



Gladstone Ports Corporation
Growth, Prosperity, Community.

COPY

Document No. 1228924
GPC Ref: DA2015/15

E-MAILED
12.4.16

DECISION NOTICE – DA 2015/15

Application:	Port Application (Operational Works) for Shared Marine Operations Terminal
Applicant Name and address:	GLNG Operations Pty Ltd and QCLNG Common Facilities Company Pty Ltd c/- Brian Gibbs Town Planner AECOM Australia Pty Ltd PO Box 1307 FORTITUDE VALLEY QLD 4006
Owner:	Gladstone Ports Corporation Limited
Subject Land:	Part of Lot 210 on SP120888 (Proposed Lease MAAJ on SP272316)
Location:	Access Road (un-named) RG Tanna Coal Terminal GLADSTONE
Present Zoning	Strategic Port Land
Proposed Use:	Marine Operations Terminal – passenger ferry terminal, goods/cargo loading and unloading, heavy vehicle logistics yard, administrative building and car parking
Application Received:	Informally - 10 December 2015

This development application was assessed on: **12 April 2016**

1. Details Of The Approval

Development Permit:

RGTCT Shared Marine Operations Terminal – passenger ferry terminal, marine operations building, heavy vehicle marshalling/logistics yard, car park, and existing roll-on/roll-off ramp and lift-on/lift-off facility for transfer of goods.

This approval supersedes the previous port application approval issued to GLNG Operations Pty Ltd for this site i.e. DA2010/33.

2. Assessment Manager's Conditions

In general the facilities are in compliance with the requirements of Gladstone Ports Corporation. It is to be noted that the following conditions will be complied with in the granting of this Development Application.

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 the Gladstone Ports Corporation 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 the 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 in accordance with the approved plans.
6. The proponent must at its cost and expense, keep and maintain the subject area, including existing services, in a state that is satisfactory to the Port.

ENGINEERING

7. The proponent must supply the Port with "As Constructed" plans in both hard copy (2 of) and electronic (CAD format) which illustrates all infrastructure on Port land which is associated with the activity (e.g. detailed positions of underground services i.e. sulphuric acid pipeline, electrical routes, water, sewage, stormwater drainage etc. and surface infrastructure e.g. office, amenities and other buildings, roads, truck loading area, guard rails etc.).
8. The proponent must design, construct and maintain the street frontage in a manner that prevents weed growth and presents a clean and tidy access road edge, footpath, stormwater drain, fence etc.
9. The traffic movements generated from the operation of the facility will increase the traffic loadings on GPC controlled roads. GPC utilise a Traffic Impact Formula (Schedule 1) which identifies the cost in bringing forward road and bridge construction or replacement due to the reduced life of these caused by the Increased Traffic Loadings.

The proponent is to pay to GPC the Traffic Impact Cost each year based on the number and type of vehicles entering a leaving the site during the year. The cost relies on the proponent providing GPC with an up to date and maintained record of the number and type of vehicle entering and leaving the site each year.
10. The proponent must implement access road upgrade works as described in the Design Development Report - RG Tanna MOT – Access Road Upgrade dated 22/02/2016 and associated drawings.
11. The proponent is to match the verge pavement identified in drawing #502302 Rev D to that of the adjacent roadway (50mm DG14).
12. The proponent is to notify GPC of damage/wear and tear caused to any port roads and associated infrastructure e.g. signage as a result of this activity. GPC will undertake necessary repairs at the expense of the proponent.
13. The holder must provide to GPC for approval a Construction Traffic Management Plan (CTMP) prior to initiation of works.

14. Operational traffic must be carried out in compliance with the GPC approved version of the Operational Traffic Management Plan (OTMP) and drawings. Any amendments to the OTMP or relevant drawings must be submitted for approval by the Gladstone Ports Corporation prior to implementation.
15. Any material excavated during the construction period, which is not reused as fill, is to be removed from GPC lands.
16. Water charges will be issued by GPC which are subject to upstream changes made by the Gladstone Regional Council. The holder of this DA must install a water use meter on site in consultation with GPC.
17. Site lighting 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 will 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.

ENVIRONMENT

18. Prior to the commencement of construction an Construction Environmental Management Plan, including an Acid Sulphate Soil Management Plan, is to be developed by the permit holder and submitted for approval to Gladstone Ports Corporation.
19. Construction works are to be carried out in accordance with the approved Construction Environmental Management Plan.
20. Prior to commencement of terminal operations an Operations Environmental Management Plan (OEMP) is to be developed by the permit holder and approved by the Gladstone Ports Corporation.
21. Operations are to be conducted in accordance with the approved Operations Environmental Management Plan.
22. Any amendments to the approved Environmental Management Plans (Construction or Operations) must be approved by the Gladstone Ports Corporation.
23. GPC is to be notified within two (2) business days after the permit holder has becoming aware of any non-compliance with any environmental conditions specific to this approval.
24. Spills equal to or greater than 20 litres are to be reported within 24 hours of the spill occurring to the Gladstone Ports Corporation Environmental Hotline; 4976 1617.
25. The permit holder is to maintain a register of any spills of contaminants (e.g. hydrocarbons, sewage and chemicals) throughout construction and operation of the facility. The register at a minimum should contain the date, location, volume, substance spilt, and clean up details. The register is to be made available to GPC upon request.
26. Any spillage of wastes, contaminants or other materials must be cleaned up immediately. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such materials to any stormwater drainage system (except where such systems are designed to remove such contaminants), road side gutters or waters.
27. Appropriate spill kits must be located within 10 metres of any loading/unloading points of hydrocarbons, sewage and chemicals. Persons involved with loading/unloading of hydrocarbons, sewage and chemicals must be trained in the use of these spill kits. Any waste generated as a result of spill clean-up (including but not limited to contaminated soil) is to be disposed of.
28. Fuel and Chemical storage on site must be done in accordance with the applicable Australian Standards.

29. Minor servicing (e.g. oil or grease top-ups) of vehicles, plant, or other equipment must have controls in place to prevent spilt contaminants being released to waters or land.
30. The permit holder will investigate any nuisance complaint (including but not limited to noise, air quality, light) received in relation to their construction or operation activities. Within 24 hours of receiving a complaint the permit holder is to notify the Gladstone Ports Corporation Environmental Hotline; 4976 1617.
31. The permit holder is to ensure that the site is managed and operated in such a manner (during construction and operations) that it does not encourage the proliferation of pests and weeds. Pests and weeds on site are the responsibility of the permit holder to manage.
32. Upon receipt of this Development Approval (DA), the holder must forward to GPC within 10 business days prior to operation of the activity, a copy of any environmental approvals issued for activities related to this land or DA, including those held by third parties e.g. an Environmental Authority. Any permissible changes or amendments to these approvals must also be forwarded to GPC within 20 business days of the variation coming into effect.

3. The Approved Plans –

The approved plans and/or documents forming part of this decision notice are listed in the following table:

Document Reference	Plan / Document Name	Date
010001	Locality Plan and Drawing List	26/10/15
022002 Rev A	Marine Operations Terminal Site - Boundary Plan	26/10/15
022101 Rev A	Marine Operations Terminal – Landside Master Plan	26/10/15
022201	Marine Operations Terminal – Stormwater Layout Plan	26/10/15
104002 Rev D	Marine Operations Terminal – Site Plan Stormwater and Sanitary Drainage	02/02/2016
202250 Rev A	Marine Operations Terminal – Sewer Connection – Plan and Long Section	02/02/2016
022301 Rev A	Marine Operations Terminal – Pavement Plan	26/10/15
022310	Marine Operations Terminal – Vehicle Paths - Semi-Trailer & Bus	26/10/15
022311	Marine Operations Terminal – Vehicle Paths – Unscheduled B-Double	26/10/15
022312	Marine Operations Terminal – Vehicle Paths – Standard Details	26/10/15
024002	Marine Operations Terminal – Hydraulic Services Plan Sheet 1	26/10/15
024003	Marine Operations Terminal – Hydraulic Services Plan Sheet 2	26/10/15
025200 Rev A	Marine Operations Terminal – Site Plan - New Services	26/10/15

Document Reference	Plan / Document Name	Date
031000 Rev A	Marine Operations Building – Cover Sheet & Location Plan	26/10/15
031001 Rev A	Marine Operations Building – 3D Images	26/10/15
031002 Rev A	Marine Operations Building – Materials	26/10/15
031100 Rev A	Marine Operations Building – Site Plan	26/10/15
031200 Rev A	Marine Operations Building – General Arrangement Plan	26/10/15
031250 Rev A	Marine Operations Building – Roof Plan	26/10/15
031300 Rev A	Marine Operations Building – Elevations	26/10/15
031400 Rev A	Marine Operations Building – Sections – Sheet 1	26/10/15
031401 Rev A	Marine Operations Building – Sections – Sheet 2	26/10/15
031550 Rev A	Marine Operations Building – Walkway Typical Details	26/10/15
60323818-REP-006 Issue B	RG Tanna Marine Operations Terminal Landscape Concept Plan	27/10/15
Lighting Plan	RG Tanna Marine Operations Terminal – Obtrusive Lighting Calculation Plan	n/a
CEB06628	Traffic Impact Assessment – GLNG Marine operations Terminal	04/2015
60323818-REP-004	Operational Stormwater Management Plan – RG Tanna Marine Operations Terminal	01/10/15
60323818 – REP-14	Design Development Report - RG Tanna MOT - Access Road Upgrade	22/01/16
502000 Rev B	Access Road – Cover Sheet and Drawing List	18/12/15
502001 Rev B	Access Road – Notes and Legend	18/12/15
502100 Rev B	Access Road - Layout Plan – Sheet 1	18/12/15
502101 Rev B	Access Road - Layout Plan – Sheet 2	18/12/15
502102 Rev B	Access Road - Layout Plan – Sheet 3	18/12/15
502103 Rev B	Access Road - Layout Plan – Sheet 4	18/12/15
502104 Rev B	Access Road - Layout Plan – Sheet 5	18/12/15
502105 Rev B	Access Road - Layout Plan – Sheet 6	18/12/15
502106 Rev B	Access Road - Layout Plan – Sheet 7 – this drawing to be amended and reissued	18/12/15
502107 Rev B	Access Road - Layout Plan – Sheet 8	18/12/15

Document Reference	Plan / Document Name	Date
502108 Rev B	Access Road - Layout Plan – Sheet 9	18/12/15
502200 Rev B	Access Road – Typical Cross Section – Sheet 1	18/12/15
502300 Rev B	Access Road – Pavement Layout Plan – Sheet 1	18/12/15
502301 Rev B	Access Road – Pavement Layout Plan – Sheet 2	18/12/15
502302 Rev D	Access Road – Pavement Layout Plan – Sheet 3	18/03/16
502400 Rev B	Access Road – Setout Tables – Sheet 1	18/12/15
502401 Rev B	Access Road – Setout Tables – Sheet 2	18/12/15

4. When the Development Approval Takes Effect –

If the application is approved, or approved subject to conditions, the decision notice, or if a negotiated decision notice is given, the negotiated decision notice, is taken to be the development approval and has effect on the date that the notice is signed by an authorised delegate of the Gladstone Ports Corporation.

5. When Approval Lapses if Development Not Started

The relevant period stated below applies to each aspect of development in this approval, as outlined below:-

- 4 years

6. Other Necessary Development Approvals

Listed below are the other development permits that are necessary to allow the development to be carried out:

- Development Permit for Building Works for the construction of any new structures.

7. Appeal Rights

No legislated appeal rights are afforded with this decision notice as the application was not made under the provisions of The Sustainable Planning Act 2009.

If you have concerns or queries regarding the conditions, please contact the undersigned on 4976 1287.

8. Assessment Manager Certification



Sarah Hunter
Senior Planning Officer
12 April 2016

Schedule 1

The Traffic Impact Cost or bring forward cost, A is calculated as follow;

Increased heavy vehicle traffic generated on Alf O'Rourke Dr, Bryan Jordan Dr & RGTCT Heavy Haul Rd by GLNG MOT operations will apply additional ESA impacts to the existing road infrastructure. Based on available information the existing roads were designed for a traffic load of 4 x 10⁶ ESA's over a 20 year design life. The road replacement is estimated to cost \$1,250,000 per km. The Cooling Channel bridge has an estimated design traffic of 13 x 10⁶ ESA's over a 50yr design life, with a replacement cost estimated at \$7,400,000.

Based on available information at the time of this assessment, the assumed traffic generated by the GLNG MOT operations are:

- 10 truck movement per day, for 260 days of the year (5 day week).
- Operations to occur indefinitely (therefore applied over a typical design period of 20yrs).
- All HV's assumed to be tri-axle Semi-trailer

This example calculates the reduction in design life due to the impact of additional traffic and develops the associated bring forward cost for reconstruction of the roadway.

The pavement impact cost, or bring forward cost, A is calculated as shown:

$$A = A_R + A_B \text{ (current year costs)}$$

A_R = Bring forward cost of the roads

A_B = Bring forward cost of bridges

$$A_R = [(Y \times D_{LR}) \times C_R \times (i/100)]$$

$$A_B = [(Y \times D_{LB}) \times C_B \times (i/100)] / D_F$$

Where: Y = Ratio of additional traffic to design traffic (in ESA's) as a decimal fraction.

D_{LR} = Estimated design life of the roadway

D_{LB} = Estimated design life of the bridge

$$D_F = D_{LB} / D_{LR}$$

C_R = Cost to reconstruct the road segment/s in current year costs.

C_B = Cost to reconstruct the bridge in current year costs.

i = Current interest rate

ESA's (Equivalent Standard Axles)

(A standard axle is a single axle with dual tyres that applies a load of 80kN (8.2 tonne) to the road pavement. The equivalent standard axle (ESA) is calculated by the following formula: [Tonne's on an axle/a standard axle]⁴. For example, an axle with a 10t load would have an ESA = [10/8.2]⁴=2.2. The ESA is calculated for each axle of a vehicle, then the ESA for each axle is added to calculate the total vehicle ESA)

Example: Semi-trailer impact = 4.93 ESA's when fully loaded
= 0.51 ESA's when empty

DESIGN TRAFFIC

(This is how many ESA's the road was designed for over its life, (determined by the asset owner))

= 4 x 10⁶ ESA's (Road)

= 13 x 10⁶ ESA's (Bridge)

ADDITIONAL TRAFFIC

(This is how much the traffic on the road will increase because of the project/development)

Road Length $\approx 2150\text{m} + 450\text{m} + 1150\text{m} \approx 3750\text{m}$

Travel length: $\approx 3750\text{m}$ Unloaded, 3750m Loaded

Additional ESA's = $(4.93 + 0.51) \times 1 \text{ truck} \times 10 \text{ trips per day} \times 260 \text{ days} \times 20 \text{ yrs} = 282880 \text{ ESA's}$

Y

(This is the ratio of additional traffic to design traffic as a decimal fraction)

= Additional Traffic / Design Traffic

= $282880 / 4000000 = 282880 / 13000000$

= **0.071 (road) = 0.022 (bridge)**

RECONSTRUCTION 'BRING FORWARD' YEARS

(This is how many years earlier the road will need to be reconstructed because of the increased traffic)

= Y x Design life

= $0.071 \times 20 = 0.022 \times 50$

= **1.42 yrs = 1.10 yrs**

BRING FORWARD COSTS (A_R & A_B)

(This is the cost of bringing forward the reconstruction of the road or bridge)

A_R = Y x DL x road length (km) x road cost per km x interest rate / 100 (assumed interest rate of 8%)

= $0.071 \times 20 \times 3.75 \times 1250000 \times (8 / 100)$

= **\$532,500**

A_B = (Y x DL x C_B x (i / 100)) / D_F

= $(0.022 \times 50 \times 7400000 \times (8 / 100)) / 2.5$

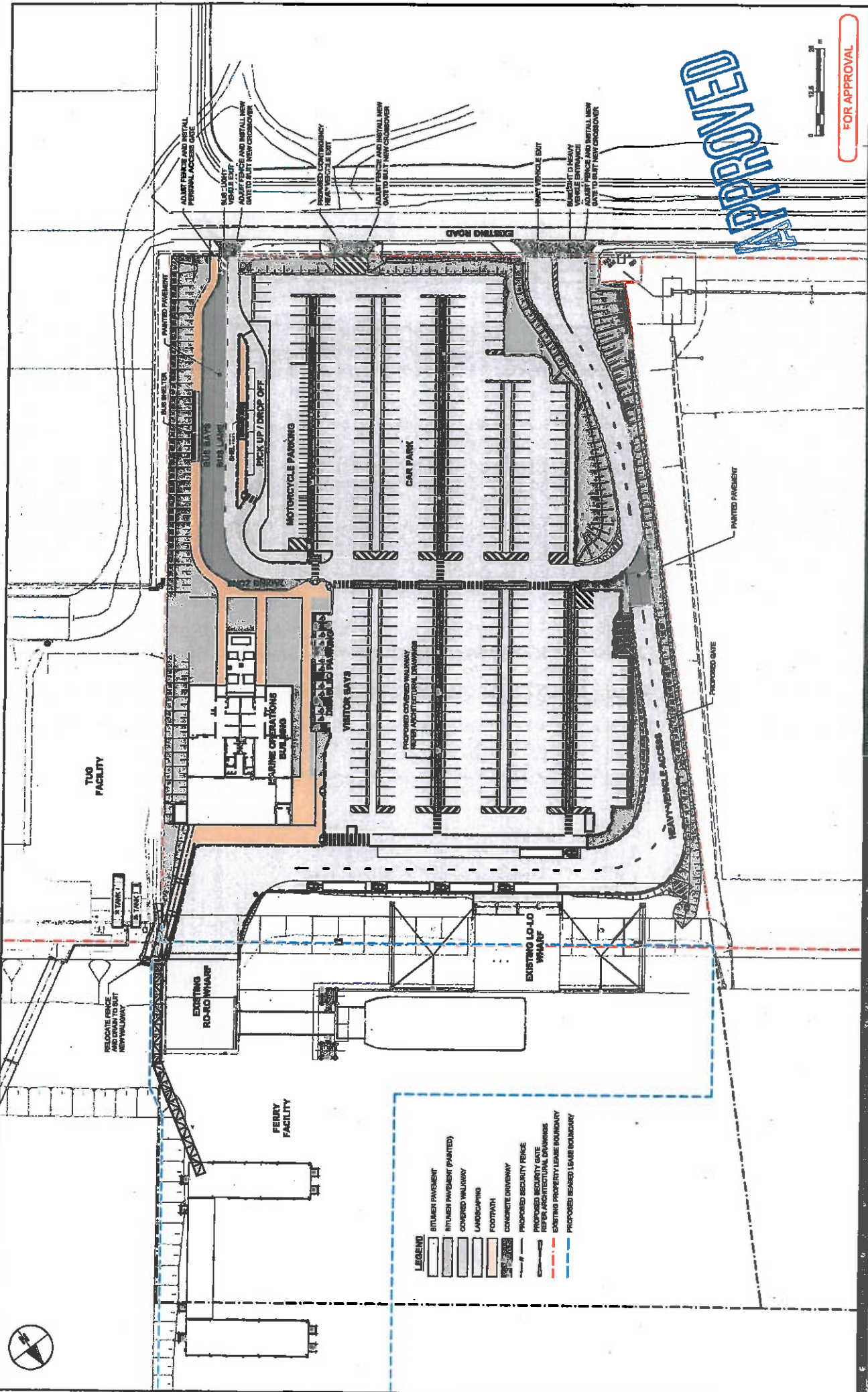
= **\$260,480**

TOTAL PAVEMENT IMPACT COST:

A = A_R + A_B

= $\$532,500 + \$260,480$

= **\$792,980 = (approximate yearly cost of \$39,649)**



FOR APPROVAL

APPROVED

PROJECT MANAGEMENT INITIALS		DESIGNER/VERSION	
DESIGNED	CHECKED	NO	NO
APPROVED	APPROVED		
PROJECT DATA		REVISION DESCRIPTION	
DATE	AND	NO	DESCRIPTION
		A	ISSUED FOR APPROVAL
		B	
		C	

PROJECT NUMBER: 60323618
 SHEET TITLE: MARINE OPERATIONS TERMINAL LANDSIDE MASTER PLAN
 SHEET NUMBER: 022101
 REVISION: A

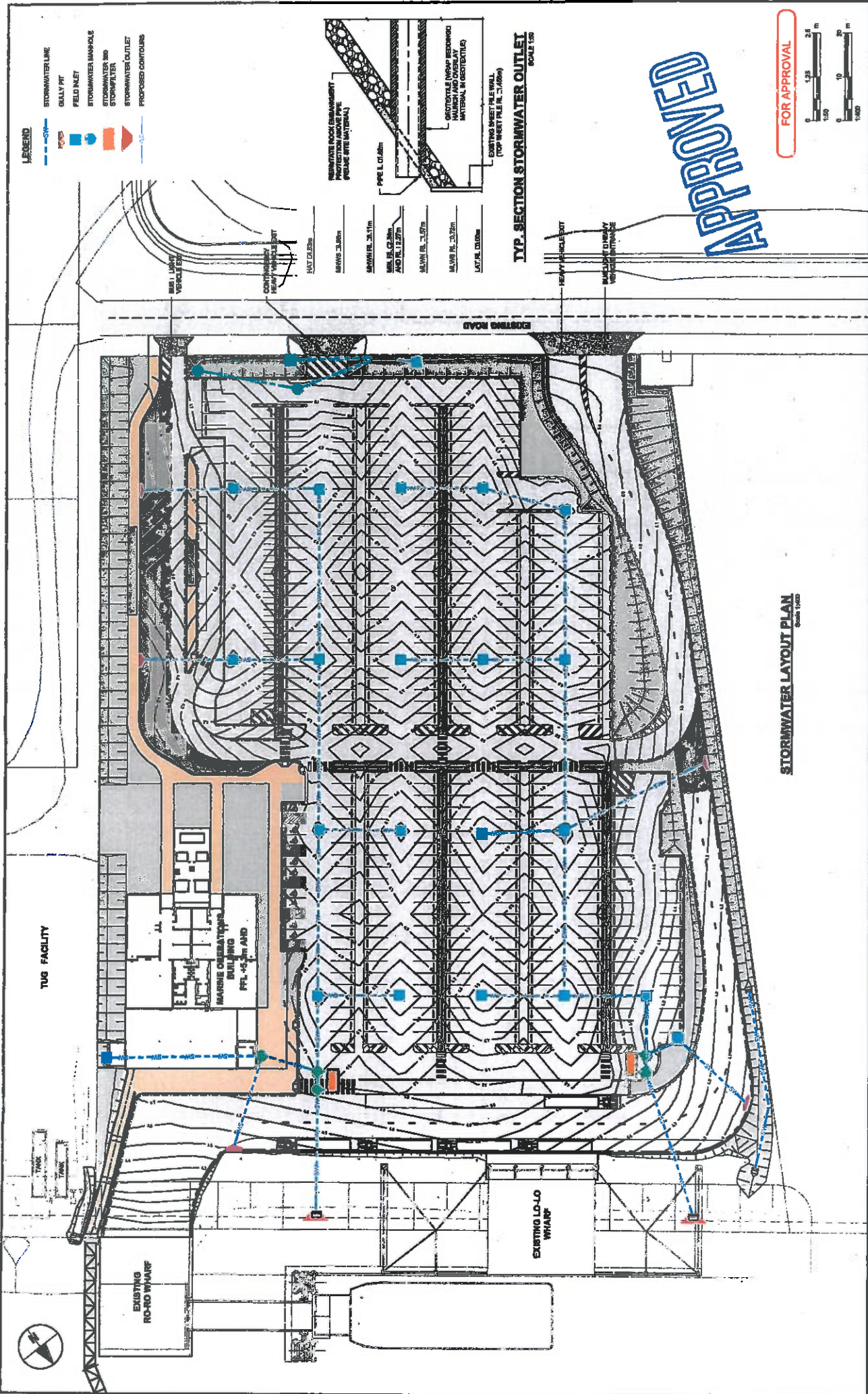
CLIENT
Santos
 GLNG
QGC
 A QGC Group Business

PROJECT
RG Tanna Marine
 Operations Terminal
 GLAUSTONE

AECOM
 CONSULTANT
 AECOM Australia Pty Ltd
 A.S.N. 20 003 648 625
 www.aecom.com

LEGEND

	BITUMEN PAVEMENT
	BITUMEN PAVEMENT (PAINTED)
	COVERED WALKWAY
	LANDSCAPING
	FOOTPATH
	CONCRETE DRIVEWAY
	PROPOSED SECURITY FENCE
	PROPOSED SECURITY GATE
	REFER ARCHITECTURAL DRAWINGS
	EXISTING PROPERTY LEASE BOUNDARY
	PROPOSED LEASE BOUNDARY



- LEGEND**
- STORMWATER LINE
 - GULLY PIT
 - FIELD INLET
 - STORMWATER MANHOLE
 - STORMWATER 300 STOPFILTER
 - STORMWATER OUTLET
 - PROPOSED CONTOURS

MIN. L. UNDER VERGULE END
 CONTINUOUS HEAVY VERGULE END
 HAT GULLY
 MANHOLE 300mm
 MANHOLE 300mm
 MANHOLE 300mm AND INLET 125mm
 MANHOLE 300mm
 MANHOLE 300mm
 LAT. INLET 300mm

TYP. SECTION STORMWATER OUTLET
 SCALE 1:50

FOR APPROVAL

STORMWATER LAYOUT PLAN
 Scale 1:500

ISSUE/REVISION

NO	DATE	DESCRIPTION
A	26.10.18	ISSUED FOR APPROVAL

PROJECT NUMBER 00323818
SHEET TITLE MARINE OPERATIONS TERMINAL STORMWATER LAYOUT PLAN
SHEET NUMBER 022201

CERTIFICATION

DISCIPLINE	CERTIFIER	PROJ. NO.	NO.	NO.
DRAWN	CHECKED	APPROVED		

PROJECT DATA

DATE	ISSUE	NO.
26.10.18	ISSUED FOR APPROVAL	022201

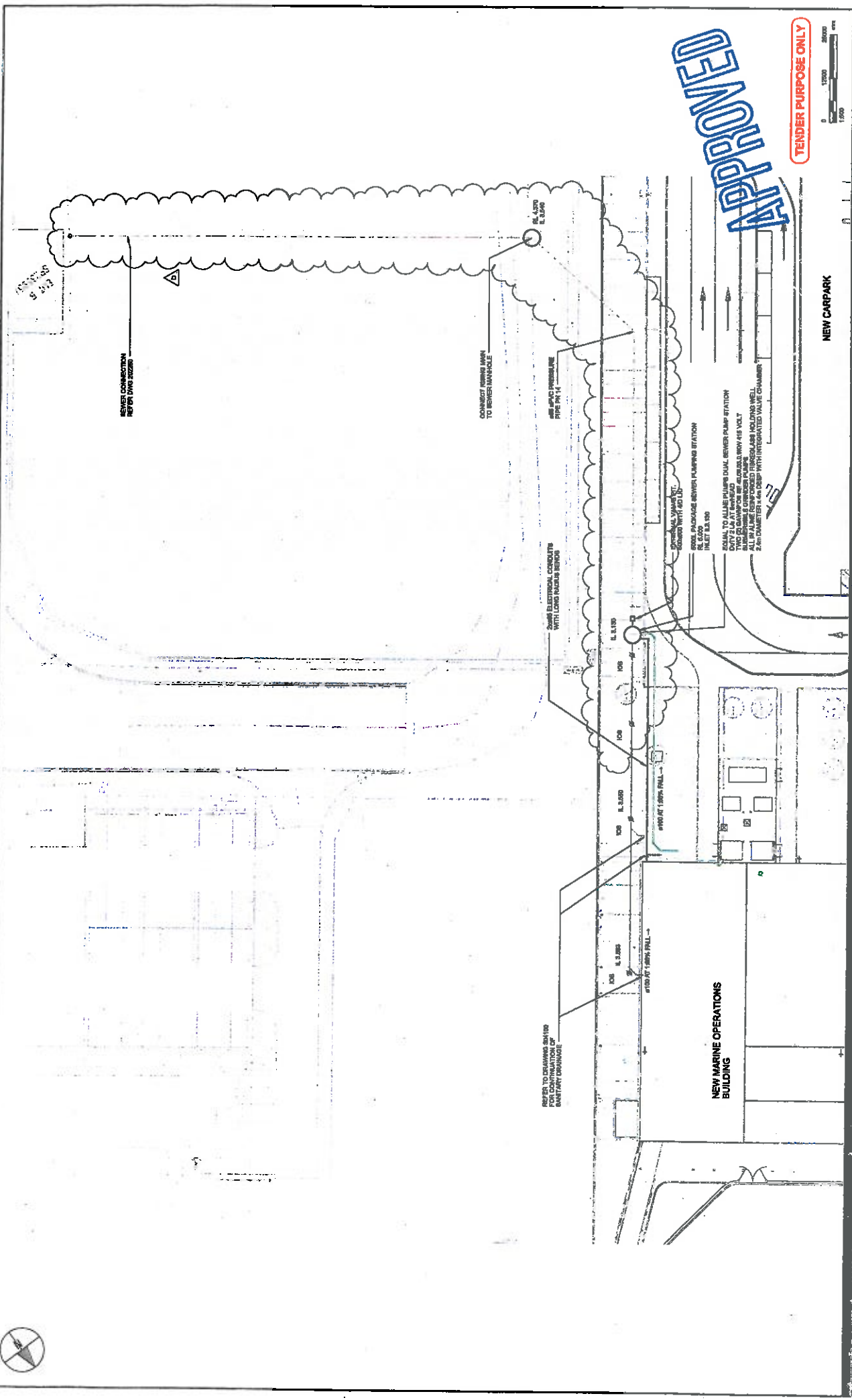
CLIENT

RG Tanna Marine Operations Terminal
 GLASGOW

CLIENT

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PROJECT
 RG Tanna Marine
 Operations Terminal
 GLAOSTONE

CLIENT
Santos
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QGC
 A QS Group business

CERTIFICATION

DISCIPLINE	CHECKED	DATE	BY	APPROVED
HYDRAULIC				

PROJECT MANAGEMENT INITIALS

CP	RY	AD

PROJECT DATA

DRAWN	AND	CHECKED	DATE

REVISION

NO	DATE	DESCRIPTION
0	05/12/18	ISSUED FOR TENDER
1	25/11/18	ISSUED FOR TENDER
2	25/11/18	ISSUED FOR TENDER
3	05/12/18	PRELIMINARY TENDER ISSUE
4	05/12/18	PRELIMINARY TENDER ISSUE

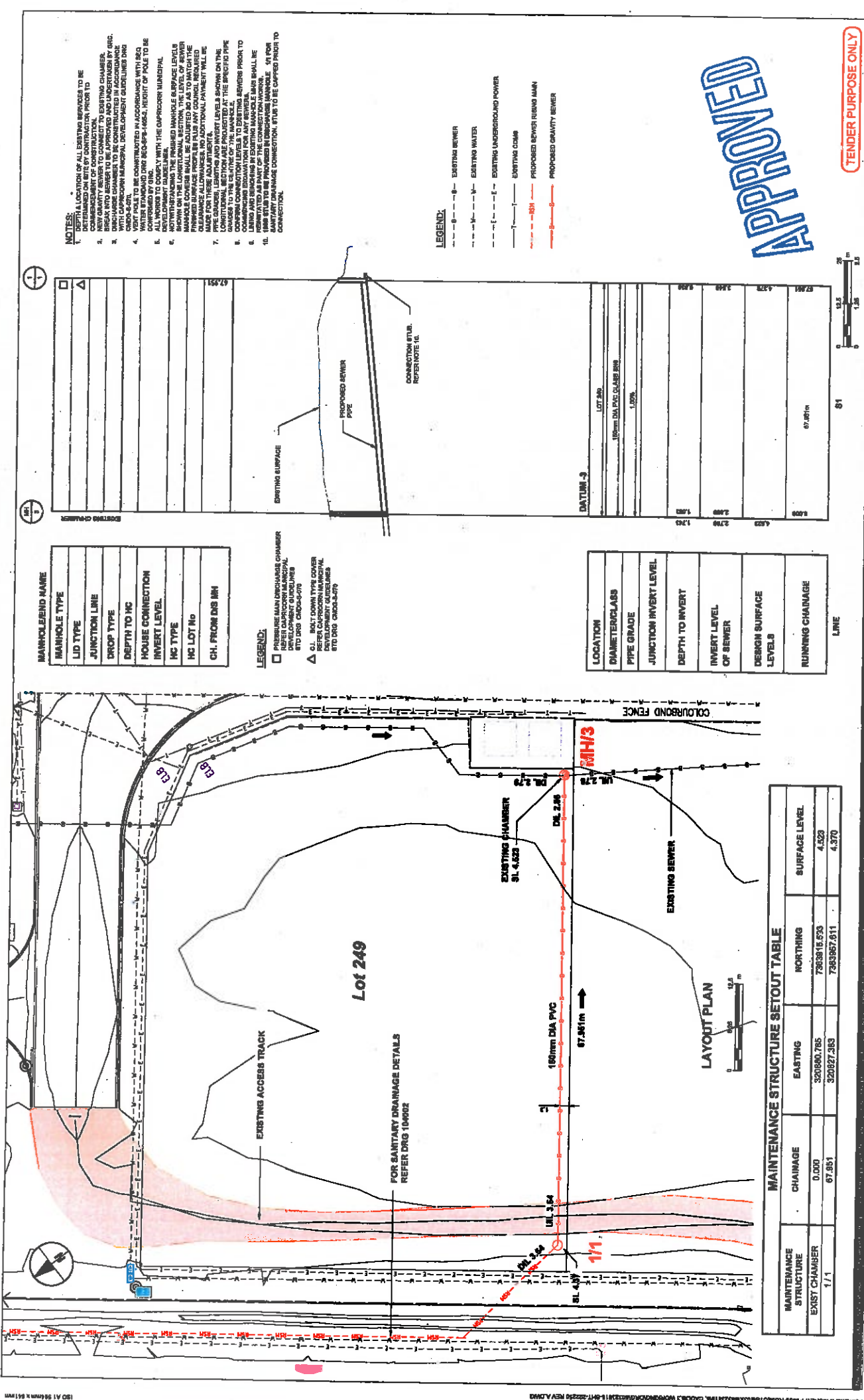
PROJECT NUMBER
00323818

SHEET TITLE
MARINE OPERATIONS TERMINAL
SITE PLAN STORMWATER AND
SANITARY DRAINAGE

SHEET NUMBER
104002

REVISION
D

TENDER PURPOSE ONLY



MAINTENANCE STRUCTURE	CHAINAGE	EASTING	NORTHING	SURFACE LEVEL
EXIST CHAMBER	0.000	320890.785	7383818.630	4.520
1/1	87.951	320827.383	7383857.811	4.370

- NOTES:**
1. DEPICT LOCATION OF ALL EXISTING SERVICES TO BE MAINTAINED OR REMOVED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 2. NEW GRAVITY SEWER TO CONNECT TO EXISTING CHAMBER.
 3. ALL EXISTING SERVICES TO BE MAINTAINED BY THE DISCHARGE CHAMBER TO BE CONSIDERED UNDER THE WITH CAPACITON MUNICIPAL DEVELOPMENT GUIDELINES DRG 104002.
 4. VENT POLE TO BE CONSTRUCTED IN ACCORDANCE WITH R20 WATER STANDARD DRG 803-APP-14652. HEIGHT OF POLE TO BE 1.80m ABOVE FINISHED GRADE.
 5. ALL WORKS TO BE IN ACCORDANCE WITH THE DEVELOPMENT MANAGEMENT PLAN.
 6. NOTIFY THE APPLICANT'S DEVELOPMENT MANAGEMENT PLAN FOR THE PROPOSED WORKS TO BE ADJUSTED TO AS TO MATCH THE FINISHED SURFACE PROFILE PLUS ANY COUNCIL REQUIRED FOR THESE ADJUSTMENTS.
 7. PIPE SIZES, LENGTHS AND INVERT LEVELS SHOWN ON THE PLAN SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 8. CONTROL CONNECTION LEVELS TO EXISTING SEWERS PRIOR TO LAYOUT AND REMOVAL OF EXISTING SEWERS SHALL BE REMOVED AS PART OF THE CONNECTION WORK.
 9. ALL WORKS TO BE PROVIDED IN DISCHARGE CHAMBER OF FOR MAINTENANCE CONNECTION. THIS TO BE CAPPED PRIOR TO CONNECTION.

- LEGEND:**
- EXISTING SEWER
 - EXISTING WATER
 - EXISTING UNDERGROUND POWER
 - EXISTING CDM
 - PROPOSED SEWER RUBING MAN
 - PROPOSED GRAVITY SEWER

APPROVED

TENDER PURPOSE ONLY

MANHOLE END NAME	LID TYPE	JUNCTION LINE	DROP TYPE	DEPTH TO HC	HOUSE CONNECTION	INVERT LEVEL	HC TYPE	HC LOT NO	CH. FROM DNS IRI
EXISTING CHAMBER						4.520			
PROPOSED SEWER						4.370			
CONNECTION STUB						4.370			

LEGEND:

- PREPARED MAIN DISCHARGE CHAMBER REFER TO DRG 104002-070
- △ G.I. BOLT DOWN TYPE COVER REFER TO DRG 104002-070
- REFER TO CAPACITON MUNICIPAL DEVELOPMENT GUIDELINES DRG 104002-070
- REFER TO CAPACITON MUNICIPAL DEVELOPMENT GUIDELINES DRG 104002-070

LOCATION	DIAMETER/CLASS	PIPE GRADE	JUNCTION INVERT LEVEL	DEPTH TO INVERT	INVERT LEVEL OF SEWER	DESIGN SURFACE LEVELS	RUNNING CHAINAGE
LOT 249	180mm DIA PVC CLASSE BING	1.02%					87.951m

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Santos GLNG
 A Santos Energy business

RG Tanna Marine Operations Terminal
 GLADSTONE

PROJECT: RG Tanna Marine Operations Terminal
CLIENT: Santos

PROJECT MANAGEMENT DETAILS

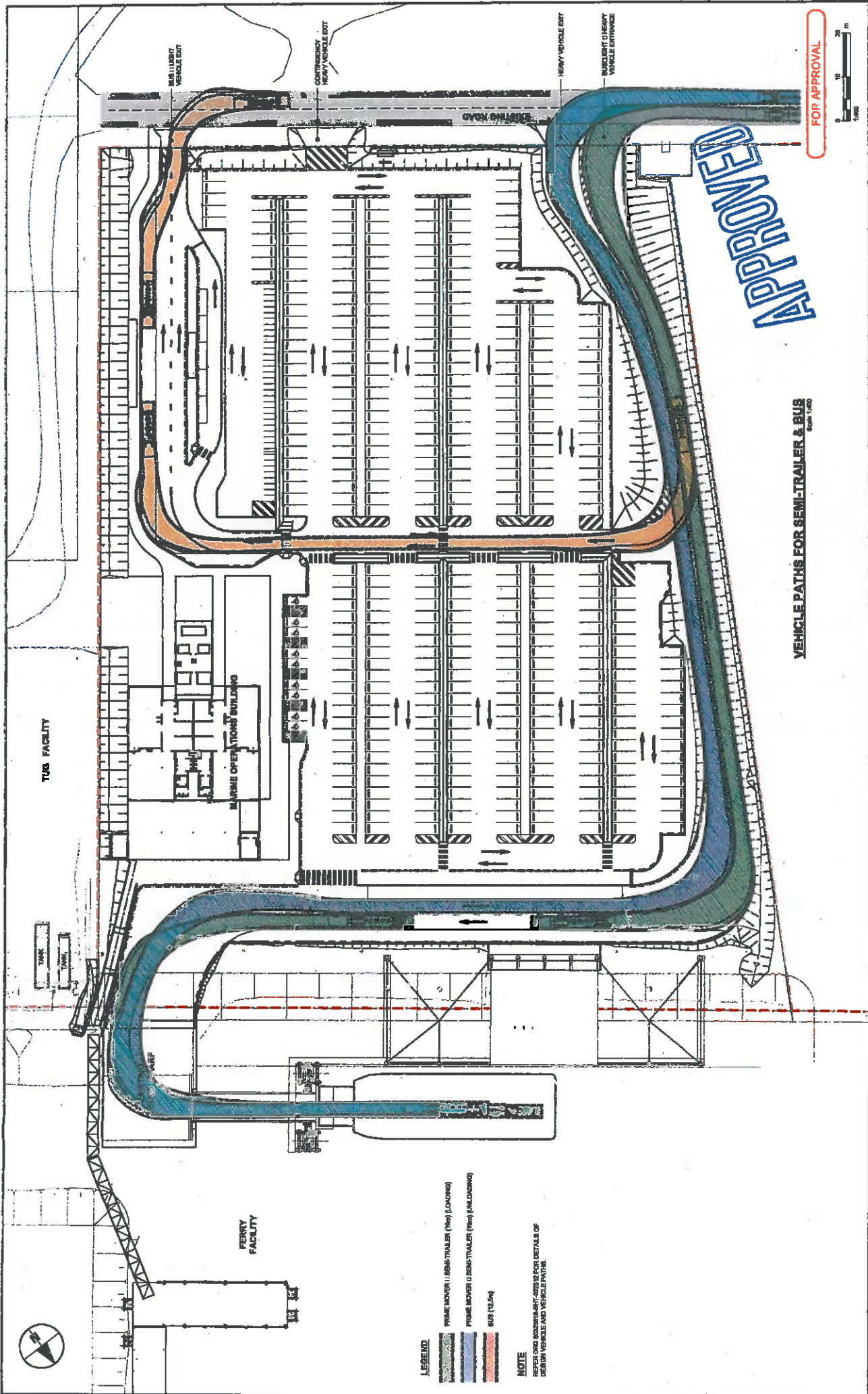
AP	NO	IR
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AND	BARRY	SCALE
A	02/2018	NEW DRAWING	
IRI	DATE	DESCRIPTION	

CERTIFICATION

ISSUE/REVISION	PROJECT NUMBER
	00323818
	SHEET TITLE
	MARINE OPERATIONS TERMINAL
	SEWER CONNECTION
	PLAN AND LONG SECTION
	SHEET NUMBER
	202250
	REVISION



VEHICLE PATHS FOR SEMI-TRAILER & BUS
Scale: 1:400

FOR APPROVAL

LEGEND

- PRIME MOVER (1) SEMI-TRAILER (10m) (LOADING)
- PRIME MOVER (2) SEMI-TRAILER (10m) (UNLOADING)
- BUS (12.5m)

NOTE

REFER TO ARCHITECTURE AND CIVIL DETAILS OF DESIGN VEHICLE AND VEHICLE PATHS.

PROJECT MANAGEMENT INITIALS		REVISION	
DESIGNER	CHECKED	APPROVED	DATE

PROJECT DATA	
DATE	DESCRIPTION
15/10/16	ISSUED FOR APPROVAL

PROJECT INFORMATION	
PROJECT NUMBER	SHEET TITLE
80032818	MARINE OPERATIONS TERMINAL VEHICLE PATHS
	SEMI-TRAILER & BUS
	SHEET NUMBER
	022310

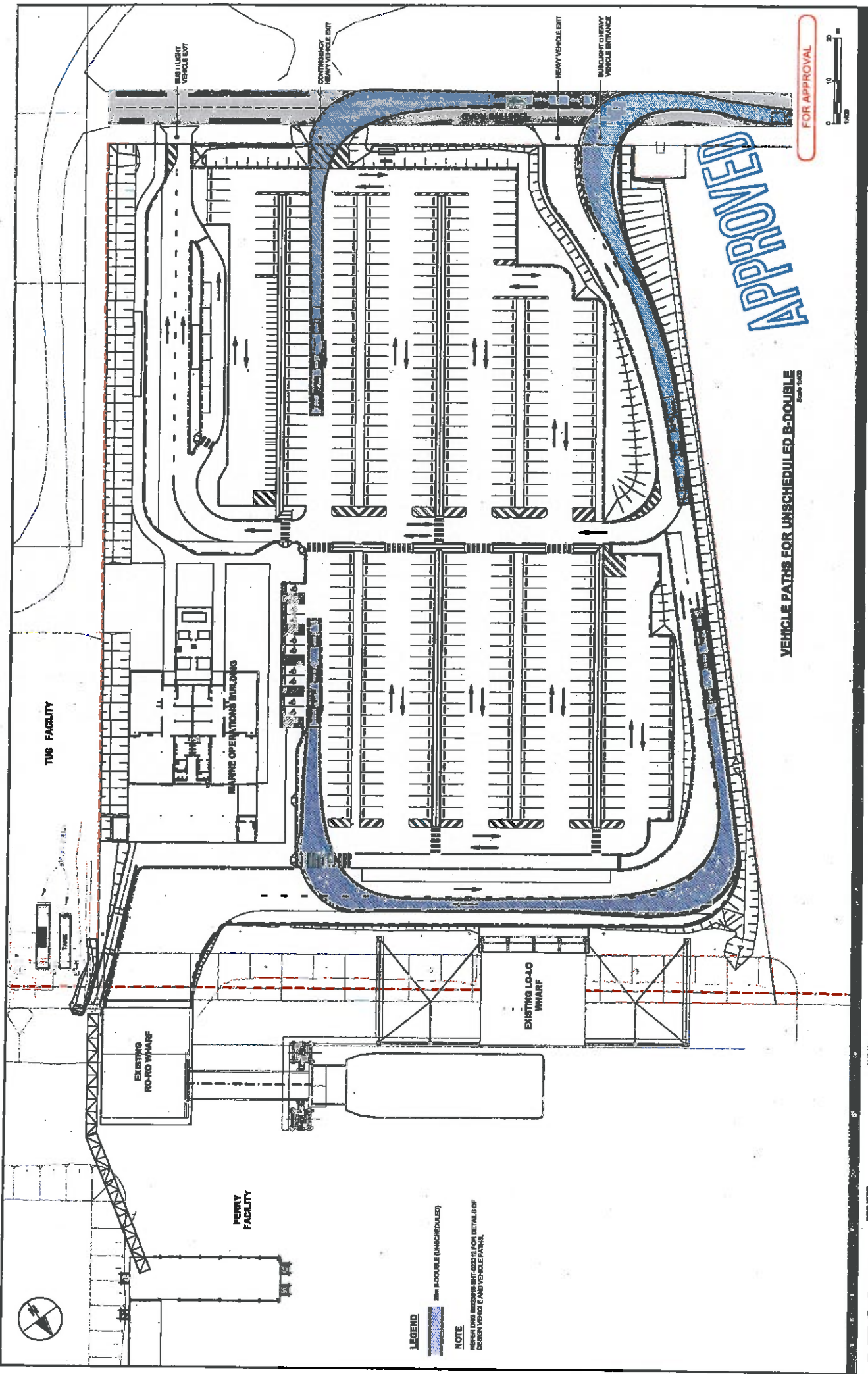
CLIENT

Santos
GLNG
Operations Terminal
GLADSTONE

PROJECT

AECOM
CONSULTANT
AECOM Australia Pty Ltd
A.B.N. 20 003 846 925
www.aecom.com

QGC
A B Group Business



FOR APPROVAL

VEHICLE PATHS FOR UNSCHEDULED B-DOUBLE
Date: 1/03

LEGEND

2m BUFFER (UNSCHEDULED)

NOTE
REFER DRG 0022018-SHT-022012 FOR DETAILS OF DESIGN VEHICLE AND VEHICLE PATHS.

PROJECT MANAGEMENT DETAILS

DESIGNER	CHECKED	APPROVED
DATE: / /	SURVEY /	ISSUE 02

DESCRIPTION

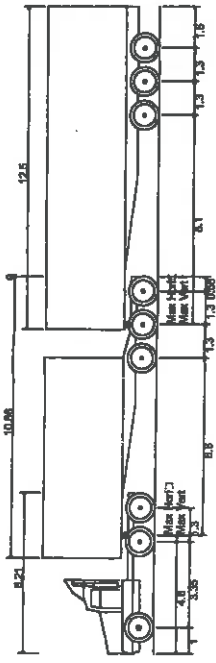
NO.	DATE	DESCRIPTION
A	24.10.18	BASED FOR APPROVAL

PROJECT NUMBER: 6022018
SHEET TITLE: MARINE OPERATIONS TERMINAL VEHICLE PATHS UNSCHEDULED B-DOUBLE
SHEET NUMBER: 022011

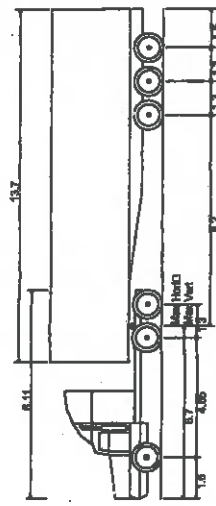
CLIENT
Santos **QCC**
GLING
A QCC Group Member

PROJECT
RG Tanna Marine
Operations Terminal
GLAUSTONE

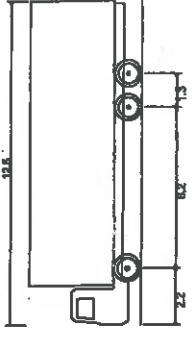
AECOM
CONSULTANT
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A.S.N. 20 003 848 025
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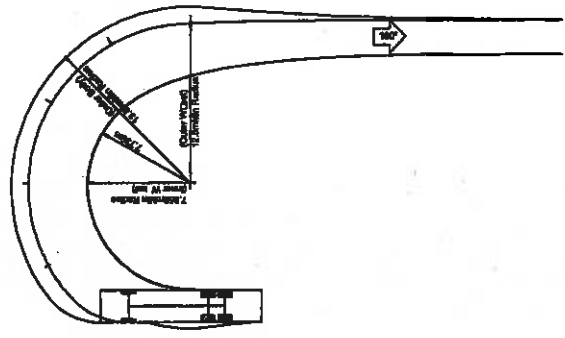
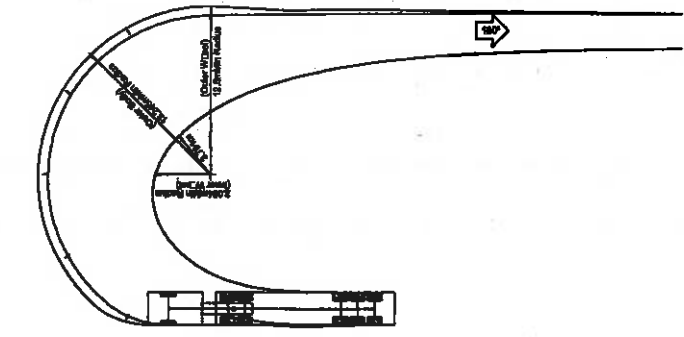
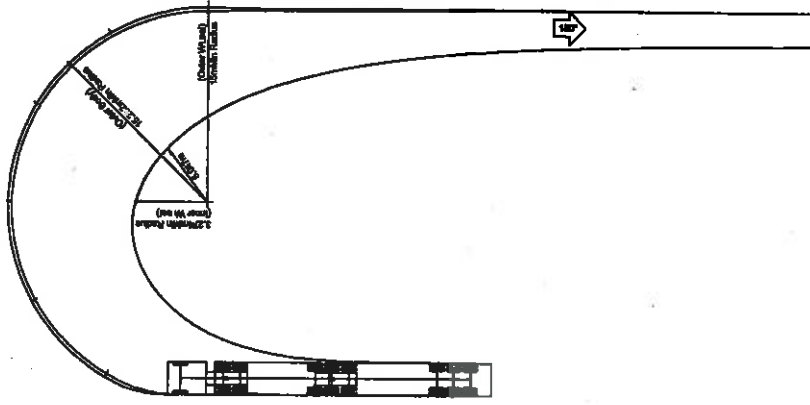
B-Double (25.0m)
 Overall Length 25.00m
 Overall Width 4.300m
 Min Body Ground Clearance 0.540m
 Track Width 2.500m
 Load Limit 6.00t
 Curb to Curb Turning Radius 15.000m



Prime mover and semi-trailer (19 m)
 Overall Length 19.000m
 Overall Width 2.600m
 Overall Body Height 4.300m
 Min Body Ground Clearance 0.540m
 Track Width 2.600m
 Load Limit 6.00t
 Curb to Curb Turning Radius 12.500m



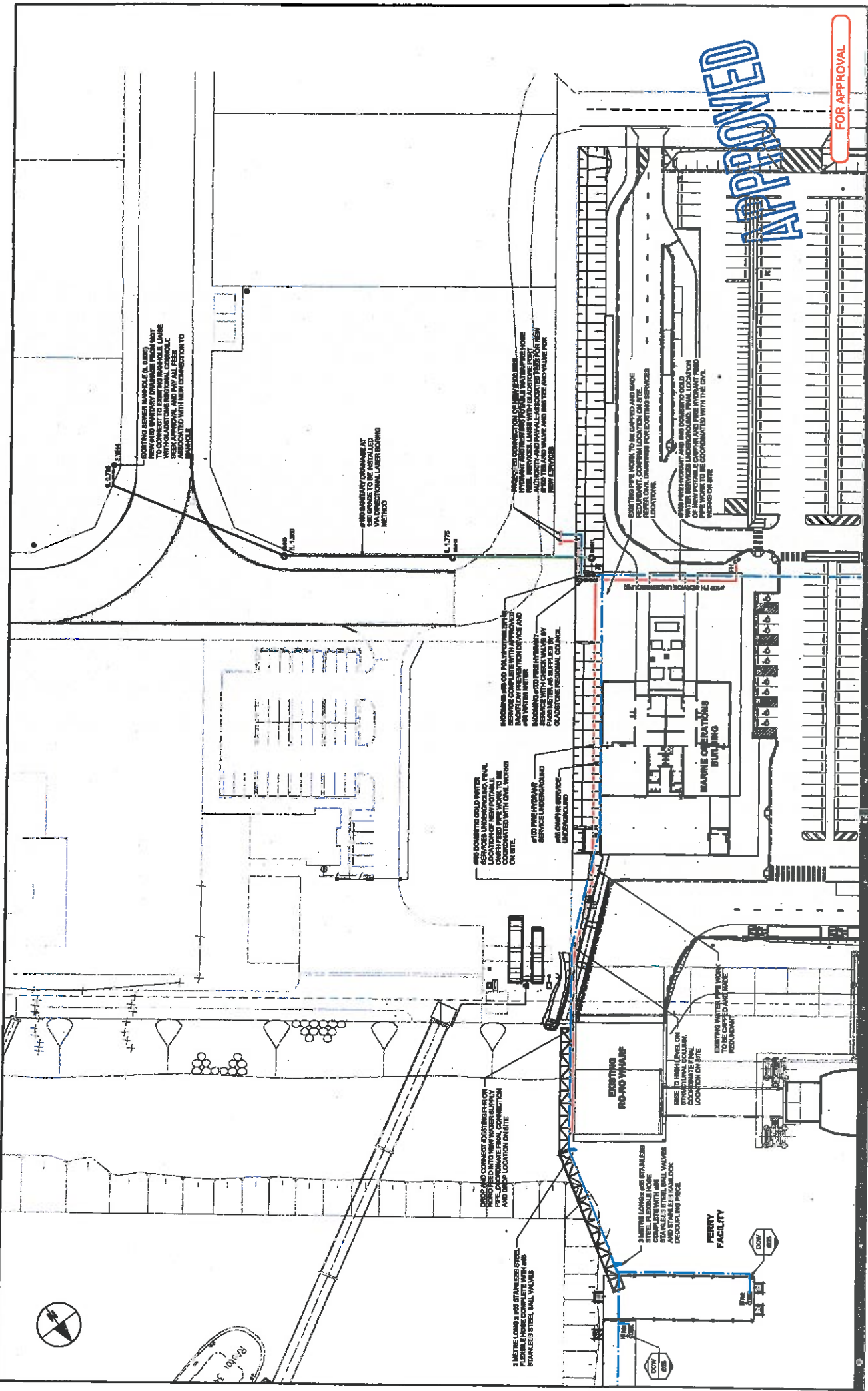
Single Unit Truck/Bus (12.5 m)
 Overall Length 12.500m
 Overall Width 2.600m
 Overall Body Height 4.300m
 Min Body Ground Clearance 0.480m
 Track Width 2.600m
 Load Limit 6.00t
 Curb to Curb Turning Radius 12.500m



APPROVED

FOR APPROVAL

AECOM	PROJECT	CLIENT	REVISIONS
CONSULTANT AECOM Australia Pty Ltd A.B.N 20 053 616 825 www.aecom.com	RG Tanna Marine Operations Terminal GLADSTONE	Santos GLNG A 100 Energy Services	PROJECT NUMBER 60228116 SHEET TITLE MARINE OPERATIONS TERMINAL VEHICLE PATHS STANDARD DETAILS SHEET NUMBER 022312
	DESIGNER	CHECKED	APPROVED
	PROJECT DATA		
	DRAWN	ISSUED FOR APPROVAL	DATE
	DATE	DATE	DESCRIPTION



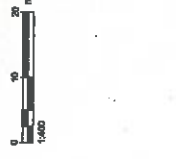
APPROVED

FOR APPROVAL

PROJECT NUMBER	00323815
SHEET TITLE	MARINE OPERATIONS TERMINAL HYDRAULIC SERVICES PLAN
SHEET 1	
SHEET NUMBER	024/02

DESIGNED	BY	NO
CHECKED	BY	APPROVED
DATE	AND	SURVEY
DATE	DATE	DESCRIPTION
A	24/10/18	ISSUED FOR APPROVAL
B		

PROJECT MANAGEMENT DETAILS	ISSUED/REVISION
DATE	NO
DESCRIPTION	

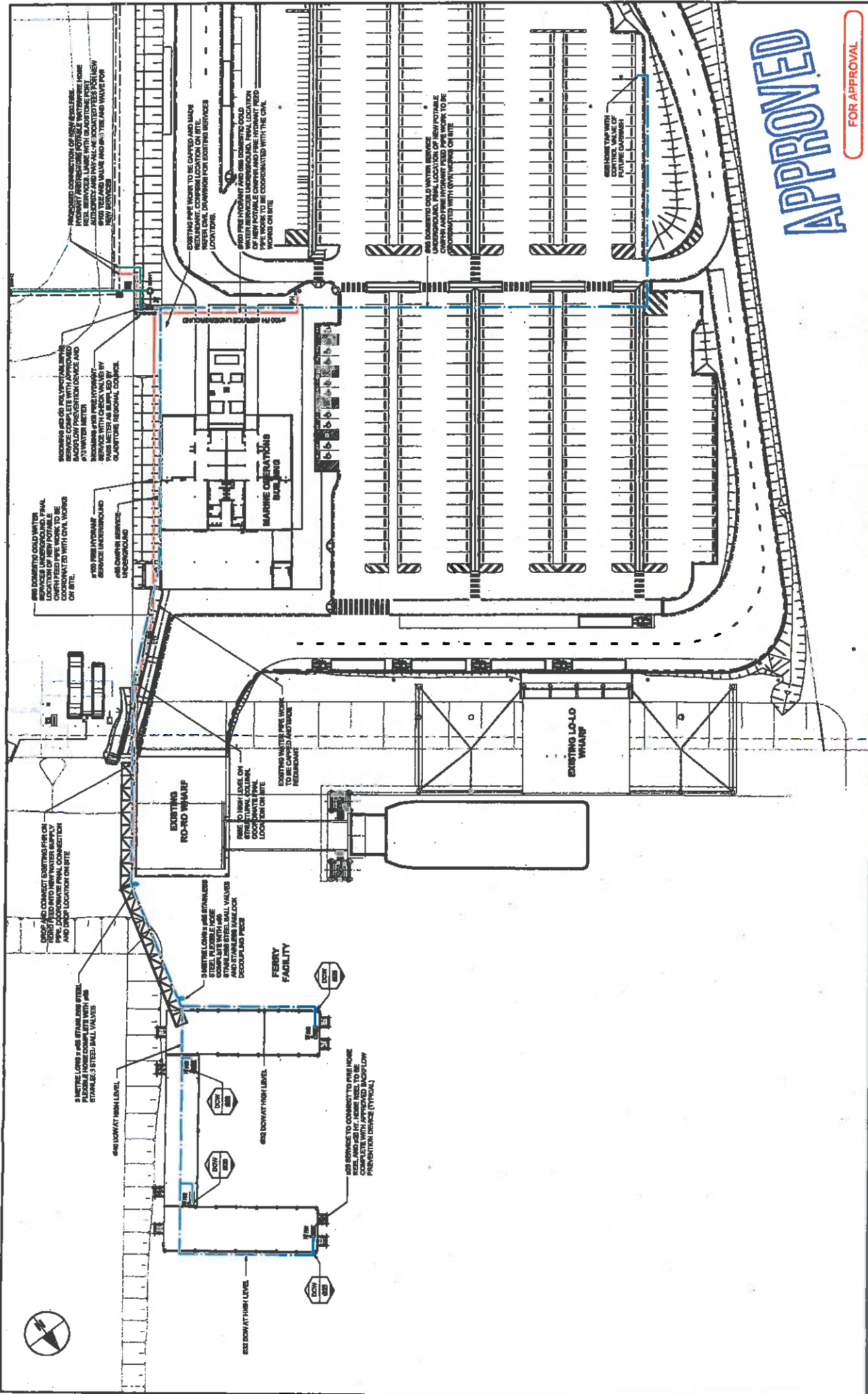


CLIENT
 RG Tanna Marine
 Operations Terminal
 GLAUSTONE

PROJECT
 RG Tanna Marine
 Operations Terminal
 GLAUSTONE



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CONSULTANT
AECOM Australia Pty Ltd
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CLIENT
RG Tanna Marine
Operations Terminal
GLAUSTONE

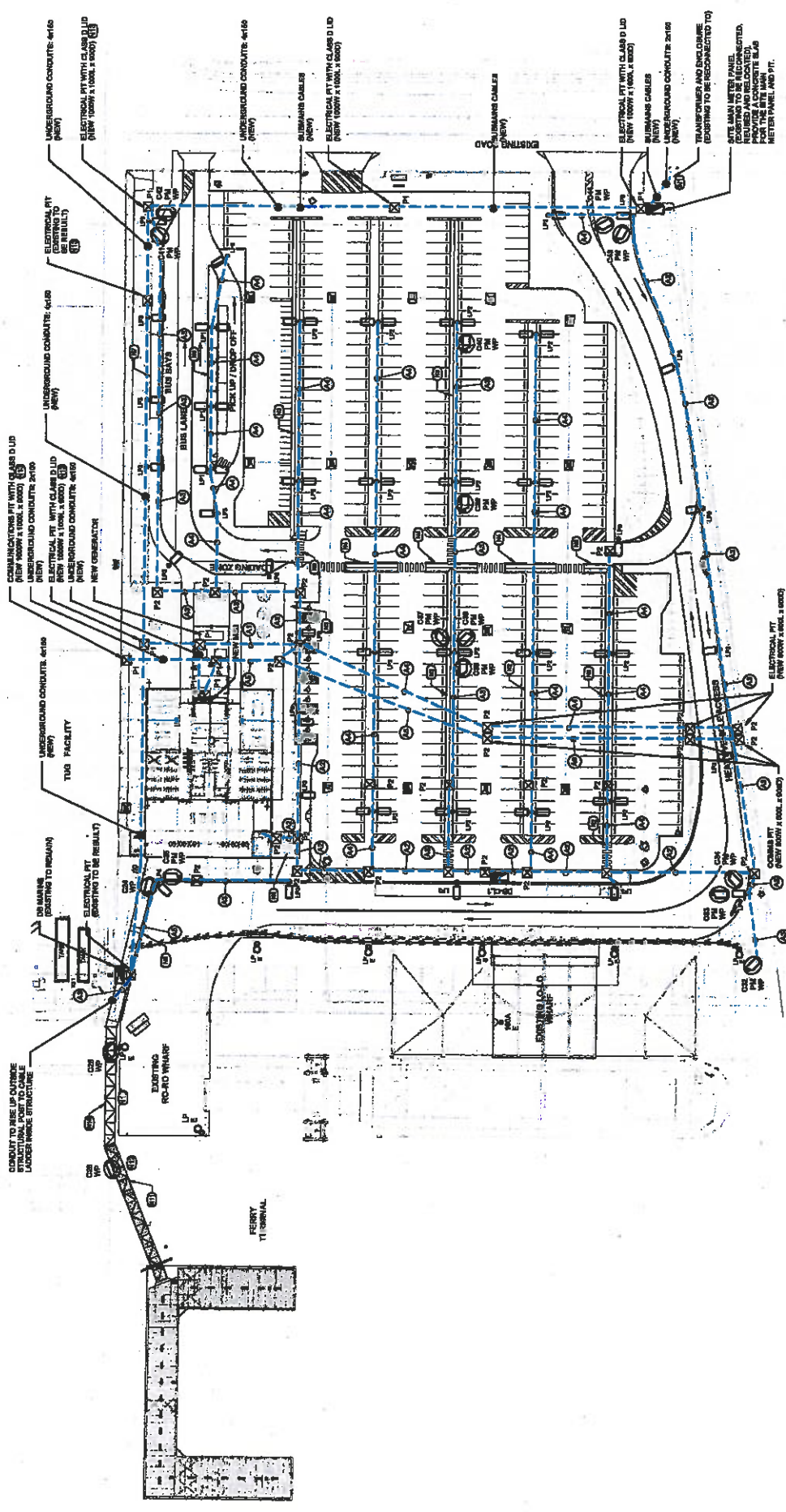
CLIENT
Santos
GLNG
A BSC Group business



PROJECT MANAGEMENT DETAILS			
OP	RY	AD	
DRAWN	CHECKED	APPROVED	

ISSUES/REVISION			
NO.	DATE	DESCRIPTION	
A	24.04.15	ISSUED FOR APPROVAL	

PROJECT NUMBER: 00220818
SHEET TITLE: MARINE OPERATIONS TERMINAL HYDRAULIC SERVICES PLAN
SHEET 2
SHEET NUMBER: 024003



APPROVED

ISSUED FOR APPROVAL

CONDUIT NO	DETAILS
A1	1 x 100mm ELEC HD UPVC
A2	1 x 100mm ELEC HD UPVC + 1 x 100mm COMMS HD UPVC
A3	1 x 50mm ELEC HD UPVC + 1 x 50mm COMMS HD UPVC
A4	1 x 50mm ELEC HD UPVC
A5	1 x 100mm COMMS HD UPVC
A6	1 x 50mm COMMS HD UPVC

- NOTES:**
1. LUMINAIR SECTION AND PLY ALL COVER TO BE INSTALLED TO PROTECT THE EXISTING SHEET PILES SUPPORTING THE SITE WITH 100mm PLY.
 2. INSTALL 1x100mm LUMINAIR WITHIN THIS SECTION OF COVERED WALKWAY. LUMINAIR TO BE EVENLY SPACED.
 3. INSTALL 1x100mm LUMINAIR WITHIN THIS SECTION OF COVERED WALKWAY. LUMINAIR TO BE EVENLY SPACED.
 4. INSTALL 1x100mm LUMINAIR WITHIN THIS SECTION OF COVERED WALKWAY. LUMINAIR TO BE EVENLY SPACED.
 5. INSTALL 1x100mm LUMINAIR WITHIN THIS SECTION OF COVERED WALKWAY. LUMINAIR TO BE EVENLY SPACED.
 6. INSTALL 1x100mm LUMINAIR WITHIN THIS SECTION OF COVERED WALKWAY. LUMINAIR TO BE EVENLY SPACED.
 7. INSTALL ALL LUMINAIR WITHIN THE BUS SHELTER.
 8. INSTALL 1x100mm LUMINAIR WITHIN THE BUS SHELTER.
 9. INSTALL 1x100mm LUMINAIR WITHIN THE BUS SHELTER.
 10. WALKWAY LUMINAIR TO BE EVENLY SPACED.
 11. WALKWAY LUMINAIR TO BE EVENLY SPACED.
 12. WALKWAY LUMINAIR TO BE EVENLY SPACED.
 13. WALKWAY LUMINAIR TO BE EVENLY SPACED.
 14. WALKWAY LUMINAIR TO BE EVENLY SPACED.
 15. PT LIDS TO FOLLOW THE SLOPE OF THE GROUND.

GENERAL NOTES:

- A. INBOUND CONDUIT ROUTER AND PTL LOCATIONS ARE INDICATIVE ONLY. COORDINATE WITH THE HEAD CONTRACTOR TO ENSURE ADEQUATE PENETRATIONS FOR THE INSTALLATION OF THE CONDUIT.
- B. COORDINATE WITH THE HEAD CONTRACTOR TO ENSURE ADEQUATE PENETRATIONS FOR THE INSTALLATION OF THE CONDUIT.
- C. INSTALL LIGHT POLES WITH A MINIMUM CLEARANCE OF 2000mm BETWEEN THE REAR FACE AND FRONT FACE OF THE POLE, WHERE APPLICABLE.
- D. REFER TO THE SPECIFICATION FOR FURTHER DETAILS OF THE CONDUIT SYSTEM.
- E. REFER TO THE SPECIFICATION FOR FURTHER DETAILS OF THE CONDUIT SYSTEM.
- F. INBOUND SERVICES ARE TO BE INSTALLED AFTER STRUCTURAL WALKWAY BEARING DAMAGE IS INSTALLED INBOUND SERVICE.

CLIENT

Santos
GLNG

QGC
A PG Group business

PROJECT

RG Tanna Marine
Operations Terminal

GLADSTONE

AECOM
CONSULTANT

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A.B.N. 20 183 845 025
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PROJECT MANAGEMENT DETAILS

NO	DATE	BY	DESCRIPTION
1			ISSUED FOR APPROVAL

PROJECT NUMBER: 60303818

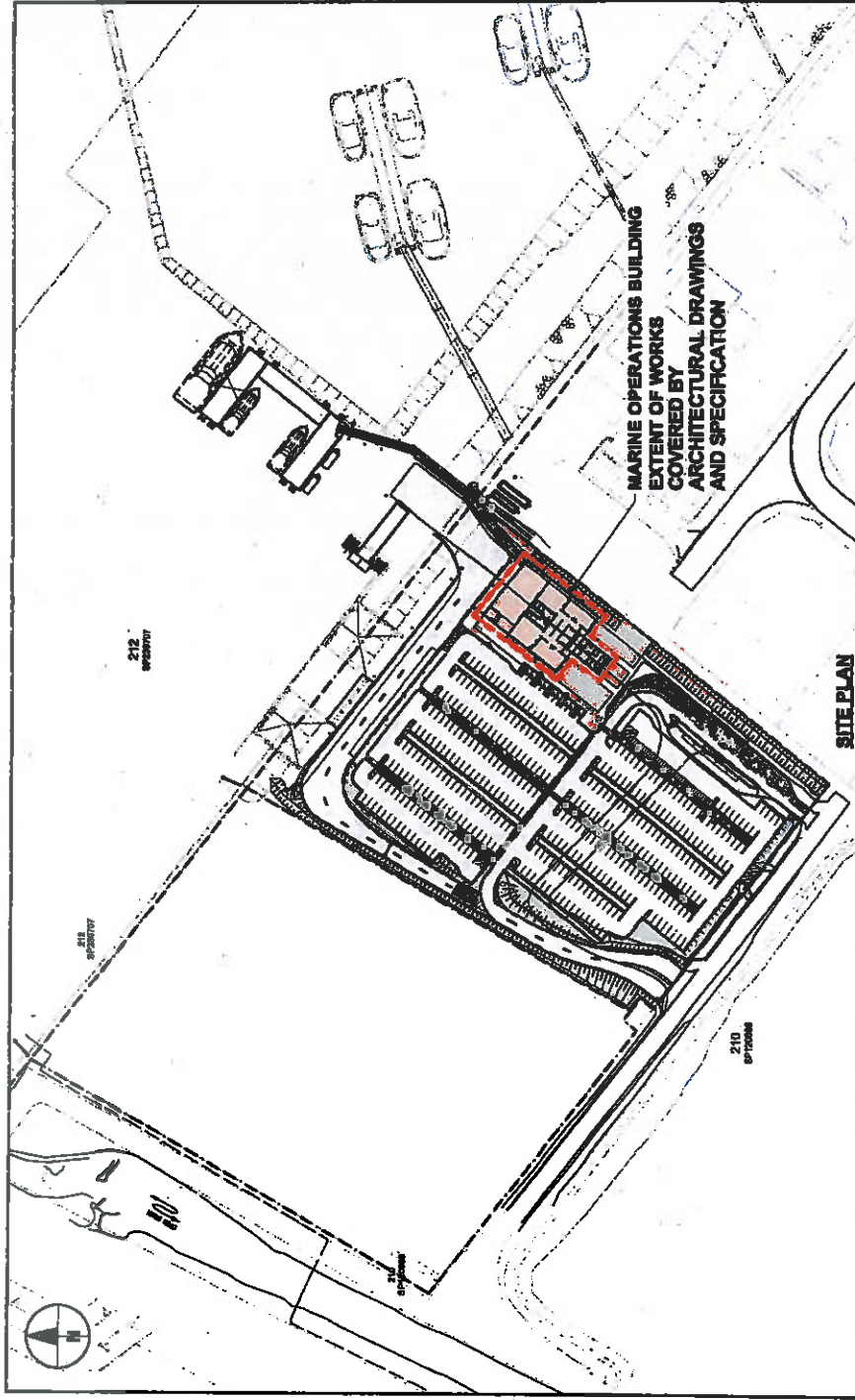
SHEET TITLE: MARINE OPERATIONS TERMINAL SITE PLAN NEW SERVICES

SHEET NUMBER: 025000

REVISION: A

RG TANNA MARINE OPERATIONS TERMINAL

MARINE OPERATIONS BUILDING ARCHITECTURAL DRAWINGS



RG TANNA MARINE OPERATIONS TERMINAL DRAWING LIST	
SHEET NUMBER	SHEET TITLE
031009	COVER SHEET & LOCATION PLAN
031011	3D IMAGES
031002	MATERIALS
031100	SITE PLAN
031000	GENERAL ARRANGEMENT PLAN
031200	ROOF PLAN
031300	ELEVATIONS
031400	SECTIONS - SHEET 1
031401	SECTIONS - SHEET 2
031600	WALKWAY TYPICAL DETAILS

APPROVED

ISSUED FOR APPROVAL



PROJECT MANAGEMENT INITIALS			
DESIGNER	CHECKED	APPROVED	DATE

REVISIONS			
NO.	DATE	ISSUED FOR APPROVAL	DESCRIPTION

PROJECT NUMBER		SHEET TITLE	
031000	031000	MARINE OPERATIONS BUILDING	COVER SHEET & LOCATION PLAN

PROJECT		CLIENT	
RG Tanna Marine Operations Terminal	GLAOSTONE	Santos	GLNG

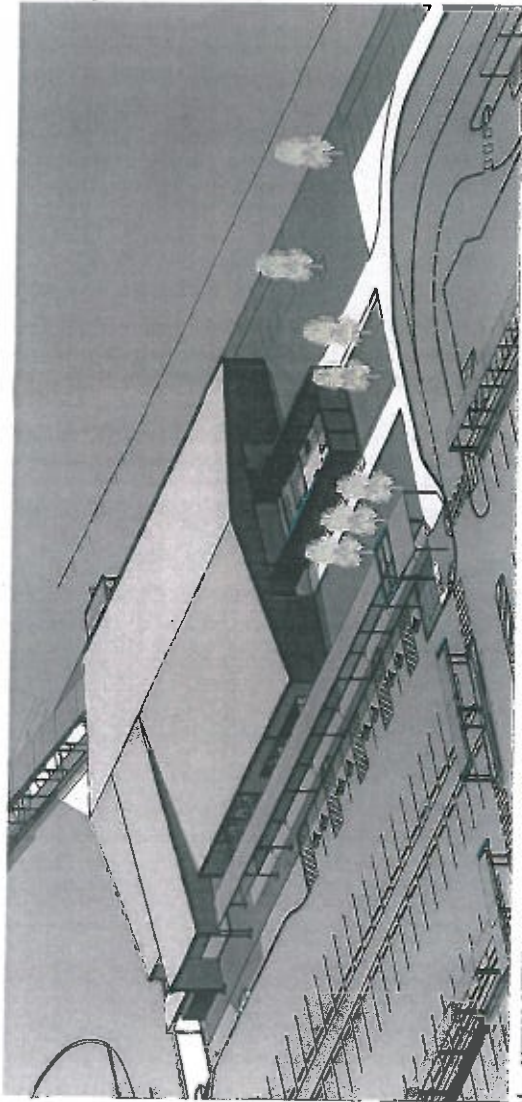


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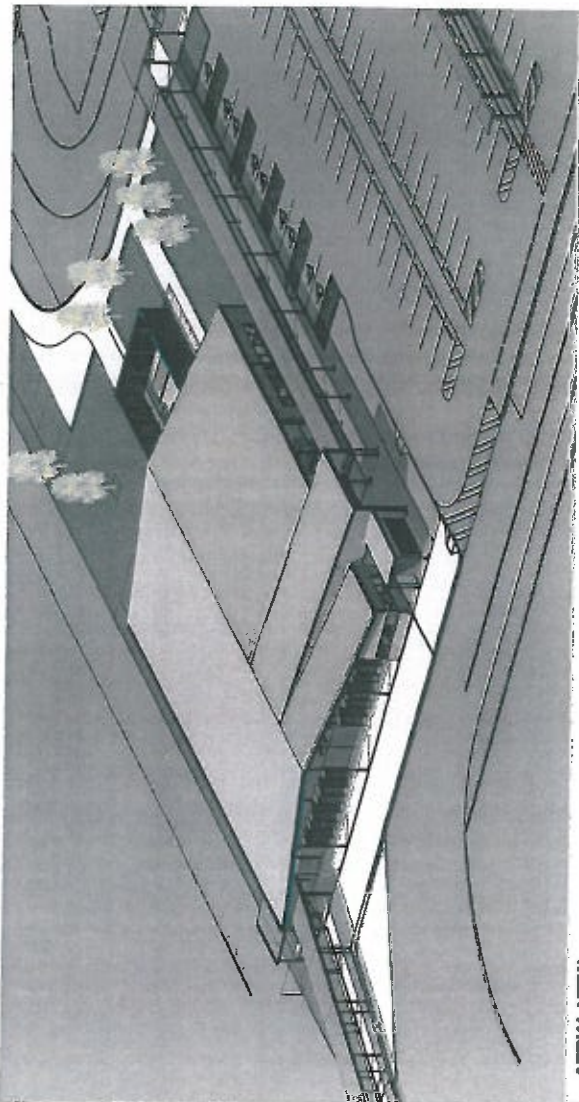
PROJECT: RG Tanna Marine Operations Terminal
 CLIENT: Santos GLNG
 SHEET NUMBER: 031000
 REVISION: A

APPROVED

ISSUED FOR APPROVAL



1 AERIAL VIEW
SCALE N/A



2 AERIAL VIEW
SCALE N/A

REVISION	ISSUED FOR APPROVAL	DATE	DESCRIPTION
A	28/04/18		

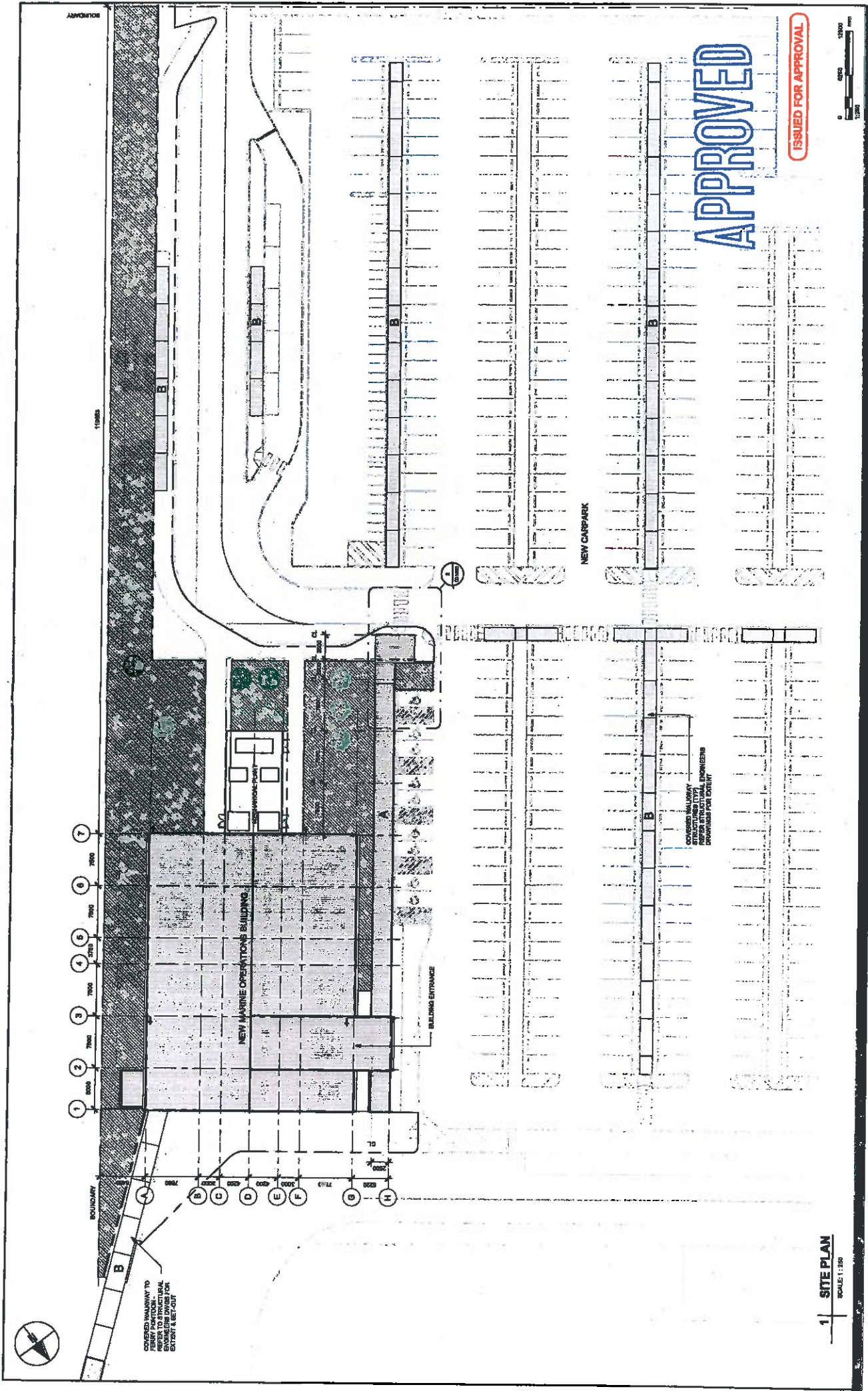
PROJECT NUMBER	60323816
SHEET TITLE	MARINE OPERATIONS BUILDING
3D IMAGES	
SHEET NUMBER	031/001
REVISION	A

PROJECT: RG Tanna Marine Operations Terminal GLADSTONE

CLIENT: Santos GLNG

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AECOM Australia Pty. Ltd.
A.S.N. 30 093 548 858
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1 SITE PLAN
SCALE: 1:200

PROJECT RG Tanna Marine Operations Terminal
GLADSTONE

CLIENT **Santos** GLING
QGC
A 100% owned subsidiary

PROJECT NUMBER 60222818
SHEET TITLE MARINE OPERATIONS BUILDING SITE PLAN
ISSUE NUMBER 091100

ISSUES/REVISION

NO	DATE	DESCRIPTION
A	25-10-18	ISSUED FOR APPROVAL

PROJECT MANAGEMENT INITIALS

DESIGNER	CHECKED	APPROVED
DATE: / /	SURVY: / /	ISSUE: / /

PROJECT DATA

DATE	NO	DESCRIPTION
DATE: / /	NO	DESCRIPTION

COVERED WALKWAY
REFER TO STRUCTURAL DRAWINGS FOR EXACT DETAILS

BUILDING ENTRANCE

NEW CARPARK

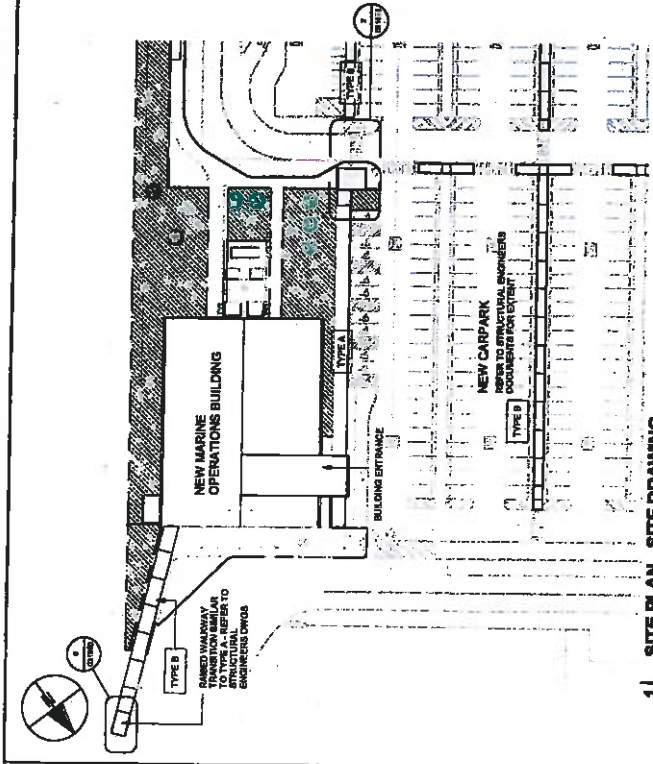
BOUNDARY

APPROVED

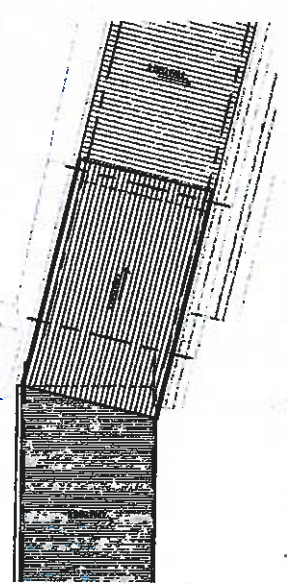
ISSUED FOR APPROVAL

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Melbourne VIC 3000

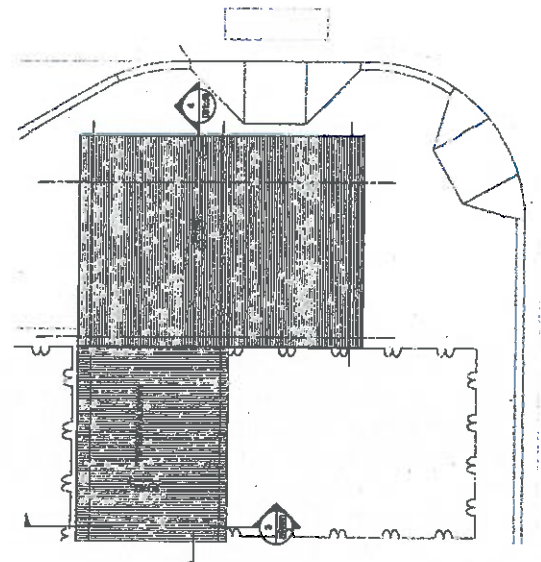
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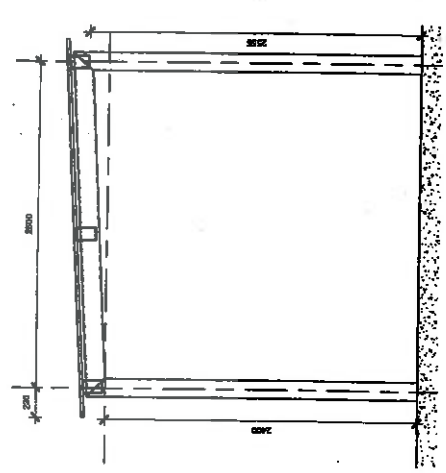
1 | SITE PLAN - SITE DRAWING
DT100 | SCALE: 1:500



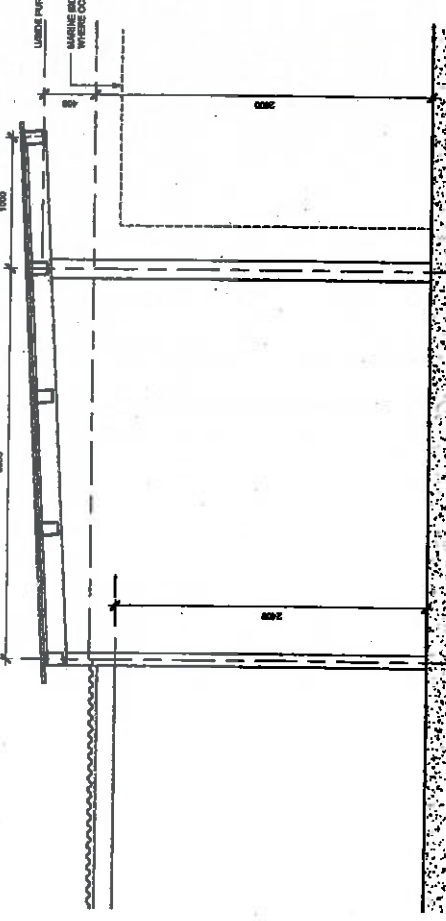
6 | WALKWAY TRANSITION PLAN DETAIL
DT100 | SCALE: 1:50



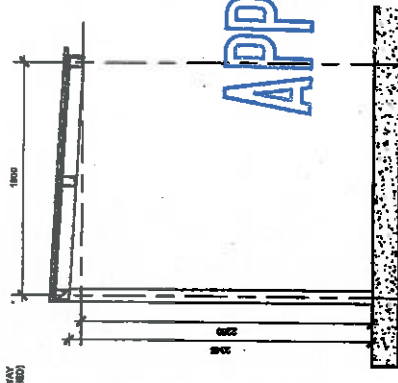
2 | WALKWAY PLAN DETAIL
DT100 | SCALE: 1:50



3 | SECTION - TYPE A WALKWAY
DT100 | SCALE: 1:20



4 | SECTION
DT100 | SCALE: 1:20



5 | SECTION - TYPE B WALKWAY
DT100 | SCALE: 1:20

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Santos
GLNG
CLIENT

QCC
A QCC Group business

PROJECT
RG Tanna Marine
Operations Terminal
GLASTONE

DESIGNER/REVISION

NO	DATE	DESCRIPTION
1	20/10/16	ISSUED FOR APPROVAL

PROJECT MANAGEMENT INITIALS

NO	DATE	DESCRIPTION
1	20/10/16	ISSUED FOR APPROVAL

PROJECT NUMBER: 00020810
SHEET TITLE: MARINE OPERATIONS BUILDING WALKWAY TYPICAL DETAILS
SHEET NUMBER: 031550
REVISION: A



Project Number 60323818
Reference Number 60323818-REP-006
Issue B
27 October 2015



RG TANNA MARINE OPERATIONS TERMINAL

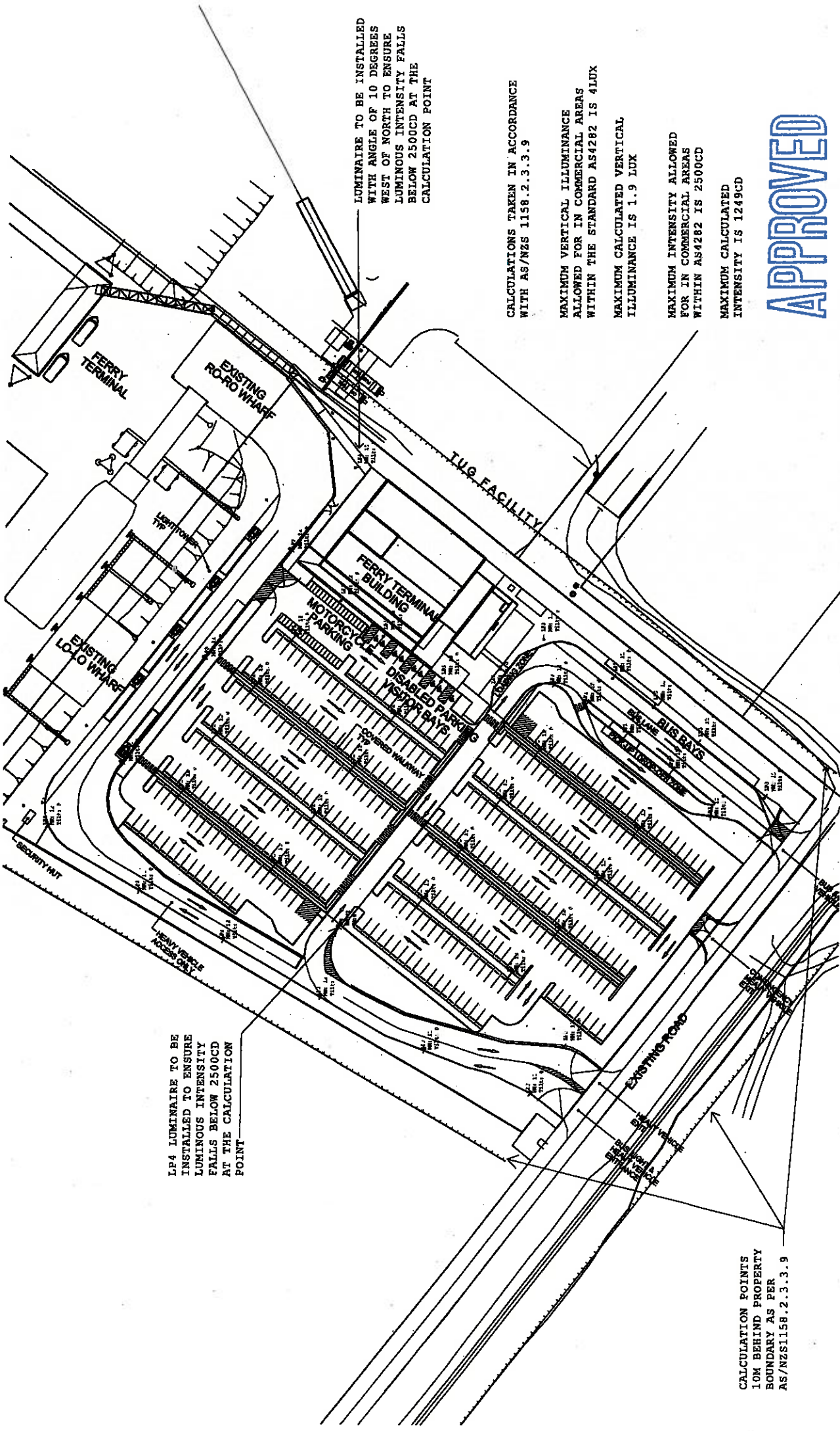
Landscape
Development
Application
Package

APPROVED

APPROVED

Appendix L

Lighting Plan



LUMINAIRE TO BE INSTALLED WITH ANGLE OF 10 DEGREES WEST OF NORTH TO ENSURE LUMINOUS INTENSITY FALLS BELOW 2500CD AT THE CALCULATION POINT

CALCULATIONS TAKEN IN ACCORDANCE WITH AS/NZS 1158.2.3.3.9

MAXIMUM VERTICAL ILLUMINANCE ALLOWED FOR IN COMMERCIAL AREAS WITHIN THE STANDARD AS4282 IS 4LUX

MAXIMUM CALCULATED VERTICAL ILLUMINANCE IS 1.9 LUX

MAXIMUM INTENSITY ALLOWED FOR IN COMMERCIAL AREAS WITHIN AS4282 IS 2500CD

MAXIMUM CALCULATED INTENSITY IS 1249CD

APPROVED

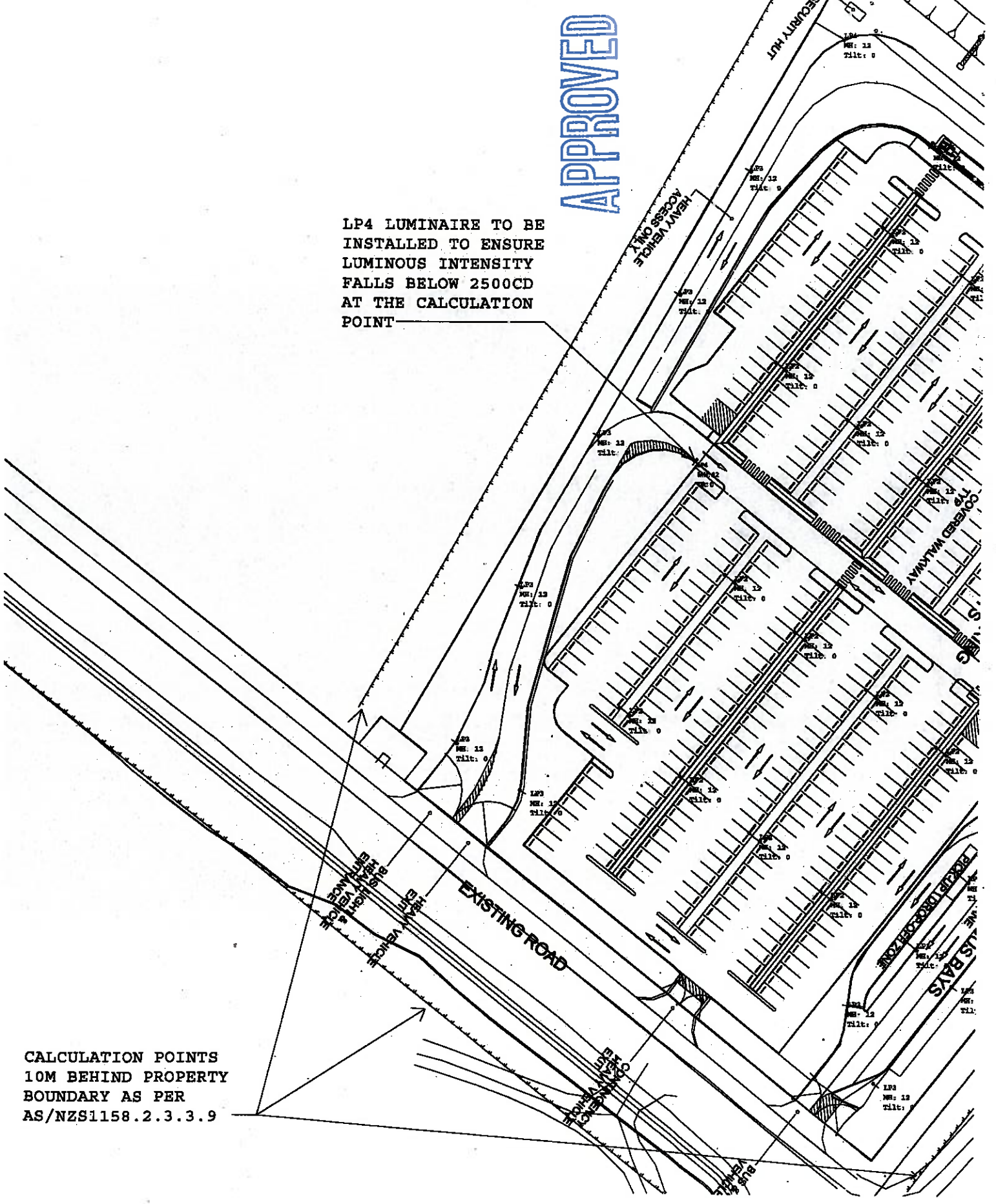
LPA LUMINAIRE TO BE INSTALLED TO ENSURE LUMINOUS INTENSITY FALLS BELOW 2500CD AT THE CALCULATION POINT

CALCULATION POINTS 10M BEHIND PROPERTY BOUNDARY AS PER AS/NZS1158.2.3.3.9

**RG TANNA MARINE OPERATIONS TERMINAL
OBTRUSIVE LIGHTING CALCULATION PLAN**

APPROVED

LP4 LUMINAIRE TO BE
INSTALLED TO ENSURE
LUMINOUS INTENSITY
FALLS BELOW 2500CD
AT THE CALCULATION
POINT



CALCULATION POINTS
10M BEHIND PROPERTY
BOUNDARY AS PER
AS/NZS1158.2.3.3.9

APPROVED

Traffic Impact Assessment

GLNG Marine Operations Terminal

CEB06628

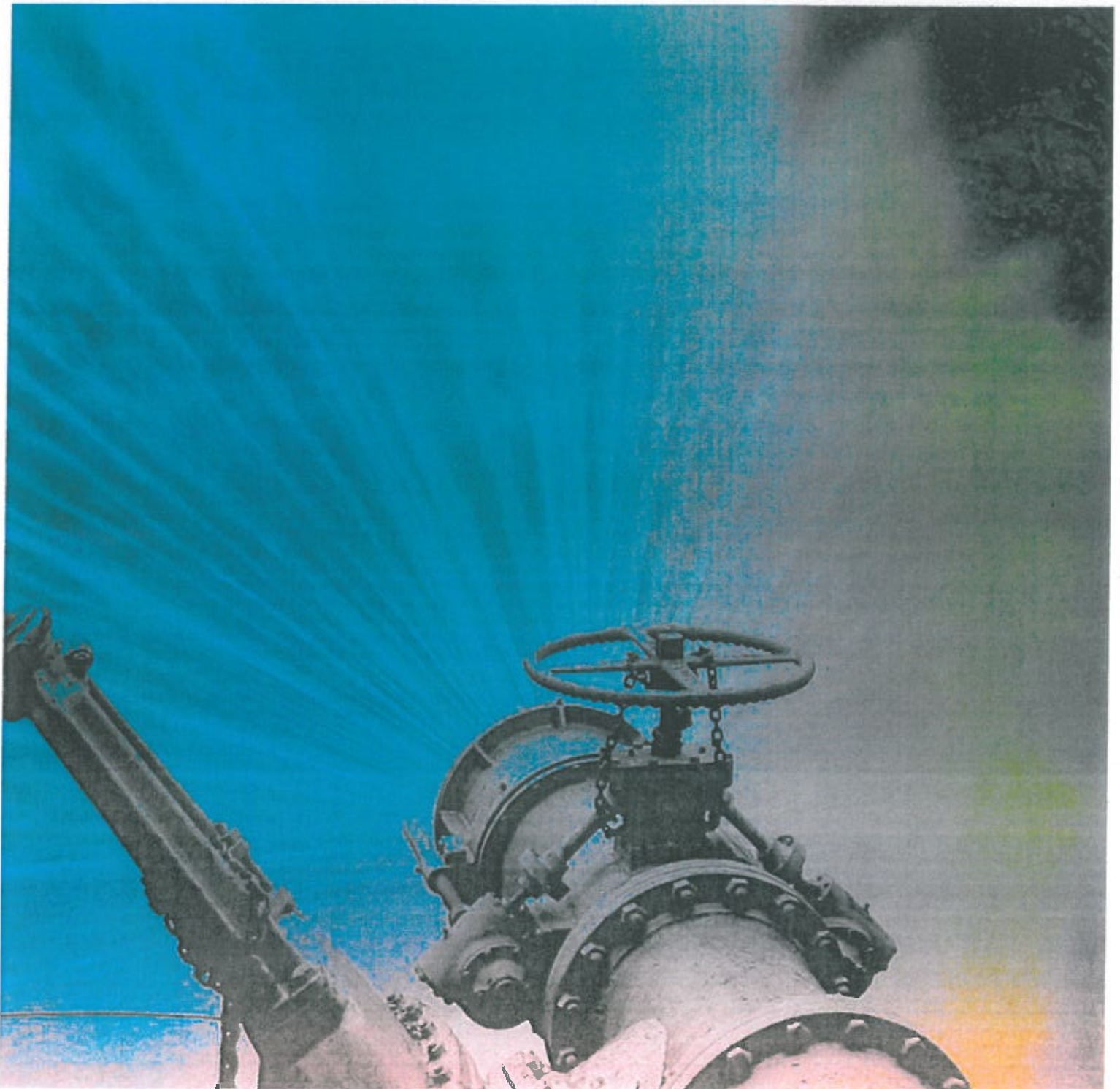


Prepared for
GLNG Operations Pty Ltd

April 2015

Stormwater Management Plan

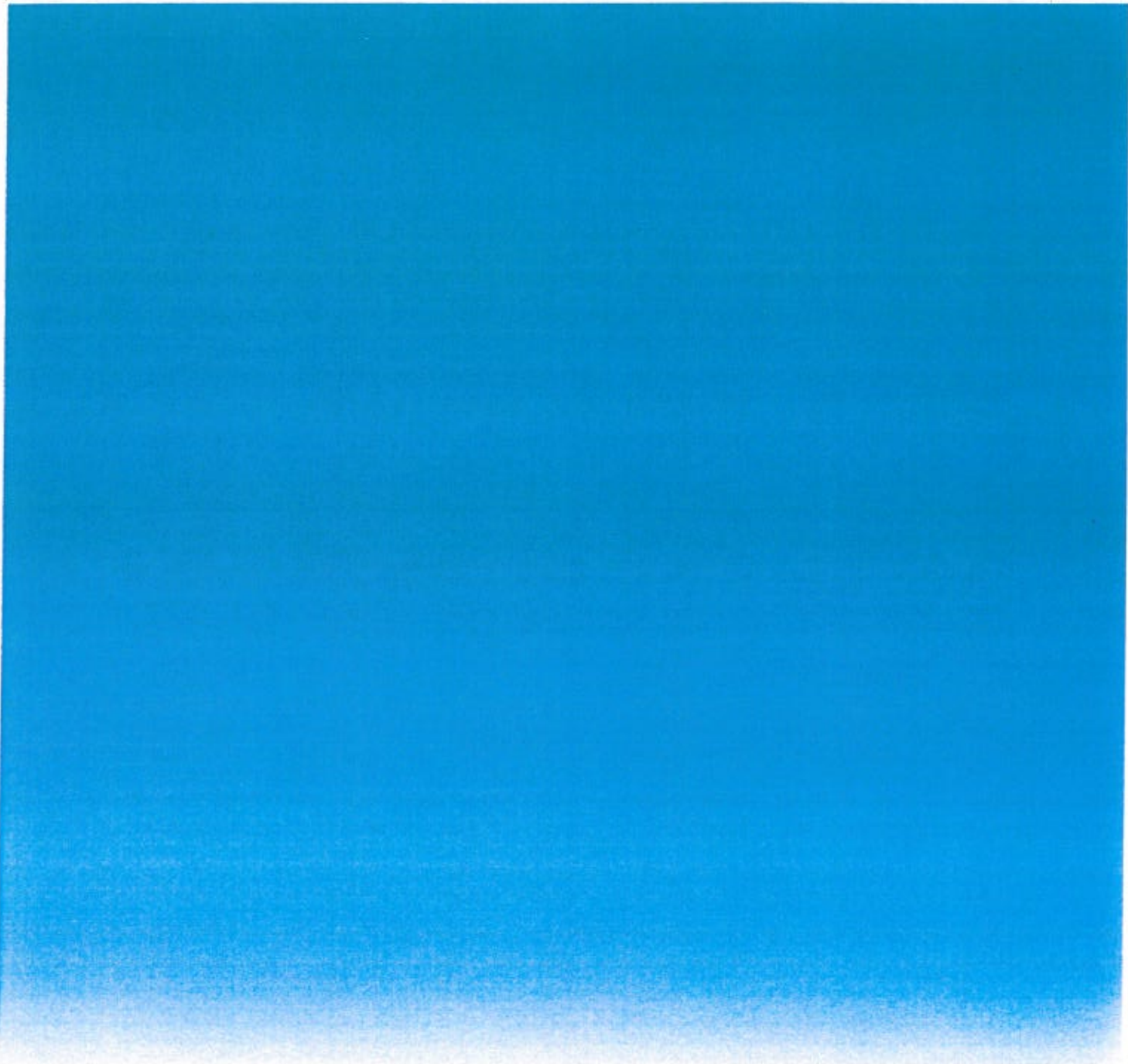
RG Tanna Marine Operations Terminal



APPROVED

Design Development Report

RG Tanna MOT - Access Road Upgrade



GENERAL NOTES

- REFER TO PROJECT SPECIFICATION FOR DETAILED REQUIREMENTS FOR MATERIALS, MANAGEMENT OF WORKS, CONSTRUCTION REQUIREMENTS, TOLERANCES, INSPECTION OF THE WORKS AND THE LIKE.
- THE LOCATION OF UTILITIES SHOWN ARE INDICATIVE ONLY. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF ALL EXISTING SERVICES WHETHER INDICATED ON THE PLANS OR OTHERWISE. THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT OF ANY POTENTIAL CONFLICTS THAT MAY OCCUR PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DAMAGE TO EXISTING SERVICES IS TO BE RECTIFIED AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INDEPENDENTLY IDENTIFY/OBTAIN/APPROVE ALL RELEVANT PERMITS AND APPROVALS TO CONSTRUCT THE WORKS.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER WORKING DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.
- DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SITE DRAINAGE AND GENERAL MAINTENANCE OF THE AREA DURING CONSTRUCTION.
- WORKMANSHIP MATERIALS AND TOLERANCES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

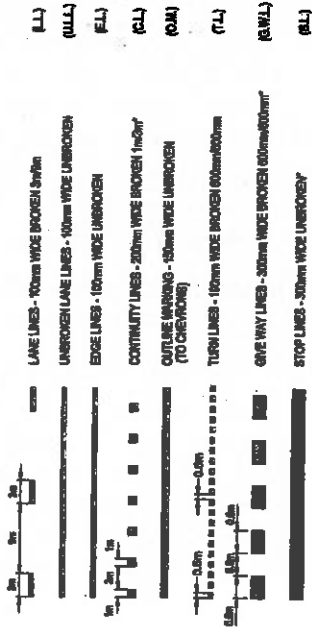
SURVEY DATA

- LEVEL DATUM: AHD
- HORIZONTAL DATUM: MGA 58
- SURVEY BY: FREDERICK MACLEAN & ASSOCIATES
DATE OF SURVEY: 20/05/11/17
FILE ID: 4770-3 DETAIL SURVEY
FIELD BOOK ID: 270
SURVEYOR CONTACT NUMBER: (07) 46725877

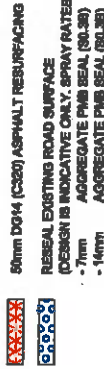
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0003	520265.770	785477.228	4.041
0004	520187.268	785263.707	3.846
0005	520388.063	784207.718	6.370
0002	520162.882	785002.795	4.251
0009	520002.813	784608.740	3.884
1701	520376.846	785419.818	4.818
1381	520174.373	785097.248	4.818
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LINEMARKING LEGEND

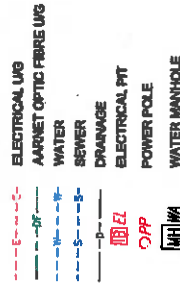
* DENOTES THERMOPLASTIC LINEMARKING



PAVEMENT LEGEND



PUP LEGEND



APPROVED

TENDER PURPOSE ONLY

PROJECT MANAGEMENT INITIALS		REVISIONS	
BY	DATE	NO.	DESCRIPTION

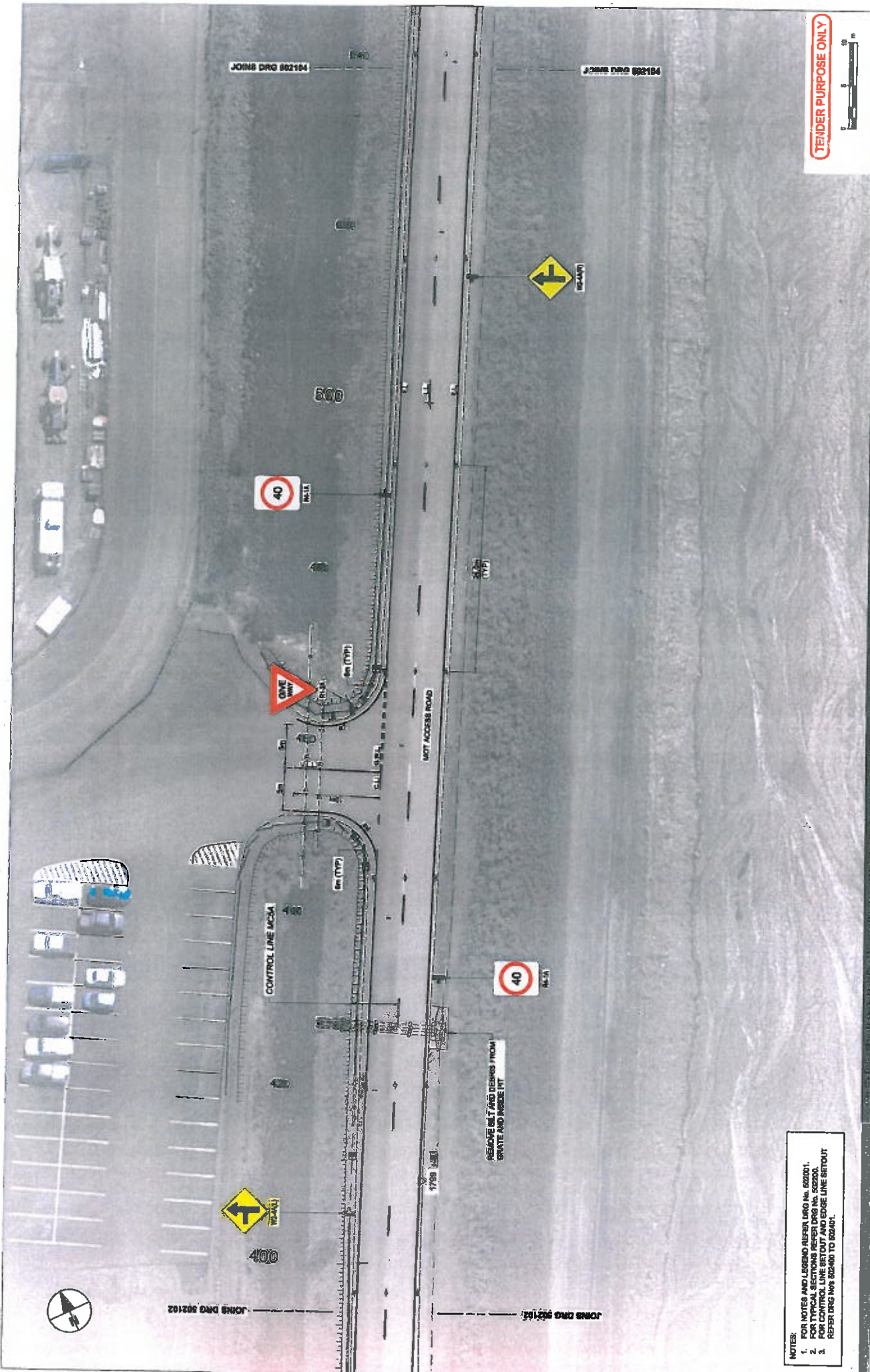
PROJECT NUMBER	60322819
SHEET TITLE	ACCESS ROAD NOTES AND LEGEND
ISSUED FOR TENDER	16.12.15
ISSUED FOR INFORMATION	11.12.15
DATE	
DESCRIPTION	

AECOM CONSULTANT
AECOM Australia Pty Ltd
A.B.N 20 063 546 925
www.aecom.com

CLIENT
GLADSTONE
RG Tanna Marine
Operations Terminal

CONSULTANTS
QCC
GLING
A full service business | a qccgroup.com

DISCIPLINE
Address Line 1
Address Line 2
Address Line 3
00 61 08 0000 100
00 61 08 0000 100
www.aecom.com



TENDER PURPOSE ONLY



PROJECT NUMBER	8022819
SHEET TITLE	ACCESS ROAD LAYOUT PLAN SHEET 4
REVISION	
DATE	
DESCRIPTION	

DESIGNER	CHECKED	APPROVED
PROJECT DATA		
DRAWN / AID	SCALE	DATE

PROJECT MANAGEMENT INITIALS	
DATE	

DATE	DESCRIPTION
18.12.15	ISSUED FOR TENDER
19.12.15	ISSUED FOR INFORMATION

PROJECT NUMBER	8022819
SHEET NUMBER	50210

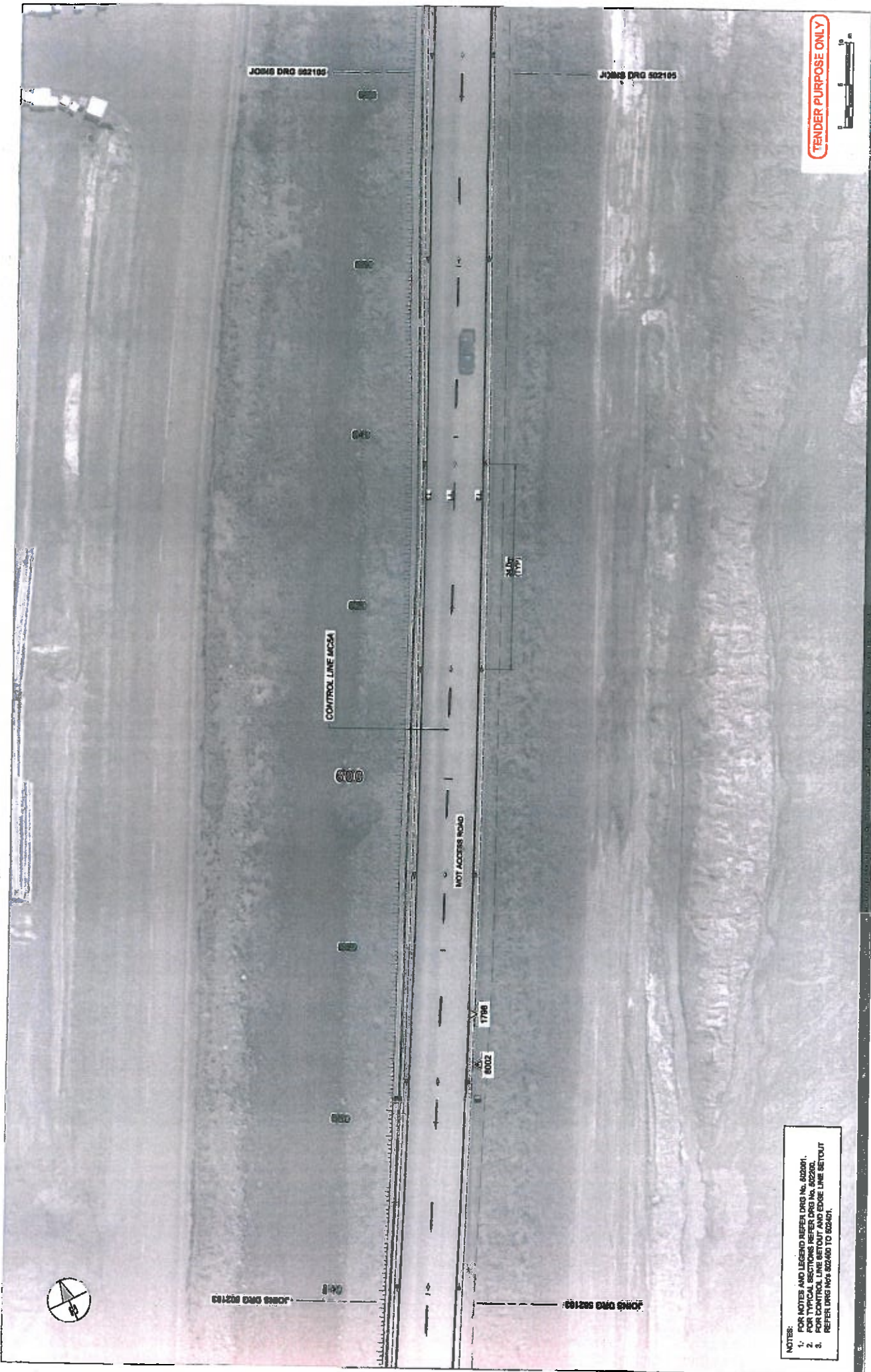
APPROVED

CLIENT
Santos
 GLNG
QGC
 A joint venture between Santos and QGC

PROJECT
RG Tanna Marine
 Operations Terminal
 GLADSTONE

CONSULTANT
AECOM
 AECOM Australia Pty Ltd
 ALBANY 08 999 894 655
 www.aecom.com

NOTES:
 1. FOR NOTES AND LEGEND REFER DRG NO. 80201.
 2. FOR TYPICAL SECTIONS REFER DRG NO. 80200.
 3. REFER DRG NO'S 80240 TO 80249.



NOTES:
 1. FOR NOTES AND LEGEND REFER DRG NO. 602001.
 2. FOR TYPICAL SECTIONS REFER DRG NO. 602200.
 3. FOR CONTROL LINE SETOUT AND EDGE LINE SETOUT REFER DRG NO'S 602400 TO 602401.

PROJECT NUMBER	6022010
SHEET TITLE	ACCESS ROAD LAYOUT PLAN SHEET 6
SHEET NUMBER	602104
REVISION	B

NO	DATE	DESCRIPTION
1	13.12.16	ISSUED FOR TENDER
2	13.12.16	ISSUED FOR INFORMATION

PROJECT MANAGEMENT INITIALS	
DESIGNER	CHECKED
DRAWN	APPROVED

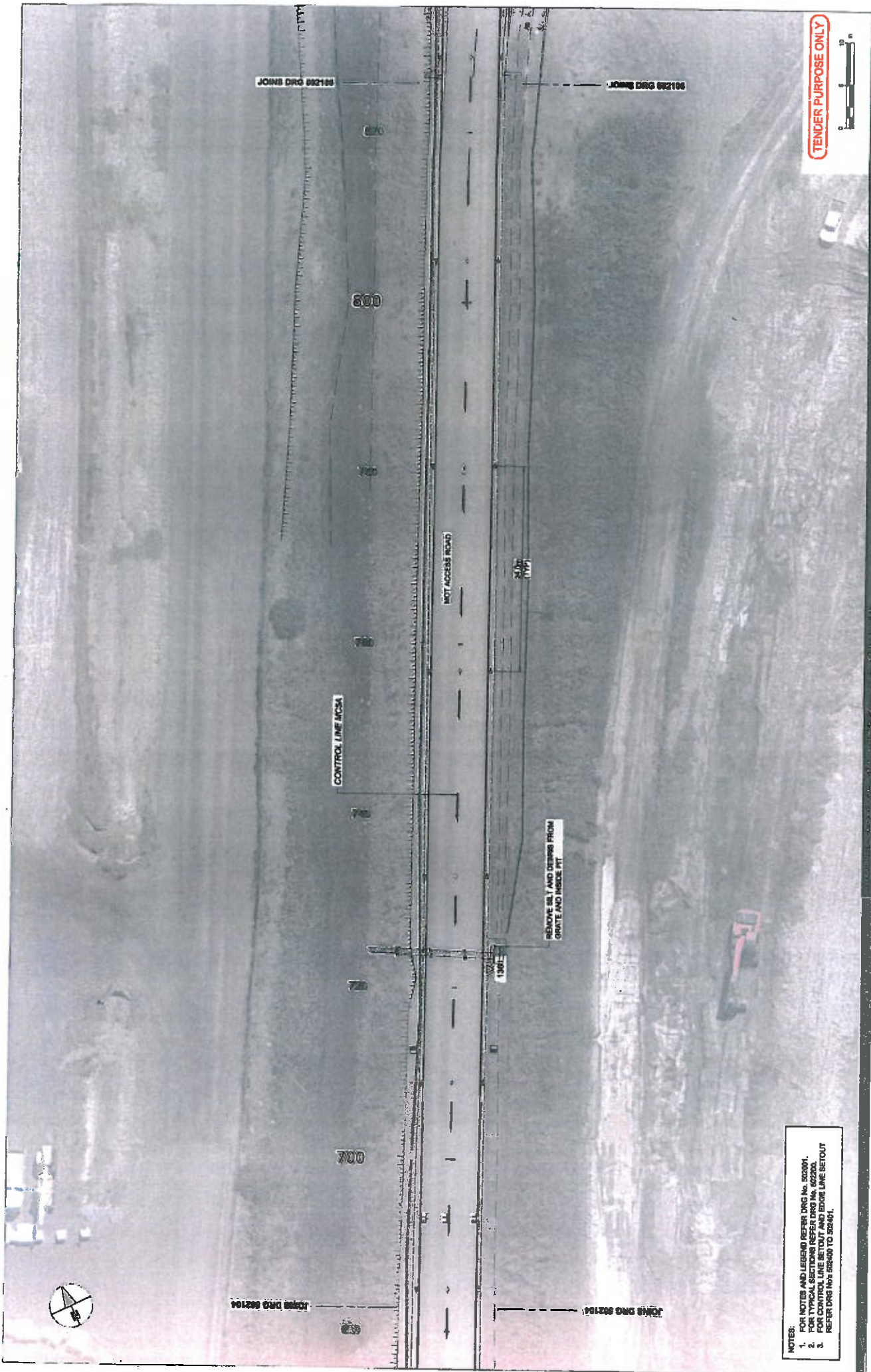
DATE	BY	DESCRIPTION

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CLIENT
Santos
 GLNG
 Operations Terminal
 GLADSTONE

PROJECT
OGG
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CONSULTANT
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 AECOM Australia Pty Ltd
 A.B.N. 52 058 608 895
 www.aecom.com



TENDER PURPOSE ONLY



NOTES:
 1. FOR NOTES AND LEGEND REFER DRG No. 502001.
 2. FOR TYPICAL SECTIONS REFER DRG No. 502001.
 3. FOR CONTROL LINE SETOUT AND EDGE LINE SETOUT REFER DRG Nos 502400 TO 502401.

PROJECT MANAGEMENT INITIALS		REVISION	
EN	DESIGNER	CHECKED	APPROVED
PROJECT DATA			
DRAWN / AFD	DATE	ISSUED FOR TENDER	DESCRIPTION
		11.12.05	ISSUED FOR INFORMATION
		18.12.05	ISSUED FOR TENDER
		11.12.05	ISSUED FOR INFORMATION

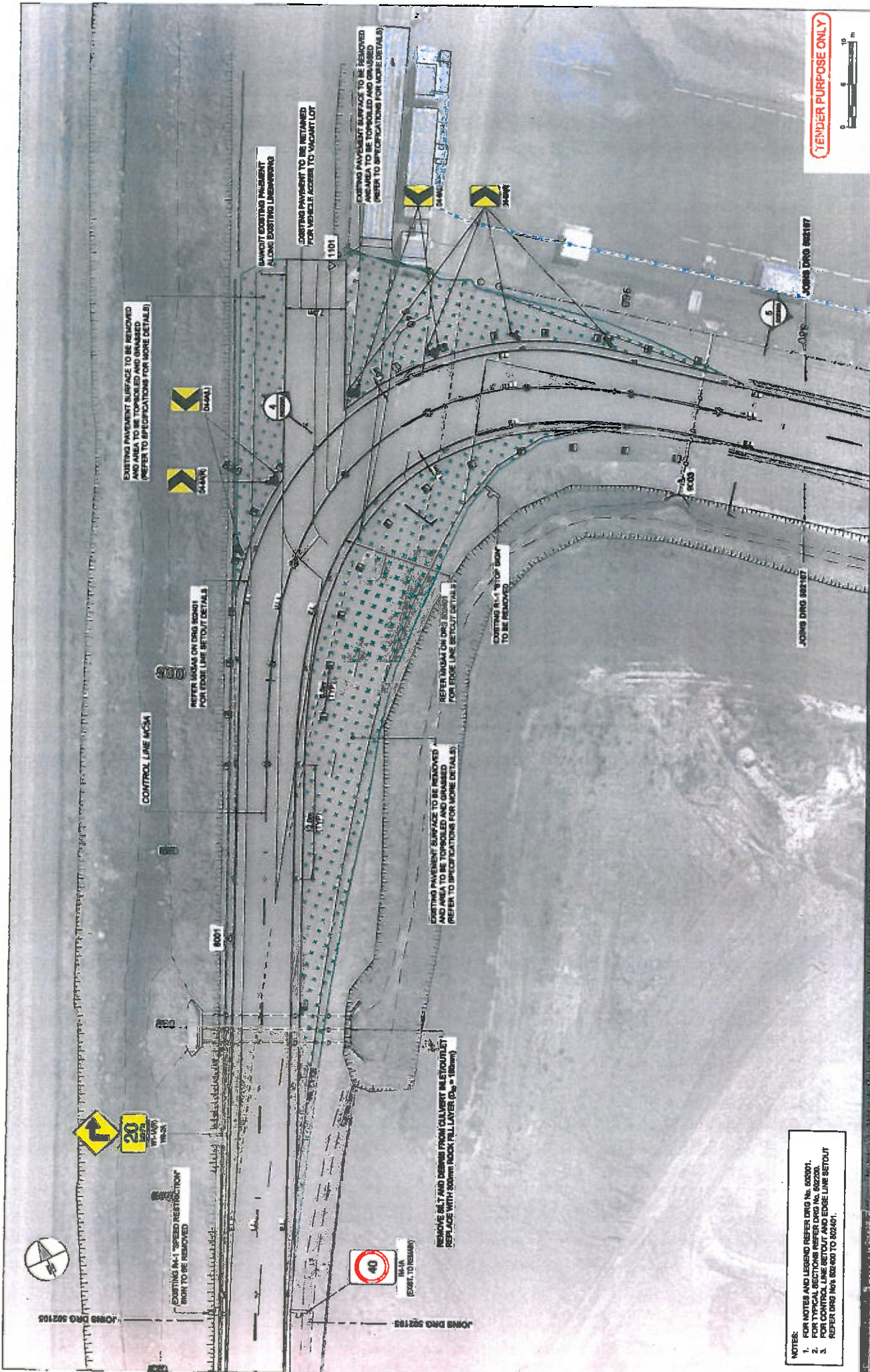
PROJECT NUMBER: 60220015
 SHEET TITLE: ACCESS ROAD LAYOUT PLAN
 SHEET 6
 SHEET NUMBER: 502105
 REVISION: 6

APPROVED

CLIENT
Santos
 GLNG
OCG
 A B Group Limited

PROJECT
RG Tanna Marine
 Operations Terminal
 GLADSTONE

CONSULTANT
AECOM
 AECOM Australia Pty Ltd
 A.B.N 20 093 448 826
 www.aecom.com



TENDER PURPOSE ONLY

SCALE
0 5 10 m

NOTES:
 1. FOR NOTES AND LEGEND REFER DRG No. 502001.
 2. FOR TYPICAL SECTIONS REFER DRG No. 502002.
 3. REFER DRG No's 502000 TO 502040.

PROJECT MANAGEMENT DETAILS	
BY	CHECKED / APPROVED
DESIGNED	DRAWN
DATE	DATE

PROJECT NUMBER	60223016
SHEET TITLE	ACCESS ROAD LAYOUT PLAN SHEET 7
DATE	11.12.15
REVISION	REVISION

PROJECT	RG Tanna Marine Operations Terminal
CLIENT	GLASTONE
CONSULTANT	AECOM
CONTRACT	ALB N 20 000 848 025

DATE	11.12.15
BY	DATE
DESCRIPTION	DATE

DATE	11.12.15
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DESCRIPTION	DATE

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DESCRIPTION	DATE

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Operations Terminal

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 ALB N 20 000 848 025
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NOTES:
 1. FOR NOTES AND LEGEND REFER DRG NO. 80201.
 2. FOR TYPICAL MCSI REFER TO THE TENDERS DRAWING.
 3. FOR CONTROL LINE SETOUT AND EDGE LINE SETOUT REFER DRG NO. 802491.
 4. FOR PAVEMENT TIE-IN DETAIL REFER DRG NO. 802300.

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PROJECT
 RG Tanna Marine
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 GLADSTONE

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PROJECT MANAGEMENT INITIALS

ROLE	DESIGNER	CHECKED	APPROVED
DESIGNER			
CHECKED			
APPROVED			

PROJECT DATA

DATE	BY	DESCRIPTION

ES:300/REVISION

NO	DATE	DESCRIPTION
B	18.12.18	ISSUED FOR TENDER
A	11.12.18	ISSUED FOR INFORMATION

PROJECT NUMBER
 802281/6
SHEET TITLE
 ACCESS ROAD
 PAVEMENT LAYOUT PLAN
 SHEET 2
SHEET NUMBER
 802281/6
REVISION
 8



NOTES:
 1. FOR NOTES AND LEGEND REFER DRG NO. 02201.
 2. FOR TYPICAL SECTIONS REFER DRG NO. 02202.
 3. FOR CONTROL LINE SETOUT AND EDGE LINE SETOUT REFER DRG NO. 02203.
 4. FOR PAVEMENT TEAM DETAIL REFER DRG NO. 02200.

JONES DRG 02281

JONES DRG 02281

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CERTIFICATION
 DISCIPLINE: CIVIL
 CERTIFIER: [Signature]
 TITLE: [Signature]

PROJECT MANAGEMENT DETAILS
 BY: [Signature] DATE: [Signature]
 CHECKED: [Signature] APPROVED: [Signature]
PROJECT DATA
 DRAWN: [Signature] SURVEY: [Signature]

REVISIONS

NO	DATE	DESCRIPTION
A	11/12/18	BRANDED FOR INFORMATION
B	11/12/18	BRANDED FOR TENDER
C	11/12/18	BRANDED FOR TENDER
D	11/12/18	VEHICLE PAVEMENT ADDED

PROJECT NUMBER
 00223810
SHEET TITLE
 ACCESS ROAD
 PAVEMENT LAYOUT PLAN
 SHEET 3
SHEET NUMBER
 0022302
REVISION
 D

MODEL : CONTROL 5000 - STRING : MC5A

PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RADSPIRAL	A LENGTH	D ANGLE	L TANGENT	S TANGENT	L TANGENT2	S TANGENT2
IP1	0.000	320215.874	793270.678	4.310	28°38'28.18"							
IP2	7.766	320016.001	793276.082	4.071		-26.000	15.892	38°44'03.19"				
CT	16.962	320217.105	793286.941	3.916	347°32'22.98"							
TC	21.386	320215.888	793291.517	3.861	347°32'22.98"							
IP3	28.948	320214.666	793297.306	3.684		-16.000	11.101	42°26'14.51"				
CT	32.489	320208.827	793300.688	3.608	305°20'00.46"							
TC	32.489	320208.827	793300.688	3.608	305°20'00.46"							
IP4	50.863	320194.871	793311.238	3.972		100.000	11.875	6°47'21.08"				
CC	62.826	320188.679	793316.622	4.063	312°07'20.54"							
IP5	63.237	320180.203	793326.791	4.113		11.863	13.089	83°40'01.81"				
CC	78.137	320182.647	793331.000	4.150	17°48'51.18"							
IP6	94.277	320188.107	793336.370	4.234		300.000	36.281	6°55'44.59"				
CT	112.416	320188.712	793336.484	4.474	24°48'18.14"							
TC	112.416	320188.712	793336.484	4.474	24°48'18.14"							
IP7	154.489	320213.334	793340.000	4.316		300.000	82.023	1°30'58.89"				
CT	186.970	320251.519	793349.642	4.333	28°18'15.84"							
TC	308.303	320279.353	793358.837	4.822	38°18'15.84"							
IP8	360.344	320318.433	793365.428	4.667		488.000	183.709	1°49'57.80"				
CT	457.086	320349.679	793373.207	4.148	28°08'12.72"							
TC	457.086	320349.679	793373.207	4.148	28°08'12.72"							
IP9	578.639	320408.987	793378.356	5.057		-300.000	93.028	1°46'35.86"				
CT	625.192	320427.651	793382.008	5.000	28°21'36.75"							
TC	625.192	320427.651	793382.008	5.000	28°21'36.75"							
IP10	689.884	320446.227	793403.306	4.878		26.385						
TC	689.884	320446.227	793403.306	4.878		26.385						
IP11	872.608	320510.381	793408.085	4.469	100°00'24.98"							
CT	872.608	320510.381	793408.085	4.469	100°00'24.98"							
IP12	1183.101	320762.441	793362.796	4.790	128°04'37.58"							
TC	1294.863	320783.488	793361.049	4.807	127°44'25.12"							

MODEL : CONTROL 5000 MINOR - STRING : MK5A1

PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RADSPIRAL	A LENGTH	D ANGLE
IP1	0.000	320213.010	793296.081	3.649	348°12'30.71"			
IP2	4.266	320212.111	793299.287	3.783		-80.000	8.726	18°41'08.71"
CC	8.726	320210.013	793298.204	3.800	331°31'24.00"			
IP3	11.010	320208.910	793296.288	3.844		-10.000	4.847	28°03'16.53"
CT	13.294	320207.026	793296.610	3.885	305°20'00.48"			
TC	40.849	320184.738	793291.488	4.121	305°20'00.48"			
IP4	63.340	320172.404	793281.278	4.217		16.500	25.383	78°36'47.32"
CC	88.032	320175.894	793286.195	4.225	24°04'58.79"			
IP5	83.682	320185.774	793281.192	4.300		3000.000	35.241	0°46'20.38"
IP6	101.273	320180.183	793287.184	4.488	24°45'16.14"			

MODEL : CONTROL 5000 MINOR - STRING : MK5A2

PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RADSPIRAL	A LENGTH	D ANGLE
IP1	0.000	320219.007	793272.623	4.232	38°08'32.00"			
TC	1.814	320221.118	793274.119	4.194	38°08'32.00"			
IP2	6.389	320223.348	793276.881	4.080		-12.800	6.801	31°37'53.05"
CC	8.816	320223.808	793280.372	3.866	7°27'58.97"			
IP3	16.800	320224.748	793287.584	3.859		-16.000	13.863	48°38'27.46"
CC	22.384	320219.988	793282.874	3.854	316°52'51.81"			
IP4	28.404	320215.358	793286.296	3.800		-80.000	14.088	13°24'23.04"
CT	36.424	320209.816	793292.378	3.800	305°20'00.48"			
TC	64.883	320184.825	793291.516	3.884	308°20'00.48"			
IP5	70.480	320179.880	793282.708	4.028		24.500	31.813	74°25'51.85"
IP6	88.386	320185.000	793281.195	4.185	18°52'00.42"			

TENDER PURPOSE ONLY

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PROJECT: RG Tanna Marine Operations Terminal
CLIENT: GLADSTONE

PROJECT MANAGEMENT DETAILS
 DESIGNER: [] CHECKED: [] APPROVED: []
 PROJECT DATA
 DATUM: [] AND SURVEY INSTRUMENT: []
 MFL: [] DATE: [] DESCRIPTION: []

PROJECT NUMBER: 6022816
 SHEET TITLE: ACCESS ROAD SETOUT TABLES
 SHEET 1
 SHEET NUMBER: 602400
 REVISION: B

