



Gladstone Ports Corporation

Growth, Prosperity, Community.

GPC Document No. 1474377
GPC Ref: DA2018/13
Your Ref.:

20 February 2019

Gladstone Ports Corporation Limited
c/- Anthea Bennett
PO Box 259
GLADSTONE QLD 4680

Email: bennetta@gpcl.com.au

Dear Ms Bennett

DECISION NOTICE – APPROVAL WITH CONDITIONS – DA2018/13

(GIVEN UNDER S63 PLANNING ACT 2016 AND THE PROVISIONS OF GLADSTONE PORTS CORPORATION LAND USE PLAN 2012)

1. Application Details

This development application was **properly made** to the Gladstone Ports Corporation Limited on **20 December 2018**.

Application Number:	DA2018/13
Applicant Name:	Gladstone Ports Corporation Limited
Applicant Contact Details:	Anthea Bennett Gladstone Ports Corporation Limited PO BOX 259 GLADSTONE QLD 4680 bennetta@gpcl.com.au
Approvals Sought:	Operational works that is tidal works in SPL tidal area
Details of Proposed Development:	Construction of a mooring dolphin and attaching walkway at Auckland Point Wharf 4
Location Street Address:	Auckland Point GLADSTONE Q 4680
Location Real Property Description:	Lot 424 on SP293582
Land Owner:	Department of Natural Resources, Mines & Energy
Present Zoning & Precinct	Adjacent to Strategic Port Land – Wharves (offshore) - Strategic Port Land tidal area

2. Details Of Proposed Development

Construction of a mooring dolphin and attaching walkway.

3. Details Of Decision

This development application was **decided** on **20 February 2019**.

This development application is **approved in full with conditions**. These conditions are set out in Attachment 1 and are clearly identified to indicate whether the assessment manager or a concurrence agency imposed them.

4. Details Of Approval

This development approval is a **Development Permit** given for:

- a) Strategic Port Land tidal area – *Planning Regulation 2017* reference: Schedule 10, part 13 - Ports, division 5 - Strategic Port Land, subdivision 2, Table 1; and
- b) Operational Works that is Tidal Works – *Planning Regulation 2017* reference: Schedule 10, part 17 – Tidal Works or work in a coastal management district, division 3, Table 1, Item 1; and Schedule 10, part 17 - Tidal Works or work in a coastal management district, division 3, Table 2, Item 1.

5. Conditions

This development approval is subject to the conditions in Attachment 1 - Part 1 and Part 2.

6. Further Development Permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

1. Not applicable.

7. Properly made submissions

Not applicable – No part of the application required public notification.

8. Referral Agencies for the Application

The referral agencies for this application are:

For an application involving	Name of referral agency	Advice agency or concurrence agency	Address
Operational Works that is Tidal Works	Department of State Development, Manufacturing, Infrastructure and Planning	Concurrence	Rockhampton State Assessment Referral Agency (SARA) PO Box 113 Rockhampton Qld 4700 RockhamptonSARA@dilgp.qld.gov.au

9. Approved Plans and Specifications –

Copies of the following plans, specifications or drawings are enclosed in **Attachment 2**:

Drawing/report title	Prepared by	Date	Reference no.	Version
Aspect of development: Operational Work that is Tidal Works in SPL tidal area				
Auckland Point Berth 4 – AP4 Eastern Mooring Dolphin				
Cover Sheet and Drawing List	GHD	04/09/2018	005-00118	0
General Arrangement	GHD	04/09/2018	005-00119	0
Notes Sheet 1 of 3	GHD	04/09/2018	005-00120	0
Notes Sheet 2 of 3	GHD	04/09/2018	005-00121	0
Notes Sheet 3 of 3	GHD	04/09/2018	005-00122	0
Piling Plan and Schedule	GHD	04/09/2018	005-00123	0
Piling Details	GHD	04/09/2018	005-00124	0
Intermediate Headstock – General Arrangement	GHD	04/09/2018	005-00125	0
Intermediate Headstock – Precast Details	GHD	04/09/2018	005-00126	0
Intermediate Headstock – Insitu Details	GHD	04/09/2018	005-00127	0
Mooring Dolphin – General Arrangement	GHD	04/09/2018	005-00128	0
Mooring Dolphin – Precast Details	GHD	04/09/2018	005-00129	0
Mooring Dolphin – Insitu Details	GHD	04/09/2018	005-00130	0
Mooring Dolphin – Miscellaneous Details	GHD	04/09/2018	005-00131	0
Walkways – General Arrangement	GHD	04/09/2018	005-00132	0
Walkways – Details	GHD	04/09/2018	005-00133	0
Auckland Point Terminal Wharf Berth No. 4 – Eastern Mooring Dolphin				
Electrical Equipment Schematic	GHD	04/09/2018	016-1240	0
Cathodic Protection Schematic	GHD	04/09/2018	016-1241	0
Electrical Services Arrangement	GHD	04/09/2018	016-1242	0
Electrical Services Detail	GHD	04/09/2018	016-1244	0
Cathodic Protection – Cable Schedule and Bill of Quantities	GHD	04/09/2018	016-1245	0
Cathodic Protection – Detail	GHD	04/09/2018	016-1246	0

10. Currency Period for the Approval

This development approval will lapse at the end of the periods set out below:

- For Operational Works approvals, the approval lapses 2 years after this approval decision date – reference section 85 of the *Planning Act 2016*.

11. Rights of Appeal

The rights of applicants to appeal to a tribunal or the Planning and Environment Court against decisions about a development application are set out in chapter 6, part 1 of the *Planning Act 2016*. For particular applications, there may also be a right to make an application for a declaration by a tribunal (see chapter 6, part 2 of the *Planning Act 2016*).

Attachment 3 is an extract from the *Planning Act 2016* that sets down the applicant's appeal rights and the appeal rights of a submitter.

For further information please contact Sarah Hunter, Principal Planner, on 07 4976 1287 or via email hunters@gpcl.com.au.

Yours sincerely



Sarah Hunter
Principal Planner
20 February 2019

Cc: Gladstone Regional Council
Rockhampton SARA

Enc. Attachment 1: Conditions of Approval
Part 1 – Conditions imposed by the assessment manager
Part 2 – Conditions required by the referral agency response
a) Department of State Development, Manufacturing, Infrastructure and
Planning, 5 February 2019

Attachment 2: Approved plans and specifications

Attachment 3: Extract of appeal provisions

ATTACHMENT 1: CONDITIONS OF APPROVAL

PART 1: ASSESSMENT MANAGER CONDITIONS

In general the development proposal is in compliance with the requirements of Gladstone Ports Corporation Limited (GPC). This development approval is subject to each of the following conditions which are stated by Gladstone Ports Corporation Limited, the assessment manager.

Part 1a: Approval sought under *Planning Act 2016* – Operational Works that is Tidal Works in Strategic Port Land tidal area

GENERAL

1. The proposed development must be carried out generally in accordance with the plans as lodged with the application except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be completed prior to the commencement of the use.
3. Where additional “approval” is required under these conditions by GPC for drawings or documentation, the proponent must submit for review, amend to the satisfaction of, and obtain written acceptance from the Gladstone Ports Corporation. Only in this manner can compliance with the condition be achieved.
4. All other relevant regulatory approvals must be obtained before commencement of works or operation of the facility.
5. The proponent must inform GPC of completion of works within 14 days of practical completion and undertake a site inspection with GPC. The proponent must also certify that the development is constructed as per design and provide RPEQ certification that the development has been constructed generally in accordance with the approved plans.

ENGINEERING & PLANNING

6. Upon completion of the works, the proponent must supply GPC with RPEQ certified “As Constructed” plans in both hard copy (2 of) and electronic (CAD format) which illustrate all infrastructure and services installed on and adjacent to Port land associated with the activity.
7. Any site lighting used during construction should not impact on the visibility of Navigational Aids utilised for the primary shipping channels nor illuminate a landward glare beyond the site boundary. Lighting must be continually reviewed during construction and operations with respect to navigation and will be revised as required in response to negative impacts as they arise.
8. Any material which is deposited or any debris which falls or is deposited on tidal lands or into tidal waters during the construction of the Works shall be removed by the proponent at its cost and expense. At the end of the construction, the proponent shall provide GPC with certification that the seabed is clear of foreign materials before Practical Completion.
9. The hours for the construction of the facility (i.e. operation of any machinery and/or other equipment) shall be restricted to between 7:00am and 6:00pm Monday to Saturday. No works shall be undertaken Sundays or on public holidays. Any variations to these times will be subject to the approval of GPC.

ENVIRONMENT

Management Plans

10. Prior to construction and operational phases of the works commencing on site, a Construction Environmental Management Plan (CEMP) specific to these works, are to be submitted to GPC for approval.

The activity must be undertaken in accordance with the approved CEMP that ensures:

- (a) environmental risks are identified, managed and continually assessed in relation to the activity (this includes construction, operations, and rehabilitation as applicable);
- (b) that staff are trained and aware of their obligations under the EMP;
- (c) that reviews of environmental performance are undertaken at least annually; and
- (d) any amendments to the EMP are to be submitted to GPC for review and approval.

Incident notification

11. Gladstone Ports Corporation Environment Hotline (07) 4976 1617 is to be notified of the occurrence of any:

- (a) release / spill of contaminants (e.g. fuels / chemicals / sewerage) greater than 250L to land;
- (b) release / spill of contaminants (e.g. fuels / chemicals / sewerage) of any amount to water;
- (c) any environmental complaints received by the holder of this approval; and
- (d) non-compliance with conditions of this approval or any other environmental approval obtained in relation to the approved activity.

PART 2: REFERRAL AGENCY CONDITIONS

Referral Agency Name: Department of State Development, Manufacturing, Infrastructure and Planning



Department of
**State Development,
Manufacturing,
Infrastructure and Planning**

Our reference: 1812-9070 SRA
Your reference: DA2018/13

5 February 2019

The Chief Executive Officer
Port of Gladstone Ports Corporation Limited
PO Box 259
Gladstone Qld 4680
hunters@gpcl.com.au

Attention: Sarah Hunter

Dear Sir/Madam,

Referral agency response - with conditions
(Given under section 56 of the *Planning Act 2016*)

The development application described below was properly referred to the Department of State Development, Manufacturing, Infrastructure and Planning on 4 January 2019.

Applicant details

Applicant name: Gladstone Ports Corporation Limited
Applicant contact details: 40 Goonoon Street
PO Box 259
Gladstone QLD 4680
bennetta@gpcl.com.au

Location details

Street address: Mcfarlan Drive, Barney Point
Real property description: Lot 424 on SP293582
Local government area: Gladstone Regional Council

Application details

Development permit: Operational work for a mooring dolphin and associated walkway

Referral triggers

The development application was referred to the department under the following provisions of the Planning Regulation 2017:

- 10.17.3.1.1 *Tidal works or work in a coastal management district*

- 10.17.3.2.1 *Tidal works*

Conditions

Under section 56(1)(b)(i) of the *Planning Act 2016* (the Act), the conditions set out in Attachment 1 must be attached to any development approval.

Reasons for decision to impose conditions

The department must provide reasons for the decision to impose conditions. These reasons are set out in Attachment 2.

Advice to the applicant

The department offers advice about the application to the applicant - see Attachment 3.

Approved plans and specifications

The department requires that the plans and specifications set out below and enclosed must be attached to any development approval.

Drawing/report title	Prepared by	Date	Reference no.	Version/issue
Aspect of development: Operational work for a mooring dolphin and associated walkway				
Auckland Point Bert 4, AP4 Eastern Mooring Dolphin, General Arrangement	Gladstone Ports Corporation	4 September 2018	005-00119	Revision 0

A copy of this response has been sent to the applicant for their information.

For further information please contact Rebecca Gesch, Planning Officer on (07) 4924 2915 or via email at RockhamptonSARA@dsgmp.qld.gov.au who will be pleased to assist.

Yours sincerely,



Anthony Walsh
Manager Planning

- cc Gladstone Ports Corporation Limited, bennetta@gpcl.com.au
- enc Attachment 1 - Conditions to be imposed
Attachment 2 - Reasons for decision to impose conditions
Attachment 3 - Advice to the applicant
Approved plans and specifications

Attachment 1 - Conditions to be imposed

No.	Conditions	Condition timing
Aspect of development: Operational work for a mooring dolphin and associated walkway		
<i>Tidal works or work in a coastal management district</i> - The chief executive administering the <i>Planning Act 2016</i> nominates the Director-General of The Department of Environment and Science to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
1.	The tidal works for a mooring dolphin and associated walkway must be carried out generally in accordance with the following plan: <ul style="list-style-type: none"> • <i>Auckland Point, Berth 4, AP4 Eastern Mooring Dolphin, General Arrangement</i>, prepared by GHD, dated 4 September 2018 and referenced 005-00119 (Revision 0). 	For the duration of the works.
2.	For the proposed works, only use clean materials and ensure that the works do not cause contamination.	For the duration of works.
3.	Erosion and sediment control measures which are in accordance with Best Practice Erosion and Sediment Control (BPESC) guidelines for Australia (International Erosion Control Association), are to be installed and maintained to prevent the release of sediment to tidal waters.	For the duration of works.
4.	Should the proposed mooring dolphin and associated walkway works collapse, fail or otherwise suffer structural consequences which impact their integrity or ability to function as intended, the works must be: <p>(a) reinstated in accordance with this development approval; or</p> <p>(b) removed and disposed of at an appropriately licensed facility.</p>	As soon as reasonably practicable subsequent to the damage.
5.	<p>(a) In the event that the works cause disturbance or oxidisation of acid sulfate soil, the affected soil must be treated and thereafter managed (until the affected soil has been neutralised or contained) in accordance with the current <i>Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines</i>, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014.</p> <p>(b) Certification by an 'appropriately qualified person', confirming that the affected soil has been neutralised or contained, in accordance with (a) above is to be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and Licence Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001</p> <p>Note: 'appropriately qualified person' means a person or persons who has professional qualifications, training, skills and experience relevant to soil</p>	<p>(a) Upon disturbance or oxidisation until the affected soil has been neutralised or contained.</p> <p>(b) At the time the soils have been neutralised or contained.</p>

	chemistry or acid sulfate soil management and can give authoritative assessment, advice and analysis in relation to acid sulfate soil management using the relevant protocols, standards, methods or literature.	
6.	Piles must be driven using a 'ramp-up technique' to minimise conflicts with marine mammals and reptiles.	For the duration of works.
7.	All works permitted under this approval must be conducted according to the following measures to minimise conflicts with marine mammals and reptiles: <ul style="list-style-type: none"> (i) a safety zone extending no less than a radius of 100m around the in-water works is established and is monitored during all works; (ii) in-water works shall not commence if marine mammals or reptiles are sighted within the safety zone based on a minimum pre-works observation time of 15 minutes and ongoing monitoring during works; (iii) in-water works shall cease if a marine mammal or reptile is observed within the safety zone; and (iv) in-water works shall not recommence until the marine mammal or reptile sighted within the safety zone is observed to leave the safety zone or is not sighted for 15 minutes. 	For the duration of works.
<p><i>Tidal works</i> - The chief executive administering the <i>Planning Act 2016</i> nominates the Director-General of the Department of Transport and Main Roads to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):</p>		
8.	<p>(a) Provide written notice to The Regional Harbour Master Gladstone by email Gladstone.rhm@msq.qld.gov.au when the development authorised under this approval is scheduled to commence.</p> <p>Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.</p> <p>(b) Provide written notice to The Regional Harbour Master Gladstone by email Gladstone.rhm@msq.qld.gov.au, when the development authorised under this approval has been completed.</p> <p>Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.</p>	<p>(a) At least two (2) weeks prior to the commencement of works.</p> <p>(b) Within two (2) weeks of the completion of works.</p>
9.	"As Constructed" drawings of the approved structure must be provided to the Regional Harbour Master Gladstone email Gladstone.rhm@msq.qld.gov.au	Within two (2) weeks of the completion of the works.
10.	All vessels, structures, plant and equipment associated with the construction of the approved works must be lit/marked in accordance with the following specifications and requirements such that undertaking the construction works does not cause a risk to the safe navigation of ships:	While the works are occurring.

	<p>(a) Any vessels associated with the project must comply with relevant lighting standards.</p> <p>(b) The vessels and structures will have warning lights as specified in the Marine Execution Plan (MEP). Temporary markers/floating buoys will also be installed by the contractor as specified in the MEP.</p> <p>Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.</p>	
11.	<p>The structure must be lit/marked in accordance with the following specifications, such that it does not cause a risk to the safe navigation of other ships:</p> <p>(a) Steady red lights to be fitted to the mooring dolphin as per other structures in Gladstone Harbour.</p> <p>Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.</p>	At all times.
12.	<p>(a) The construction, operation or maintenance of the approved development must not:</p> <ul style="list-style-type: none"> • damage or interfere (physically or by electrical or electromagnetic emissions) with any aid to navigation; or • impede the safe navigation of other ships or restrict safe access to or from neighbouring structures. <p>(b) In the event that damage or interference is caused to any aid to navigation the Harbour Master must be immediately contacted on Ph: (07) 49715200 or by email to Gladstone.rhm@msq.qld.gov.au, and at the applicant's cost the damage or interference must be promptly repaired, replaced or interference removed.</p>	<p>(a) At all times.</p> <p>(b) As indicated.</p>

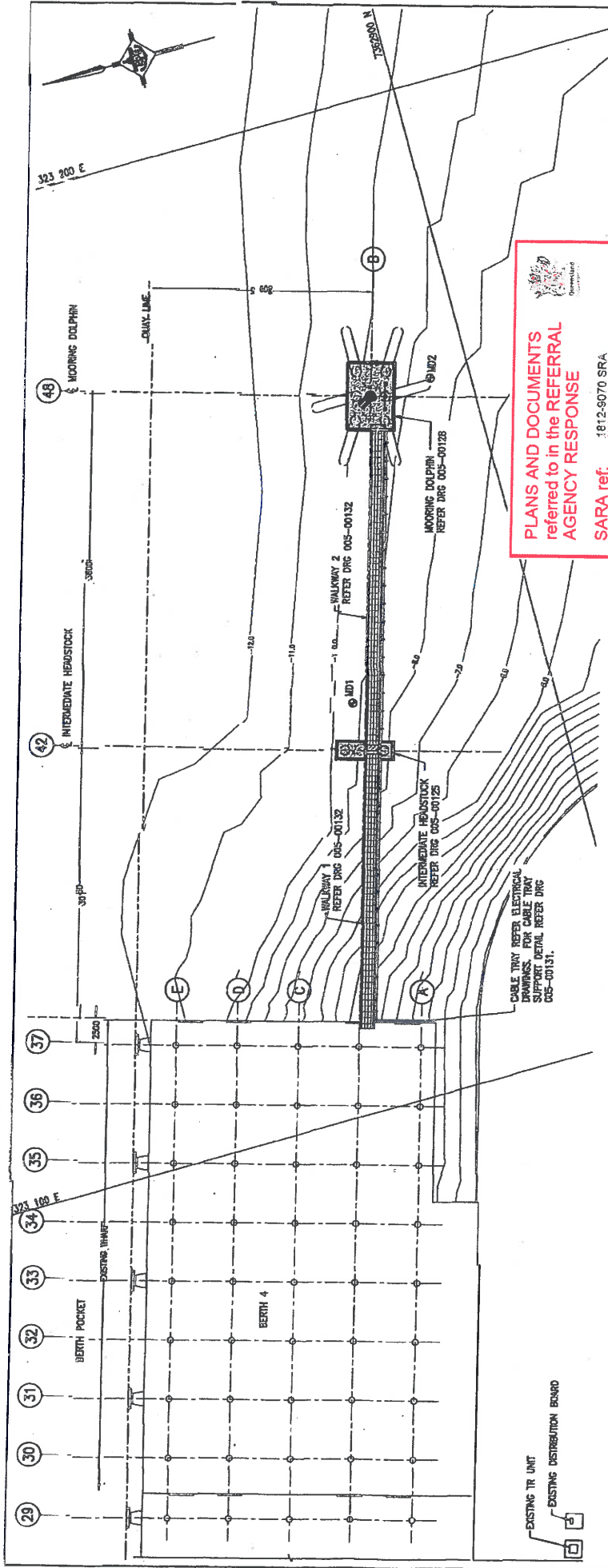
Attachment 2 - Reasons for decision to impose conditions

The reasons for this decision are:

- To ensure the development is carried out generally in accordance with the plans of development submitted with the application.
- To ensure the development avoids or minimises adverse impacts on coastal resources and their values.
- To ensure landowners are aware they must take responsibility for their damaged property as they can impact on coastal resources and public safety.
- To ensure any disturbance to acid sulfate soils is managed to prevent impacts to coastal environments.
- To ensure the development avoids or minimises adverse impacts onto marine animals or reptiles.
- To facilitate the monitoring of the development works for compliance purposes.
- To ensure that at all times, all lights on or above the development site do not interfere with safe navigation in surrounding waterways.
- To ensure that the development does not interfere with any existing aids to navigation.

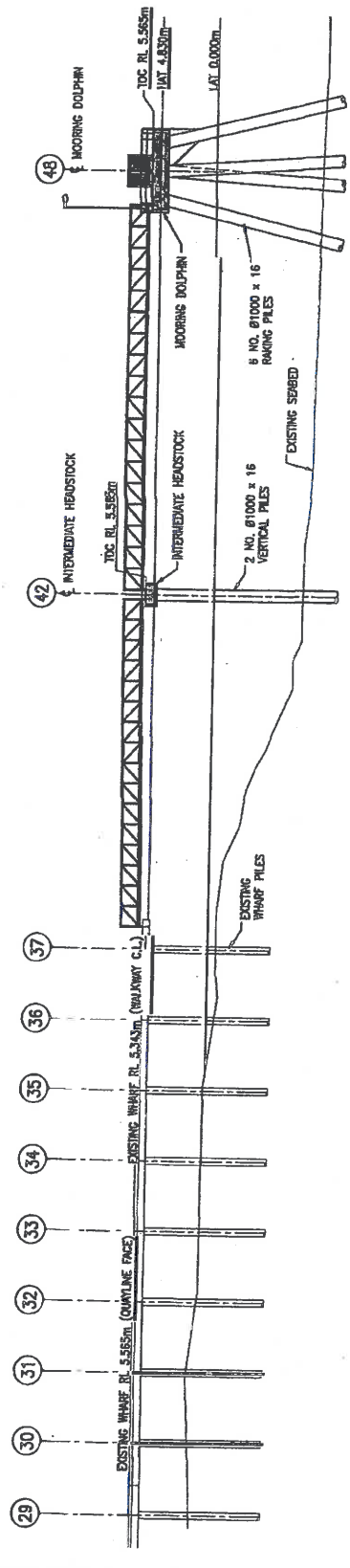
Attachment 3 - Advice to the applicant

General advice	
1.	Notification of incident involving marine animals (turtle, dugong and cetaceans) In the event a marine animal is injured or captured during the works, the Permittee must immediately notify the animal emergency hotline by telephoning RSPCA QLD on 1300 ANIMAL (1300 264 625).




PLANS AND DOCUMENTS
 referred to in the REFERRAL
AGENCY RESPONSE
 SARA ref: 1812-9070 SRA
 Date: 5 February 2019

PLAN
SCALE 1:200



ELEVATION
SCALE 1:200

HAT 4.830m
 MWS 3.960m
 MS 2.280m
 MWS 0.720m
 LAT 0.000m
TIDAL PLANES GLADSTONE
 (ASD TIDAL PLANES 2018)

LEGEND
 BOREHOLE LOCATION

GHD 1180 Collins Street Melbourne VIC 3000 Australia PO Box 270 Melbourne VIC 3000 T 61 3 9473 1000 F 61 3 9473 6229 ghd.com.au melbourne@ghd.com.au		GLADSTONE PORTS CORPORATION MEMBER COMPANY THE SHIPPIERS ASSOCIATION OF AUSTRALIA AUSTRALIAN PORTS CORPORATION AUSTRALIAN MARITIME PORTS CORPORATION	
SHEET NO. 005-00119 DATE 05 FEB 2019 DRAWN BY AT CHECKED BY AT DESIGNED BY AT PROJECT NO. 1812-9070 SRA	SHEET NO. 005-00119 DATE 05 FEB 2019 DRAWN BY AT CHECKED BY AT DESIGNED BY AT PROJECT NO. 1812-9070 SRA	SHEET NO. 005-00119 DATE 05 FEB 2019 DRAWN BY AT CHECKED BY AT DESIGNED BY AT PROJECT NO. 1812-9070 SRA	SHEET NO. 005-00119 DATE 05 FEB 2019 DRAWN BY AT CHECKED BY AT DESIGNED BY AT PROJECT NO. 1812-9070 SRA
AUCKLAND POINT BERTH 4 AP4 EASTERN MOORING DOLPHIN GENERAL ARRANGEMENT		AUCKLAND POINT BERTH 4 AP4 EASTERN MOORING DOLPHIN GENERAL ARRANGEMENT	



Department of
**State Development,
Manufacturing,
Infrastructure and Planning**

Department of State Development, Manufacturing, Infrastructure and Planning

Statement of reasons for application 1812-9070 SRA

(Given under section 56 of the *Planning Act 2016*)

Departmental role: Referral agency

Applicant details

Applicant name: Gladstone Ports Corporation Limited
Applicant contact details: 40 Goondoon Street,
PO Box 259
Gladstone QLD 4680
bennetta@gpcl.com.au

Location details

Street address: Mcfarlan Drive, Barney Point
Real property description: Lot 424 on SP293582
Local government area: Gladstone Regional Council

Development details

Development permit: Operational work for a mooring dolphin and associated walkway

Assessment matters

Aspect of development requiring code assessment	State Development Assessment Provisions version 2.4 Applicable codes
Operational work	<ul style="list-style-type: none">State code 7: Maritime SafetyState code 8: Coastal development and tidal works

Reasons for the department's decision

The reasons for the decision are the proposed development:

- is to install a mooring dolphin and associated walkway in the Port of Gladstone
- will involve works within tidal waters and navigable waterways
- will not have any significant impacts on the coastal management district
- does not intend to cause adverse impacts on the safe operations of marine vessels
- complies with state codes 7 and 8, subject to the implementation of conditions.

Response:

Nature of approval	Decision details	Date of response
Development permit	Approved subject to conditions	5 February 2019

Relevant material

- Development application material
- *Planning Act 2016*
- Planning Regulation 2017
- Development Assessment Rules
- State Development Assessment Provisions

ATTACHMENT 2: APPROVED PLANS AND SPECIFICATIONS

GENERAL:

- G1. READ THESE NOTES IN CONJUNCTION WITH DRAWINGS AND SPECIFICATIONS, AND PRECEDENCE IS GIVEN TO DRAWINGS, THEN NOTES, THEN SPECIFICATION.
- G2. SUPERSEDES ALL PREVIOUS EDITIONS OF THESE NOTES.
- G3. SUPERSEDES ALL PREVIOUS EDITIONS OF THESE NOTES.
- G4. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G5. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G6. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G7. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G8. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G9. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G10. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.
- G11. APPROVAL OF ANY MATERIALS, METHODS OR WORK METHODS MUST BE OBTAINED FROM THE CONTRACTOR.

SAFETY IN DESIGN:

- S01. THE ADEQUACY OF WORKING SPACE AVAILABLE FOR CONSTRUCTION ACTIVITIES IS TO BE REVIEWED TO ENSURE SEPARATION OF PLANT AND PERSONNEL ON SITE, AND TO PROVIDE FOR THE SAFE MOVEMENT OF BOTH.
- S02. ADVANCE FROM A SUITABLY QUALIFIED STRUCTURAL ENGINEER IS TO BE SOUGHT IF CRANE LIFTS OR HOIST INSTALLATIONS ARE TO BE CONDUCTED ON PARTIALLY ERECTED OR SUSPENDED STRUCTURES.
- S03. STRUCTURAL MEMBERS ARE NOT TO BE CUT OR UNBOLTED WITHOUT SEEKING REVIEW BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER.
- S04. SITE BASED TREATMENTS ARE TO BE MINIMISED (EG WELDING, CUTTING, SPRAY PAINTING, GHT BLASTING, ETC), ADEQUATE PROTECTION, SCREENING AND VENTILATION ARE TO BE PROVIDED TO MINIMISE THE HAZARD TO PERSONNEL IF SITE BASED TREATMENT IS UNAVOIDABLE.
- S05. THESE ARE NOT TO INTERFERE WITH THE EXISTING STRUCTURES, ENSURE THAT THESE ARE NOT DAMAGED OR ARE MADE GOOD PRIOR TO COMMENCING WORKS.

DESIGN LOADS:

- D01. DESIGN CRITERIA LIST ON THIS DRAWING IS A SUMMARY ONLY. REFER TO 42-20438-REP-003 REV A FOR FULL DESIGN PARAMETERS.
- D02. STRUCTURE DESIGN LIFE IS 50 YEARS.
- D03. LIVE LOADS:
 - DOLPHINS
 - INTERMEDIATE PIER
 - 50kPa (6.0m x 15.0m AREA) UNIFORMLY DISTRIBUTED LOAD
 - 50 kPa (6.0m x 6.3m AREA) UNIFORMLY DISTRIBUTED LOAD
 - 50 kPa (6.0m x 6.3m AREA) UNIFORMLY DISTRIBUTED LOAD
 - 2.5kPa UNIFORMLY DISTRIBUTED LOAD AND 1.1kN CONCENTRATED LOAD
- D04. MOORING CONDITIONS:
 - MOORING OPERATIONAL WIND SPEED IS 38 KNOTS
 - MOORING FORCE IS TO BE CONSIDERED THE VERTICAL & HORIZONTAL LINE ENVELOPES FOR A TOWER 500m TALL, 500m QUICK RELEASE HOOK.
 - ULTIMATE WIND LOAD CATEGORY IS 1.5.
 - WIND REGION C, TERRAIN CATEGORY 1.5.
 - REGIONAL WIND SPEED = 68m/s (3 sec gust) FOR ULTIMATE LIMIT STATE
 - DESIGN EVENT
 - OPERATION WIND SPEED = 70 m/s (3 sec gust)
- D06. EARTHQUAKE LOADS TO AS1701.4 (3 sec gust)
 - ANNUAL PROBABILITY OF EXCEEDANCE 1/500
 - PROBABILITY FACTOR (P) 1.0
 - HAZARD FACTOR (Z) 0.09
 - SITE SUB-SOIL CLASS Bc.

PILING:

- P1. ALL PILING WORKS TO BE IN ACCORDANCE WITH AS2159, TECHNICAL SPECIFICATION FOR FABRICATION AND SUPPLY OF TUBULAR STEEL PILES AND TECHNICAL SPECIFICATION FOR STEEL PILE INSTALLATION.
- P2. ALL PILES SHALL BE GRADE 350 MPa STEEL UNO.
- P3. ALL PILES MUST BE DRIVEN TO ACHIEVE DESIGN GEOTECHNICAL COMPRESSION AND TENSION STRENGTHS OF NOT LESS THAN THE VALUES STIPULATED ON THE DRAWINGS AS PREDICTED/TESTED USING AN APPROVED ASSESSMENT/TESTING METHODS.
- P4. A GEOTECHNICAL STRENGTH REDUCTION FACTOR OF 0.4 HAS BEEN ADOPTED IN THE DESIGN FOLLOWING PILE TESTING IN ACCORDANCE WITH AS2159. THE REDUCTION FACTOR COMPARED WITH AS2159 HAS BEEN DETERMINED BY THE CONTRACTOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNDERTAKE FURTHER DRIVABILITY ASSESSMENTS BASED ON PROPOSED HAZARD AND DRIVING SYSTEM TO BE USED ON SITE AND CONSIDERING OTHER FACTORS SUCH AS PILE SPACES, DRIVING INTERRUPTIONS, ETC. THIS IS TO ENSURE THAT THE PROPOSED PILE TERMINATION DEPTHS CAN BE ACHIEVED WITHOUT DAMAGING THE PILES WITH THE EQUIPMENT PROPOSED TO BE USED ON SITE.
- P5. PILES SHALL BE PDA/DAPWAP TESTED TO DETERMINE THEIR ULTIMATE GEOTECHNICAL CAPACITY. PILE DRIVING ANALYSER (PDA) AND PILE DRIVING MONITOR (PDM) SHALL BE CONDUCTED CONCURRENTLY TO ESTABLISH CORRELATION FOR DRIVING IMPACT ENERGY AND PILE CAPACITY.
- P6. CORROSION PROTECTION OF PILES SHALL BE AS NOTED IN SPECIFICATION.
- P7. PILE DRIVING STRESSES SHALL NOT EXCEED 90% OF THE YIELD STRENGTH OF THE PILE SECTIONS.
- P8. ALL SUBMERGED STEELWORK SHALL BE PROTECTED BY AN IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM IN ACCORDANCE WITH AS 2832. REFER TO THE DRAWINGS FOR A CATHODIC PROTECTION SYSTEM FOR STEEL PILES.
- P9. ALL STEELWORK SHALL BE PROVIDED BY THE CONTRACTOR.
- P10. ALL ANCHORING BOND BARS SHALL BE GRADE D500M IN ACCORDANCE WITH AS/NZS4671.
- P11. FOR PILE HEAD TREATMENT/PROTECTION REFER TO THE SPECIFICATION.
- P12. ALL PILES SHALL HAVE PROTECTIVE COATINGS APPLIED IN ACCORDANCE WITH THE SPECIFICATION.
- P13. ALL PILES SHALL BE DRIVEN TO ±100 mm OF THE INDICATED HORIZONTAL POSITION, UNLESS NOTED OTHERWISE ON THE PILE DRAWINGS.

EARTHWORKS:

- E1. EARTHWORKS ARE TO BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF AS2709 AND AS2870. TEMPORARY SUPPORTS TO THE FACES OF EXCAVATIONS ARE TO BE PROVIDED AS REQUIRED.
- E2. THE SAFETY OF ANY PROPOSED EXCAVATIONS INCLUDING ANY TEMPORARY WORKS ARE TO BE ASSESSED BY SUITABLY QUALIFIED GEOTECHNICAL / STRUCTURAL ENGINEER.
- E3. ALL BULK EARTHWORKS SHALL BE IN ACCORDANCE WITH GPC'S GENERAL EARTHWORKS SPECIFICATION (DOC # 695951). FILL MATERIAL SHALL BE SELECTED AS APPROVED BY THE SUPERINTENDENT PRIOR TO COMMENCING WORKS. COMPACTED COVER FILL TO BE 100% M100 STANDARD COMPACTION (DETERMINED IN ACCORDANCE WITH AS1288 ES.1.1).
- E4. ALL UNDERGROUND ELECTRICAL (ORANGE) & COMMUNICATIONS (WHITE) CONDUITS SHALL BE HEAVY DUTY (CLASS 12) PVC, INSTALLED WITH DRAIN ROPES.
- E5. MINIMUM 600 mm COVER TO UNDERGROUND CONDUITS.
- E6. WORKING SAND TO BE PLACED WITHIN COVER FILL FOR WARNING OF BURIED CONDUITS.
- E7. BARRER TAP TO BE PLACED WITHIN COVER FILL FOR WARNING OF BURIED CONDUITS.
- E8. BARRER TAP TO BE PLACED WITHIN COVER FILL FOR WARNING OF BURIED CONDUITS.
- E9. BARRER TAP TO BE PLACED WITHIN COVER FILL FOR WARNING OF BURIED CONDUITS.

CATHODIC PROTECTION:

- CP1. ALL SUBMERGED STEELWORK SHALL BE PROTECTED BY AN IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM IN ACCORDANCE WITH AS 2832. REFER TO THE CATHODIC PROTECTION DRAWINGS AND TECHNICAL SPECIFICATION FOR THE INSTALLATION OF A CATHODIC PROTECTION SYSTEM FOR STEEL PILES.
- CP2. TO PROVIDE FOR FUTURE CATHODIC PROTECTION OF METAL IN THE CONCRETE STRUCTURE, ALL REINFORCEMENT MUST BE MADE ELECTRICAL CONTINUOUS TO TACK OR BUTT WELDING AS NECESSARY. ALL ANGIULAR, STEEL FIXED TO, OR PART OF THE CONCRETE STRUCTURE (E.G. EMBEDDED STEEL BEAMS, BEARINGS, ELECTRICAL PIPES, STEEL PILES AND PILE SLEEVES ETC.) SHALL BE MADE ELECTRICAL CONTINUOUS.
- CP4. CORROSION ALLOWANCE:
 - 2mm ON ALL EXPOSED STEEL SURFACE FOR 1m BELOW SEABED

STEEL:

- S1. WORKMANSHIP AND MATERIALS TO COMPLY WITH AS4100, AS/NZS4600, AS/NZS1554 AND AS4673 FOR STAINLESS STEEL.
- S2. PROVIDE STEEL IN ACCORDANCE WITH:
 - AS1163 GRADE C350 OR C450 FOR RECTANGULAR AND SQUARE HOLLOW SECTIONS.
 - AS1163 GRADE C250 OR C350 FOR CIRCULAR HOLLOW SECTIONS, AS NOTED ON DRAWINGS.
 - AS/NZS1594 GRADE 250 HOT-ROLLED STEEL FLAT PRODUCTS.
 - AS/NZS3678 PART 1 PLATE 300 OR BHP GRADE 300 PLUS FOR UNIVERSAL BEAMS, UNIVERSAL COLUMNS, PARALLEL FLANGE CHANNELS, ANGLES, FLATS, BARS AND RODS.
 - OTHERWISE TO COMPLY WITH AS/NZS3678 GRADE 250 UNO.
 - STEEL MEMBERS AND PILES TO GRADE 350 UNO. STEEL CONNECTIONS TO COMPLY WITH AS4100, ALL STRUCTURAL STEEL BOLTS, NUTS, SCREWS AND WASHERS TO BE GRADE 4.6 TO AS1111, MECHANICAL PROPERTIES TO COMPLY WITH AS/NZS4291.2. MARK STEEL GRADINGS ON STRUCTURAL MEMBERS IN NON-CRITICAL AREAS. USE IDENTIFICATION MARKS COMPATIBLE WITH AND VISIBLE THROUGH PAINT SYSTEM. ENSURE METAL DECKING, FLOOR PLATE AND FLOOR GRATING SECURELY FIXED IN POSITION BEFORE ALLOWING GENERAL CONSTRUCTION ACCESS.
- S3. OTHERWISE TO COMPLY WITH AS/NZS3678 GRADE 250 UNO.
- S4. STEEL MEMBERS AND PILES TO GRADE 350 UNO. STEEL CONNECTIONS TO COMPLY WITH AS4100, ALL STRUCTURAL STEEL BOLTS, NUTS, SCREWS AND WASHERS TO BE GRADE 4.6 TO AS1111, MECHANICAL PROPERTIES TO COMPLY WITH AS/NZS4291.2. MARK STEEL GRADINGS ON STRUCTURAL MEMBERS IN NON-CRITICAL AREAS. USE IDENTIFICATION MARKS COMPATIBLE WITH AND VISIBLE THROUGH PAINT SYSTEM. ENSURE METAL DECKING, FLOOR PLATE AND FLOOR GRATING SECURELY FIXED IN POSITION BEFORE ALLOWING GENERAL CONSTRUCTION ACCESS.
- S5. OTHERWISE TO COMPLY WITH AS/NZS3678 GRADE 250 UNO.

WELDING:

- S6. WELDING PROCEDURES TO SUIT JOINT DETAILS AND SHOW ON SHOP DRAWINGS. USE PREQUALIFIED WELD PROCEDURES AND CONSUMABLES TO AS/NZS1584.1 CLAUSE 4.3 OR DEVELOP QUALIFICATION OF WELD PROCEDURE AND MAKE RECORD PARAMETERS BY TESTING TO AS/NZS1584.1 CLAUSE 4.2. LIST APPLICABLE AVAILABLE FOR INSPECTION. QUALIFICATION RECORD AND MAKE RECORD WELDING TO BE UNDERTAKEN BY SUITABLY QUALIFIED EXPERIENCED WELDER UNDER SUPERVISION OF QUALIFIED WELDING SUPERVISOR.
- S7. SUPERVISION OF QUALIFIED WELDING SUPERVISOR.
- S8. CARRY OUT WELDING TO AS/NZS1584.1 ALL INTERFACES BETWEEN ALL ROUND, BOTH SIDES UNO. WELDS TO BE CATEGORISED AS:
 - WELDS TO BE SHAP WELDED UNO.
 - BUTT WELDS TO BE FULL (COMPLETE) PENETRATION UNO.
 - ELECTRODES TO BE FULL CARBON WITH TENSILE STRENGTH OF $f_{u} = 490$ MPa.
 - PRE-APPROVED TO AS/NZS1584.1 CLASSIFICATION B-E49X.
 - EXTENT OF WELD INSPECTION/TESTING TO BE:
 - VISUAL EXAMINATION: 100% OF WELDS
 - OTHER WELDS
 - RADIOGRAPHIC OR ULTRASONIC: 10% OF BUTT WELDS IN TENSION MEMBERS AND 50% OF OTHER WELDS
 - REPAIR FACILITY WELDS AND DEFECTS REVEALED BY WELD INSPECTION/TESTING AND REPEAT THE EXAMINATION.
- S9. BUTT WELDS TO BE FULL (COMPLETE) PENETRATION UNO.
- S10. ELECTRODES TO BE FULL CARBON WITH TENSILE STRENGTH OF $f_{u} = 490$ MPa.
- S11. PRE-APPROVED TO AS/NZS1584.1 CLASSIFICATION B-E49X.
- S12. EXTENT OF WELD INSPECTION/TESTING TO BE:
- S13. VISUAL EXAMINATION: 100% OF WELDS
- S14. OTHER WELDS
- S15. RADIOGRAPHIC OR ULTRASONIC: 10% OF BUTT WELDS IN TENSION MEMBERS AND 50% OF OTHER WELDS
- S16. REPAIR FACILITY WELDS AND DEFECTS REVEALED BY WELD INSPECTION/TESTING AND REPEAT THE EXAMINATION.

- S13. WELDS TO BE INSPECTED BY INDEPENDENT NATA ACCREDITED QUALIFIED WELDING INSPECTOR TO AS2214. PROVIDE WELDING INSPECTOR'S REPORT TO SUPERINTENDENT.

BOLTS

- S14. USE BOLTS WITH THREADS IN COMPLIANCE WITH AS1275. BOLTS OF STRENGTH STRENGTH GRADE 8.8 TO BE HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND WASHERS TO AS/NZS1292. MECHANICAL PROPERTIES OF BOLTS, NUTS, SCREWS AND STUDS TO COMPLY WITH AS/NZS4991. WASHERS TO COMPLY WITH AS1237. TIGHTENING TORQUE TO BE IN ACCORDANCE WITH AS14100:
 - TB BEARING HOLES: JOINT BOLTS FULLY TENSIONED
 - USE BOLT LENGTHS SO THAT PROJECTION BEFORE NUT IS AT LEAST TWO THREADS, AND NOT MORE THAN 10 mm.

STAINLESS STEEL

- S16. PROVIDE STAINLESS STEEL GRADE 316 (OR 316L WHERE WELDING IS REQUIRED).
- S17. BOLTS AND NUTS TO BE STAINLESS STEEL GRADE 14 CLASS 70 TO ISO 3506. WASHERS TO BE STAINLESS STEEL TO ISO 7089 OR ISO 7090. AVOID GALVING BY USING METAL-FREE LUBRICATING PASTE OR OTHER METHOD APPROVED BY SUPERINTENDENT.
- S18. STAINLESS STEEL SURFACE ROUGHNESS (Ra) TO BE 0.2µm AS DETERMINED ACCORDING TO AS2382. WELDS TO BE POLISHED TO MATCH ADJACENT STAINLESS STEEL ROUGHNESS AND APPEARANCE. APPLY PASSIVATION TREATMENT USING NITRIC ACID (HNO3) SOLUTION TO ALL STAINLESS STEEL SURFACES IN ACCORDANCE WITH ASTM A380. WASH THOROUGHLY AFTER PASSIVATION.
- S19. STAINLESS STEEL TO BE WELDED TO AS/NZS 1554.6. WELDS TO BE CLASS 1A FOR STAINLESS STEEL. WELD SURFACE FINISH GRADE 1 OR 11 TO AS/NZS1554.6 CLAUSE 6.2. SURFACE ROUGHNESS TO BE 0.2 MICRONS TO AS2382.
- S20. ELECTRODES TO BE E316LX UNO, PRE-QUALIFIED TO AS/NZS1554.6. DO NOT FLAME CUT STAINLESS STEEL. KEEP STAINLESS STEEL SURFACES CLEAN AND FREE OF BLEMISHES THROUGHOUT FABRICATION.
- S21. APPROVED HIGH-STRENGTH (40MPa AT 7 DAYS) NON-SHRINK PRE-MIXED RAMMED GROUT. GROUT THICKNESS 20 mm MINIMUM, 40 mm MAXIMUM UNO. CHAMFER GROUT EDGES AT 45 DEGREES UNO. DO NOT LOAD GROUT UNTIL FULL STRENGTH ACHIEVED.

DURABILITY & PROTECTIVE COATINGS

- S22. AFTER COMPLETION OF FABRICATION, PREPARATION FOR SURFACE TREATMENT TO BE ROUND OFF ROUGH SURFACES, SHARP EDGES (2 mm RADII) etc. SURFACE TO BE FREE OF WELDING SPATTER, OIL, GREASE, LUBRICANTS, ROLLED-IN EXTREMES, WATER, GROUTS, (RUBBLES OF COUSERS TO BE LESS THAN 4 mm), INTRUSIONS, ROLL MARKS, BURRS, ARRES, CRACKS, TO BE REMOVED BY WELDING, EDGES AND OTHER SURFACES WITH SURFACE IMPROVING TO ISO 8501-1. PREPARATION TO BE AS NOTED ON DRAWINGS. REMOVE OIL, GREASE AND OTHER CONTAMINANTS TO AS1627.1. ABRASIVE BLAST CLEAN TO AS1627.4 CLASS SA 2½ WITH SURFACE PROFILE 40 TO 70 MICRONS OR AS SPECIFIED BY CLIENTS. WELDS TO BE WETTER FOR THE SERVICE CONDITIONS. ASSESS ABRASIVE BLAST CLEANING AREAS WHERE AS1627.9 AND SURFACE PROFILE TO AS3944.5. FOR SMALL AREAS WHERE ABRASIVE BLAST CLEANING IS NOT POSSIBLE OBTAIN APPROVAL FROM SUPERVISOR TO USE POWER TOOL CLEANING TO AS1627.2 CLASS ST 3/P3/3 AS DEFINED IN ISO 8501-1 FOR STEEL CLEANED BY BRUSHING OR VACUUM CLEANING.
- S24. APPLY PROTECTIVE COATINGS AS SOON AS PRACTICABLE AFTER PREPARATION. WITHIN FOUR HOURS AND BEFORE FLASH RUST OR RUST FORM APPEARS. APPLICATION OF PROTECTIVE COATINGS TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.
- S25. APPLY PROTECTIVE COATINGS AS PER SYSTEM/SYSTEMS NOMINATED IN THE PROTECTIVE COATING SPECIFICATION AND IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS2312.
- S26. COATING REPAIRS: REINSTATE COATING TO DAMAGED AREAS TO PROTECTIVE COATINGS SPECIFICATION.
- S27. FIELD WELD REPAIRS: DO NOT WELD THROUGH COATINGS. REMOVE WELD SPATTER, RESIDUAL FLUX etc BY CHIPPING, GRINDING OR ABRASIVE BLAST AS PER COATING SPECIFICATION. REMOVE RUST, LOOSE AND BURRY PAINT AND SURFACE WELD REPAIRS TO BE TO MATCH SURFACE IS FEATHERED AND SMOOTH. STRIPE COAT ALL WELDS EDGES AND TOUCH SURFACES TO FEATHERED AND SMOOTH. REINSTATE COATING AS PER PROTECTIVE COATINGS SPECIFICATION.
- S28. PROTECTIVE COATINGS ARE TO BE SHIP APPLIED AND CURED IN WORKSHOP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS APPROVED OTHERWISE IN WRITING BY SUPERINTENDENT. PROTECTIVE COATINGS TO BE SMOOTH, UNIFORM AND WITHOUT RUNS, BEADS, PINHOLES, SURFACE CRACKING OR OTHER IMPERFECTIONS.
- S29. PROVIDE PILE LINERS TO PILES FROM 1m BELOW LAT TO TOP OF PILE AT INTERFACE WITH DECK SOFFIT IN ACCORDANCE WITH THE SPECIFICATION.

APPROVED

AUCKLAND POINT
REVISION 4

AP4 EASTERN MOORING DOLPHIN
NOTES SHEET 1 OF 3

REV: JAE/167/Resp No. 0

005-00120

A1 East/Port No.

GLADSTONE PORTS CORPORATION		VENDOR DRAWING	
DRAWN	BY	DATE	BY
JT	BC	04.08.18	BC
DESIGN	CPB	04.08.18	CPB
APPROVE	MC	04.08.18	MC

GHD

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NO.	DATE	ISSUED FOR CONSTRUCTION	REVISION DESCRIPTION	DATE DESIGN APPROVED	BY	CHK. NO.	CHK. NO.
0	10/01/18						

NO.	DATE	ISSUED FOR CONSTRUCTION	REVISION DESCRIPTION	DATE DESIGN APPROVED	BY	CHK. NO.	CHK. NO.
0	10/01/18						

TOTAL PLANES

- HAT +4.830m HIGHEST ASTRONOMICAL TIDE
- MHWS +3.960m MEAN HIGH WATER SPRINGS
- MHW +3.286m MEAN HIGH WATER DATUM
- MWS +0.720m MEAN LOW WATER SPRINGS
- LAT -4.000m LOWEST ASTRONOMICAL TIDE

CONCRETE:

- C1. WORKMANSHIP AND MATERIALS TO COMPLY WITH AS3600, AS3972, AS3610 & AS3697
- C2. SET CONCRETE TO BE UNIFORM, HOMOGENEOUS, COHESIVE AND ABLE TO WORK WITHIN THE SPECIFIED TOLERANCES. CONCRETE TO BE PLACED IN A MANNER THAT PREVENTS SEGREGATION, EXCESS FREE WATER ON SURFACE, LOSS OF MATERIAL OR COLOUR VARIATION. CONCRETE TO HAVE GOOD DIMENSIONAL STABILITY AND BE ABLE TO RESIST PLASTIC SETTING CRACKING, THERMAL CRACKING AND SHRINKAGE CRACKING.
- C3. FINISHED CONCRETE TO BE DURABLE, DENSE, HOMOGENEOUS MASS COMPLETELY FREE FROM HONEYCOMBS, REINFORCEMENT AND TENDONS, AND FREE OF FILLING POCKETS OR HONEYCOMBS OF UNIFORM COLOUR AND COLOUR WITH LOW PERMEABILITY AND ADEQUATE BUT NOT EXCESSIVE STRENGTH FOR GRADES WITH LOW REVIEW LOCATION OF EMBEDDED ITEMS TO MINIMIZE VISIBLE ZONES OF POOR COMPACTION THAT MAY COMPROMISE STRUCTURAL INTEGRITY.
- C4. QUALITY OF CONCRETE ELEMENTS TO BE AS FOLLOWS:

EXPOSURE CLASSIFICATION	In-Situ	Pvc Cast	Piles
STRUCTURAL ELEMENT	S50	S50	S70
STRENGTH GRADE (Mpa)	50	50	70
COVER	70	70	75
- C5. SUPPLEMENTARY CEMENTITIOUS MATERIALS INCLUDE AMORPHOUS SILICA FUME, FLY ASH, AND GROUND GRANULATED BLAST FURNACE SLAG (GGBS OR SLAG) SHALL COMPLY WITH AS3592.
- C7. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED, THOROUGHLY SCABBLED TO REMOVE LAMINAE AND POORLY COMPACTED MATERIAL AND USED ONLY WHERE SPECIFIED IN THE DRAWINGS OR APPROVED IN WRITING BY THE SUPERINTENDENT.
- C8. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 50 MPa.
- C9. NON-SHRINK GROUT SHALL BE SIKARBOOT 212HP OR APPROVED EQUIVALENT UNLESS NOTED OTHERWISE.
- C10. ALL FORMED EXPOSED EDGES SHALL BE CHAMFERED OR FILED 25mm UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- C11. OFF FORM CONCRETE SURFACE FINISH SHALL BE CLASS 3 TO AS3610.
- C12. FOR GENERAL BLENDED CEMENT (GB) CONTAINING ORDINARY PORTLAND CEMENT PLUS AT LEAST 3% SUPPLEMENTARY CEMENTITIOUS MATERIALS:
 - SILICA FUME TO BE LESS THAN 25%, OR
 - FLYASH TO BE LESS THAN 10%, OR
 - GROUND GRANULATED BLAST FURNACE SLAG TO BE LESS THAN 40%.
- C13. FOR TRIPLE BLENDED CEMENT TOTAL SUPPLEMENTARY CEMENTITIOUS MATERIAL MUST BE LESS THAN 40%.
- C14. AMMONIUM ACID SOLUBLE CHLORIDE ON CONTENT IS 4 kg/m³ OF CONCRETE. DO NOT USE STRONGLY IONIZED SALTS.
- C15. DO NOT ADD WATER TO CONCRETE AFTER TRUCK HAS LEFT BATCHING PLANT.
- C16. MIX CONCRETE TO ENSURE UNIFORM DISTRIBUTION OF CONSTITUENTS.

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
10 - 24	2.00
24 - 27	1.50
27 - 30	1.00
30 - 32	0.75

- C17. TEST SLUMP OF EACH BATCH OF CONCRETE DELIVERED BEFORE PLACING CONCRETE FROM THAT DELIVERY SLUMP MEASURED TO BE NOT GREATER THAN TARGET SLUMP WITHIN TOLERANCES GIVEN IN AS1379 CLAUSE 5.2.3. CONCRETE OUTSIDE PROJECT LIMITS IS LIABLE TO REJECTION.
- C18. CARRY OUT PROJECT ASSESSMENT OF CONCRETE TO AS1379 CLAUSE 6.4 AND 6.5. TAKE SAMPLES AT PROJECT SITE AT POINT OF DISCHARGE FROM AGITATOR. SPREAD SAMPLING EVENLY THROUGH POUR.
- C19. CARRY OUT DRYING SHRINKAGE TESTING TO AS1012.13. FOR EACH CONCRETE DESIGN MIX TAKE ONE SAMPLE EVERY THREE MONTHS, OR FOR EVERY 1000 m³ OF CONCRETE PLACED, A MINIMUM OF ONE SAMPLE.
- C20. CONCRETE SAMPLING AND TESTING TO BE BY AN APPROVED INDEPENDENT NATA REGISTERED LABORATORY.
- C21. RESPONSIBILITY FOR DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK AND FALSEWORK LIES WITH CONTRACTOR.
- C22. FORMWORK TO BE DESIGNED BY A SUITABLY QUALIFIED CHARTERED ENGINEER REGISTERED WITH REGISTERED PROFESSIONAL ENGINEERS OF QUEENSLAND (RPEQ), TO AS3610, AND INDEPENDENTLY CHECKED BY A CHARTERED ENGINEER EXPERIENCED IN FORMWORK DESIGN AND REGISTERED WITH REGISTERED PROFESSIONAL ENGINEERS OF QUEENSLAND (RPEQ). PROVIDE COPY OF DESIGN CALCULATIONS AND CERTIFICATION TO SUPERINTENDENT. DESIGN FORMWORK TO ACCOMMODATE DIMENSIONAL CHANGES AND MOVEMENTS, RESULTING FROM IMPOSED PRESTRESSING FORCES, etc.
- C23. DO NOT SUPPORT OR RESTRAIN FORMWORK ON PERMANENT WORKS WITHOUT SUPERINTENDENT'S WRITTEN APPROVAL.
- C24. CONSTRUCT FORMWORK TO COMPLY WITH AS3610 AND CLAUSE 17.6 OF AS3600 WHERE THIS IS MORE STRINGENT SO CONCRETE WILL HAVE DIMENSIONS, SHAPE, LOCATION AND FINISH SPECIFIED.
- C25. PROVIDE OPENINGS OR REMOVABLE PANELS IN FORMWORK FOR INSPECTION AND CLEANING.

- C46. CURE CONTINUOUSLY UNTIL NUMBER OF DAYS DURING WHICH AIR TEMPERATURE IS ABOVE 10°C TOTALS:
 - 7 DAYS FOR EXPOSURE CLASSIFICATION A1 AND A2
 - 7 DAYS FOR EXPOSURE CLASSIFICATION B1, B2 AND C.
- C47. - PREVENT RAIN OR OTHER UNDESIRABLE WEATHER CONDITIONS AT END OF CURING PERIOD.
- C48. DO NOT MAKE HOLES, REINFORCERS, RECESSES, CHASSES, NOR EMBED PIPES (OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS) WITHOUT APPROVAL OF SUPERINTENDENT. DO NOT PUT UP WITH THESE THINGS AT JAB OR BEAM DEPTH LOCATE CONDUITS, PIPES, etc ONLY IN UNOBTAINED AREAS.
- C49. AND BETWEEN REINFORCEMENT LAYERS, AND SPACED AT 300mm BETWEEN CENTRES MINIMUM. DO NOT CUT REINFORCEMENT AT PENETRATIONS WITHOUT APPROVAL.

DELIVERABLES

- C49. AT LEAST ONE WEEK PRIOR TO CONCRETE PLACEMENT SUBMIT DETAILS OF PROPOSED READY MIXED CONCRETE SUPPLIER, NAME OF CONCRETE DELIVERY SUPERVISOR, LOCATION OF BATCHING PLANT, CONCRETE MIX DESIGNS, METHOD OF CONCRETE TEMPERATURE CONTROL, MIXING, HANDLING, TRANSPORT, PUMPING, PLACEMENT, COMPACTATION, FINISHING, PROTECTION AND CURING, SEQUENCE AND TIMES FOR CONCRETE POURS, PROTECTION JOINT LOCATIONS AT LEAST ONE WEEK PRIOR TO EACH MIX DESIGN FOR SUPERINTENDENT'S APPROVAL. NOMINATE FOR EACH MIX DESIGN THE SOURCE, TYPE AND PROPORTIONS OF CONSTITUENTS, AGGREGATE GRADINGS AND SATURATED SURFACE-DRY DENSITIES, ADMITTANCE AND ADMIXTURES, MAXIMUM WATER CONTENT AND MAXIMUM WATER/CEMENT RATIO, TARGET SLUMP, TARGET CHARACTERISTIC STRENGTH (f_c), INTER-CURING PERIODS, EVIDENCES OF PREVIOUS PERFORMANCE AND RELEVANT TEST RESULTS OF MIX DESIGN. VIBRATORS, INCLUDING 3, 7, AND 28 DAY COMPRESSIVE STRENGTHS, CHARACTERISTIC STRENGTH, RISE, DRYING SHRINKAGE, LIMITS OF SOLUBLE SALTS AND ALKALI AGGREGATE REACTION (if applicable); BEING CERTIFIED TEST RESULTS MADE ON AT LEAST TWO SEPARATE SAMPLES FROM A NATA REGISTERED LABORATORY EITHER:
 - ON CONCRETE OF SAME MIX DESIGN (IN RESPECT OF ALL DETAILS TO BE NOMINATED ABOVE) OF SIMILAR GRADE MADE UNDER PRODUCTION CONDITIONS IN SIMILAR PLANT WITHIN SIX MONTHS, OR
 - SUBMIT DETAILS OF ALL PROPOSED CONCRETE COATINGS TO SUPERINTENDENT FOR REVIEW.
- C51. PROVIDE RECORD OF SLUMP TESTING TO SUPERINTENDENT. REFER CONCRETE TESTING NOTES.
- C52. FORWARD CONCRETE PROJECT ASSESSMENT INFORMATION TO SUPERINTENDENT AS PER AS1379 CLAUSE 6.3 WHEN PROJECT ASSESSMENT IS UNDERTAKEN. REFER CONCRETE TESTING NOTES.
- C53. PROVIDE DETAILS OF PROPOSED COATINGS AND RELEVANT TEST CERTIFICATES FOR SUPERINTENDENT'S REVIEW 28 DAYS PRIOR TO APPLICATION.
- C54. ALL EXPOSED CONCRETE REINFORCED WITH CARBON STEEL TO BE COATED WITH SLOANME WATER REPELLENT.

- W1. COMPLY WITH REQUIREMENTS OF AS3650 PREFABRICATED CONCRETE ELEMENTS CODE, NATIONAL CONSTRUCTION CODE (NCC), CONCRETE NOTES AND SPECIFICATION.
- W2. USE FORMWORK BOND BREAKERS AND STRONG BACKS AS REQUIRED.
- W3. DO NOT APPLY ADHESIVE TREATMENTS TO PRECAST CONCRETE SURFACES UNO.
- W4. LOCATE CONNECTIONS TO FACILITATE CONCRETE PLACEMENT, EASE OF ACCESS DURING INSTALLATION AND FINAL AESTHETICS.
- W5. USE CAST IN FERRULES FOR STRUCTURAL FINISHES, NOT MECHANICAL OR CHEMICAL ANCHORS.
- W6. DO NOT PLACE LIFTING ATTACHMENTS, HOLES, OTHER TEMPORARY FINISHES etc ON VISIBLE FACES OF UNITS.
- W7. INSURE THAT PRECAST UNITS REMAIN UNCRACKED AND UNDAMAGED DURING MANUFACTURE, HANDLING, ERECTION AND INSTALLATION OPERATIONS. PROVIDE PROTECTION TO AVOID CRACKING AND/OR CHIPPING. PROTECT UNITS FROM STAINING, DISCOLOURATION AND OTHER DAMAGE.
- W8. HOT WIRE CALVAULATORS AND OTHER EQUIPMENT INCLUDING LIFTING INSERTS, FERRULES, POWER BAGS, ANGLE CUTTERS, SPLICERS, NOTS WISHERS AND PACKERS etc. MINIMUM GALVANIZED CORROSIVE PROTECTANT 100% SOLUBLE IN WATER. PROVIDE 10mm CROSS BARS PROVIDE FERRULES WITH FULL CAPABILITY TO TIGHTEN BOLT. PROVIDE 10mm CROSS BARS IN FERRULES; FERRULES TO ACCOMMODATE M20 BOLTS UNO.
- W10. USE RIGID FORMWORK AND INTENSE COMPACTION, SUCH AS VIBRATING TABLES OR FORM VIBRATORS, TO AS3600.
- W11. PRECAST UNIT TOLERANCES TO BE TO AS3600 AND AS3610 EXCEPT WHERE VARYED BY SPECIFICATION.
- W12. FINISH SURFACE OF PRECAST UNITS IN ACCORDANCE WITH SPECIFICATION.
- W13. PROVIDE 25mm x 45 DEGREE CHAMFERS OR FILLETS AT EDGES AND CORNERS OF PRECAST UNITS.
- W14. RECESS LIFTING INSERTS, REMOVE TEMPORARY ATTACHMENTS AFTER ERECTION, MAKE GOOD AND SEAL.
- W15. PRECAST UNITS SHALL NOT BE LIFTED OR HANDLED UNOIL CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 35 MPa.
- W16. DETAILS OF LIFTING, REQUIREMENTS, HANDLING AND TRANSPORTATIONS SHALL BE DESIGNED BY THE CONTRACTOR TO ENSURE THE UNITS ARE NOT OVERSTRESSED. CONCRETE SHALL NOT BE VIBRATED UNO OTHERWISE DISTURBED ONCE INITIAL SET HAS OCCURRED.
- W17. SUBMIT NAME, CONTACT DETAILS AND CREDENTIALS OF PROPOSED MANUFACTURER OF PRECAST UNITS.
- W18. EACH UNIT TO HAVE LEGIBLE MARKING (HIDDEN IN COMPLETED STRUCTURE) INCLUDING DATE OF CASTING, CORRECT ORIENTATION OF UNIT AND WEIGHT, POSITION FOR TEMPORARY BEARING DURING STORAGE etc.
- W20. ALLOW FOR DEPARTMENT OF LABOUR OR OTHER REQUIREMENTS GOVERNING HANDLING, LIFTING, ROTATION OR TRANSPORT OF PRECAST UNITS.
- W21. PROVIDE COMPONENTS, MATERIALS, FASTENERS, BRACES, STRONGBACKS, SHIMS, JOINTING STRIPS, SEALANTS, FLASHING, GROUT AND MORTAR, BEARING PADS AND STRIPS, TIES, DOWELS, CLIPS, FRAMES etc AS REQUIRED.
- W22. RECESS LIFTING INSERTS, REMOVE TEMPORARY ATTACHMENTS AFTER ERECTION, MAKE GOOD AND SEAL.

PRECAST:

- W23. SUBMIT DETAILS OF PROPOSED METHODS TO ACHIEVE SELECTED COLOUR INCLUDING TYPE AND COLOUR OF AGGREGATE, SAND, AGGREGATES AND COLOURING OXIDE PIGMENTS AND STAINS IF REQUIRED.
- W24. SUBMIT SAFE WORK METHOD STATEMENT SPECIFIC TO PROJECT FOR MANUFACTURE AND INSTALLATION OF UNITS. CARRY OUT WORK ONLY UNDER WHO AND TEMPERATURE CONDITIONS CONSISTENT WITH SAFE WORK METHOD STATEMENT AND STRUCTURAL CAPABILITY OF UNIT.

- W23. DELIVERABLES
- W24. DELIVERABLES

APPROVED

Auckland Point
 BERTH 4
 AP4 EASTERN MOORING DOLPHIN
 NOTES SHEET 2 OF 3

GLADSTONE PORTS CORPORATION	
VENDOR DRAWING	DATE
DRAWN	JT
CHECK	BC
DESIGN	EBB
APPROVE	MAC

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REV	DATE	DESCRIPTION	DESIGN APPROV	CHK. NO.	DATE
0	04.08.18	ISSUED FOR CONSTRUCTION			

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Ext Ref No. 42-20438-0004
 OPC DRAWING NO.
 005-00121
 A1 Rev/Part No.
 Rev/Iss/Rev/Iss No.

APPROVED

**AUCKLAND POINT
BERTH 4
AP4 EASTERN MOORING DOLPHIN
NOTES SHEET 3 OF 3**

EA Ref No. 42-2043R-0005
GPR DRAWING No.
005-00122
M1 Rev/Port No.
REV. DATE Ref/Issue No.
0

Gladstone Ports Corporation		Vendor Drawing	
Drawn	JT	04.08.18	
Check	BC	04.08.18	
Design	EWB	04.08.18	
Approve	MAC	04.08.18	



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REV	DATE	REVISION DESCRIPTION	DESIGN APPROV		DATE	NO.	REFERENCE DRAWING TITLE	
			BY	CHK			BY	CHK
0		ISSUED FOR CONSTRUCTION						

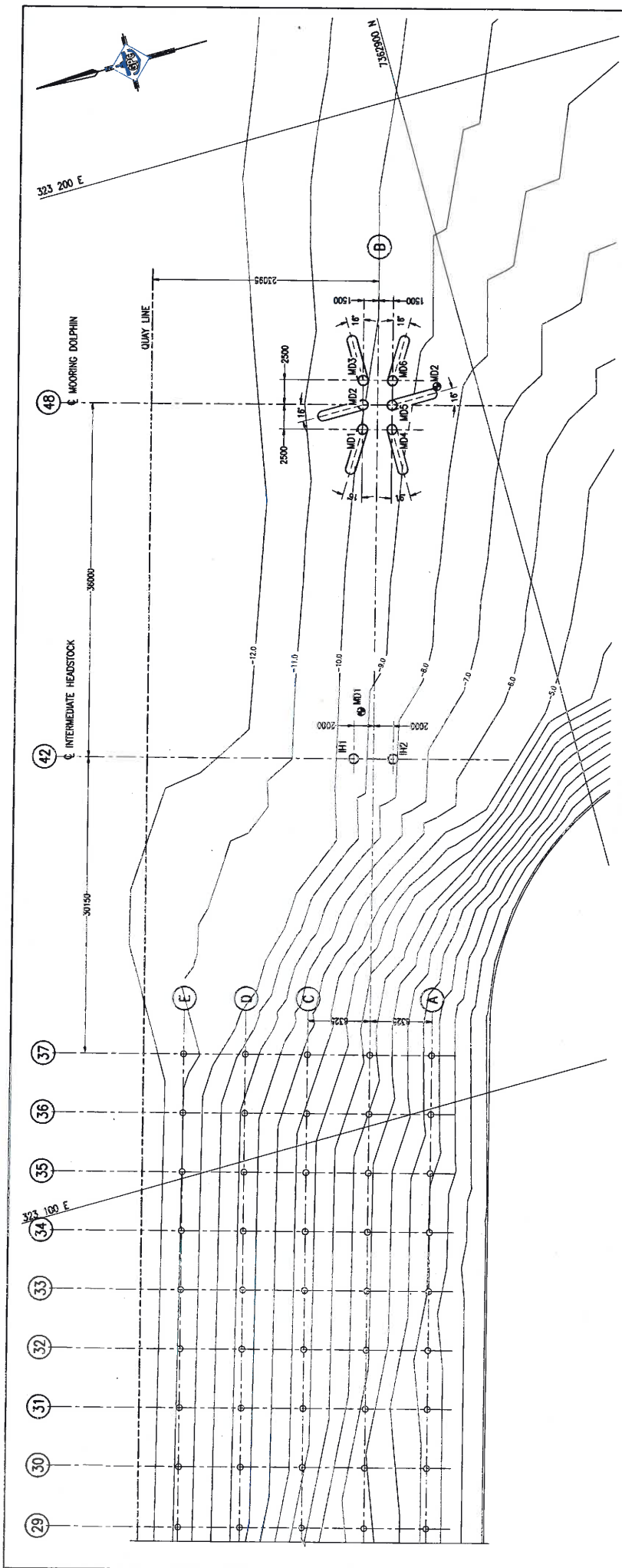
- REINFORCEMENT:**
- USE HOT-ROLLED, GRADE 500 DEFORMED (REBED) BARS OF DUCTILITY CLASS N TOR23. APPROVED BY SUPERINTENDENT. WHERE ALLOWED, WELDING OF REINFORCEMENT (INCLUDING TACK-WELDING FOR FIXING PURPOSES) TO COMPLY WITH AS3900 AND AS/NZS1554.3. DO NOT WELD REINFORCEMENT WITHIN 75 mm OF A SECTION THAT HAS BEEN BENT (100 mm FOR N28 AND N32 BARS, 125 mm FOR N38 BARS).
 - DO NOT WELD REINFORCEMENT UNLESS SHOWN ON DRAWINGS OR OTHERWISE APPROVED BY SUPERINTENDENT. WHERE ALLOWED, WELDING OF REINFORCEMENT (INCLUDING TACK-WELDING FOR FIXING PURPOSES) TO COMPLY WITH AS3900 AND AS/NZS1554.3. DO NOT WELD REINFORCEMENT WITHIN 75 mm OF A SECTION THAT HAS BEEN BENT (100 mm FOR N28 AND N32 BARS, 125 mm FOR N38 BARS).
 - EXTENT OF WELD INSPECTION/TESTING TO BE:
 - VISUAL SCANNING 100% OF WELDS
 - RADIOGRAPHIC OR ULTRASONIC 50% OF WELDS
 - DO NOT BEND OR STRAIN REINFORCEMENT IN A WAY THAT MAY CAUSE DAMAGE. DIMENSIONS TO BE TO AS3900. BARS TO BE BENT COLD UNO. GRADE 250 BARS BY QUENCHING.
 - DO NOT CUT, BEND, NOR HEAT REINFORCEMENT ON SITE WITHOUT SUPERINTENDENT'S PRIOR WRITTEN APPROVAL.
 - DO NOT BEND REINFORCEMENT AFTER GALVANISING OR APPLICATION OF OTHER COATINGS.
 - PERCUSSION ROTARY DRILL HOLES FOR GROUTED BARS AND THREADED RODS TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. EMBEDMENT LENGTHS AS PER DRAWINGS.
 - ENSURE HOLES FOR GROUTED BARS AND THREADED RODS ARE DRY AND CLEANED THOROUGHLY BEFORE INSTALLING ANCHORS. WIRE BRUSH HOLES AND BLOW OUT WITH COMPRESSED AIR TO REMOVE DUST. FILL HOLE WITH ADHESIVE USING A CAULKING GUN FROM BOTTOM OF HOLE OUTWARDS. DISCARD ADHESIVE FROM FIRST TRIGGER PULL. PROVIDE BARS/THREADED RODS WITH CHAMFERED (CHISELLED) ENDS. BARS TO BE DEGRADED AND FLAKY RUST REMOVED. ROTATE WHILE INSERTING TO ENSURE FULLY COATED AND PUSH FULLY INTO HOLE. PROTECT FROM DISTURBANCE DURING CURING. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 - ENSURE ALL LAD REINFORCING BARS ARE RESTRAINED BEFORE STOPPING WORK TO PREVENT BARS ROLLING UNDERFOOT.
 - REINFORCEMENT TO BE SUPPLIED TO SITE PRE-BENT TO REQUIRED SHAPES. REINFORCEMENT CAGES TO BE PRE-FABRICATED OFF-SITE AS FAR AS PRACTICABLE.
 - SECURE REINFORCEMENT IN POSITION AGAINST DISPLACEMENT AND MAINTAIN SPECIFIED CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS) BY APPROVED CHAIRS, SPACERS, CHAIRS, OR OTHER MEANS TO A 40 mm MINIMUM CENTRES EACH WAY UNO. PROVIDE ADEQUATE SUPPORT TO PREVENT DISPLACEMENT OF REINFORCEMENT BY WORKMEN OR EQUIPMENT DURING CONCRETE PLACEMENT.
 - SECURELY TIE REINFORCEMENT WITH WIRE TIES. TURN ENDS OF THE WIRES INTO CONCRETE. CLEAR OF COVER ZONE.
 - FOR BEAMS, THE STIRRUPS TO BARS IN EACH CORNER OF EACH STIRRUP. FIX OTHER LONGITUDINAL BARS TO STIRRUPS AT 1000 MAXIMUM CENTRES.
 - FOR EXTERNAL OR CORROSIVE APPLICATIONS USE HOP DIP GALVANIZED TIE WIRES.
 - DO NOT PLACE OR MOVE REINFORCEMENT DURING OR AFTER CONCRETE PLACEMENT.
 - ENSURE EMBEDDED ITEMS (INSERTS, THREADED SOCKETS, FERRULES, BOLTS, DISSIMILAR METAL ITEMS, etc) IN COVER CONCRETE OR EXPOSED TO AIR ARE NOT IN CONTACT WITH REINFORCEMENT. PROVIDE ISOLATION BETWEEN DISSIMILAR METALS, AND BETWEEN REINFORCEMENT AND EXPOSED ITEMS.
 - OBTAIN SUPERINTENDENT'S APPROVAL OF INSERTS, FITTINGS AND OTHER ITEMS EMBEDDED IN COVER CONCRETE.
 - DO NOT WELD REINFORCEMENT. CAST-IN ITEMS etc UNLESS APPROVED UNO.
 - SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS OR AS APPROVED BY SUPERINTENDENT. STAGGER LAPS WHERE POSSIBLE. LAPPED SPLICES TO COMPLY WITH AS3900. CLEAR SPACING BETWEEN LAPPED BARS TO BE 3 TIMES THE LARGER BARS BAR DIAMETER. WHERE BAR SIZES VARY USE LAPPED SPLICE LENGTH BASED ON LARGER DIAMETER.
 - REINFORCEMENT SPLICES IN TENSION MEMBERS MUST BE WELDED OR MECHANICAL SPLICES.
 - REINFORCEMENT DEVELOPMENT AND LAP LENGTHS SHALL BE AS FOLLOWS UNO ON THE DRAWINGS:

BAR DIAMETER	DEVELOPMENT LENGTH (mm)	LAP LENGTH (mm)
N12	350	350
N16	450	450
N20	600	600
N24	700	750
N28	850	1000
N32	1000	1250
N36	1250	1550

BAR DIAMETER	DEVELOPMENT LENGTH (mm)	LAP LENGTH (mm)
N12	450	450
N16	600	600
N20	750	750
N24	950	1000
N28	1100	1300
N32	1300	1650
N36	1600	2000

FOR HORIZONTAL REINFORCEMENT WITH MORE THAN 300mm CONCRETE BENEATH:

FOR VERTICAL REINFORCEMENT AND HORIZONTAL REINFORCEMENT WITH UP TO 300mm OF CONCRETE BENEATH:



PILING PLAN
SCALE 1:200

PILE SCHEDULE

PILE NUMBER	DIAMETER (mm)	WALL THICKNESS (mm)	PILE RAKE (H-V)	TOE PIN TYPE	CUT OFF LEVEL (RL)	APPROX. EXISTING SEALED LEVEL (RL)	APPROX. PILE TOE LEVEL (RL)	ULTIMATE LOAD (kN) TENS (kN)	REQUIRED GEOTECHNICAL CAPACITY (kN) TENS (kN)
RH1	1000	16	VERTICAL	P1	4.835	-9.50	-13.50	2500	6300
RH2	1000	16	VERTICAL	P1	4.835	-8.00	-13.50	2500	6300
MD1	1000	16	1:4	P2	4.235	-10.00	-18.50	2500	6300
MD2	1000	16	1:4	P2	4.235	-10.00	-18.50	2500	6300
MD3	1000	16	1:4	P2	4.235	-10.00	-18.50	900	6300
MD4	1000	16	1:4	P2	4.235	-9.5	-18.50	2500	6300
MD5	1000	16	1:4	P2	4.235	-9.5	-18.50	1500	6300
MD6	1000	16	1:4	P2	4.235	-9.5	-18.50	600	6300

APPROVED

LEGEND
MD/ BOREHOLE LOCATION

REV	DATE	DESCRIPTION	ISSUED FOR CONSTRUCTION	DATE	BY	CHK	APP	REF
0	04.08.18							

REFERENCE DRAWING TITLE

SCALE 1:200 AT ORIGINAL SIZE

GLADSTONE PORTS CORPORATION
VENDOR DRAWING

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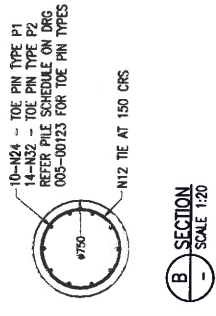
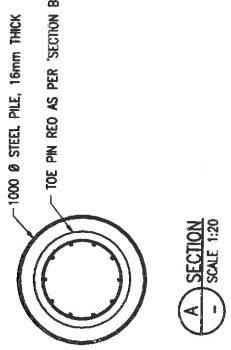
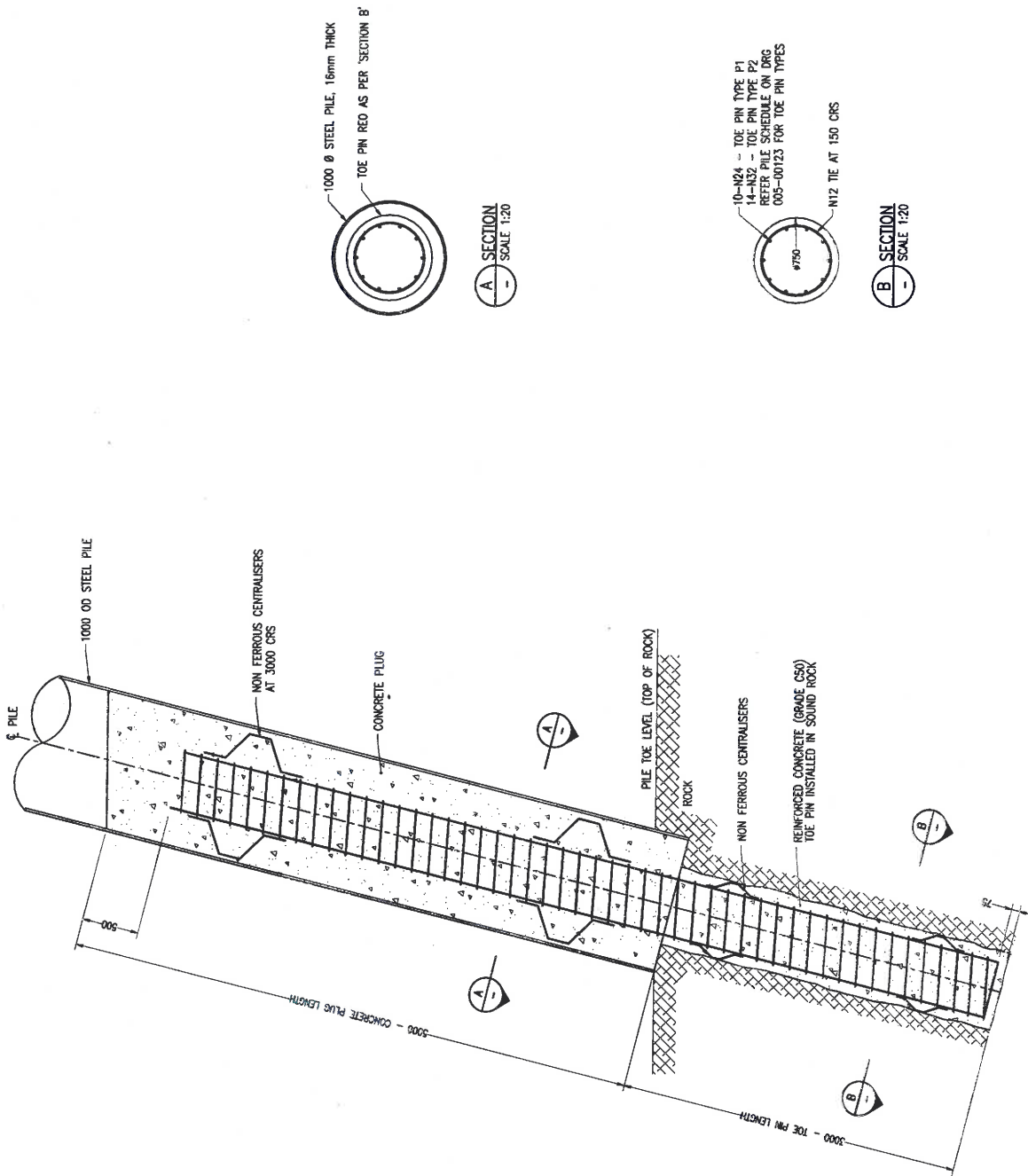
AUCKLAND POINT
BERTH 4
AP4 EASTERN MOORING DOLPHIN
PILING PLAN AND SCHEDULE

DATE	BY	CHK	APP
04.08.18	JT		
04.08.18	BC		
04.08.18	ENB		
04.08.18	MAC		

005-00123
A1 Rev/Part No.
0

APPROVED

NOTES:
1. COVER TO ALL REINFORCEMENT SHALL BE 75mm

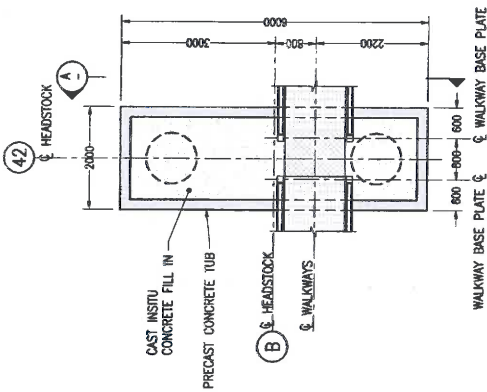


TOE PIN - TYPICAL DETAIL
(VERTICAL PILE SIMILAR)
SCALE 1:20

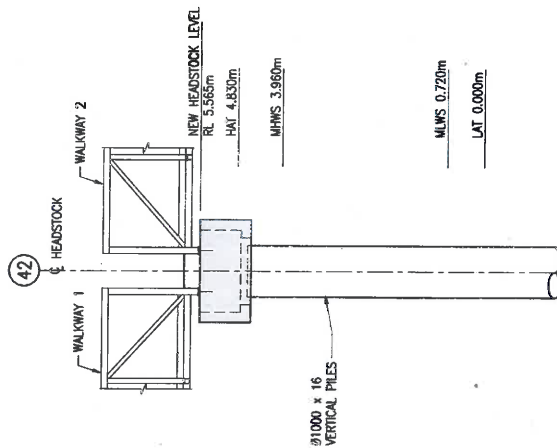
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GLADSTONE PORTS CORPORATION VENDOR DRAWING				DRAWN JT 04.08.18	CHECKED BG 04.08.18	DESIGN EMB 04.08.18	APPROVED MAC 04.08.18
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2/100 Capricorn Street, Gladstone, QLD 4680 Australia P 07 4973 1000 F 07 4973 8235 g.p.corp@gladstoneports.com.au www.gladstoneports.com.au							

EAU Ref No. 42-2043B-002
005-00124
A1 01/04/18
REF. USE Ref/Rev No. 0

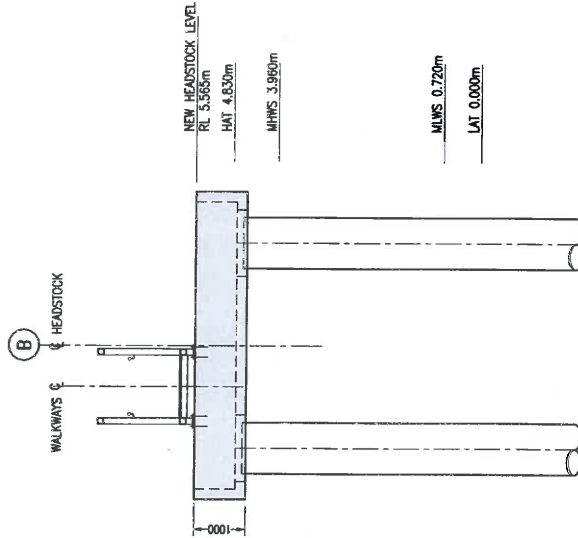
AUCKLAND POINT
BERTH 4
AP4 EASTERN MOORING DOLPHIN
PILING DETAILS



PLAN
SCALE 1:50



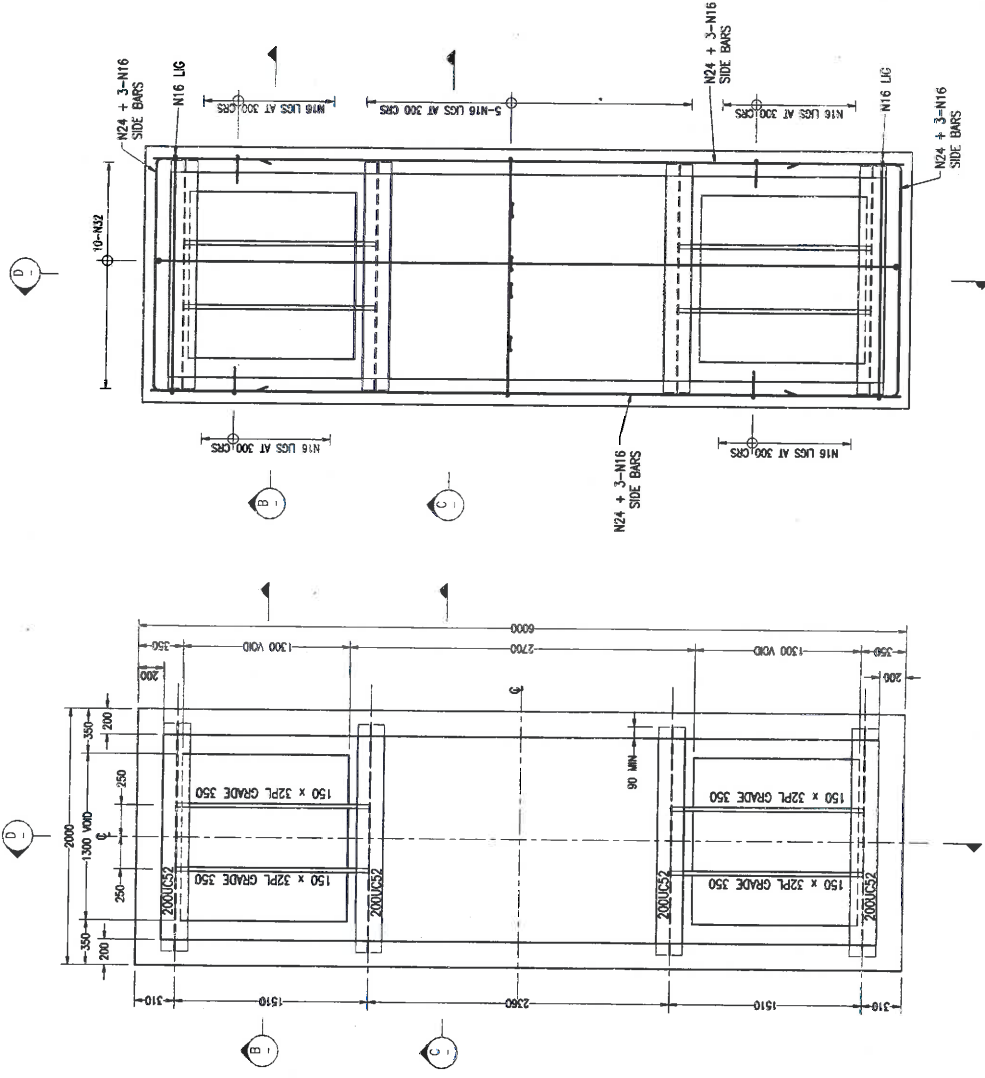
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SCALE 1:50



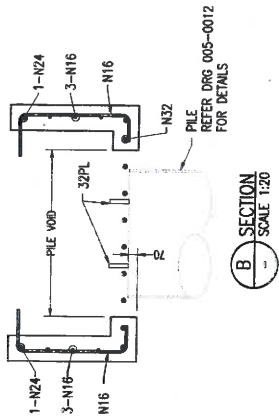
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SCALE 1:50

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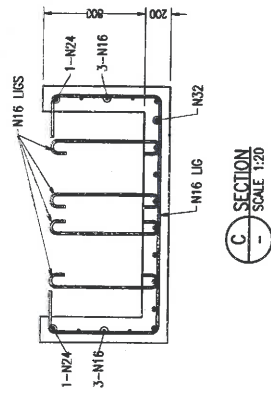
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<p>GLADSTONE PORTS CORPORATION 2/100 Cornerbank Street Gladstone QLD 4680 Australia P O Box 373 Gladstone QLD 4680 T 61 7 4973 1000 F 61 7 4972 0238 E gportal@glport.com.au www.gport.com.au</p>							
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GLADSTONE PORTS CORPORATION				DRAWN	JT	04.08.18	
VENDOR DRAWING				CHECK	BC	04.08.18	
				DESIGN	EV6	04.08.18	
				APPROVE	MAC	04.08.18	
<p>AUCKLAND POINT BERTH 4 APA EASTERN MOORING DOLPHIN INTERMEDIATE HEADSTOCK GENERAL ARRANGEMENT</p>							
<p>Est Ref No. 42-20A38-1005 GPC DRAWING No. 005-00125 A1/ Revs/Draw No. 001/001/001/001 0</p>							



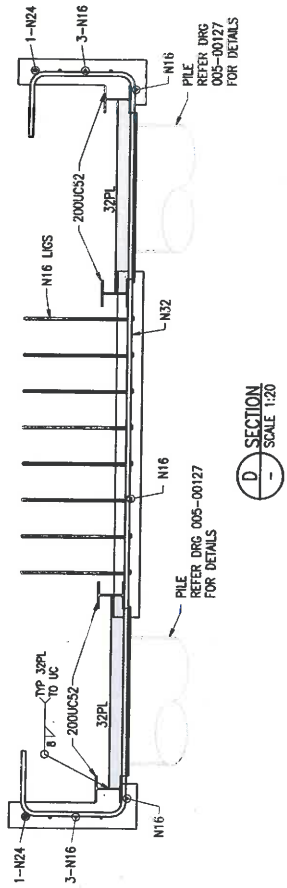
PRECAST SHELL PLAN
SCALE 1:20



SECTION B
SCALE 1:20



SECTION C
SCALE 1:20



SECTION D
SCALE 1:20

- NOTES:
- COVER TO ALL REINFORCEMENT SHALL BE 70mm
 - PRECAST SHELL SUPPORT PLATES TO BE 6mm CFY ALL ROUND TO PILES AT ALL BEARING POINTS.
 - SUPPORT POINTS TO BE PROVIDED BY PRECAST SHELL. SUPPORT PLATES ARE NOT TO BE USED FOR LIFTING PURPOSES.
 - SHELL MASS APPROXIMATELY 1.5 TONS.
 - SHAKE SHALL BE APPLIED TO THE CONCRETE FOLLOWING INSTALLATION

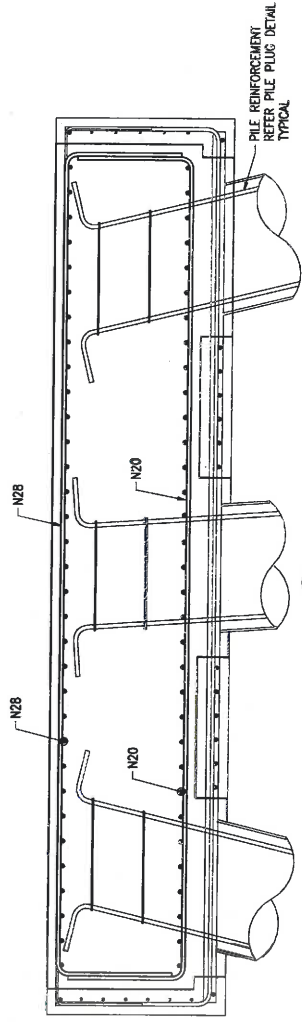
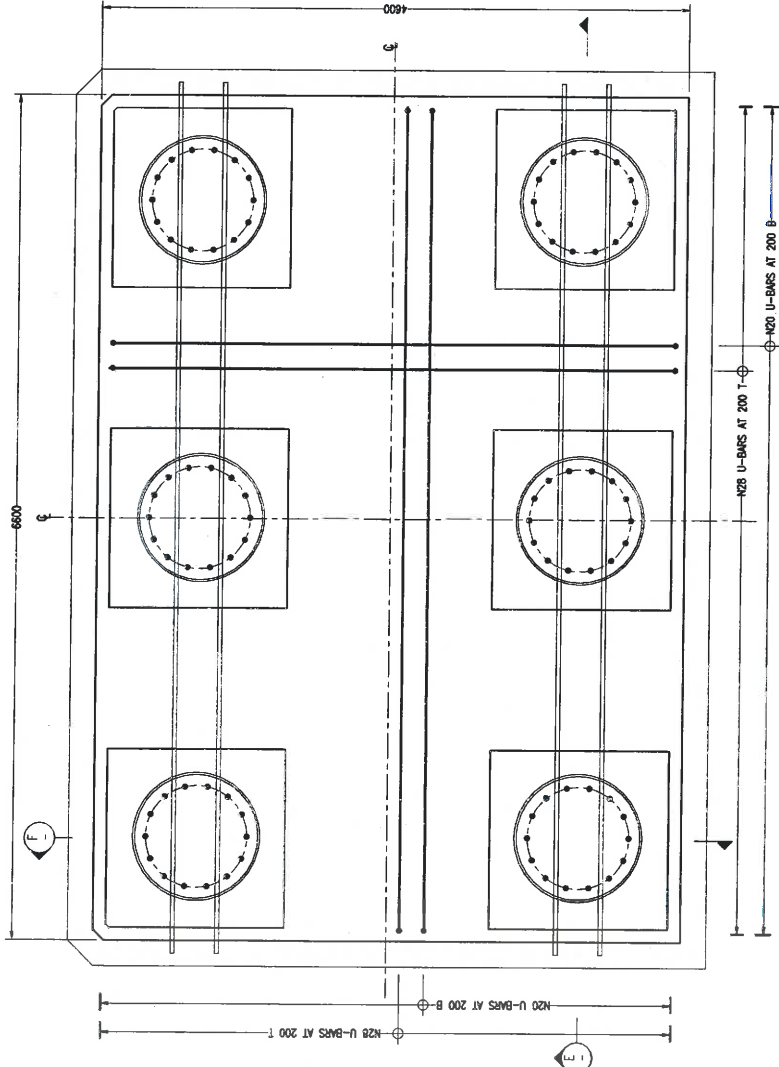
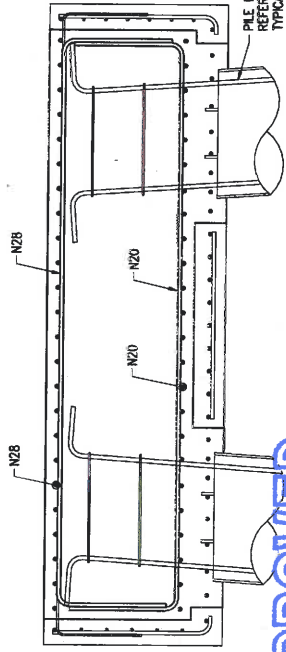
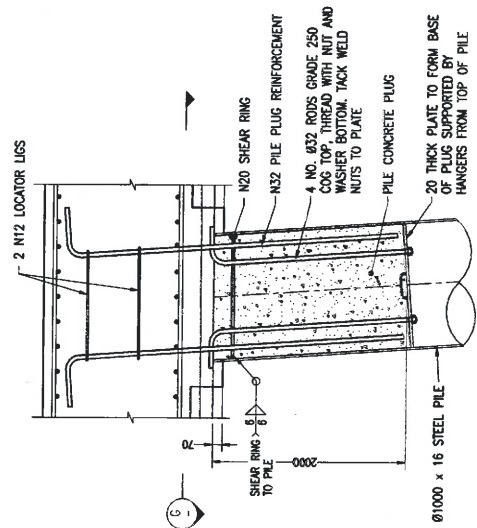
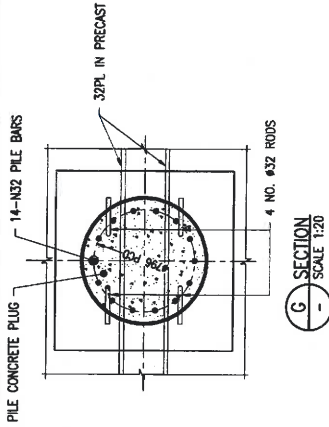
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REV	DATE	DESCRIPTION	ISSUED FOR CONSTRUCTION	DESIGN APPROVE	CHK. NO.	DATE	REFERENCE DRAWING TITLE
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2	04/08/18			BC			
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6	04/08/18			BC			
7	04/08/18			BC			
8	04/08/18			BC			
9	04/08/18			BC			
10	04/08/18			BC			

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AUCKLAND POINT
 BERTH 4
 AP4 EASTERN MOORING DOLPHIN
 INTERMEDIATE HEADSTOCK
 PRECAST DETAILS

ECF Ref No. 42-2043-0208
 GPC DRAWING No. 005-00126
 A1 ASSET/UNIT No. 0
 REV: JDE/REF/APP No. 0



NOTES:
1. COVER TO ALL REINFORCEMENT SHALL BE 70mm

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REV	DATE	ISSUED FOR CONSTRUCTION	DESCRIPTION	CHKD	DESIGN	APPR	ENR	MAC	DATE
1	04.08.18								

DRW	JT	04.08.18
CHECK	BC	04.08.18
DESIGN	ENB	04.08.18
APPROVE	MAC	04.08.18

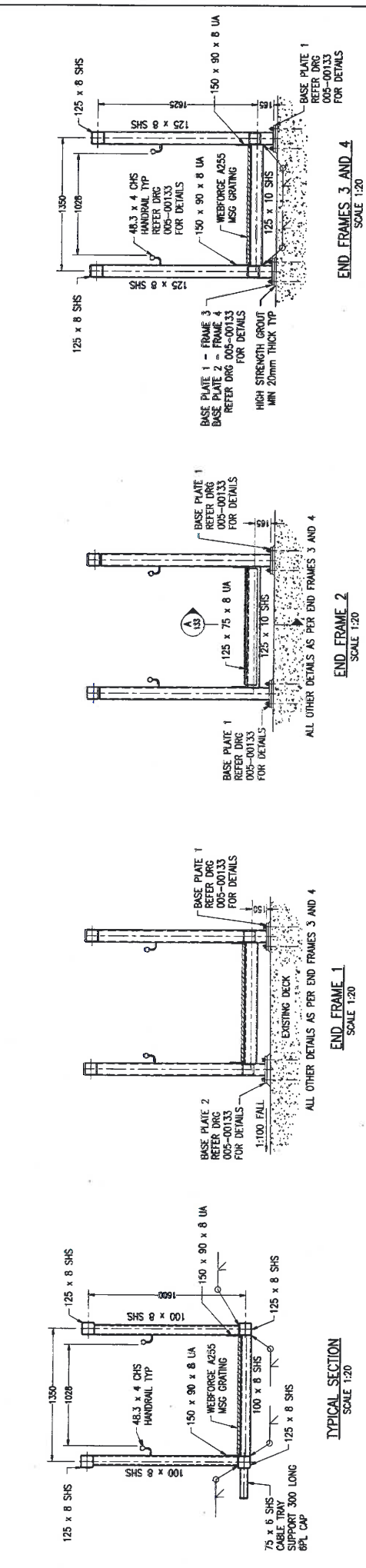
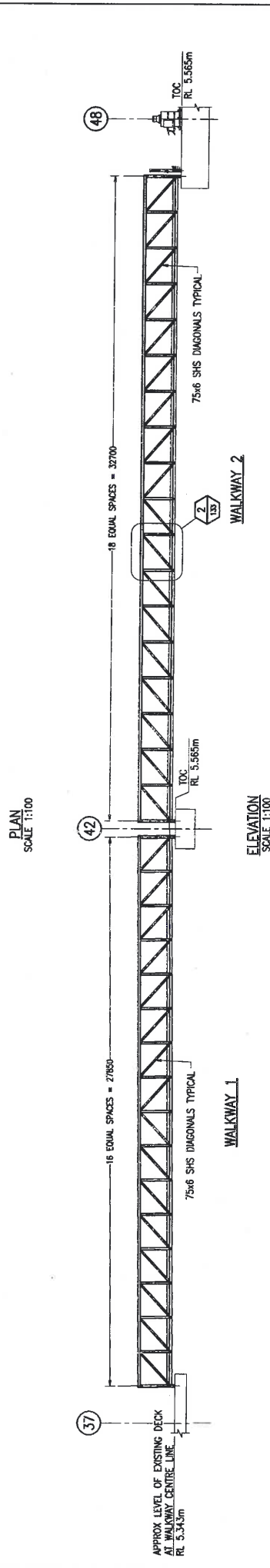
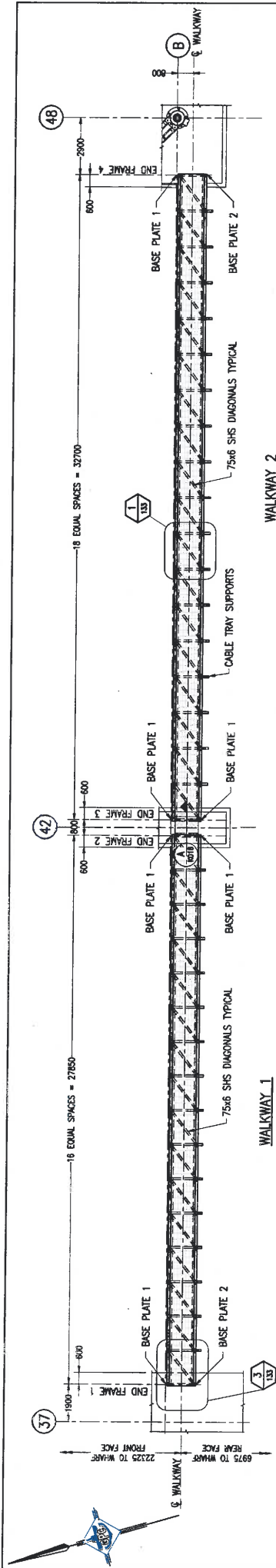
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VENDOR DRAWING

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GLADSTONE PORTS CORPORATION
AUCKLAND POINT
BERTH 4
AP4 EASTERN MOORING DOLPHIN
INSITU DETAILS

005-00130
A1
REV: 102 / Rev No. 0



APPROVED

NOTES:
1. ALL WELDS SHALL BE 6 CFW UNLESS NOTED OTHERWISE

DESIGN DESCRIPTION		CHECKED		APPROVED		DATE	
NO.	DATE	BY	DATE	BY	DATE	BY	DATE
1	10/11/18	MC	10/11/18	EM	10/11/18	EM	10/11/18
2	10/11/18	EM	10/11/18	EM	10/11/18	EM	10/11/18

SCALE 1:20 AT ORIGINAL SIZE
SCALE 1:100 AT ORIGINAL SIZE
SCALE 1:500 AT ORIGINAL SIZE
SCALE 1:1000 AT ORIGINAL SIZE

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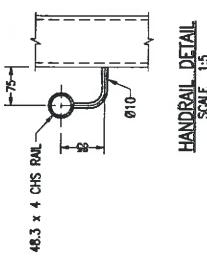
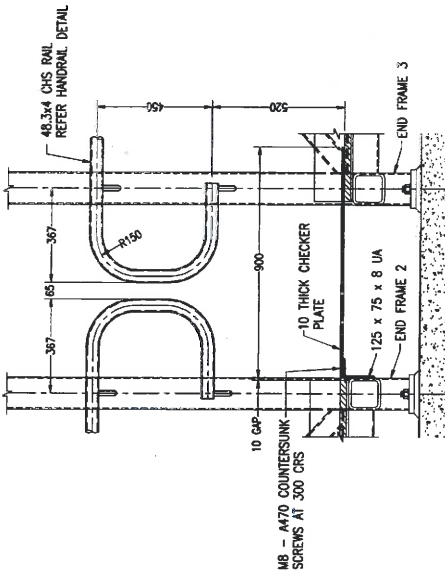
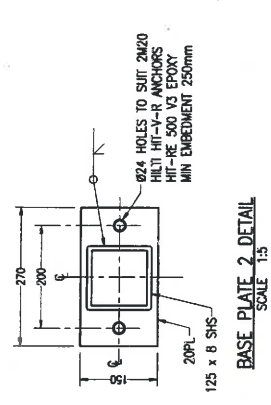
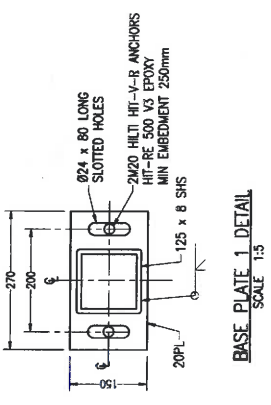
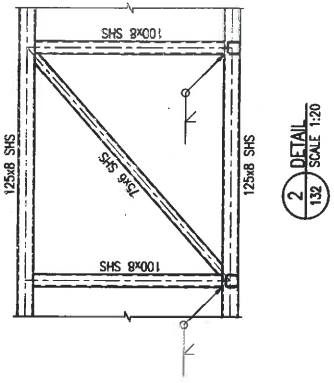
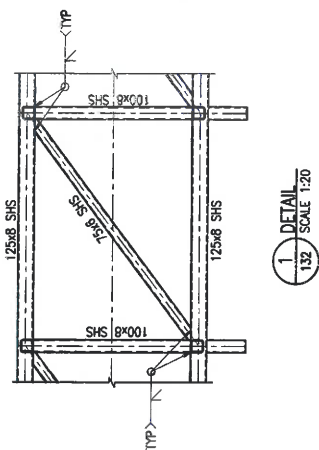
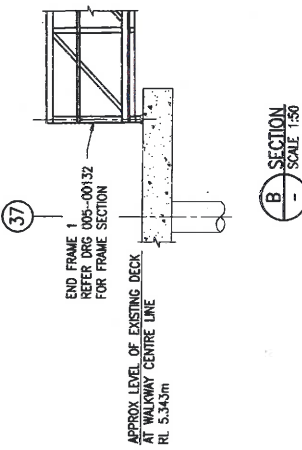
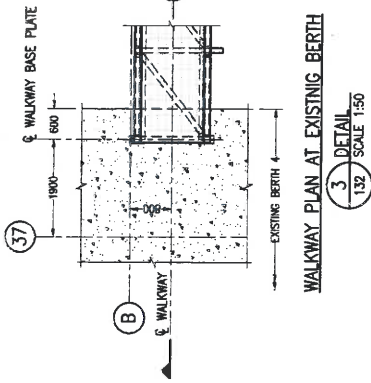
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VENDOR DRAWING

DRAWN	CHECK	DESIGN	APPROVE
JT	BC	EM	MC

04.08.18
04.08.18
04.08.18
04.08.18

GLADSTONE PORTS CORPORATION
AUCKLAND POINT
BERTH 4
AP4 EASTERN MOORING DOLPHIN
WALKWAYS
GENERAL ARRANGEMENT

Let Ref No. 42-20AR-1015
GPC DRAWING No. 005-00132
A1
REV. DATE Ref/Issued No. 0



NO	DATE	ISSUED FOR	CONSTRUCTION	DESIGNER	CHKD	APPV	DRG. NO.	SCALE	DESCRIPTION
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

GHD
2/100 Corporation Street, Cheltenham QLD 4669 Australia
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GLADSTONE PORTS CORPORATION		VENDOR DRAWING	
DRW	CHK	DESIGN	APPROVE
JT	BC	EVG	MAC
04.08.18	04.08.18	04.08.18	04.08.18

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AUCKLAND POINT BERTH 4
APA EASTERN MOORING DOLPHIN WALKWAYS DETAILS

Ext Ref No: 42-2043B-0018
GPC Drawing No: **005-00133**
A1 Rev/Part No:
REV: 005 Rev/Issp No: 0

APPROVED

NOTES:
1. ALL WELDS SHALL BE 6 CFW UNLESS NOTED OTHERWISE

FROM
EASTERN MOORING
DOLPHIN

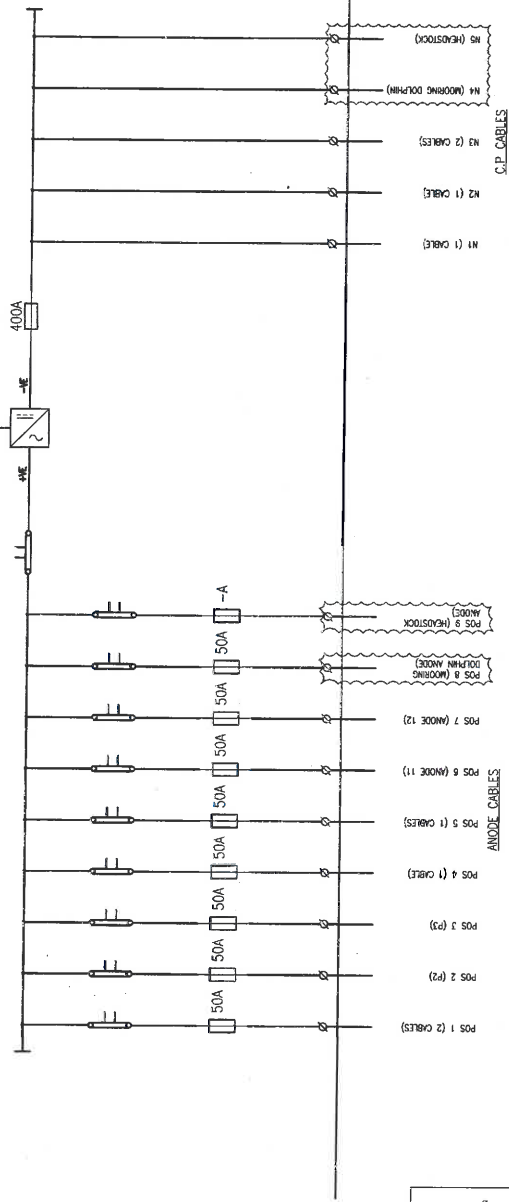
20A

TRANSFORMER RECTIFIER UNIT DETAILS

SEE DRAWING 016-1241 FOR SPEC. No. 911
 INPUT: 415V AC, 3 PHASE, 50Hz / 60Hz / 400A
 OUTPUT: 20V DC / 400A DC

F1-F3
355A

400A



APPROVED

DRAWING NO.		016-1241
AUCKLAND POINT TERMINAL WHARF BERTH NO 4 EASTERN MOORING DOLPHIN CATHODIC PROTECTION SCHEMATIC		REGISTRATION NO. A-WB4S3
A3	REVISION	0

DATE	NTS	SCALE	DATE
04.09.18	TAS	DRAWN	04.09.18
04.09.18	M/C	CHKD	04.09.18
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REV	DRAWN	DATE	DESCRIPTION
0	TAS	04.09.18	ISSUED FOR CONSTRUCTION

CHKD	DESIGN	APPRD	REF DNG	DRAWING TITLE

CHKD	DESIGN	APPRD	REF DNG	DRAWING TITLE

CHKD	DESIGN	APPRD	REF DNG	DRAWING TITLE

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ATTACHMENT 3: EXTRACT OF APPEAL PROVISIONS

(2) The person is taken to have engaged in the representative's conduct, unless the person proves the person could not have prevented the conduct by exercising reasonable diligence.

(3) In this section—

conduct means an act or omission.

representative means—

(a) of a corporation—an executive officer, employee or agent of the corporation; or

(b) of an individual—an employee or agent of the individual.

state of mind, of a person, includes the person's—

(a) knowledge, intention, opinion, belief or purpose; and

(b) reasons for the intention, opinion, belief or purpose.

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

(1) Schedule 1 states—

(a) matters that may be appealed to—

(i) either a tribunal or the P&E Court; or

(ii) only a tribunal; or

(iii) only the P&E Court; and

(b) the person—

(i) who may appeal a matter (the *appellant*); and

(ii) who is a respondent in an appeal of the matter; and

- (iii) who is a co-respondent in an appeal of the matter;
and
 - (iv) who may elect to be a co-respondent in an appeal of the matter.
- (2) An appellant may start an appeal within the appeal period.
- (3) The *appeal period* is—
- (a) for an appeal by a building advisory agency—10 business days after a decision notice for the decision is given to the agency; or
 - (b) for an appeal against a deemed refusal—at any time after the deemed refusal happens; or
 - (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises—20 business days after a notice is published under section 269(3)(a) or (4); or
 - (d) for an appeal against an infrastructure charges notice—20 business days after the infrastructure charges notice is given to the person; or
 - (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given—30 business days after the applicant gives the deemed approval notice to the assessment manager; or
 - (f) for any other appeal—20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note—

See the P&E Court Act for the court's power to extend the appeal period.

- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.

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- (6) To remove any doubt, it is declared that an appeal against an infrastructure charges notice must not be about—
- (a) the adopted charge itself; or
 - (b) for a decision about an offset or refund—
 - (i) the establishment cost of trunk infrastructure identified in a LGIP; or
 - (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that—
- (a) is in the approved form; and
 - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.
- (3) The appellant or, for an appeal to a tribunal, the registrar, must, within the service period, give a copy of the notice of appeal to—
- (a) the respondent for the appeal; and
 - (b) each co-respondent for the appeal; and
 - (c) for an appeal about a development application under schedule 1, table 1, item 1—each principal submitter for the development application; and
 - (d) for an appeal about a change application under schedule 1, table 1, item 2—each principal submitter for the change application; and
 - (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and

- (f) for an appeal to the P&E Court—the chief executive; and
 - (g) for an appeal to a tribunal under another Act—any other person who the registrar considers appropriate.
- (4) The *service period* is—
- (a) if a submitter or advice agency started the appeal in the P&E Court—2 business days after the appeal is started; or
 - (b) otherwise—10 business days after the appeal is started.
- (5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
- (6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.
- (7) Despite any other Act or rules of court to the contrary, a copy of a notice of appeal may be given to the chief executive by emailing the copy to the chief executive at the email address stated on the department’s website for this purpose.

231 Other appeals

- (1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
- (2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
- (3) A person who, but for subsection (1) could have made an application under the *Judicial Review Act 1991* in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
- (4) In this section—
decision includes—

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- (a) conduct engaged in for the purpose of making a decision; and
 - (b) other conduct that relates to the making of a decision; and
 - (c) the making of a decision or the failure to make a decision; and
 - (d) a purported decision; and
 - (e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter—

- (a) is final and conclusive; and
- (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the *Judicial Review Act 1991* or otherwise, whether by the Supreme Court, another court, any tribunal or another entity; and
- (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, any tribunal or another entity on any ground.

232 Rules of the P&E Court

- (1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
- (2) However, the P&E Court may hear and decide an appeal even if the person has not complied with rules of the P&E Court.