clearing** in the ‘Gold Coast International Marine Precinct’ LAP area

Place Code	Specific Development Codes	Constraint Codes
‘Gold Coast International Marine Precinct’ Place Code	36 Vegetation Management	9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

7.6 Reconfiguring a Lot

The following codes apply to development that is code or impact assessable **Reconfiguring a Lot** in the ‘Gold Coast International Marine Precinct’ LAP area

Place Code	Specific Development Codes	Constraint Codes
‘Gold Coast International Marine Precinct’ Place Code	11 Changes to Ground Level and Creation of New Waterbodies 21 Landscape Work 28 Reconfiguring a Lot 36 Vegetation Management 39 Works for Infrastructure	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 13 Road Traffic Noise Management

8.0 'Gold Coast International Marine Precinct' Place Code

8.1 Purpose

This Place Code seeks to ensure that the scale, density, layout and aesthetic appearance of all development is consistent with desired style and character of the Gold Coast International Marine Precinct (GCIMP). These provisions also aim to ensure that the GCIMP becomes an integrated, functional and recognisable facility of an international standard.

A range of land uses and services are to be provided to broaden the diversity of activities and capacity of the GCIMP, Gold Coast Marine Precinct and wider community.

8.2 Application

- 8.2.1 The 'Gold Coast International Marine Precinct' Development Code applies to development indicated as self, code or impact assessable in the 'Gold Coast International Marine Precinct' Table of Development at **Clause 5.0** of this Development Code.
- 8.2.2 Performance Criteria PC1-PC49 apply to all code and impact assessable development in this Development Code. For development identified as self assessable in **Clause 5.0**, only the Acceptable Solutions to Performance Criteria PC1-PC7 apply.

8.3 Development Requirements

Performance Criteria	Acceptable Solutions
Development that is Self Assessable, Code Assessable or Impact Assessable	
Building Height	
PC1 The height of buildings is to be consistent with the role of the GCIMP area as a predominantly marine industrial use area. Buildings are to be constructed to a height that complements the surrounding built form.	AS1.1 The building is not more than 8.5 metres in height and has a maximum of two storeys. OR AS1.2 The height of buildings in each precinct does not exceed the maximums shown on GCIMP Map 3 – Maximum Building Height .

Performance Criteria	Acceptable Solutions						
Accommodation Density							
<p>PC2 Accommodation density must be consistent with the predominant character of the GCIMP as a marine industrial location.</p>	<p>AS2 The maximum dwelling density in any precinct does not exceed the relevant accommodation density (RD number) shown for that precinct on GCIMP Map 4 – Maximum Residential Density.</p>						
Site Coverage							
<p>PC3 The site coverage of development must be in accordance with the function of the precinct and its relationship with surrounding precincts.</p>	<p>AS3 The maximum site coverage of any development does not exceed the following:</p> <table> <tr> <td>Precinct 1</td><td>80%</td></tr> <tr> <td>Precinct 2</td><td>80%</td></tr> <tr> <td>Precinct 3</td><td>80%</td></tr> </table>	Precinct 1	80%	Precinct 2	80%	Precinct 3	80%
Precinct 1	80%						
Precinct 2	80%						
Precinct 3	80%						
Building Setback							
<p>PC4 The layout of buildings, structures and activities achieves an attractive and orderly appearance where development is visible from the public domain.</p> <p>A good standard of visual amenity is achieved through varied building setbacks and materials and high quality landscaping.</p>	<p>Precinct 1 AS 4.1 The minimum building frontage setback to any street is 3m where an average of 4.5m is achieved.</p> <p>AS4.2 The minimum side or rear setback is 0, except where the site abuts public open space, a dredge spoil facility or the IRTC where the minimum setback is 3m metres.</p> <p>Precinct 2 AS 4.3 The minimum building frontage setback to any street is 3m where an average of 4m is achieved. Or</p> <p>AS4.4 The building fronts Shipper Drive and the minimum setback is 0m with an average of 4.5m. Awnings shall be provided for that part of the building utilising a 0m – 2m setback.</p> <p>AS4.5 The minimum side or rear setback is 2m, except where the site abuts private/ public open space, The Coomera River or the IRTC where the minimum setback is 3m metres.</p> <p>Precinct 3 AS 4.6 The minimum building frontage setback to any street is 3m where an average of 4.5m is achieved.</p> <p>AS 4.7 The minimum side or rear setback is 0, except where the site abuts the Coomera River where the minimum setback is 10m metres.</p>						

Performance Criteria	Acceptable Solutions
	<p>Precinct 4 AS4.8 All buildings are set back not less than 6m from the frontage of the site and 3m from the side and rear boundaries of the site.</p>
<p>All Precincts PC5 The height of the buildings must not cause adverse impact on neighbouring sites. The development opportunities of the neighbouring sites are considered in terms of the impact of the development.</p>	<p>All Precincts AS5 All buildings exceeding two storeys in height have their upper storeys set back from the lot boundaries, consistent with the following distances:</p> <ul style="list-style-type: none"> a) a minimum of six metres from the frontage in respect of that part of the building which exceeds two storeys in height; b) for side and rear boundary setbacks, two metres for that part of the building which is above the second storey but which does not exceed 7.5 metres above that storey; c) for side and rear boundary setbacks, two metres plus 0.5 metres for every three metres (or part thereof) of that part of the building which is greater than 7.5 metres above the second storey
Vehicular Crossings	
<p>PC6 Vehicular crossings associated with the development must be designed and constructed to ensure:</p> <ul style="list-style-type: none"> a) a safe footpath environment; b) safe vehicular access to the property; c) appropriate hydraulic performance of the stormwater infrastructure; d) no damage to vehicle or road infrastructure; e) minimal loss of on-street parking spaces; f) continued amenity of the neighbourhood. 	<p>AS6 Driveways are designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.</p>
Land Use and Role of the 'Gold Coast International Marine Precinct'	
<p>All Precincts PC7 Development in the 'Gold Coast International Marine Precinct' does not compromise the Activity Centres hierarchy for the Gold Coast. Retail uses are established in the Gold Coast International Marine Precinct to cater for the convenience and retail needs of the users and workers of the Marine Precinct, and those living in the immediate surrounding residential areas.</p> <p><i>Note: An economic impact assessment may be required for proposals not meeting the acceptable solutions to this performance criteria.</i></p>	<p>Precinct 1 AS7.1 Retail floor space in Precinct 1 is limited to a total maximum of 1,000m² GFA.</p> <p>Precinct 2 AS7.2 Retail, café, floor space in Precinct 2 is limited to a total maximum of 3,000m² GFA and no individual tenancy is to exceed a maximum of 300m² GFA. This acceptable solution does not apply to:</p> <ul style="list-style-type: none"> a) Café; b) Convenience Shop; c) Restaurant; d) Take-Away Food Premises; or e) Showroom

Performance Criteria	Acceptable Solutions
	<p>AS7.3 Office floor space in Precinct 2 is limited to 2,000m² GFA.</p> <p>All Precincts AS7.4 Ancillary non-retail uses (a mixture of uses such as a Child Care Centre, Commercial Services, Indoor Recreation Facility or Medical Centre) are limited to a combined maximum of 2,500m² GFA in the GCIMP area.</p> <p>AS7.5 Total Office floor space in the GCIMP area is limited to 3,000m² GFA.</p>
Development that is Code Assessable or Impact Assessable	
Environment	
<p>PC8 Development is located, designed and constructed and/or managed to avoid or minimise:</p> <p>(a) impacts arising from:</p> <ol style="list-style-type: none"> altered stormwater quality or flow and waste water <p>(b) the release and mobilisation of nutrients that increase the risk of algal blooms in coastal waters</p> <p>(c) the disturbance of acid sulfate soils and the release of acid and associated metal contaminants into receiving waters.</p>	<p>AS8 No acceptable solution provided.</p>
<p>PC9 Areas used for storing environmentally hazardous materials in bulk are located to take into consideration the likelihood of flooding.</p>	<p>AS9 No acceptable solution provided.</p>
<p>PC10 To achieve the ongoing minimisation of environmental harm resulting from the development, all facilities/buildings/structures at which activities will be carried out, must be designed to permit the activity to be carried out in accordance with best practice environmental management (as defined in the EP Act 1994).</p>	<p>AS10 No acceptable solution provided.</p>
Siting	
<p>PC11 All buildings must be sited to complement the marine industrial character and the predominant built form of the surrounding area and to reduce potential conflicts between uses having regard to a site analysis, prepared in</p>	<p>AS11 No acceptable solution provided.</p>

Performance Criteria	Acceptable Solutions
accordance with Planning Scheme Policy 17 – Site Analysis.	
<p>PC12 The layout of the site must provide a clear separation between the public access areas and the areas set aside for servicing the building.</p>	<p>AS 12.1 Development is to be separable from public open space areas along Oakey Creek by a road; and</p> <p>AS12.2 Identifiable public access pathways / boardwalks shall be provided to the Coomera River, within Precinct 2.</p>
<p>PC13 Industrial structures, storage or service areas, which are likely to appear visually dominating or unsightly, are located to the rear or sides of sites or are otherwise designed and screened to enhance their appearance where possible, when viewed from the street.</p> <p>Blank or screen walls, opaque roller shutters and air vents, especially in ground floor walls, will not generally be supported</p>	<p>AS13 No acceptable solution provided.</p>
Building and Layout Design, Safety and Comfort	
<p>PC14 Buildings are sited and designed to suit climatic conditions.</p>	<p>AS14.1 Buildings are oriented to the north east to take advantage of summer breezes and winter sun. Western aspects are avoided, wherever possible.</p> <p>AS14.2 Where not air conditioned, buildings incorporate a maximum of openings (i.e. louvring, windows, doorways) on eastern walls.</p> <p>AS14.3 Windows are minimised and trees are planted along west walls wherever practicable for protection from hot afternoon sun.</p> <p>AS14.4 Shading devices (i.e: large roof overhangs, window hoods/blinds, awnings and verandahs) are attached to buildings, particularly eastern and western sides. Where possible, shading devices are retractable on northern sides during winter.</p> <p>AS14.5 Semi-enclosed workstations, where relatively strenuous manual labour takes place, are located in the cooler and more ventilated parts of the building.</p>
<p>PC15 All buildings must be designed and constructed to a high aesthetic standard and to complement or enhance the local character of the GCIMP.</p>	<p>AS15.1 The massing and proportions of new buildings are consistent with those of adjoining buildings.</p> <p>AS15.2 Building materials, patterns, textures and colours used in</p>

Performance Criteria	Acceptable Solutions
	<p>new buildings are complementary to those of nearby buildings.</p> <p>AS15.3 Buildings which are constructed to a zero boundary are to have the zero façade be treated in a similar material colour to that used on the street frontage.</p> <p>AS 15.4 Buildings which adjoin communal open space and or the Coomera River shall include 80% glazing at ground level and be designed to orientate active use areas to these frontages.</p> <p>AS 15.5 Outdoor use areas are to be incorporated into dining landuses.</p> <p>AS 15.6 Corner Treatments All buildings located on the corner of two streets shall incorporate design features/elements to the corner which are at a greater scale or geometry relative to the remainder of the building. These and must contribute to the nautical / coastal character sought to be developed and include 2 of the following elements;</p> <ul style="list-style-type: none"> • locational/directional information signage; • architectural /façade features; • awnings/balconies/varied roof form; • public art • landscape treatments including public seating <p>AS15.7 The facades of buildings should address street frontages and public spaces.</p> <p>AS 15.8 Shipper Drive Buildings should be articulated to break up their perceived bulk and provide visual interest, particularly with buildings occupying a large/long site frontage. A 'fine grain' of built form shall be achieved by each new development;and</p>
<p>PC16 Buildings and associated areas must be designed to assist in crime prevention.</p>	<p>AS16.1 Landscaping does not restrict sightlines and surveillance within a site.</p> <p>AS16.2 Car parking areas are well lit and are designed to ensure casual surveillance.</p> <p>AS16.3 Building entrances face public streets, town squares or</p>

Performance Criteria	Acceptable Solutions
	public parks and not internal courtyards.
<p>PC17 Building design and appearance must be conducive to the safety and comfort of all building users.</p>	<p>AS17.1 Glass which forms all or part of any external wall of a building does not exceed a maximum degree of reflection of both heat and light of 20%. The glass area does not exceed 60% of the total area of any western orientated external wall.</p> <p>AS17.2 Entrances to the premises are clearly visible from the street, including evening hours.</p>
<p>PC18 All buildings, structures and facilities are designed to minimise the environmental impacts of the activities conducted within the building/structure/facility.</p>	<p>AS18 No acceptable solution</p>
<p>PC19 All buildings, structures and facilities are designed to minimise the environmental impacts of the activities conducted within the building/structure/facility.</p>	<p>AS19 No acceptable solution</p>
Design of Car Park Areas	
<p>PC20 All parking areas are to be suitably landscaped to provide an attractive and pleasant outlook and shade for parked vehicles, and to contribute towards the quality presentation of new developments.</p> <p>Above ground car parking is to be appropriately screened and treated to provide an articulated frontage.</p>	<p>AS20.1 Landscaped bays for the planting of shade trees are provided at regular intervals throughout car parking areas, at the rate of one landscaped bay per 40 vehicle parking bays or one large shade tree per ten parking spaces. Landscape bays have the same dimensions as a vehicle parking space.</p> <p>AS20.2 Large car parking areas and all heavy/service vehicle parking are situated to the side or rear of sites unless impractical. Smaller car parking areas, particularly for short term and disabled parking, may be located to the front of sites.</p> <p>AS20.3 Car parking areas located in frontage setback areas are set back behind a minimum 1.5 metre landscaped buffer to the frontages.</p>
Advertising Devices	

Performance Criteria	Acceptable Solutions
<p>PC21</p> <p>Signs and other forms of advertising on business/ industry premises are kept to a minimum. Any advertising relates directly to the activity/process conducted on the premises, rather than general product advertisements. Advertising signage does not dominate the visual amenity of the area.</p> <p>Buildings are not painted in colours which seek to advertise a tenant and are not primary or fluorescent in nature.</p>	<p>AS21.1</p> <p>There is one sign per premises. Multi-unit developments display a single index sign at the entrance to the development which details each occupant, its activity/process and respective unit number.</p> <p>AS21.2</p> <p>The design and construction of signs meets the following parameters:</p> <ul style="list-style-type: none"> a) signs are situated near site entries and are well placed for viewing by pedestrians and drivers; b) free-standing signs have a maximum area of 3m²; c) signs on façades have a maximum area of 5m²; d) signs utilise company logos or symbolic representations for quick and easy identification; e) wording on signs is limited to the name, location, business and products of the establishment; f) signs do not utilise fluorescent paints; g) signs do not rotate, flash or move; h) signs are integrated with the form of development and are not visually dominating
Conservation Areas and Open Space Linkages	
<p>PC22</p> <p>Identified conservation areas remain in a substantially undeveloped condition, with vegetation retained to the fullest extent possible and, where necessary, rehabilitated using local native species.</p>	<p>AS22.1</p> <p>Areas identified as Conservation on Gold Coast International Marine Precinct LAP Map 2: Precincts are reserved for conservation purposes, through:</p> <ul style="list-style-type: none"> a) transfer to Council; b) dedication of a conservation easement; or c) reservation of an area of the site as open space. <p>AS22.2</p> <p>Reserved Conservation Areas are managed in the following manner:</p> <ul style="list-style-type: none"> a) the land remains largely undisturbed by any buildings, clearing and earthworks; b) rehabilitation of natural features is undertaken, where necessary, particularly by way of revegetation of any previously cleared areas and stabilisation of any eroding banks of watercourses. <p>AS22.3</p> <p>In Conservation Areas associated with the Coomera River and Oakey Creek, there is no discharge of waste water or contaminants or piped discharge of stormwater. Any development within the catchment of these waterways retains natural drainage patterns as far as possible, and</p>

Performance Criteria	Acceptable Solutions
	<p>utilises appropriate stormwater management techniques to minimise any increase in the volume, velocity or sedimentation of runoff into the river or creek.</p> <p>AS22.4 On land adjacent to Conservation Areas, buildings, clearing and earthworks are sited as far away as practicable from reserved Conservation Areas, with the greatest possible separation in the case of ridges, gullies and watercourses.</p> <p>AS22.5 Existing trees are retained, and additional trees planted where necessary within the 40 metre wide band, that being the designated conservation area identified on Gold Coast International Marine Precinct Map 2 Precincts</p> <ul style="list-style-type: none"> a) The conservation areas should generally remain free of building and earthworks; additional tree planting utilises species similar to those existing naturally in the area; b) any parallel roads or services are grouped on one side of the link, to minimise disturbance; c) any breaks in the vegetation canopy, necessary for roads or services, are minimised by cutting through perpendicular to the link at a point where damage and discontinuity are minimised, such as where the canopy is already broken or sparse.
Landscape Design	
<p>PC23 Landscape design is used to enhance the landscape character of the GCIMP as generally presented in the Landscape Concept Master Plan.</p>	<p>AS23.1 Landscape Design includes:</p> <ul style="list-style-type: none"> a) Provision of pleasant, shaded areas with appropriate furniture for lunch/relaxation areas for workers and visitors; b) Use of garden edges, lines of trees and mass planting to frame pathways and define site and building entries; c) Incorporation of drainage channels and planting to strengthen their resistance to erosion, especially where development is expected to result in increased volume and velocity of stormwater runoff
<p>PC24 Potentially obtrusive noise, odour and visual impacts are effectively buffered.</p>	<p>AS24.1 Development incorporates landscape buffers, earth mounds, acoustic treatments and/or acoustic fencing appropriate to the likely off-site impacts of particular developments. OR</p> <p>AS24.2 A landscape buffer, densely planted with shrubs and trees,</p>

Performance Criteria	Acceptable Solutions										
	is provided along the relevant frontage to effectively screen development behind. Species selection, use of mature or semi mature trees, and density of planting will be important in this respect.										
<p>PC25</p> <p>The street side environment and other public spaces are developed to enhance their visual appeal and create a physical continuity and legibility throughout the GCIMP and its component precincts.</p>	<p>AS25</p> <p>Individual developments contribute to streetscape enhancement work (including street tree planting, paving, landscaping of traffic islands and provision of street lighting and furniture), in accordance with the Landscape Concept Master Plan 2012.</p>										
<p>PC26</p> <p>Public open space is designed to provide for conservational and recreational uses consistent with Precinct Plan.</p> <p>Open Space areas may be incorporated into development of Precincts 1, 2 and 3 for amenity, passive recreational opportunities. Public access to the Coomera River from Precinct 3 is not required due to the functional aspects of this precinct.</p>	<p>AS26.1</p> <p>Individual developments contribute to a network of multiuse paths and trails and/or private open space</p> <p>AND</p> <p>AS26.2</p> <p>Public and Private open space areas are landscaped appropriately to the functions identified for them.</p> <p>AS26.3</p> <p>Publically accessible boardwalk / pedestrian path of shall be provided for in Precinct 2 to the Coomera River as generally depicted in the Landscape Concept Master Plan 2012.</p>										
<p>PC27</p> <p>Open space and pedestrian areas are to be designed to be both functional and safe.</p>	<p>AS27</p> <p>Development is designed to ensure a high degree of casual surveillance from employees, visitors or passing traffic, public and semi-public spaces, pedestrian and cyclist paths, car parking areas and building entrances.</p>										
<p>PC28</p> <p>All ground level car parking, open space and buffer areas must be landscaped and maintained to complement the character of the local area, and any adjoining residential or public open spaces areas.</p>	<p>AS28</p> <p>The car park area, open space and buffer areas of the lot are landscaped with landscape and design and use of plant species generally consistent with that of adjacent and nearby lots. The landscape design may incorporate extensive paved areas for pedestrian use.</p>										
Lot Size (for Subdivision only)											
<p>PC29</p> <p>All lots are to be of sufficient size to comfortably accommodate the type of development envisaged in the GCIMP Development Code and the relevant precinct intent.</p>	<p>AS29</p> <p>Any new lots created are sized in accordance with the following schedule:</p> <table border="1"> <thead> <tr> <th>Precinct</th><th>Min Area</th></tr> </thead> <tbody> <tr> <td>1 - Western Precinct</td><td>3000m²</td></tr> <tr> <td>2 - Northern Precinct</td><td>1000m²</td></tr> <tr> <td>3 - Southern Precinct</td><td>3000m²</td></tr> <tr> <td>4 - Nature Conservation Precinct</td><td>20 hectares</td></tr> </tbody> </table>	Precinct	Min Area	1 - Western Precinct	3000m ²	2 - Northern Precinct	1000m ²	3 - Southern Precinct	3000m ²	4 - Nature Conservation Precinct	20 hectares
Precinct	Min Area										
1 - Western Precinct	3000m ²										
2 - Northern Precinct	1000m ²										
3 - Southern Precinct	3000m ²										
4 - Nature Conservation Precinct	20 hectares										
<p>PC30</p> <p>Allotments prior to development have suitable topography for industry.</p>	<p>AS30</p> <p>Industrial allotments generally have a ground slope not greater than 10%.</p>										

Performance Criteria	Acceptable Solutions
<p>PC31 Allotments are of regular shapes suited to the intended uses, and allowing design flexibility, efficient development and access.</p>	<p>AS31.1 Development generally incorporates the following features:</p> <ul style="list-style-type: none"> a) allotments that are rectangular shapes; b) allotments which have frontage to depth ratios between 1:2 and 1:4 <p>OR</p> <p>AS31.2 Alternative allotment shapes are provided where warranted, due to:</p> <ul style="list-style-type: none"> a) the special site requirements of particular industries; and/or b) exceptional physical constraints. <p>OR</p> <p>AS31.3 The development incorporates a small proportion of battle axe allotments, where particular industries have special requirements for square or long and narrow sites.</p>
<p>PC32 Allotments are oriented to suit climatic conditions.</p>	<p>AS32 Allotments are arranged in a manner that maximises the number of allotments oriented to the north east to take advantage of breezes and enable optimal building orientation for energy efficiency and use of natural lighting.</p>
<p>PC33 Reconfiguration may take place in the form of Community Title Subdivision, allowing for sharing of space, facilities and services, while at the same time ensuring allotments created are suited to the intended businesses/industries.</p>	<p>AS33 Community Title Subdivisions are provided, which:</p> <ul style="list-style-type: none"> a) are consistent with the Acceptable Solutions for PC29-PC32; b) are not used for heavy manufacturing, metal/food processing, or noxious, offensive or hazardous industries.
Road Design	
<p>PC34 Roads are provided so as to form a road hierarchy, with each road serving a particular function according to the intended land use characteristics of the estate, expected traffic volumes and types, and external existing and future road linkages to anticipated development on adjoining lots.</p>	<p>AS34.1 Concept plans submitted with reconfiguration and/or development applications identify all roads proposed to be upgraded and/or newly constructed and their intended function within a road hierarchy.</p> <p>AS34.2 Concept plans submitted with reconfiguration and/or development applications identify road connections with adjacent allotments that will promote connectivity.</p>
<p>PC35 The width, pavement, curvature, sight distances, intersections, turning radii and design features of roads convey the particular function of each road with the hierarchy mentioned in PC31, and reflect the nature of traffic management. In particular, road design ensures the safe movement of heavy articulated vehicles.</p>	<p>AS35.1 Road design and construction is in accordance with Planning Scheme Policy 11 – Land Development Guidelines and the Table to this Acceptable Solution.</p> <p>AS35.2 Distances between intersections are not less than 60 metres.</p>

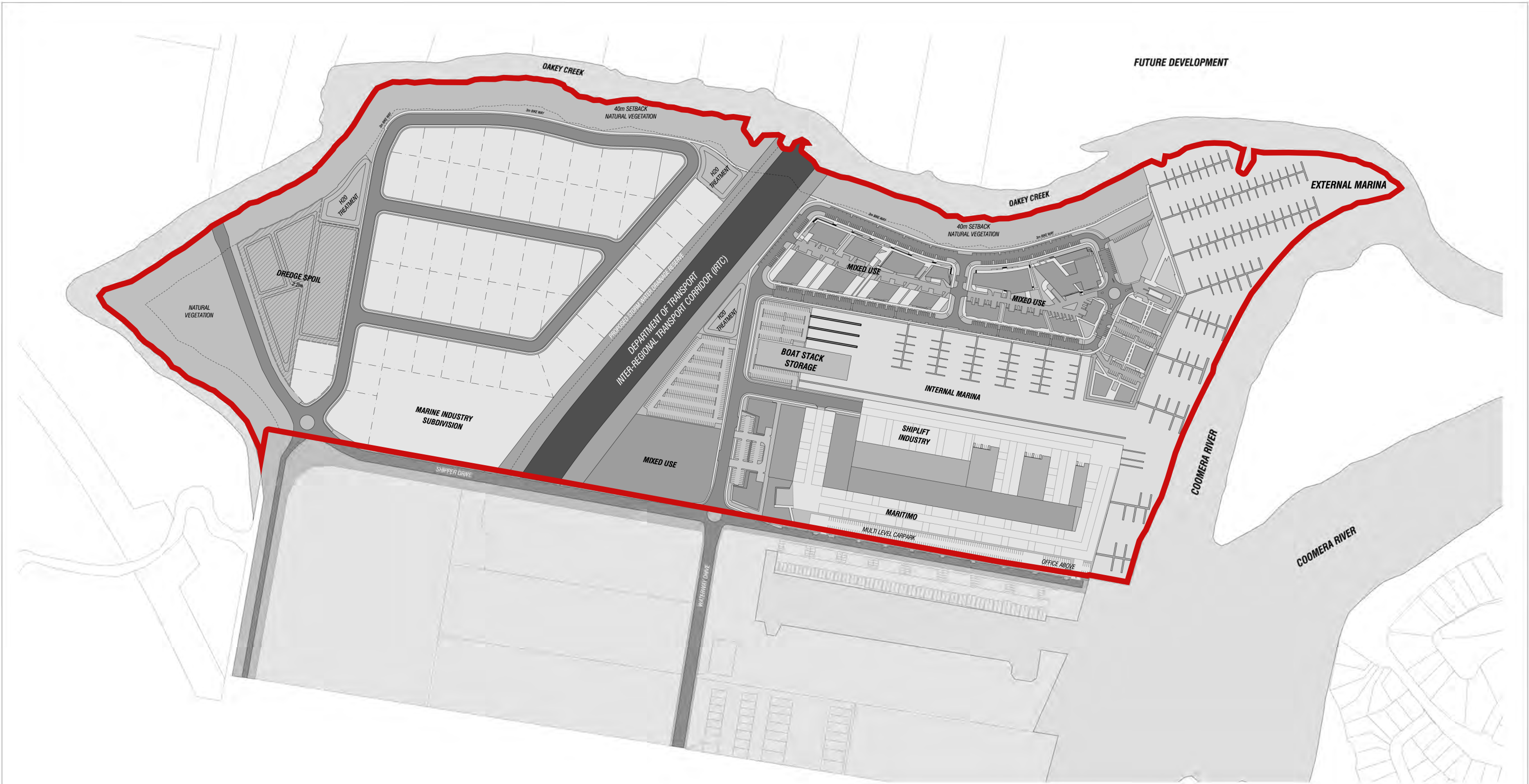
Performance Criteria	Acceptable Solutions
	<p>AS35.3 Streets intersect at right angles, or as near as topography or other limiting factors permit.</p> <p>AS35.4 Various vehicle control devices are used to regulate traffic speed and enhance pedestrian safety (such as traffic lights and illuminated pedestrian crossings).</p> <p>AS35.5 Paving surfaces, landscape treatment and signage are used to define entrances to the estate and joint use areas within the estate.</p> <p>AS35.6 Road pavements are designed and constructed for long life, hard wearing and suitability to the load capacity of expected vehicles.</p> <p>AS35.7 Median strips, roundabouts and footpaths are to be aesthetically treated and planted and paved accordingly.</p> <p>AS35.8 The design of road networks avoids the use of <i>cul-de-sacs</i>.</p>
<p>PC36 The alignment of roads reflects the physical land characteristics, and provides adequate drainage and safety.</p>	<p>AS36.1 Road drainage is designed and situated along natural drainage courses.</p> <p>AS36.2 Road grades are established to avoid excessive grading, indiscriminate removal of ground cover and tree growth, and unnecessary topographical levelling wherever possible.</p>
<p>PC37 A network of pedestrian paths and cycleways is provided which considers:</p> <ul style="list-style-type: none"> a) expected levels of pedestrian and cyclist activity; b) linkage between public transport, major employment activities, and parks; c) recreation opportunities along open space corridors; d) safe integration of users and vehicles, particularly at intersections; and e) provision of end-of-journey facilities. 	<p>AS37.1 Concept plans submitted with reconfiguration and/or development applications identify all footpaths and, where appropriate, cycle paths proposed to be upgraded and/or newly constructed.</p> <p>AS37.2 Footpaths are provided along at least one side of all major roads as specified in any relevant Council adopted strategy.</p> <p>AS37.3 Paths are designed and constructed in accordance with Council standards and AUSTROADS Part B.</p> <p>AS37.4 Features such as signs, road markings, lighting. Paving,</p>

Performance Criteria	Acceptable Solutions
	<p>bollards and street furniture are provided to enhance the safety and amenity of foot/cycle paths.</p> <p>AS37.5 Individual establishments, particularly those with 100 employees or more, provide bike racks, showers/change rooms, and other end of journey facilities.</p> <p>Precinct 1 and 2 AS37.6 Cycle paths are provided along major open space corridors, such as alongside Oakey Creek and the Coomera River.</p>
<p>PC38 The road network is designed to accommodate the extension and integration of the public transport system, with accessible linkages and routes and stops providing for passenger comfort without obstructing traffic flow.</p>	<p>AS38.1 Bus routes are located as specified by Council's City Transport Plan.</p> <p>AS38.2 Road design and construction incorporates bus lay-bys and sheltered passenger waiting areas at regular intervals along bus routes, or as specified in any relevant Council strategy.</p>
<p>PC39 Site access is designed and constructed to provide for the safe ingress/egress of vehicles to the site.</p>	<p>AS39.1 Vehicular access to the site is designed and constructed in accordance with Council and AUSTROAD standards, and/or the following minimum requirements:</p> <ul style="list-style-type: none"> a) comprises a single vehicular driveway (entrance/exit) wherever possible; b) is not closer than ten metres to an intersecting street on the same side of the street; c) provides minimum sight distances of 110metres; d) shares adjoining property access driveways wherever possible; e) always enters the street at right angles; f) where the site has frontage to two roads, access is taken off the secondary/minor road, if possible.
<p>PC40 Treatment of access points to the site maintains appropriate sight distances and visually enhances its identification.</p>	<p>AS40 Access points incorporate decorative paving treatment and landscaping which distinguishes the access point, but which does not obstruct the safe sight distance requirements outlined above.</p>
<p>PC41 Provision is made for safe pedestrian and disabled access.</p>	<p>AS41.1 Pedestrian paths designed for disabled access are provided between building entrances, public footpaths and car parking areas.</p> <p>AS41.2 Pedestrian paths are separated from vehicular driveways.</p>
Amenity Protection	
PC42	AS42

Performance Criteria	Acceptable Solutions
<p>The proposed use must not adversely detract from the amenity of the local area, having regard, but not limited, to the impact of:</p> <ul style="list-style-type: none"> a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions 	<p>No acceptable solution provided.</p>
<p>PC43 The proposed development must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area, having regard, but not limited, to the existing impact of:</p> <ul style="list-style-type: none"> a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions 	<p>AS43 No acceptable solution provided.</p>
On-Site Vehicle Parking and Movement	
<p>PC44 Internal driveways are provided for safe and easy manoeuvring of vehicles.</p>	<p>AS44.1 Internal driveways are designed and constructed to enable all vehicles to enter and exit the site in a forward motion.</p> <p>AS44.2 Minimum driveway widths are as follows:</p> <ul style="list-style-type: none"> a) six metres to accommodate non-articulated vehicles; b) nine metres to accommodate articulated vehicles; c) 4.5 metres for one way driveways. <p>AS44.3 Driveways are designed and constructed in accordance with the relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.</p>
<p>PC45 On-site vehicle parking is provided to meet expected demand, having regard to:</p> <ul style="list-style-type: none"> a) the size of proposed workforce; b) the likely number of visitors to the site; c) the likely size and number of service and transport vehicles to be on the site at any one time; d) on-site parking and loading/unloading activities within sites; e) the availability of conveniently located on-street 	<p>Precinct 1 AS45.1 The number of car parking spaces provided in Precinct 1 generally meets the standards set out in Constraint Code 4 – Car Parking, Access and Transport Integration.</p> <p>Precinct 2 and 3 AS45.2 The total number of car parking spaces provided in Precinct 2 and 3 is a total of 2720 spaces in accordance with the Overall Development Master Plan.</p>

Performance Criteria	Acceptable Solutions
f) parking; any possible future expansion, redevelopment or change of use.	AS42.3 A lesser provision may be acceptable where it can be demonstrated, to Council's satisfaction, that the parking needs of a particular development will be adequately met. Where less than the standard amount of parking is provided, the left over space is retained as landscaped open space and placed so as to be suited to ready conversion to additional parking, should the use of the site change and/or the actual car parking demand rise.
PC46 On-site vehicle parking is located: <ul style="list-style-type: none"> a) to allow easy access to building entrances; b) to provide visitor spaces for short term/high turnover use clearly visible from the street and signposted accordingly; c) to be adequately screened from the street; d) compatible with surrounding development and, where possible, facilitating shared use with adjacent land users. 	AS46.1 In areas where visual amenity is important and/or where relatively large amounts of parking are provided, parking areas are generally situated to the rear or side of the site. In particular, employee parking is situated at the rear of the site, with staff entrances at the rear of the building. AS46.2 Some parking may be located toward the front of the site convenient to the street, provided it is behind landscaping strips and treated aesthetically. AS46.3 Short term/high turnover visitor parking and disabled parking spaces are located close to the main building entrance and clearly signposted. AS46.4 Driveways and parking areas may be constructed to property boundaries and linked to adjoining car parking areas. Similarly, loading areas may be located to facilitate shared turning areas across property boundaries.
Loading and Unloading	
PC47 All loading and unloading activities take place on-site, unless access is from a service street and effectively screened.	AS47 Loading docks are located in the side or rear portions of the site, separate from public/visitor parking and access points, and screened by vegetation or walls to avoid public view.
PC48 Adequate provision is made for on-site manoeuvring of heavy vehicles.	AS48.1 On sites over 4,000m ² and/or where the uses thereon involve regular servicing by heavy vehicles, on-site service areas are provided. On-site service areas comprise an area of land with an appropriate hard surface to enable a heavy vehicle to turn around within the site (based on standard design turning templates given by AUSTROADS AS 2890.1, 2890.2), and space for additional service vehicle parking and storage requirements. AS51.2 It may be acceptable for two or more developments to share heavy vehicle turning areas.
Site Servicing	

Performance Criteria	Acceptable Solutions
<p>PC49 The design and provision of water, stormwater drainage, sewerage, electricity, gas and communications networks meets the needs of industry and business, and provides an orderly and economic progression of service development in the region.</p>	<p>AS49.1 The design and supply of water, stormwater drainage, sewerage electricity, gas and communication services is in accordance with the requirements of Planning Scheme Policy 11 – Land Development Guidelines and the responsible authority (eg. Telstra, Queensland Electricity Boards and Queensland Emergency Services).</p> <p>AS49.2 Car park entrances and ramps, loading docks and access ways are minimised, suitably designed and treated to ensure that they do not adversely impact on the streetscape and adjoining development.</p>
<p>PC50 Conflicts between pedestrians and vehicles at entrance points to parking areas are to be minimised.</p>	<p>AS50.1 The number of vehicle entry points to a development site is minimised, particularly in areas which have high volumes of pedestrian traffic and on streets with a significant through road function.</p> <p>AS50.2 Entrance points to parking and loading areas have clear and unobstructed visibility of pedestrian pathway areas, with pedestrian crossing points clearly identified which give priority to pedestrians.</p>
<p>PC51 Development is to be designed to support the functional operation of the cycle network.</p>	<p>AS51 Development is designed to support the functional operation for the local and regional cycleway system. (Local cycle ways will be determined at time of subdivision of each development).</p>
Public Convenience Facilities within Buildings	
<p>PC52 Commercial developments are to include public convenience facilities, where there is a need for their provision.</p>	<p>AS52 Where provided, public toilet facilities are open and readily accessible to the general public during retail trading hours or other trading hours relevant to the development.</p>



LEGEND

SITE BOUNDARY

PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 1 - Boundary
BASE PROVIDED BY: Pash Architects

NO	DATE	REVISION	BY

SCALE:	DATE:
1:5000 @ A3	09/12
DESIGN:	CHECKED:
ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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Telephone: 07 5526 1500
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NORTH

Gold Coast
International
marine precinct



- LEGEND**
- PRECINCT 1 - WESTERN PRECINCT
 - PRECINCT 2 - NORTHERN PRECINCT
 - PRECINCT 3 - SOUTHERN PRECINCT
 - PRECINCT 4 - NATURAL CONSERVATION / OPEN SPACE PRECINCT

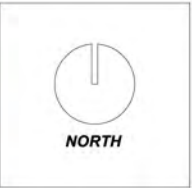
PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 2 - Precincts
BASE PROVIDED BY: Push Architects

NO	DATE	REVISION	BY

SCALE:	DATE:
1:5000 @ A3	09/12
DESIGN:	CHECKED:
ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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LEGEND

H2

H3

H4

H7

PROJECT TITLE:	Gold Coast International Marine Precinct
DRAWING TITLE:	GCIMP Map 3 - Maximum Building Heights
BASE PROVIDED BY:	Pash Architects

NO	DATE	REVISION	BY

SCALE:	1:5000 @ A3	DATE:	09/12
DESIGN:	ZP / BS	CHECKED:	BS / CH
DRAWN:	ZP	DRAW NO:	GCIMP_MASTERPLAN

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Gold Coast
International
marine precinct





LEGEND

- RD7

ONE BEDROOM PER 25m² OF NET SITE AREA*
(UP TO 400 BEDROOMS PER NET HECTARE)
- RD4

UP TO 50 DWELLINGS PER NET HECTARE
(ONE DEWELLING PER 200m² OF SITE AREA)

PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 4 - Maximum Residential Density
BASE PROVIDED BY: Pash Architects

NO	DATE	REVISION	BY

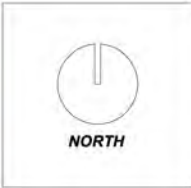
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ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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APPENDIX 3

GCIMP Development Code and Plans

Prepared By

Planit Consulting



GOLD COAST INTERNATIONAL MARINE PRECINCT DEVELOPMENT CODE

1.0 Introduction

This development code has been established to support a Preliminary Approval to Override the Gold Coast Planning Scheme made pursuant to Section 242 of the *Sustainable Planning Act 2009* (SPA). The site related to this Preliminary Approval involves land located at 2, 54 and 110 Shipper Drive, Coomera. This land comprises a total area of 63,554.5m² which can be described as:

- Lot 108 on WD6406 (4.047ha);
- Lot 98 on SP150731 (54.6608ha);
- Lot 146 on SP150731 (4.8467ha); and
- Part of Shipper Drive adjacent to Lot 98 on SP150731.

This Development Code applies to all development located within the bounds of the Gold Coast International Marine Precinct as shown on *GCIMP Map 1: Boundary*.

It is intended that the provisions of the Gold Coast International Marine Precinct (GCIMP) development code will replace the specific provisions of the Coomera Local Area Plan (LAP) and associated Place Code of the Gold Coast 'Our Living City' Planning Scheme 2003 (Planning Scheme). This is essential in ensuring that the development responds to the unique characteristics and constraints of the site, integrates well with existing and proposed future development, and details development provisions catering specifically to the various development intent/s and uses envisaged for the site.

The structure and format as provided for in the Planning Scheme has been reflected throughout this development code.

2.0 Intent

The purpose of this development code is to provide detailed planning provisions for the future development of the site. The GCIMP is a highly valuable resource for the City. The area is to be dedicated to become a market leader in terms of innovative and integrated marine industry development that would facilitate growth in employment in the marine industrial and supporting sectors. The purpose of this development code is therefore to promote economic development of the GCIMP area as a major marine industrial employment district both locally and at an international level.

This development code incorporates the provisions of the Coomera Local Area Plan except where varied within this document. It supports the requirements to establish a world class marine precinct to be accommodated in Coomera. The GCIMP focuses on establishing a high quality, innovative, and diversified precinct catering not only to the core boat building industry, but also facilitating other ancillary and associated business/industry (i.e. supply chain) to become an integrated marine industry precinct.

The development code provides locational and assessment criteria for the establishment of a range of marine industry and complimentary land uses in the defined GCIMP area (refer to the *GCIMP Map 2: Precincts*). It has been designed to adopt the most appropriate level of assessment for industrial and commercial uses in an existing marine industry zone, in order to facilitate the efficient development of the land and ensure that development requirements are proportionate to risk.

3.0 Desired Environmental Outcomes

- 3.1 A variety of employment opportunities is provided within Coomera, ranging from skilled jobs within local and neighbourhood level activity centres to light industrial and marine industry employment (refer to **DEO Soc.2**).
- 3.2 The water quality of Oakey Creek is improved and the creek is located in a wide natural riparian corridor (refer to **DEO Ecol.2**).
- 3.3 The Gold Coast Marine Precinct is developed and promoted as a world class waterfront industry area (refer to **DEO Econ.3**).

4.0 Objectives

The objectives of this development code are:

- 4.1 To establish a world class marine precinct area within Coomera providing a marina, marine industry and ancillary activities that are related to the establishment and ongoing viability of the marine development;
- 4.2 Protection of water quality, watercourses and marine environments that interface with the marine uses;
- 4.3 Protection of adjacent environmental areas, particularly in regard to JAMBA, CAMBA and Ramsar sites, to allow for the safeguard of ecological values;
- 4.4 Provision of residential, tourist and retail activity within the precinct will not compromise the viability of existing or future marine industry development;
- 4.5 Development will maintain or enhance opportunities for public access and use of the foreshore in a way that protects public safety and coastal resources;

- 4.6 Provision of a distinctive built form that promotes the marine and nautical character of the GCIMP through design principles that create a sense of place for the locality.

5.0 Precincts

The preferred pattern for development within the GCIMP development code is further defined by precinct boundaries in which common activities are placed within the same precinct. The *GCIMP Map 2: Precincts* depicts the distribution and location of each precinct. Such precincts are divided as follows:

- Precinct 1: Western Precinct
- Precinct 2: Northern Precinct
- Precinct 3: Southern Precinct
- Precinct 4: Natural Conservation / Open Space Precinct

Discussion in regard to the development intent and characteristics of each precinct provided in the below sections.

5.1 Precinct 1: Western Precinct – Preferred Character and Intended Land Use

The main purpose of the Western Precinct is to accommodate a broad range of Waterfront Industry, industrial and complimentary uses that broaden and support the development and functionality of the marine precinct, Coomera and the broader economy.

Preferred activities will typically focus on the production, manufacture, construction, distribution or servicing of marine industry and associated goods generating high levels of long term employment.

Overall, this precinct is separated from intended retail, restaurant, short term accommodation and entertainment areas at the east of the GCIMP, and also provides separation from surrounding residential areas.

Specific examples of uses in this Precinct include industry, manufacturers shops, motor vehicle repairs, warehouses, waterfront industry and car parking. Storage facilities, service stations and service industries in support of the Marine Industry are to be included where necessary. Food and convenience facilities are to be adequately provided to allow amenities to the employees of the Precinct. A dredge spoil facility is to be provided to allow for the ongoing maintenance and functionality of the marina.

The Precinct is intended to include uses to meet the needs of the boat building industry. High quality landscape treatment is anticipated throughout the precinct.

5.2 Precinct 2: Northern Precinct – Preferred Character and Intended Land Use

This precinct is intended for an integrated and interactive built form incorporating land uses of a marine, commercial and leisure nature. A variety of land uses relating to commercial, industrial, leisure, and tourist accommodation activities that support the marine industry are envisaged within this Precinct.

Land located to the south of Oakey Creek, along the northern boundary of the Gold Coast International Marine Precinct is to be developed in majority for commercial and showrooms in support of the surrounding marine industrial precinct and development. This portion of land within the Northern Precinct is to comprise buildings with substantial showrooms, workshops, service and storage areas.

Land fronting the external marina within the Northern Precinct is envisaged to be developed as a vibrant, lively centre for the Gold Coast International Marine Precinct. Tourist and entertainment uses such as restaurants, shops, cafes, taverns, tourist accommodation and eateries are encouraged in order to promote the area as a vibrant centre that facilitates interaction between workers, locals, tourists and boat users.

The area is envisaged to incorporate commercial and retail facilities required by workers of the Marine Precinct. Tenancy size and total retail floor space restrictions are incorporated to preclude full line supermarket department stores. The amalgamation of use within this area may result in multiple tenancies constituting a shopping centre as defined under the Planning Scheme. A character and form similar to Sanctuary Cove Marine Village is contemplated. Development is to be generally in accordance with the Gold Coast International Marine Precinct Master Plan.

Importantly, the Northern Precinct will facilitate boat activities and access to the water body / watercourse. Marine product fabrication, marinas, slipways, berths, boat stacks and storage areas, transport terminals, warehouses and waterfront industry are essential to the viability of the internal and external marina.

Education facilities are intended to be established within this precinct which support the industries and workforce. Shared use of facilities, inclusive of information technology, networks and marine industry workshop areas are encouraged. Offices, short term accommodation for students and facilities related to activities within the GCIMP are encouraged.

The Precinct is intended to be a high activity area of an urban nature comprising of high quality streetscapes, built form and landscape treatment. View corridors will be created to overlook the marina and water areas and a high level of visual amenity is intended in this Precinct.

A strong sense of place will be established through contemporary and nautical architecture incorporated throughout the Precinct along with shady pedestrian pathways and street furniture/public art located along road ways and adjoining the waterfront areas.

5.3 Precinct 3: Southern Precinct – Preferred Character and Intended Land Use

This Southern Precinct is to be developed for marine focused and related industries with direct access provided to the Coomera River and via the internal marina.

Boat building, repairs and storage, warehouses, waterfront industry, manufacturing, associated industry, marinas, boat stacks, transport terminals, wharves and docks are anticipated to be developed within this Precinct.

Development is to be appropriately designed and landscaped using a nautical theme. Visual appeal and pedestrian friendly access is encouraged along the marina, however pedestrian conflict with industrial activity will be managed accordingly.

5.4 Precinct 4: Natural Conservation / Open Space Precinct – Preferred Character and Intended Land Use

This Precinct is intended to conserve the natural vegetation and environmental qualities of Oakey Creek along the northern and western boundary of the Gold Coast International Marine Precinct.

The intent of this Precinct is to prohibit encroachment of urban activity and to provide permanent areas of land for the protection of natural conservation values through the conservation of wildlife and wildlife habitat areas of ecological significance. It also seeks to conserve local native plant species and indigenous vegetation and wildlife habitat areas of significance whilst enhancing the provision of open space.

This Precinct also contributes to an important buffer separating the industrial functions of the Coomera Marine Precinct from residential areas to the north of

Oakey Creek. Subsequently no urban development is anticipated within this buffer area.

6.0 Tables of Development

'Gold Coast International Marine Precinct' Table of Development

Note: This table must be read in conjunction with the explanation provided in Part 6, Division 1, Chapter 2 - Using Local Area Plans.

A: Material Change of Use

Precinct 1 – Western Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Caretaker's Residence Extractive Industry (Dredge Spoil Facility*) Estate Sales Office Manufacturer's Shop Substantial Structure Temporary Use Warehouse Waterfront Industry (where excluding fish and seafood processing)	Café** Car Park Industry Motor Vehicle Repairs Office where above ground level Outdoor Storage Facility Service Industry Service Station Storage (for boats and/or marine products) Take-Away Food** Premises where the GFA is less than 100m ² Telecommunications Facilities n.e.i. Waterfront Industry n.e.i.	Aquaculture Brothel Fuel Depot Office Shop** where GFA is less than 100m ² Take-Away Food Premises** n.e.i. Storage n.e.i.

* Dredge Spoil Facility is defined as any land used or intended to be used for the storage and / or treatment of sediment and material that has been dredged (removed) from the bottom of a harbour, river or lake.

** The total resulting GFA for Cafes, Shops, Take Away Food Premises and Service Stations (retail/food components only) within the precinct area is not permitted to exceed 1,000m².

A: Material Change of Use

Precinct 2 – Northern Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Agriculture Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park Public Utility	Caretaker's Residence Car Park Estate Sales Office Kiosk Manufacturers Shop Office** Shop* Showroom where ancillary to a waterfront industry Storage Take Away Food Premises Temporary Use Transport Terminal where including water based transport Warehouse where directly associated with waterfront industry Waterfront Industry where excluding fish and seafood processing and storage	Café Childcare Centre Commercial Services Convenience Shop Educational Establishment Laundromat Marina Market Motel Motor Vehicle Repairs Reception Room Resort Hotel Restaurant Service Industry Shop* Substantial Structure Tavern Telecommunications Facility n.e.i. Tourist Shop Vehicle Hire Office (only where hiring marine craft) Vehicle Hire Premises (only where hiring marine craft) Vehicle Sales Premises (only where selling marine craft) Warehouse n.e.i.	Fuel Depot Helipad Hostel Accommodation Indoor Recreation Facility Industry Medical Centre Place of Worship Shopping Centre Development* Showroom n.e.i. Transit Centre n.e.i. Vehicle Hire Office n.e.i. Vehicle Hire Premises n.e.i. Vehicle Sales Premises n.e.i.

**the total resulting GFA for café, shops, takeaway food premises, tourist shop or shopping centre development within the precinct area is not greater than 3,000m² with no individual tenancy exceeding 300m²*

*** the total resulting GFA for offices within the precinct area is not greater than 2,000m²*

A: Material Change of Use

Precinct 3 – Southern Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Agriculture Conservation (natural area management) Low Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Open Sports Ground Park	Caretakers Residence Manufacturer's Shop Outdoor Storage Facility Storage (for boats and/or marine products) Temporary Use Transport Terminal where including water based transport Waterfront Industry Warehouse where directly associated with waterfront industry	Car Park Marina Motor Vehicle Repairs Office Service Industry Showroom where ancillary to a waterfront industry Storage n.e.i. Substantial Structure Telecommunications Facility n.e.i.	Hostel Accommodation where located above ground level Industry Vehicle Hire Office Vehicle Hire Premises Vehicle Sales Premises

A: Material Change of Use

Precinct 4 – Natural Conservation / Open Space Precinct			
EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Conservation (natural area management) Low-Impact Telecommunications Facility Public Utility		Telecommunications Facility n.e.i.	

B: Material Change of Use Overlay Provisions

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Material Change of Use involving Building Work that:			
		Exceeds two storeys due to the inclusion of a partial third storey and the GFA of the partial third storey does not exceed 50% of the GFA of the storey immediately below, and the site is not in an area where a maximum building height exceeding 2 storeys is identified on GCIMP Map 3 - Maximum Building Height	exceeds two storeys (except for a partial third storey with less than 50% of the GFA of the storey immediately below), where the site is not in an area where a maximum building height exceeding two storeys is identified on GCIMP Map 3 - Maximum Building Height OR exceeds the maximum number of storeys indicated for the site identified on GCIMP Map 3 - Maximum Building Height .
			Exceeds the residential density for the subject land as shown on GCIMP Map 4 - Residential Density
	is on a site identified on Overlay Map OM13 – Building Setback Line from Canals and Waterways as being affected by a waterway building setback, and is in compliance with the Acceptable Solutions of Constraint Code 3 – Canals and Waterways	is on a site identified on Overlay Map OM13 – Building Setback Line from Canals and Waterways as being affected by a waterway building setback, and alternative solutions to the Acceptable Solutions of Constraint Code 3 – Canals and Waterways are proposed	
		is on or adjoins a site listed on the Queensland Heritage Register (Queensland Heritage Act 1992) or the Register of the National Estate (Australian Heritage Commission Act 1975) or the National Trust of Queensland list	
		is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes	

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
		Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR is located on land that is known to the owner and/or the developer to be of indigenous cultural heritage value	
	is on a site identified on the Domain Maps as being affected by Future Road Requirement and complies with the Acceptable Solutions of Constraint Code 4 – Car Parking, Access and Transport Integration	is on a site identified on the Domain Maps as being affected by Future Road Requirement and alternative solutions to the Acceptable Solutions of Constraint Code 4 – Car Parking, Access and Transport Integration are proposed	

C: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Operational Work that involves extraction, excavation or fill that:			
		exceeds a volume of 100 cubic metres of fill or excavation, or is closer than two metres from the site boundary	
		is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR is located on land that is known to the owner and/or the developer to be of indigenous cultural	

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
		heritage value	

D: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Advertising Device			
	Advertising Device that is: a) not illuminated, nor animated, and where the total area of signage per street frontage does not exceed the following for each precinct: Precinct 1 20m ² Precinct 2 20m ² Precinct 3 20m ² Precinct 4 2m ² b) not visible from any State-controlled road	Advertising Device n.e.i.	

E: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Infrastructure and Landscape Work			
Minor Landscape Work		Landscape Work n.e.i	
Landscape Work associated with a Detached Dwelling or a Caretakers Residence		Works for Infrastructure	

F: Operational Works

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Vegetation Clearing that:			
	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and complies with the Acceptable Solutions of Specific Development	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and alternative solutions to the Acceptable Solutions of Specific Development	results in the removal of, or damage to, vegetation over which a Vegetation Protection Order has been made by Council

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
	Code 36 – Vegetation Management or results in the removal of or damage to, vegetation that is equal to, or in excess of, four metres in height (Precinct 4), and complies with the Acceptable Solutions of Specific Development Code 36 - Vegetation Management .	Code 36 – Vegetation Management are Proposed or results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height (Precinct 4), and alternate solutions to the Acceptable Solutions of Specific Development Code 36 - Vegetation Management are proposed.	

G: Reconfiguring a Lot

EXEMPT	SELF ASSESSABLE	CODE ASSESSABLE	IMPACT ASSESSABLE
Reconfiguring a Lot that:			
		Precinct 1, 2 & 3 Results in no lots with an area less than 1,000m ² OR Entails only a Community Title Subdivision (Including Standard Format Plans and / or volumetric lots) or a volumetric lot within a building, or a leasehold subdivision of an existing or approved development. Precinct 4 Results in no lots with an area less than 20,000m ²	Precinct 1, 2 & 3 Results in one or more lots with an area less than 1,000m ² . Precinct 4 Results in one or more lots with an area less than 20 hectares.

7.0 Relevant Codes

Codes relevant for development assessment in the 'Gold Coast International Marine Precinct' are listed below. The GCIMP Development Code applies in all cases. A Specific Development Code will only apply if that specific development is proposed. A Constraint Code will only apply where the proposed development is directly impacted by the constraint that is the subject of that code.

7.1 Self Assessable Development

The following codes apply to development that is self assessable in the 'Gold Coast International Marine Precinct' Development Area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	2 Advertising Devices 10 Caretaker's Residence 14 Display Homes and Estate Sales Offices 24 Office 27 Retail and Related Establishments 34 Temporary Use 36 Vegetation Management	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 10 Nature Conservation 13 Road Traffic Noise Management 14 Sediment and Erosion Control

7.2 Material Change of Use

The following codes apply to development that is code or impact assessable **Material Change of Use** in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	5 Aquaculture 6 Attached Dwellings and Medium Density Detached Dwellings 8 Brothels 12 Child Care Centres 19 High Rise Residential and Tourist Accommodation 22 Low Rise Apartment Building 24 Office 27 Retail and Related Establishments 31 Service Stations	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 10 Nature Conservation 13 Road Traffic Noise Management 14 Sediment and Erosion Control

Place Code	Specific Development Codes	Constraint Codes
	33 Telecommunications Facility 37 Vehicle Sales 38 Working from Home	

7.3 Operational Work – Changes to Ground Level

The following codes apply to development that is code or impact assessable **Operational Work – Changes to Ground Level** (extracting gravel, rock, sand or soil from the place where it occurs naturally, or excavating or filling that materially affects premises or their use) in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Development Code	11 Changes to Ground Level and Creation of New Waterbodies	3 Canals and Waterways 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 16 Steep Slopes or Unstable Soils

7.4 Operational Work – Advertising Devices, Landscape Work and Infrastructure

The following codes apply to development that is code assessable **Operational Work – Advertising Devices** (placing an Advertising Device on premises), **Landscape Work** (undertaking Landscape Work in, on, over or under premises that materially affects premises or their use) or **Infrastructure** (undertaking Works for Infrastructure) in the 'Gold Coast International Marine Precinct' LAP area.

Place Code	Specific Development Codes	Constraint Codes
'Gold Coast International Marine Precinct' Place Code	2 Advertising Devices 21 Landscape Work 39 Works for Infrastructure	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation

Place Code	Specific Development Codes	Constraint Codes
		14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

7.5 Operational Work – Vegetation Clearing

The following codes apply to development that is code assessable **Operational Work – Vegetation Clearing** in the ‘Gold Coast International Marine Precinct’ LAP area

Place Code	Specific Development Codes	Constraint Codes
‘Gold Coast International Marine Precinct’ Place Code	36 Vegetation Management	9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

7.6 Reconfiguring a Lot

The following codes apply to development that is code or impact assessable **Reconfiguring a Lot** in the ‘Gold Coast International Marine Precinct’ LAP area

Place Code	Specific Development Codes	Constraint Codes
‘Gold Coast International Marine Precinct’ Place Code	11 Changes to Ground Level and Creation of New Waterbodies 21 Landscape Work 28 Reconfiguring a Lot 36 Vegetation Management 39 Works for Infrastructure	3 Canals and Waterways 4 Car Parking, Access and Transport Integration 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 13 Road Traffic Noise Management

8.0 'Gold Coast International Marine Precinct' Place Code

8.1 Purpose

This Place Code seeks to ensure that the scale, density, layout and aesthetic appearance of all development is consistent with desired style and character of the Gold Coast International Marine Precinct (GCIMP). These provisions also aim to ensure that the GCIMP becomes an integrated, functional and recognisable facility of an international standard.

A range of land uses and services are to be provided to broaden the diversity of activities and capacity of the GCIMP, Gold Coast Marine Precinct and wider community.

8.2 Application

- 8.2.1 The 'Gold Coast International Marine Precinct' Development Code applies to development indicated as self, code or impact assessable in the 'Gold Coast International Marine Precinct' Table of Development at **Clause 5.0** of this Development Code.
- 8.2.2 Performance Criteria PC1-PC49 apply to all code and impact assessable development in this Development Code. For development identified as self assessable in **Clause 5.0**, only the Acceptable Solutions to Performance Criteria PC1-PC7 apply.

8.3 Development Requirements

Performance Criteria	Acceptable Solutions
Development that is Self Assessable, Code Assessable or Impact Assessable	
Building Height	
PC1 The height of buildings is to be consistent with the role of the GCIMP area as a predominantly marine industrial use area. Buildings are to be constructed to a height that complements the surrounding built form.	AS1.1 The building is not more than 8.5 metres in height and has a maximum of two storeys. OR AS1.2 The height of buildings in each precinct does not exceed the maximums shown on GCIMP Map 3 – Maximum Building Height .

Performance Criteria	Acceptable Solutions						
Accommodation Density							
<p>PC2 Accommodation density must be consistent with the predominant character of the GCIMP as a marine industrial location.</p>	<p>AS2 The maximum dwelling density in any precinct does not exceed the relevant accommodation density (RD number) shown for that precinct on GCIMP Map 4 – Maximum Residential Density.</p>						
Site Coverage							
<p>PC3 The site coverage of development must be in accordance with the function of the precinct and its relationship with surrounding precincts.</p>	<p>AS3 The maximum site coverage of any development does not exceed the following:</p> <table> <tr> <td>Precinct 1</td><td>80%</td></tr> <tr> <td>Precinct 2</td><td>80%</td></tr> <tr> <td>Precinct 3</td><td>80%</td></tr> </table>	Precinct 1	80%	Precinct 2	80%	Precinct 3	80%
Precinct 1	80%						
Precinct 2	80%						
Precinct 3	80%						
Building Setback							
<p>PC4 The layout of buildings, structures and activities achieves an attractive and orderly appearance where development is visible from the public domain.</p> <p>A good standard of visual amenity is achieved through varied building setbacks and materials and high quality landscaping.</p>	<p>Precinct 1 AS 4.1 The minimum building frontage setback to any street is 3m where an average of 4.5m is achieved.</p> <p>AS4.2 The minimum side or rear setback is 0, except where the site abuts public open space, a dredge spoil facility or the IRTC where the minimum setback is 3m metres.</p> <p>Precinct 2 AS 4.3 The minimum building frontage setback to any street is 3m where an average of 4m is achieved. Or</p> <p>AS4.4 The building fronts Shipper Drive and the minimum setback is 0m with an average of 4.5m. Awnings shall be provided for that part of the building utilising a 0m – 2m setback.</p> <p>AS4.5 The minimum side or rear setback is 2m, except where the site abuts private/ public open space, The Coomera River or the IRTC where the minimum setback is 3m metres.</p> <p>Precinct 3 AS 4.6 The minimum building frontage setback to any street is 3m where an average of 4.5m is achieved.</p> <p>AS 4.7 The minimum side or rear setback is 0, except where the site abuts the Coomera River where the minimum setback is 10m metres.</p>						

Performance Criteria	Acceptable Solutions
	<p>Precinct 4 AS4.8 All buildings are set back not less than 6m from the frontage of the site and 3m from the side and rear boundaries of the site.</p>
<p>All Precincts PC5 The height of the buildings must not cause adverse impact on neighbouring sites. The development opportunities of the neighbouring sites are considered in terms of the impact of the development.</p>	<p>All Precincts AS5 All buildings exceeding two storeys in height have their upper storeys set back from the lot boundaries, consistent with the following distances:</p> <ul style="list-style-type: none"> a) a minimum of six metres from the frontage in respect of that part of the building which exceeds two storeys in height; b) for side and rear boundary setbacks, two metres for that part of the building which is above the second storey but which does not exceed 7.5 metres above that storey; c) for side and rear boundary setbacks, two metres plus 0.5 metres for every three metres (or part thereof) of that part of the building which is greater than 7.5 metres above the second storey
Vehicular Crossings	
<p>PC6 Vehicular crossings associated with the development must be designed and constructed to ensure:</p> <ul style="list-style-type: none"> a) a safe footpath environment; b) safe vehicular access to the property; c) appropriate hydraulic performance of the stormwater infrastructure; d) no damage to vehicle or road infrastructure; e) minimal loss of on-street parking spaces; f) continued amenity of the neighbourhood. 	<p>AS6 Driveways are designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.</p>
Land Use and Role of the 'Gold Coast International Marine Precinct'	
<p>All Precincts PC7 Development in the 'Gold Coast International Marine Precinct' does not compromise the Activity Centres hierarchy for the Gold Coast. Retail uses are established in the Gold Coast International Marine Precinct to cater for the convenience and retail needs of the users and workers of the Marine Precinct, and those living in the immediate surrounding residential areas.</p> <p><i>Note: An economic impact assessment may be required for proposals not meeting the acceptable solutions to this performance criteria.</i></p>	<p>Precinct 1 AS7.1 Retail floor space in Precinct 1 is limited to a total maximum of 1,000m² GFA.</p> <p>Precinct 2 AS7.2 Retail, café, floor space in Precinct 2 is limited to a total maximum of 3,000m² GFA and no individual tenancy is to exceed a maximum of 300m² GFA. This acceptable solution does not apply to:</p> <ul style="list-style-type: none"> a) Café; b) Convenience Shop; c) Restaurant; d) Take-Away Food Premises; or e) Showroom

Performance Criteria	Acceptable Solutions
	<p>AS7.3 Office floor space in Precinct 2 is limited to 2,000m² GFA.</p> <p>All Precincts AS7.4 Ancillary non-retail uses (a mixture of uses such as a Child Care Centre, Commercial Services, Indoor Recreation Facility or Medical Centre) are limited to a combined maximum of 2,500m² GFA in the GCIMP area.</p> <p>AS7.5 Total Office floor space in the GCIMP area is limited to 3,000m² GFA.</p>
Development that is Code Assessable or Impact Assessable	
Environment	
<p>PC8 Development is located, designed and constructed and/or managed to avoid or minimise:</p> <p>(a) impacts arising from:</p> <ul style="list-style-type: none"> i. altered stormwater quality or flow and ii. waste water <p>(b) the release and mobilisation of nutrients that increase the risk of algal blooms in coastal waters</p> <p>(c) the disturbance of acid sulfate soils and the release of acid and associated metal contaminants into receiving waters.</p>	<p>AS8 No acceptable solution provided.</p>
<p>PC9 Areas used for storing environmentally hazardous materials in bulk are located to take into consideration the likelihood of flooding.</p>	<p>AS9 No acceptable solution provided.</p>
<p>PC10 To achieve the ongoing minimisation of environmental harm resulting from the development, all facilities/buildings/structures at which activities will be carried out, must be designed to permit the activity to be carried out in accordance with best practice environmental management (as defined in the EP Act 1994).</p>	<p>AS10 No acceptable solution provided.</p>
Siting	
<p>PC11 All buildings must be sited to complement the marine industrial character and the predominant built form of the surrounding area and to reduce potential conflicts between uses having regard to a site analysis, prepared in</p>	<p>AS11 No acceptable solution provided.</p>

Performance Criteria	Acceptable Solutions
accordance with Planning Scheme Policy 17 – Site Analysis .	
<p>PC12 The layout of the site must provide a clear separation between the public access areas and the areas set aside for servicing the building.</p>	<p>AS 12.1 Development is to be separable from public open space areas along Oakey Creek by a road; and</p> <p>AS12.2 Identifiable public access pathways / boardwalks shall be provided to the Coomera River, within Precinct 2.</p>
<p>PC13 Industrial structures, storage or service areas, which are likely to appear visually dominating or unsightly, are located to the rear or sides of sites or are otherwise designed and screened to enhance their appearance where possible, when viewed from the street.</p> <p>Blank or screen walls, opaque roller shutters and air vents, especially in ground floor walls, will not generally be supported</p>	<p>AS13 No acceptable solution provided.</p>
Building and Layout Design, Safety and Comfort	
<p>PC14 Buildings are sited and designed to suit climatic conditions.</p>	<p>AS14.1 Buildings are oriented to the north east to take advantage of summer breezes and winter sun. Western aspects are avoided, wherever possible.</p> <p>AS14.2 Where not air conditioned, buildings incorporate a maximum of openings (i.e. louvring, windows, doorways) on eastern walls.</p> <p>AS14.3 Windows are minimised and trees are planted along west walls wherever practicable for protection from hot afternoon sun.</p> <p>AS14.4 Shading devices (i.e: large roof overhangs, window hoods/blinds, awnings and verandahs) are attached to buildings, particularly eastern and western sides. Where possible, shading devices are retractable on northern sides during winter.</p> <p>AS14.5 Semi-enclosed workstations, where relatively strenuous manual labour takes place, are located in the cooler and more ventilated parts of the building.</p>
<p>PC15 All buildings must be designed and constructed to a high aesthetic standard and to complement or enhance the local character of the GCIMP.</p>	<p>AS15.1 The massing and proportions of new buildings are consistent with those of adjoining buildings.</p> <p>AS15.2 Building materials, patterns, textures and colours used in</p>

Performance Criteria	Acceptable Solutions
	<p>new buildings are complementary to those of nearby buildings.</p> <p>AS15.3 Buildings which are constructed to a zero boundary are to have the zero façade be treated in a similar material colour to that used on the street frontage.</p> <p>AS 15.4 Buildings which adjoin communal open space and or the Coomera River shall include 80% glazing at ground level and be designed to orientate active use areas to these frontages.</p> <p>AS 15.5 Outdoor use areas are to be incorporated into dining landuses.</p> <p>AS 15.6 Corner Treatments All buildings located on the corner of two streets shall incorporate design features/elements to the corner which are at a greater scale or geometry relative to the remainder of the building. These and must contribute to the nautical / coastal character sought to be developed and include 2 of the following elements;</p> <ul style="list-style-type: none"> • locational/directional information signage; • architectural /façade features; • awnings/balconies/varied roof form; • public art • landscape treatments including public seating <p>AS15.7 The facades of buildings should address street frontages and public spaces.</p> <p>AS 15.8 Shipper Drive Buildings should be articulated to break up their perceived bulk and provide visual interest, particularly with buildings occupying a large/long site frontage. A 'fine grain' of built form shall be achieved by each new development;and</p>
<p>PC16 Buildings and associated areas must be designed to assist in crime prevention.</p>	<p>AS16.1 Landscaping does not restrict sightlines and surveillance within a site.</p> <p>AS16.2 Car parking areas are well lit and are designed to ensure casual surveillance.</p> <p>AS16.3 Building entrances face public streets, town squares or</p>

Performance Criteria	Acceptable Solutions
	public parks and not internal courtyards.
<p>PC17 Building design and appearance must be conducive to the safety and comfort of all building users.</p>	<p>AS17.1 Glass which forms all or part of any external wall of a building does not exceed a maximum degree of reflection of both heat and light of 20%. The glass area does not exceed 60% of the total area of any western orientated external wall.</p> <p>AS17.2 Entrances to the premises are clearly visible from the street, including evening hours.</p>
<p>PC18 All buildings, structures and facilities are designed to minimise the environmental impacts of the activities conducted within the building/structure/facility.</p>	<p>AS18 No acceptable solution</p>
<p>PC19 All buildings, structures and facilities are designed to minimise the environmental impacts of the activities conducted within the building/structure/facility.</p>	<p>AS19 No acceptable solution</p>
Design of Car Park Areas	
<p>PC20 All parking areas are to be suitably landscaped to provide an attractive and pleasant outlook and shade for parked vehicles, and to contribute towards the quality presentation of new developments.</p> <p>Above ground car parking is to be appropriately screened and treated to provide an articulated frontage.</p>	<p>AS20.1 Landscaped bays for the planting of shade trees are provided at regular intervals throughout car parking areas, at the rate of one landscaped bay per 40 vehicle parking bays or one large shade tree per ten parking spaces. Landscape bays have the same dimensions as a vehicle parking space.</p> <p>AS20.2 Large car parking areas and all heavy/service vehicle parking are situated to the side or rear of sites unless impractical. Smaller car parking areas, particularly for short term and disabled parking, may be located to the front of sites.</p> <p>AS20.3 Car parking areas located in frontage setback areas are set back behind a minimum 1.5 metre landscaped buffer to the frontages.</p>
Advertising Devices	

Performance Criteria	Acceptable Solutions
<p>PC21 Signs and other forms of advertising on business/ industry premises are kept to a minimum. Any advertising relates directly to the activity/process conducted on the premises, rather than general product advertisements. Advertising signage does not dominate the visual amenity of the area.</p> <p>Buildings are not painted in colours which seek to advertise a tenant and are not primary or fluorescent in nature.</p>	<p>AS21.1 There is one sign per premises. Multi-unit developments display a single index sign at the entrance to the development which details each occupant, its activity/process and respective unit number.</p> <p>AS21.2 The design and construction of signs meets the following parameters:</p> <ul style="list-style-type: none"> a) signs are situated near site entries and are well placed for viewing by pedestrians and drivers; b) free-standing signs have a maximum area of 3m²; c) signs on façades have a maximum area of 5m²; d) signs utilise company logos or symbolic representations for quick and easy identification; e) wording on signs is limited to the name, location, business and products of the establishment; f) signs do not utilise fluorescent paints; g) signs do not rotate, flash or move; h) signs are integrated with the form of development and are not visually dominating
Conservation Areas and Open Space Linkages	
<p>PC22 Identified conservation areas remain in a substantially undeveloped condition, with vegetation retained to the fullest extent possible and, where necessary, rehabilitated using local native species.</p>	<p>AS22.1 Areas identified as Conservation on Gold Coast International Marine Precinct LAP Map 2: Precincts are reserved for conservation purposes, through:</p> <ul style="list-style-type: none"> a) transfer to Council; b) dedication of a conservation easement; or c) reservation of an area of the site as open space. <p>AS22.2 Reserved Conservation Areas are managed in the following manner:</p> <ul style="list-style-type: none"> a) the land remains largely undisturbed by any buildings, clearing and earthworks; b) rehabilitation of natural features is undertaken, where necessary, particularly by way of revegetation of any previously cleared areas and stabilisation of any eroding banks of watercourses. <p>AS22.3 In Conservation Areas associated with the Coomera River and Oakey Creek, there is no discharge of waste water or contaminants or piped discharge of stormwater. Any development within the catchment of these waterways retains natural drainage patterns as far as possible, and</p>

Performance Criteria	Acceptable Solutions
	<p>utilises appropriate stormwater management techniques to minimise any increase in the volume, velocity or sedimentation of runoff into the river or creek.</p> <p>AS22.4 On land adjacent to Conservation Areas, buildings, clearing and earthworks are sited as far away as practicable from reserved Conservation Areas, with the greatest possible separation in the case of ridges, gullies and watercourses.</p> <p>AS22.5 Existing trees are retained, and additional trees planted where necessary within the 40 metre wide band, that being the designated conservation area identified on Gold Coast International Marine Precinct Map 2 Precincts</p> <ul style="list-style-type: none"> a) The conservation areas should generally remain free of building and earthworks; additional tree planting utilises species similar to those existing naturally in the area; b) any parallel roads or services are grouped on one side of the link, to minimise disturbance; c) any breaks in the vegetation canopy, necessary for roads or services, are minimised by cutting through perpendicular to the link at a point where damage and discontinuity are minimised, such as where the canopy is already broken or sparse.
Landscape Design	
<p>PC23 Landscape design is used to enhance the landscape character of the GCIMP as generally presented in the Landscape Concept Master Plan.</p>	<p>AS23.1 Landscape Design includes:</p> <ul style="list-style-type: none"> a) Provision of pleasant, shaded areas with appropriate furniture for lunch/relaxation areas for workers and visitors; b) Use of garden edges, lines of trees and mass planting to frame pathways and define site and building entries; c) Incorporation of drainage channels and planting to strengthen their resistance to erosion, especially where development is expected to result in increased volume and velocity of stormwater runoff
<p>PC24 Potentially obtrusive noise, odour and visual impacts are effectively buffered.</p>	<p>AS24.1 Development incorporates landscape buffers, earth mounds, acoustic treatments and/or acoustic fencing appropriate to the likely off-site impacts of particular developments. OR</p> <p>AS24.2 A landscape buffer, densely planted with shrubs and trees,</p>

Performance Criteria	Acceptable Solutions										
	is provided along the relevant frontage to effectively screen development behind. Species selection, use of mature or semi mature trees, and density of planting will be important in this respect.										
<p>PC25</p> <p>The street side environment and other public spaces are developed to enhance their visual appeal and create a physical continuity and legibility throughout the GCIMP and its component precincts.</p>	<p>AS25</p> <p>Individual developments contribute to streetscape enhancement work (including street tree planting, paving, landscaping of traffic islands and provision of street lighting and furniture), in accordance with the Landscape Concept Master Plan 2012.</p>										
<p>PC26</p> <p>Public open space is designed to provide for conservational and recreational uses consistent with Precinct Plan.</p> <p>Open Space areas may be incorporated into development of Precincts 1, 2 and 3 for amenity, passive recreational opportunities. Public access to the Coomera River from Precinct 3 is not required due to the functional aspects of this precinct.</p>	<p>AS26.1</p> <p>Individual developments contribute to a network of multiuse paths and trails and/or private open space</p> <p>AND</p> <p>AS26.2</p> <p>Public and Private open space areas are landscaped appropriately to the functions identified for them.</p> <p>AS26.3</p> <p>Publically accessible boardwalk / pedestrian path of shall be provided for in Precinct 2 to the Coomera River as generally depicted in the Landscape Concept Master Plan 2012.</p>										
<p>PC27</p> <p>Open space and pedestrian areas are to be designed to be both functional and safe.</p>	<p>AS27</p> <p>Development is designed to ensure a high degree of casual surveillance from employees, visitors or passing traffic, public and semi-public spaces, pedestrian and cyclist paths, car parking areas and building entrances.</p>										
<p>PC28</p> <p>All ground level car parking, open space and buffer areas must be landscaped and maintained to complement the character of the local area, and any adjoining residential or public open spaces areas.</p>	<p>AS28</p> <p>The car park area, open space and buffer areas of the lot are landscaped with landscape and design and use of plant species generally consistent with that of adjacent and nearby lots. The landscape design may incorporate extensive paved areas for pedestrian use.</p>										
Lot Size (for Subdivision only)											
<p>PC29</p> <p>All lots are to be of sufficient size to comfortably accommodate the type of development envisaged in the GCIMP Development Code and the relevant precinct intent.</p>	<p>AS29</p> <p>Any new lots created are sized in accordance with the following schedule:</p> <table border="1"> <thead> <tr> <th>Precinct</th><th>Min Area</th></tr> </thead> <tbody> <tr> <td>1 - Western Precinct</td><td>3000m²</td></tr> <tr> <td>2 - Northern Precinct</td><td>1000m²</td></tr> <tr> <td>3 - Southern Precinct</td><td>3000m²</td></tr> <tr> <td>4 - Nature Conservation Precinct</td><td>20 hectares</td></tr> </tbody> </table>	Precinct	Min Area	1 - Western Precinct	3000m ²	2 - Northern Precinct	1000m ²	3 - Southern Precinct	3000m ²	4 - Nature Conservation Precinct	20 hectares
Precinct	Min Area										
1 - Western Precinct	3000m ²										
2 - Northern Precinct	1000m ²										
3 - Southern Precinct	3000m ²										
4 - Nature Conservation Precinct	20 hectares										
<p>PC30</p> <p>Allotments prior to development have suitable topography for industry.</p>	<p>AS30</p> <p>Industrial allotments generally have a ground slope not greater than 10%.</p>										

Performance Criteria	Acceptable Solutions
<p>PC31 Allotments are of regular shapes suited to the intended uses, and allowing design flexibility, efficient development and access.</p>	<p>AS31.1 Development generally incorporates the following features:</p> <ul style="list-style-type: none"> a) allotments that are rectangular shapes; b) allotments which have frontage to depth ratios between 1:2 and 1:4 <p>OR</p> <p>AS31.2 Alternative allotment shapes are provided where warranted, due to:</p> <ul style="list-style-type: none"> a) the special site requirements of particular industries; and/or b) exceptional physical constraints. <p>OR</p> <p>AS31.3 The development incorporates a small proportion of battle axe allotments, where particular industries have special requirements for square or long and narrow sites.</p>
<p>PC32 Allotments are oriented to suit climatic conditions.</p>	<p>AS32 Allotments are arranged in a manner that maximises the number of allotments oriented to the north east to take advantage of breezes and enable optimal building orientation for energy efficiency and use of natural lighting.</p>
<p>PC33 Reconfiguration may take place in the form of Community Title Subdivision, allowing for sharing of space, facilities and services, while at the same time ensuring allotments created are suited to the intended businesses/industries.</p>	<p>AS33 Community Title Subdivisions are provided, which:</p> <ul style="list-style-type: none"> a) are consistent with the Acceptable Solutions for PC29-PC32; b) are not used for heavy manufacturing, metal/food processing, or noxious, offensive or hazardous industries.
Road Design	
<p>PC34 Roads are provided so as to form a road hierarchy, with each road serving a particular function according to the intended land use characteristics of the estate, expected traffic volumes and types, and external existing and future road linkages to anticipated development on adjoining lots.</p>	<p>AS34.1 Concept plans submitted with reconfiguration and/or development applications identify all roads proposed to be upgraded and/or newly constructed and their intended function within a road hierarchy.</p> <p>AS34.2 Concept plans submitted with reconfiguration and/or development applications identify road connections with adjacent allotments that will promote connectivity.</p>
<p>PC35 The width, pavement, curvature, sight distances, intersections, turning radii and design features of roads convey the particular function of each road with the hierarchy mentioned in PC31, and reflect the nature of traffic management. In particular, road design ensures the safe movement of heavy articulated vehicles.</p>	<p>AS35.1 Road design and construction is in accordance with Planning Scheme Policy 11 – Land Development Guidelines and the Table to this Acceptable Solution.</p> <p>AS35.2 Distances between intersections are not less than 60 metres.</p>

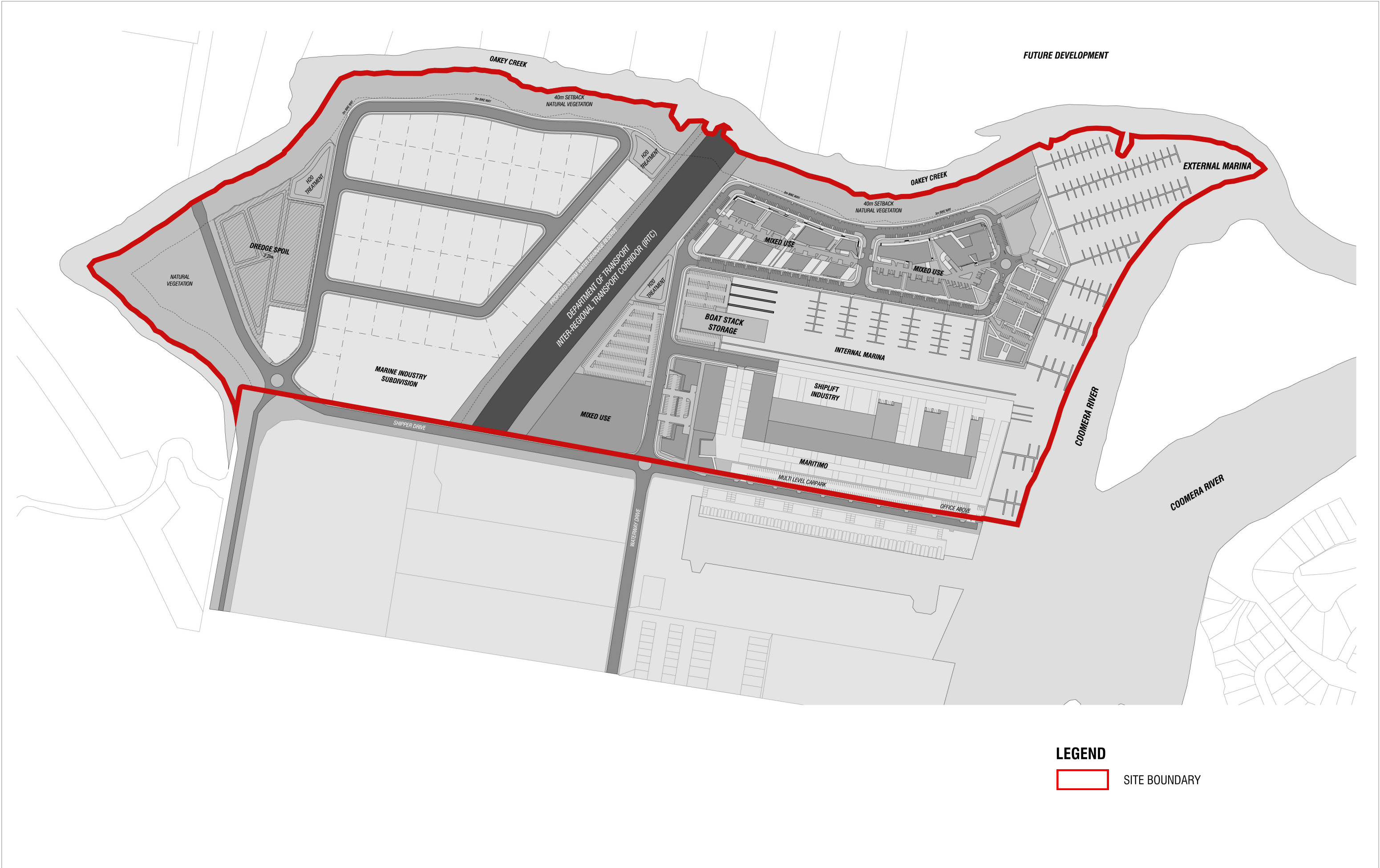
Performance Criteria	Acceptable Solutions
	<p>AS35.3 Streets intersect at right angles, or as near as topography or other limiting factors permit.</p> <p>AS35.4 Various vehicle control devices are used to regulate traffic speed and enhance pedestrian safety (such as traffic lights and illuminated pedestrian crossings).</p> <p>AS35.5 Paving surfaces, landscape treatment and signage are used to define entrances to the estate and joint use areas within the estate.</p> <p>AS35.6 Road pavements are designed and constructed for long life, hard wearing and suitability to the load capacity of expected vehicles.</p> <p>AS35.7 Median strips, roundabouts and footpaths are to be aesthetically treated and planted and paved accordingly.</p> <p>AS35.8 The design of road networks avoids the use of <i>cul-de-sacs</i>.</p>
<p>PC36 The alignment of roads reflects the physical land characteristics, and provides adequate drainage and safety.</p>	<p>AS36.1 Road drainage is designed and situated along natural drainage courses.</p> <p>AS36.2 Road grades are established to avoid excessive grading, indiscriminate removal of ground cover and tree growth, and unnecessary topographical levelling wherever possible.</p>
<p>PC37 A network of pedestrian paths and cycleways is provided which considers:</p> <ul style="list-style-type: none"> a) expected levels of pedestrian and cyclist activity; b) linkage between public transport, major employment activities, and parks; c) recreation opportunities along open space corridors; d) safe integration of users and vehicles, particularly at intersections; and e) provision of end-of-journey facilities. 	<p>AS37.1 Concept plans submitted with reconfiguration and/or development applications identify all footpaths and, where appropriate, cycle paths proposed to be upgraded and/or newly constructed.</p> <p>AS37.2 Footpaths are provided along at least one side of all major roads as specified in any relevant Council adopted strategy.</p> <p>AS37.3 Paths are designed and constructed in accordance with Council standards and AUSTROADS Part B.</p> <p>AS37.4 Features such as signs, road markings, lighting. Paving,</p>

Performance Criteria	Acceptable Solutions
	<p>bollards and street furniture are provided to enhance the safety and amenity of foot/cycle paths.</p> <p>AS37.5 Individual establishments, particularly those with 100 employees or more, provide bike racks, showers/change rooms, and other end of journey facilities.</p> <p>Precinct 1 and 2 AS37.6 Cycle paths are provided along major open space corridors, such as alongside Oakey Creek and the Coomera River.</p>
<p>PC38 The road network is designed to accommodate the extension and integration of the public transport system, with accessible linkages and routes and stops providing for passenger comfort without obstructing traffic flow.</p>	<p>AS38.1 Bus routes are located as specified by Council's City Transport Plan.</p> <p>AS38.2 Road design and construction incorporates bus lay-bys and sheltered passenger waiting areas at regular intervals along bus routes, or as specified in any relevant Council strategy.</p>
<p>PC39 Site access is designed and constructed to provide for the safe ingress/egress of vehicles to the site.</p>	<p>AS39.1 Vehicular access to the site is designed and constructed in accordance with Council and AUSTROAD standards, and/or the following minimum requirements:</p> <ul style="list-style-type: none"> a) comprises a single vehicular driveway (entrance/exit) wherever possible; b) is not closer than ten metres to an intersecting street on the same side of the street; c) provides minimum sight distances of 110metres; d) shares adjoining property access driveways wherever possible; e) always enters the street at right angles; f) where the site has frontage to two roads, access is taken off the secondary/minor road, if possible.
<p>PC40 Treatment of access points to the site maintains appropriate sight distances and visually enhances its identification.</p>	<p>AS40 Access points incorporate decorative paving treatment and landscaping which distinguishes the access point, but which does not obstruct the safe sight distance requirements outlined above.</p>
<p>PC41 Provision is made for safe pedestrian and disabled access.</p>	<p>AS41.1 Pedestrian paths designed for disabled access are provided between building entrances, public footpaths and car parking areas.</p> <p>AS41.2 Pedestrian paths are separated from vehicular driveways.</p>
Amenity Protection	
PC42	AS42

Performance Criteria	Acceptable Solutions
<p>The proposed use must not adversely detract from the amenity of the local area, having regard, but not limited, to the impact of:</p> <ul style="list-style-type: none"> a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions 	<p>No acceptable solution provided.</p>
<p>PC43 The proposed development must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area, having regard, but not limited, to the existing impact of:</p> <ul style="list-style-type: none"> a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions 	<p>AS43 No acceptable solution provided.</p>
On-Site Vehicle Parking and Movement	
<p>PC44 Internal driveways are provided for safe and easy manoeuvring of vehicles.</p>	<p>AS44.1 Internal driveways are designed and constructed to enable all vehicles to enter and exit the site in a forward motion.</p> <p>AS44.2 Minimum driveway widths are as follows:</p> <ul style="list-style-type: none"> a) six metres to accommodate non-articulated vehicles; b) nine metres to accommodate articulated vehicles; c) 4.5 metres for one way driveways. <p>AS44.3 Driveways are designed and constructed in accordance with the relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.</p>
<p>PC45 On-site vehicle parking is provided to meet expected demand, having regard to:</p> <ul style="list-style-type: none"> a) the size of proposed workforce; b) the likely number of visitors to the site; c) the likely size and number of service and transport vehicles to be on the site at any one time; d) on-site parking and loading/unloading activities within sites; e) the availability of conveniently located on-street 	<p>Precinct 1 AS45.1 The number of car parking spaces provided in Precinct 1 generally meets the standards set out in Constraint Code 4 – Car Parking, Access and Transport Integration.</p> <p>Precinct 2 and 3 AS45.2 The total number of car parking spaces provided in Precinct 2 and 3 is a total of 2720 spaces in accordance with the Overall Development Master Plan.</p>

Performance Criteria	Acceptable Solutions
f) parking; any possible future expansion, redevelopment or change of use.	AS42.3 A lesser provision may be acceptable where it can be demonstrated, to Council's satisfaction, that the parking needs of a particular development will be adequately met. Where less than the standard amount of parking is provided, the left over space is retained as landscaped open space and placed so as to be suited to ready conversion to additional parking, should the use of the site change and/or the actual car parking demand rise.
PC46 On-site vehicle parking is located: a) to allow easy access to building entrances; b) to provide visitor spaces for short term/high turnover use clearly visible from the street and signposted accordingly; c) to be adequately screened from the street; d) compatible with surrounding development and, where possible, facilitating shared use with adjacent land users.	AS46.1 In areas where visual amenity is important and/or where relatively large amounts of parking are provided, parking areas are generally situated to the rear or side of the site. In particular, employee parking is situated at the rear of the site, with staff entrances at the rear of the building. AS46.2 Some parking may be located toward the front of the site convenient to the street, provided it is behind landscaping strips and treated aesthetically. AS46.3 Short term/high turnover visitor parking and disabled parking spaces are located close to the main building entrance and clearly signposted. AS46.4 Driveways and parking areas may be constructed to property boundaries and linked to adjoining car parking areas. Similarly, loading areas may be located to facilitate shared turning areas across property boundaries.
Loading and Unloading	
PC47 All loading and unloading activities take place on-site, unless access is from a service street and effectively screened.	AS47 Loading docks are located in the side or rear portions of the site, separate from public/visitor parking and access points, and screened by vegetation or walls to avoid public view.
PC48 Adequate provision is made for on-site manoeuvring of heavy vehicles.	AS48.1 On sites over 4,000m ² and/or where the uses thereon involve regular servicing by heavy vehicles, on-site service areas are provided. On-site service areas comprise an area of land with an appropriate hard surface to enable a heavy vehicle to turn around within the site (based on standard design turning templates given by AUSTROADS AS 2890.1, 2890.2), and space for additional service vehicle parking and storage requirements. AS51.2 It may be acceptable for two or more developments to share heavy vehicle turning areas.
Site Servicing	

Performance Criteria	Acceptable Solutions
<p>PC49 The design and provision of water, stormwater drainage, sewerage, electricity, gas and communications networks meets the needs of industry and business, and provides an orderly and economic progression of service development in the region.</p>	<p>AS49.1 The design and supply of water, stormwater drainage, sewerage electricity, gas and communication services is in accordance with the requirements of Planning Scheme Policy 11 – Land Development Guidelines and the responsible authority (eg. Telstra, Queensland Electricity Boards and Queensland Emergency Services).</p> <p>AS49.2 Car park entrances and ramps, loading docks and access ways are minimised, suitably designed and treated to ensure that they do not adversely impact on the streetscape and adjoining development.</p>
<p>PC50 Conflicts between pedestrians and vehicles at entrance points to parking areas are to be minimised.</p>	<p>AS50.1 The number of vehicle entry points to a development site is minimised, particularly in areas which have high volumes of pedestrian traffic and on streets with a significant through road function.</p> <p>AS50.2 Entrance points to parking and loading areas have clear and unobstructed visibility of pedestrian pathway areas, with pedestrian crossing points clearly identified which give priority to pedestrians.</p>
<p>PC51 Development is to be designed to support the functional operation of the cycle network.</p>	<p>AS51 Development is designed to support the functional operation for the local and regional cycleway system. (Local cycle ways will be determined at time of subdivision of each development).</p>
Public Convenience Facilities within Buildings	
<p>PC52 Commercial developments are to include public convenience facilities, where there is a need for their provision.</p>	<p>AS52 Where provided, public toilet facilities are open and readily accessible to the general public during retail trading hours or other trading hours relevant to the development.</p>




PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 1 - Boundary
BASE PROVIDED BY: Push Architects


NO	DATE	REVISION	BY

SCALE:	DATE:
1:5000 @ A3	09/12
DESIGN:	CHECKED:
ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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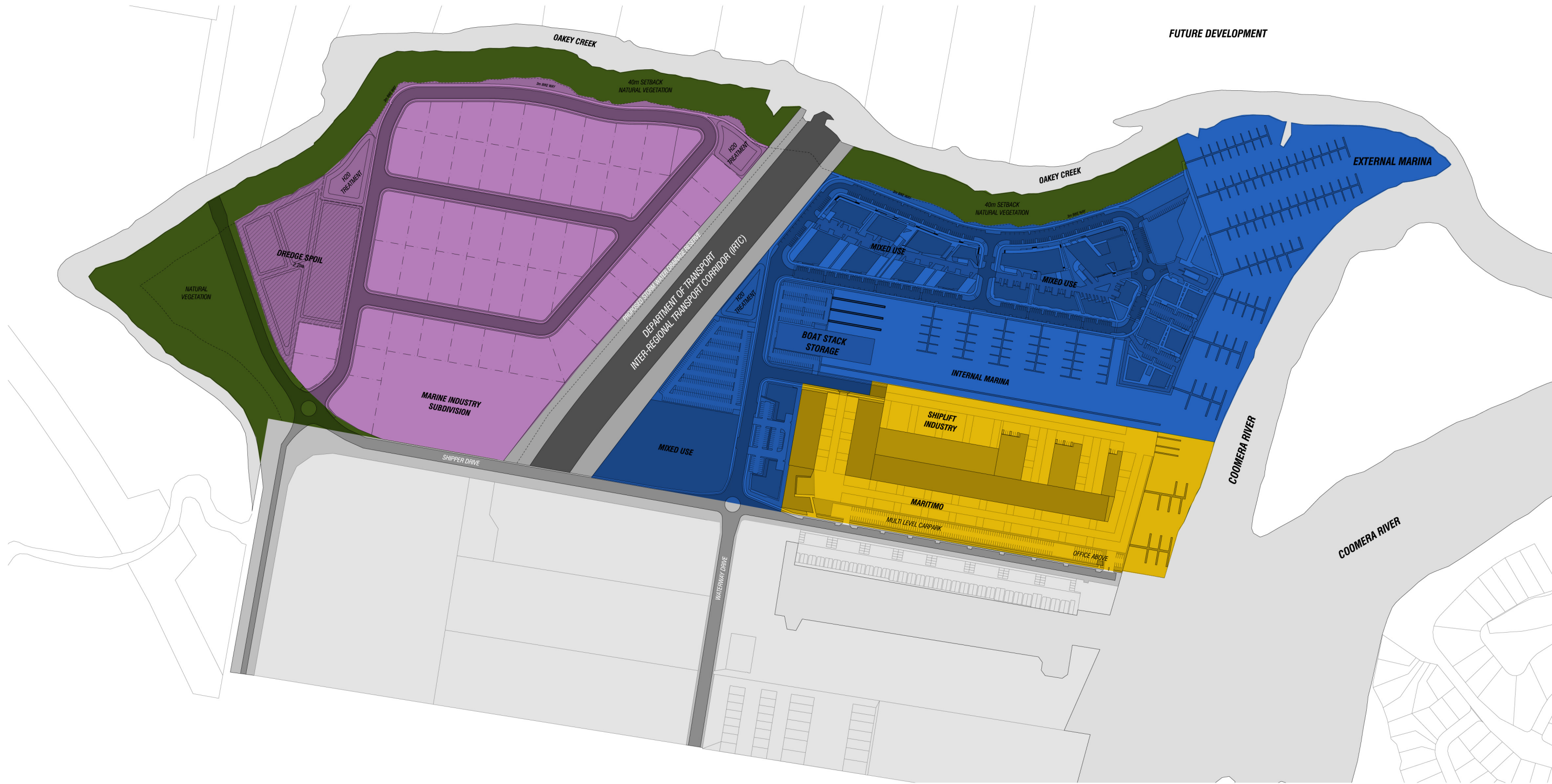




NORTH

Gold Coast
International
marine precinct





LEGEND

PRECINCT 1 - WESTERN PRECINCT

PRECINCT 2 - NORTHERN PRECINCT

PRECINCT 3 - SOUTHERN PRECINCT

PRECINCT 4 - NATURAL CONSERVATION / OPEN SPACE PRECINCT

PROJECT TITLE:
Gold Coast International Marine Precinct

DRAWING TITLE:
GCIMP Map 2 - Precincts


BASE PROVIDED BY: Push Architects

NO	DATE	REVISION	BY


SCALE: 1:5000 @ A3	DATE: 09/12
DESIGN: ZP / BS	CHECKED: BS / CH
DRAWN: ZP	DRAW NO: GCIMP_MASTERPLAN

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PLANIT
CONSULTING



NORTH

Gold Coast
International
marine precinct






PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 3 - Maximum Building Heights
BASE PROVIDED BY: Push Architects

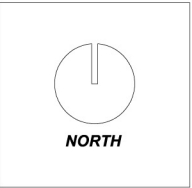
NO	DATE	REVISION	BY

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ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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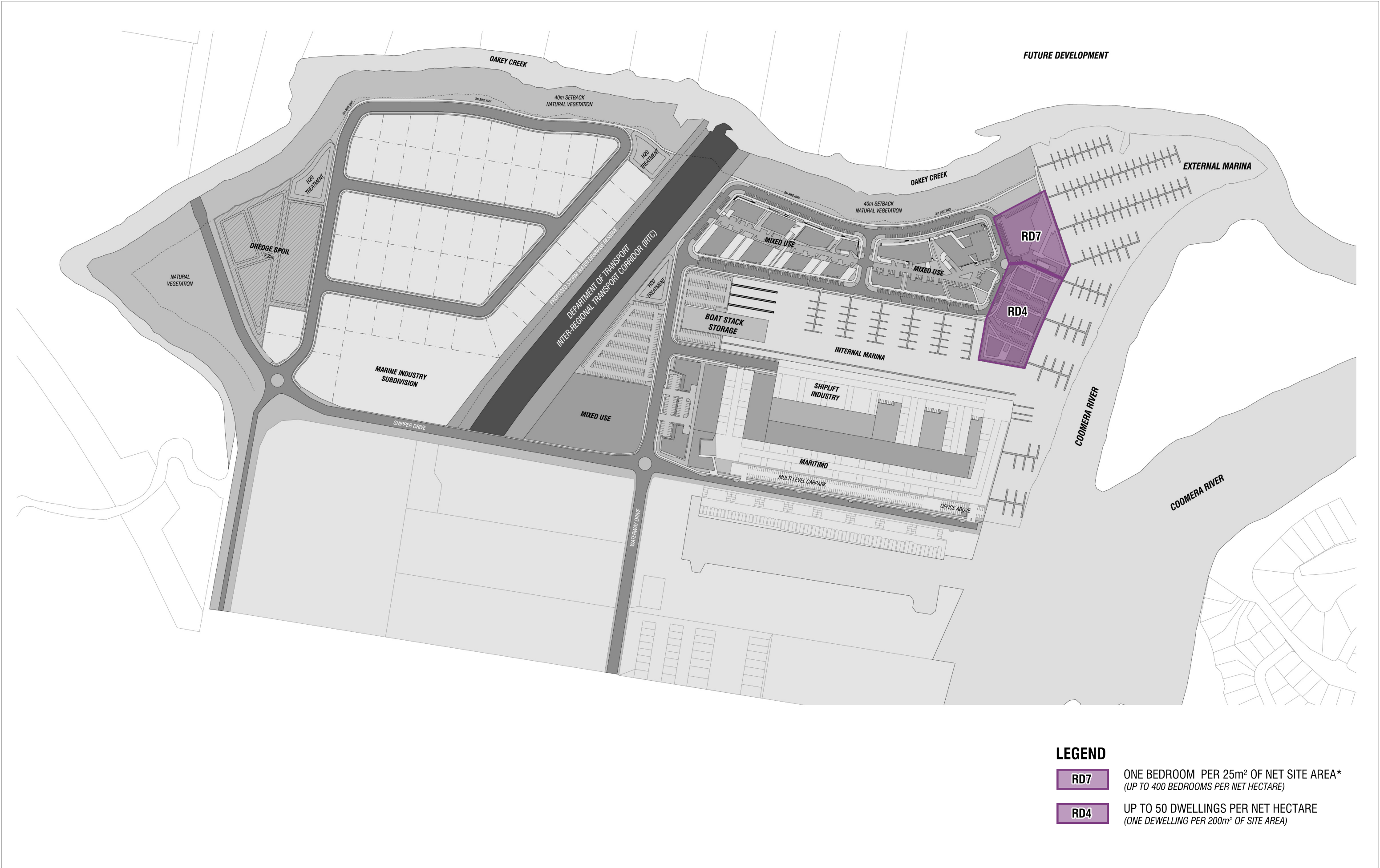
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Gold Coast
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marine precinct





LEGEND

- RD7** ONE BEDROOM PER 25m² OF NET SITE AREA*
(UP TO 400 BEDROOMS PER NET HECTARE)
- RD4** UP TO 50 DWELLINGS PER NET HECTARE
(ONE DEWELLING PER 200m² OF SITE AREA)

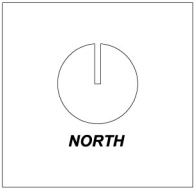
PROJECT TITLE:
Gold Coast International Marine Precinct
DRAWING TITLE:
GCIMP Map 4 - Maximum Residential Density
BASE PROVIDED BY: Push Architects

NO	DATE	REVISION	BY

SCALE:	DATE:
1:5000 @ A3	09/12
DESIGN:	CHECKED:
ZP / BS	BS / CH
DRAWN:	DRAW NO:
ZP	GCIMP_MASTERPLAN

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