



30 January 2018

Craig Knight
Queensland Sugar Limited
GPO Box 891
BRISBANE QLD 4001

Dear Craig,

**DEVELOPMENT APPROVAL PACKAGE FOR PROPOSED UPGRADE OF THE
STORMWATER AMANGEMENT SYSTEM ON LAND DESCRIBED AS LOT 63 ON SP143358
AND LOT 58 ON SP123751, AT THE PORT OF MACKAY**

NQBP Reference: PL/04/02/00004

North Queensland Bulk Ports Corporation Ltd (NQBP) wish to advise that your development application seeking approval for the proposed upgrade of the stormwater management system at the Port of Mackay was approved in full subject to conditions on 30 January 2018.

Approval has been given with respect to operational works being tidal works under the *Planning Act 2016* and Port Development Approval for associated water management works under the Port of Mackay Land Use Plan (November 2009).

You are strongly advised to read and familiarise yourself with each of the enclosures applicable to this approvals package, including the attached referral agency response.

If you have any queries regarding the approvals package, please contact the undersigned.

Yours sincerely

Julie Keane
Principal, Development Approvals

Telephone: (07) 3011 7912
Email: JKeane@nqbp.com.au
Doc Reference: E18/01329

Enc: Decision notice issued under to s 63 of the *Planning Act 2016*
~~Port development approval issued under the Port of Mackay Land Use Plan (November 2009).~~
Approved drawings

Cc: Department of State Development, Manufacturing, Infrastructure and Planning
Mackay Regional Council

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Level 1, Waterfront Place, Mulherin Drive Mackay Harbour Queensland is the Registered Office of:

NORTH QUEENSLAND BULK PORTS CORPORATION LIMITED

ACN 136 880 218 • ABN 36 136 880 218

PORTS CORPORATION OF QUEENSLAND LIMITED

ACN 126 302 994 • ABN 49 657 447 879

MACKAY PORTS LIMITED

ACN 131 965 707 • ABN 69 131 965 707

Decision Notice

Planning Act 2016 s.63

1. Details of approval

<i>Applicant name:</i>	Queensland Sugar Limited
<i>Approved development:</i>	Tidal Works under Schedule 10, Part 17, Section 28 (1)(a), which is: <ol style="list-style-type: none"> 1. the establishment of a new stormwater discharge structure where it intersects with the tidal zone 2. the decommissioning of the existing structure
<i>Date of decision</i>	30 January 2018
<i>Aspect of development:</i>	<input type="checkbox"/> Material change of use <input type="checkbox"/> Reconfiguring a lot <input checked="" type="checkbox"/> Operational work <input type="checkbox"/> Building work
<i>Decision:</i>	<input type="checkbox"/> Preliminary approval only (with conditions) <input type="checkbox"/> Part approval only (with conditions) <input type="checkbox"/> Part approval only (without conditions) <input checked="" type="checkbox"/> Approval (with conditions)

2. Property description of proposed development

<i>Port:</i>	MACKAY
<i>Street address:</i>	Ken White Avenue
<i>Real property description:</i>	Lot 63 on SP143358 and Lot 58 on SP123751
<i>Local government area:</i>	Mackay Regional Council

3. Approved drawings and documents

The following drawings and documents have been approved. Copies of approved drawings are provided in an enclosure.

<i>Drawing or document</i>	<i>Number</i>	<i>Date</i>
Demolition Plan	17355.1 – C04 Rev B	30/11/2017
General Details	17355.1 – C09 Rev B	30/11/2017
Stormwater DN2000 Headwall Plan & Details	17355.1 – C10 Rev C	30/11/2017
Reinstatement Plan	17355.1 – C14 Rev B	30/11/2017

4. Referral agency response

Referral agency response was received from the Department of State Development, Manufacturing, Infrastructure and Planning on 17 January 2018 (1711-2826 SRA) and attached to this decision notice.

5. Properly made submissions

Not applicable—no part of the application required public notification.

6. Additional development permits

This development approval is limited to works described as the Approved Development and the associated approval drawings. At no time should this document be interpreted to imply approval to any other development, operation or land use.

Please be advised that it is the applicant's responsibility to ensure that all other necessary development permits are in place prior to work commencing.

7. Currency period for the approval

This development approval will lapse if the development has not substantially commenced within two (2) years after the approval takes effect.

8. 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*).

A copy of the relevant appeal provisions is attached.

Further information may be obtained from the Planning and Environment Court website:

<http://www.courts.qld.gov.au/courts/planning-and-environment-court>

Attachment 1

ASSESSMENT MANAGER CONDITIONS

Condition	Timing																		
Carry out the approved development																			
<p>1. The development must be undertaken generally in accordance the plans and supporting documentation reference in the table below and attached which forms part of this approval, unless otherwise specified by any condition of this approval.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d3d3d3;"><i>Drawing or document</i></th> <th style="background-color: #d3d3d3;"><i>Number</i></th> <th style="background-color: #d3d3d3;"><i>Date</i></th> </tr> </thead> <tbody> <tr> <td>Construction Environmental Management</td> <td>Section 3.3</td> <td>27/11/2017</td> </tr> <tr> <td>Demolition Plan</td> <td>17355.1 – C04 Rev B</td> <td>30/11/2017</td> </tr> <tr> <td>General Details</td> <td>17355.1 – C09 Rev B</td> <td>30/11/2017</td> </tr> <tr> <td>Stormwater DN2000 Headwall Plan & Details</td> <td>17355.1 – C10 Rev C</td> <td>30/11/2017</td> </tr> <tr> <td>Reinstatement Plan</td> <td>17355.1 – C14 Rev B</td> <td>30/11/2017</td> </tr> </tbody> </table>	<i>Drawing or document</i>	<i>Number</i>	<i>Date</i>	Construction Environmental Management	Section 3.3	27/11/2017	Demolition Plan	17355.1 – C04 Rev B	30/11/2017	General Details	17355.1 – C09 Rev B	30/11/2017	Stormwater DN2000 Headwall Plan & Details	17355.1 – C10 Rev C	30/11/2017	Reinstatement Plan	17355.1 – C14 Rev B	30/11/2017	At all times.
<i>Drawing or document</i>	<i>Number</i>	<i>Date</i>																	
Construction Environmental Management	Section 3.3	27/11/2017																	
Demolition Plan	17355.1 – C04 Rev B	30/11/2017																	
General Details	17355.1 – C09 Rev B	30/11/2017																	
Stormwater DN2000 Headwall Plan & Details	17355.1 – C10 Rev C	30/11/2017																	
Reinstatement Plan	17355.1 – C14 Rev B	30/11/2017																	
<p>2. Revised “for construction” Reinstatement Plan (17355.1 – C14 Rev B) is to be provided to NQBP via approvals@nqbp.com.au for review and approval, detailing the agreed specifications for rock armour placement around both the new headwall and the decommissioned headwall. Drawings are to be RPEQ certified.</p>	Four (4) weeks prior to commencement of works.																		
<p>3. Revised “for construction” drawings specifying the design details of SWL Line 202 are to be provided to NQBP via approvals@nqbp.com.au for review and approval, detailing provisions road design levels as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d3d3d3;"><i>Load</i></th> <th style="background-color: #d3d3d3;"><i>Total weight limit (t)</i></th> </tr> </thead> <tbody> <tr> <td>Single Axle</td> <td>47.0</td> </tr> <tr> <td>Combined Dual Axle Group</td> <td>73.3</td> </tr> <tr> <td>Combined Triple Axle Group</td> <td>96.9</td> </tr> <tr> <td>Continuous Axle Limit (1.8m Axle Spacing's) Load Per Axle</td> <td>36.5</td> </tr> </tbody> </table> <p>Drawings are to be RPEQ certified.</p>	<i>Load</i>	<i>Total weight limit (t)</i>	Single Axle	47.0	Combined Dual Axle Group	73.3	Combined Triple Axle Group	96.9	Continuous Axle Limit (1.8m Axle Spacing's) Load Per Axle	36.5	Four (4) weeks prior to commencement of works.								
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Condition	Timing
<p>4. When decommissioning the existing stormwater outlets and sealing the pipe, inspections must be undertaken to ensure there is no fauna roosting or nesting in the pipe. If there is fauna present, sealing must be delayed until fauna has moved on naturally or is removed by an appropriately qualified spotter-catcher. If an animal is nesting in the pipe, an approved Species Management Program must be developed for interfering with an animal breeding place.</p>	<p>Prior to filling decommissioned pipes.</p>
<p>5. "As constructed" drawings and design certificates certified by an RPEQ must be submitted to NQBP via approvals@nqbp.com.au. The following is to be provided:</p> <ul style="list-style-type: none"> • One set of "As-constructed" drawings. • Dimensioned plot plans and general arrangement drawings must also be provided electronically to NQBP in dwg (AutoCAD 2012) and dxf formats (including pen plot, xref, ole, block files and any other external references). 	<p>Within four (4) weeks of completion of works.</p>
Environmental management	
<p>6. The release of sediment or sediment laden stormwater from the site must be minimised by implementing best industry practice for sediment and stormwater control.</p>	<p>At all times.</p>
<p>7. All waste must be removed from the site and taken to a licenced waste management facility on a regular basis. No waste is to be burned or buried on site.</p>	<p>At all times.</p>

Attachment 2

REFERRAL AGENCY RESPONSE

Agency	Reference	Date received
Department of State Development, Manufacturing, Infrastructure and Planning	1711-2826 SRA	17 January 2018

Our reference: 1711-2826 SRA
Your reference: PL/04/02/00004

17 January 2018

The North Queensland Bulk Ports
GPO Box 409
BRISBANE QLD 4001
planning@nqbp.com.au

Attention: Ms. Julie Keane

Dear Ms. Keane

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 6 December 2017.

Applicant details

Applicant name:	Queensland Sugar Limited
Applicant contact details:	GPO Box 891 BRISBANE QLD 4001 houghton@samford.net

Location details

Street address:	Ken White Drive, Port of Mackay
Real property description:	Lot 58 on SP123751; Lot 63 on SP143358
Local government area:	Mackay Regional Council

Application details

Development permit	Operational Work for Tidal Works - stormwater discharge structure and decommissioning of existing stormwater structure
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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 – Assessable development under section 28
- 10.17.3.2.1 Tidal works or work in a coastal management district – Assessable development under section 28 in tidal waters

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 assessment manager

Under section 56(3) of the Act, the department offers advice about the application to the assessment manager—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				
QSL MBST Stormwater/Sweetwater Outlet Realignment - Demolition Plan	Fortisem	30/11/2017	17355.1 - C04	B
QSL MBST Stormwater/Sweetwater Outlet Realignment - General Details	Fortisem	30/11/2017	17355.1 - C09	B
QSL MBST Stormwater/Sweetwater Outlet Realignment - Stormwater DN2000 Headwall Plan & Details	Fortisem	30/11/2017	17355.1 - C010	C
QSL MBST Stormwater/Sweetwater Outlet Realignment - Reinstatement Plan	Fortisem	30/11/2017	17355.1 – C14	B

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

For further information please contact Jackie Hunter, Planning Officer, on (07) 4898 6815 or via email MIWSARA@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Patrick Ruettjes', written in a cursive style.

Patrick Ruettjes
Manager (Planning), Mackay Isaac Whitsunday Regional Office

cc Queensland Sugar Limited, houghton@samford.net

enc Attachment 1—Conditions to be imposed
Attachment 2—Reasons for decision to impose conditions
Attachment 3—Advice to the assessment manager
Approved plans and specifications

Attachment 1—Conditions to be imposed

No.	Conditions	Condition timing
Operational Work		
10.17.3.1.1 - Tidal works or work in a coastal management district—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 conditions:		
1.	<p>The stormwater outlet works must be undertaken generally in accordance with the following plans:</p> <ul style="list-style-type: none"> • QSL MBST Stormwater/Sweetwater Outlet Realignment - Demolition Plan prepared by Fortisem dated 30/11/2017, reference 17355.1 - C04 and revision B. • QSL MBST Stormwater/Sweetwater Outlet Realignment - General Details prepared by Fortisem dated 30/11/2017, reference 17355.1 - C09 and revision B. • QSL MBST Stormwater/Sweetwater Outlet Realignment - Stormwater DN2000 Headwall Plan & Details prepared by Fortisem dated 30/11/2017, reference 17355.1 - C10 and revision C. • QSL MBST Stormwater/Sweetwater Outlet Realignment - Reinstatement Plan prepared by Fortisem dated 30/11/2017, reference 17355.1 - C14 and revision B. 	For the duration of the works.
2.	<p>For the proposed works, only use clean materials and ensure that the works do not cause contamination. To achieve this:</p> <p>Only use materials which are free from contaminants as defined under section 11 of the <i>Environmental Protection Act 1994</i>.</p>	For the duration of the works.
3.	<p>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.</p>	For the duration of the works.
4.	<p>(a) Obtain RPEQ certification confirming that the tidal works, have been constructed in accordance with the Department of Environment and Heritage Protection guideline 'Building and engineering standards for tidal works.</p> <p>(b) A copy of the certification must be provided to palm@ehp.qld.gov.au or mailed to:</p> <p>Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane QLD 4001</p>	Within two (2) weeks of the completion of the works.

5.	<p>Submit "As Constructed drawings" to palm@ehp.qld.gov.au or mail to:</p> <p>Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane QLD 4001</p>	<p>Within two (2) weeks of the completion of the works.</p>
6.	<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(s), confirming that the affected soil has been neutralised or contained, in accordance with (a) above is to be provided to palm@ehp.qld.gov.au or mailed to:</p> <p>Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane QLD 4001</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>

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 ensures the tidal works located on State land are safe and fit for purpose.
- To allow for compliance in relation to what is considered generally in accordance with the approved plans when preliminary plans are submitted with the application. Development inconsistent with the approval may have an impact on coastal management that was not considered in assessment.
- To ensure any disturbance to acid sulfate soils is managed to prevent impacts to coastal environments.

Attachment 3—Advice to the assessment manager

General advice	
1.	Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to soil 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.

Attachment 3

APPEAL PROVISIONS

PLANNING ACT 2016

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 **appellant** 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.

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

SCHEDULE 1 APPEALS

1 Appeal rights and parties to appeals

(1) Table 1 states the matters that may be appealed to—

- (a) the P&E court; or
- (b) a tribunal.

Table 1			
Appeals to the P&E Court and, for certain matters, to a tribunal			
<p>1. Development applications</p> <p>For a development application other than an excluded application, an appeal may be made against—</p> <ul style="list-style-type: none"> (a) the refusal of all or part of the development application; or (b) the deemed refusal of the development application; or (c) a provision of the development approval; or (d) if a development permit was applied for—the decision to give a preliminary approval. 			
Column 1	Column 2	Column 3	Column 4
Appellant	Respondent	Co-respondent (if any)	Co-respondent by election (if any)
The applicant	The assessment manager	If the appeal is about a concurrence agency's referral response—the concurrence agency	<ul style="list-style-type: none"> 1 A concurrence agency that is not a co-respondent 2 If a chosen assessment manager is the respondent—the prescribed assessment manager 3 Any eligible advice agency for the application 4 Any eligible submitter for the application

Statement of Reasons

Planning Act 2016 s.56

1. Applicant details

<i>Applicant name:</i>	Queensland Sugar Limited
<i>Applicant contact details:</i>	Craig Knight GPO Box 891 BRISBANE QLD 4001

2. Property description of proposed development

<i>Port:</i>	Mackay
<i>Street address:</i>	Ken White Avenue
<i>Real property description:</i>	Lot 63 on SP143358 and Lot 58 on SP123751
<i>Local government area:</i>	Mackay Regional Council

3. Development details

<i>Approved development:</i>	Tidal Works under Schedule 10, Part 17, Section 28 (1)(a), which is: <ol style="list-style-type: none"> 1. the establishment of a new stormwater discharge structure where it intersects with the tidal zone 2. the decommissioning of the existing structure
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4. Assessment matters

The application has been assessed against:

- Port of Mackay Land Use Plan 2009.
- Port authority functions under the *Transport Infrastructure Act 1994*, chapter 8, part 3.

5. Reasons for the decision

The reasons for the decision are that the proposal:

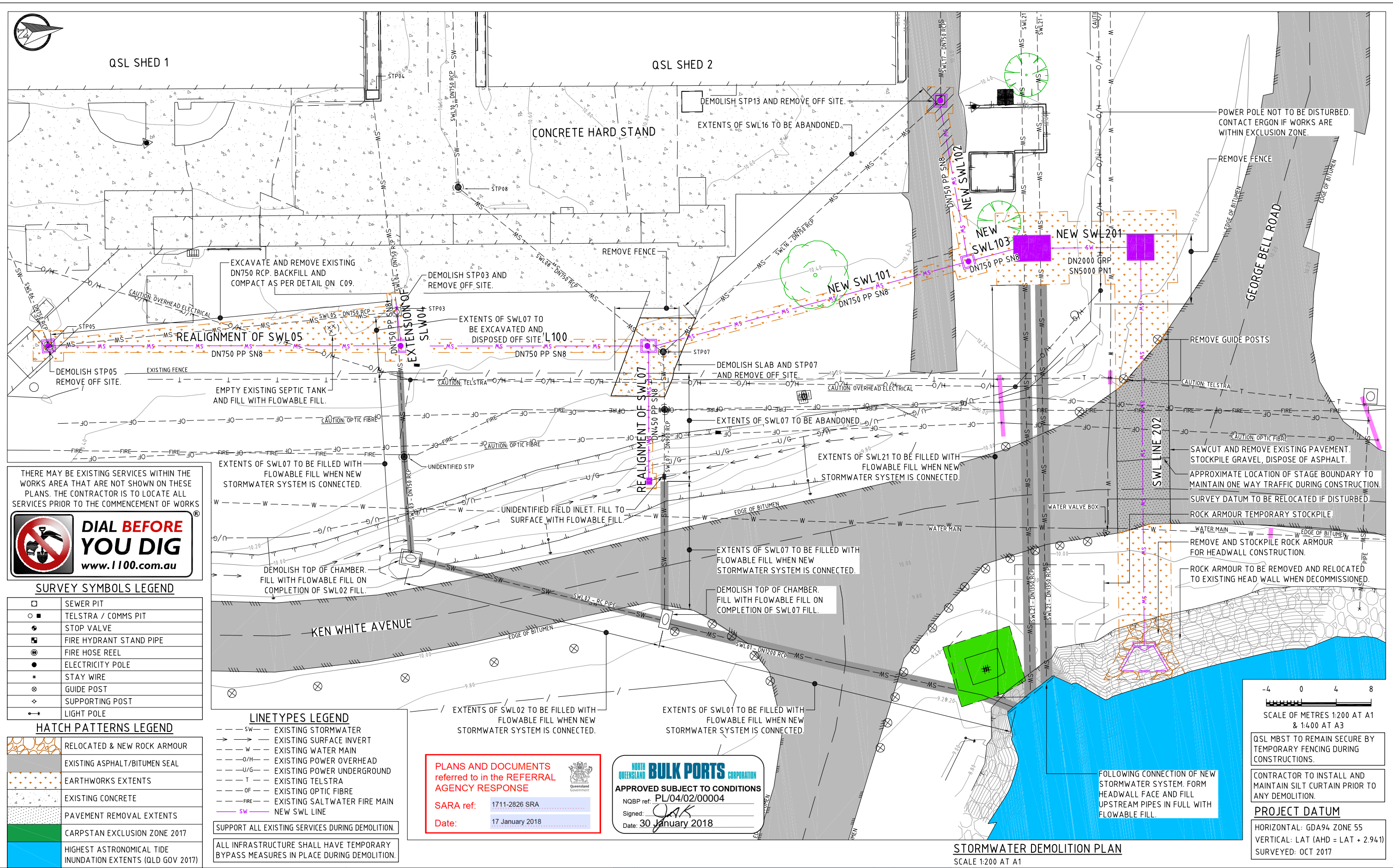
- Complies and contributes toward the achievement of the desired environmental outcomes of the Port of Mackay Land Use Plan 2009.
- Is consistent with the functions of the Port as specified in the *Transport Infrastructure Act 1994*, chapter 8, part 3

Evidence or other material on which the findings were based:

- Material provided in the development application.

Approved drawings

<i>Drawing or document</i>	<i>Number</i>	<i>Date</i>
Construction Environmental Management	Section 3.3	27/11/2017
Demolition Plan	17355.1 – C04 Rev B	30/11/2017
General Details	17355.1 – C09 Rev B	30/11/2017
Stormwater DN2000 Headwall Plan & Details	17355.1 – C10 Rev C	30/11/2017
Reinstatement Plan	17355.1 – C14 Rev B	30/11/2017



THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS

DIAL BEFORE YOU DIG
www.1100.com.au

SURVEY SYMBOLS LEGEND

□	SEWER PIT
○	TELSTRA / COMMS PIT
●	STOP VALVE
■	FIRE HYDRANT STAND PIPE
⊙	FIRE HOSE REEL
⊕	ELECTRICITY POLE
*	STAY WIRE
⊗	GUIDE POST
⊕	SUPPORTING POST
⊖	LIGHT POLE

HATCH PATTERNS LEGEND

	RELOCATED & NEW ROCK ARMOUR
	EXISTING ASPHALT/BITUMEN SEAL
	EARTHWORKS EXTENTS
	EXISTING CONCRETE
	PAVEMENT REMOVAL EXTENTS
	CARPSTAN EXCLUSION ZONE 2017
	HIGHEST ASTRONOMICAL TIDE INUNDATION EXTENTS (QLD GOV 2017)

LINETYPES LEGEND

---	SW	EXISTING STORMWATER
→	---	EXISTING SURFACE INVERT
---	W	EXISTING WATER MAIN
---	O/H	EXISTING POWER OVERHEAD
---	U/G	EXISTING POWER UNDERGROUND
---	T	EXISTING TELSTRA
---	OF	EXISTING OPTIC FIBRE
---	FIRE	EXISTING SALTWATER FIRE MAIN
---	SW	NEW SWL LINE

SUPPORT ALL EXISTING SERVICES DURING DEMOLITION.
ALL INFRASTRUCTURE SHALL HAVE TEMPORARY BYPASS MEASURES IN PLACE DURING DEMOLITION.

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

SARA ref: 1711-2826 SRA
Date: 17 January 2018

NORTH QUEENSLAND BULK PORTS CORPORATION
APPROVED SUBJECT TO CONDITIONS
NQBP ref: PL/04/02/00004
Signed: JAK
Date: 30 January 2018

SCALE OF METRES 1:200 AT A1 & 1:400 AT A3

QSL MBST TO REMAIN SECURE BY TEMPORARY FENCING DURING CONSTRUCTIONS.

CONTRACTOR TO INSTALL AND MAINTAIN SILT CURTAIN PRIOR TO ANY DEMOLITION.

PROJECT DATUM
HORIZONTAL: GDA94 ZONE 55
VERTICAL: LAT (AHD = LAT + 2.941)
SURVEYED: OCT 2017

STORMWATER DEMOLITION PLAN
SCALE 1:200 AT A1

FORTISEM consultant engineers + managers
Shop 10, 48 Gregory St, North Ward phone: 4740 4686
P.O. Box 4 Townsville, QLD 4810 email: bill@fortisem.com.au
web: www.fortisem.com.au

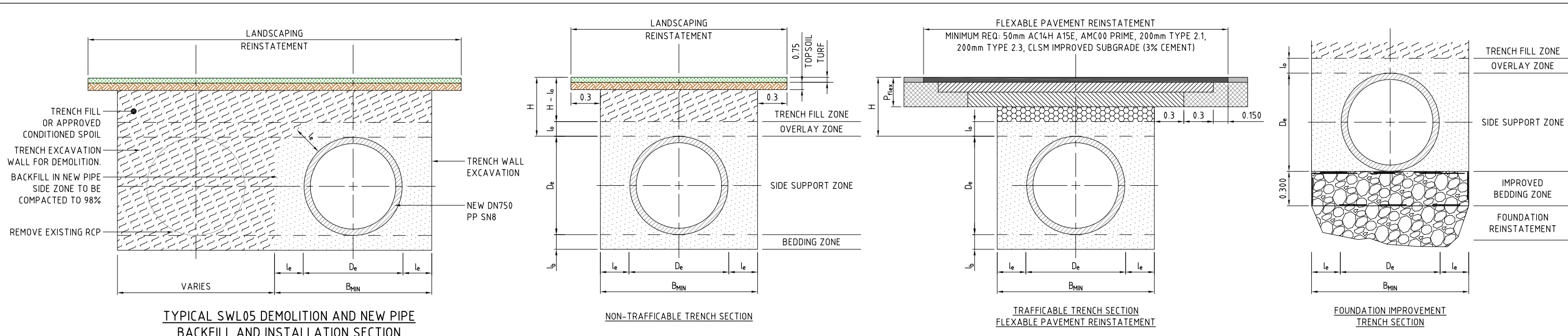
Proud Member of:
CONSULT AUSTRALIA
Representing Engineering Excellence

in association with
QSL NORTH QUEENSLAND BULK PORTS CORPORATION

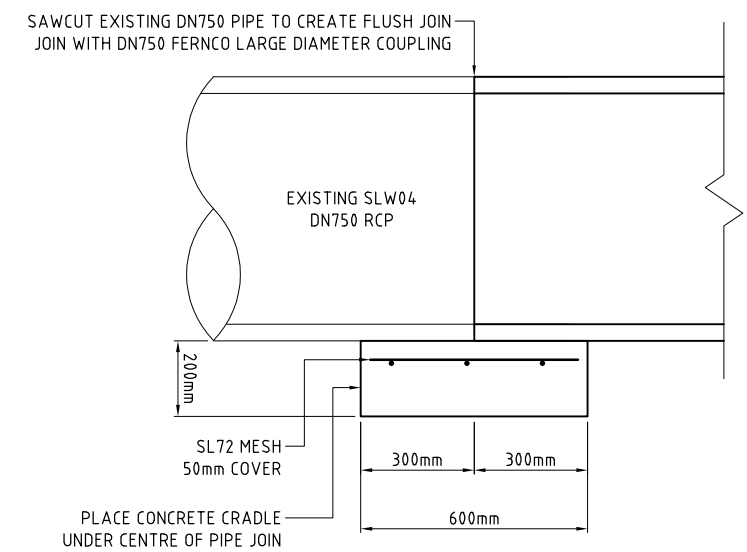
Rev	Amendments	By	Date	RPEQ
B	ISSUED FOR TENDER - ADDENDUM 1	TM	30/11/2017	
A	ISSUED FOR TENDER	TM	22/11/2017	

Client		QLD SUGAR LIMITED (QSL)		
Project		QSL MBST STORMWATER/SWEETWATER OUTLET REALIGNMENT		
Designed	SB	Approved by	Title	
Drawn	TM		DEMOLITION PLAN	
Checked	BH		Job No.	Drawing No.
			17355.1	C04
				Rev
				B
TENDER				

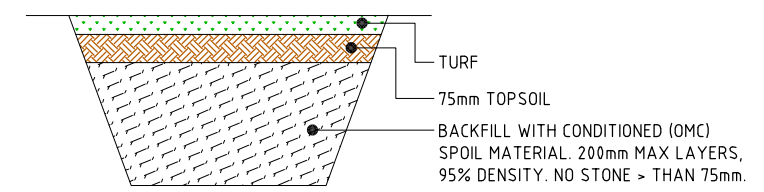
© Fortisem 2016. ORIGINAL DRAWING IS A3 SIZE. 3D. PERSPECTIVE OR ORTHOGONAL VIEWS CONTAINED IN THIS DRAWING ARE INDICATIVE ONLY. DRAWING IS INTENDED TO BE VIEWED IN COLOUR. SOME LOSS OF INFORMATION MAY OCCUR IF DRAWING IS VIEWED IN BLACK AND WHITE.



TYPICAL GRP AND PP PIPE TYPICAL INSTALLATION TRENCH SECTIONS



RCP TO PP - PIPE JOIN DETAIL
1:10 AT A1



BACKFILL REINSTATEMENT FOR DEMOLISHED SWL
NTS

LEGEND	
[Pattern]	TRENCH FILL
[Pattern]	EMBEDMENT MATERIAL
[Pattern]	CLSM FILL
[Pattern]	FOUNDATION IMPROVEMENT
[Pattern]	CONCRETE
[Pattern]	ASPHALT
[Pattern]	TYPE 2.1
[Pattern]	TYPE 2.3
[Pattern]	TURF
[Pattern]	TOPSOIL
[Pattern]	EXISTING PAVEMENT
[Pattern]	EXISTING CONCRETE

DESCRIPTION	UNIT	DIMENSIONS (mm) FOR PE PIPE SIZES								
		DN150	DN225	DN300	DN375	DN450	DN525	DN600	DN750	DN900
PIPE OUTSIDE DIAMETER	De	169	259	343	428	514	600	682	835	999
EXCAVATION CLEARANCE	lc	300	300	300	300	300	300	300	300	300
MINIMUM TRENCH WIDTH (De + 2lc)	Bmin	769	859	943	1028	1114	1200	1282	1435	1599
TRENCH WIDTH BASED ON BUCKET SIZES	B	900	900	1000	1200	1200	1500	1500	1600	1600
BEDDING	lb	100	100	100	100	100	150	150	150	150
SIDE SUPPORT ZONE	De	169	259	343	428	514	600	682	835	999
OVERLAY	lo	150	150	150	150	150	150	150	150	150
PARALLEL PIPE CLEARANCE	lp	300	300	300	300	300	300	300	300	300
PIPE COVER	H	REFER TABLE OF DIMENSIONS FOR PE SN8 PIPE COVER								

LOADING CONDITION	MINIMUM COVER (M)
NO VEHICLE LOADS	300
AGRICULTURAL USE	600
VEHICULAR LOADING:	
NO CARRIAGEWAY	450
SEALED CARRIAGEWAY	600
UNSEALED CARRIAGEWAY	750
CONCRETE PAVEMENT	600
CONSTRUCTION LOADS:	750
HANDHELD PLATE COMPACTOR	200
HANDHELD RAMMER (-75kg)	250
TRENCH ROLLER (-2t)	250
DRUM ROLLER (-7t)	500
TIPPER, TRUCK & DOG OR SEMI	500
COMPACTION WHEEL (25t EXCAVATOR)	1000

STD SIEVE SIZE (mm)	MASS PERCENTAGE PASSING (%)													
	GRADED AGGREGATE		SINGLE-SIZE AGGREGATE					WELL GRADED CRUSHED ROCK			SAND			
	20mm	14mm	20mm	14mm	10mm	7mm	5mm	7mm DUST	20mm	10mm	3mm			
37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.5	100	-	100	-	-	-	-	-	100	-	-	-	-	-
19.0	85-100	100	85-100	100	-	-	-	-	85-100	-	-	-	-	-
13.2	-	85-100	-	85-100	100	-	-	-	-	100	-	-	-	-
9.50	25-55	-	0-20	-	85-100	100	-	-	100	60-80	90-100	-	-	-
6.70	-	25-55	-	0-20	-	85-100	100	-	85-100	55-72	-	-	-	-
4.75	0-10	-	0-5	-	0-20	-	85-100	-	85-100	42-62	60-80	100	-	-
2.36	0-5	0-10	-	0-5	0-5	0-20	0-40	0-20	0-20	30-48	40-65	90-100	-	-
1.18	-	-	-	-	-	-	-	-	-	22-36	25-50	85-100	-	-
0.600	-	-	-	-	-	-	-	-	-	16-28	16-38	70-100	-	-
0.425	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.300	-	-	-	-	-	-	-	-	-	10-20	9-30	50-100	-	-
0.150	-	-	-	-	-	-	-	-	-	6-15	5-24	0-40	-	-
0.075	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	4-12	2-20	0-5	-	-

SOIL TYPE	TEST METHOD	ID	NON-TRAFFICABLE		TRAFFICABLE		
			EMBEDMENT	TRENCH FILL	EMBEDMENT	TRENCH FILL	PAVEMENT
COHESIONLESS	DENSITY INDEX	ID	60%	60%	70%	70%	N/A
	STANDARD DRY DENSITY	RD	90%	90%	95%	95%	100%
COHESIVE	HILF DENSITY RATIO	RHD	90%	90%	95%	95%	100%

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

SARA ref: 1711-2826 SRA

Date: 17 January 2018

NORTH QUEENSLAND BULK PORTS CORPORATION

APPROVED SUBJECT TO CONDITIONS PL/04/02/00004

NQBP ref: [Signature]

Signed: 30 January 2018

Date: [Signature]

FORTISEM consultant engineers + managers

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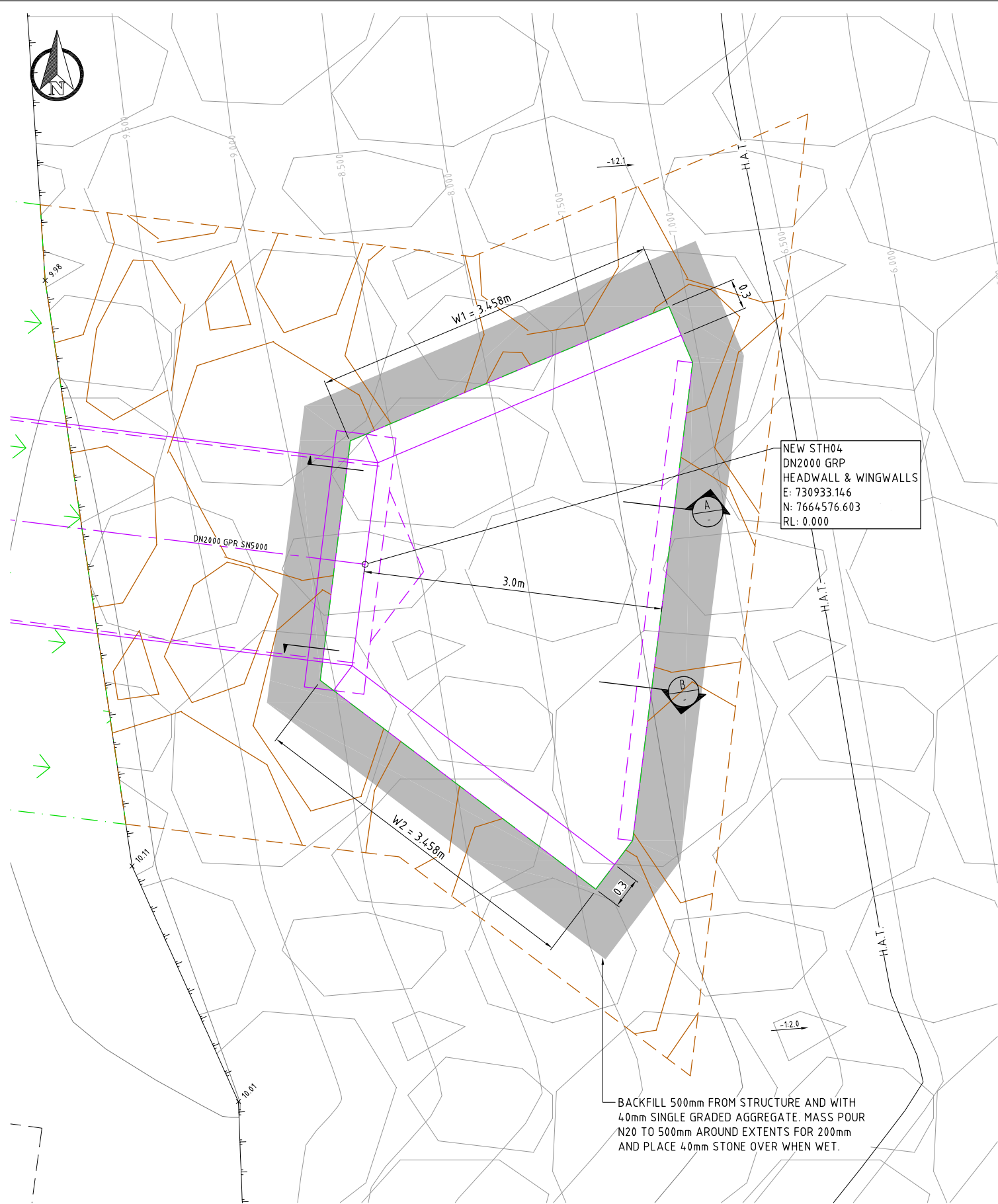
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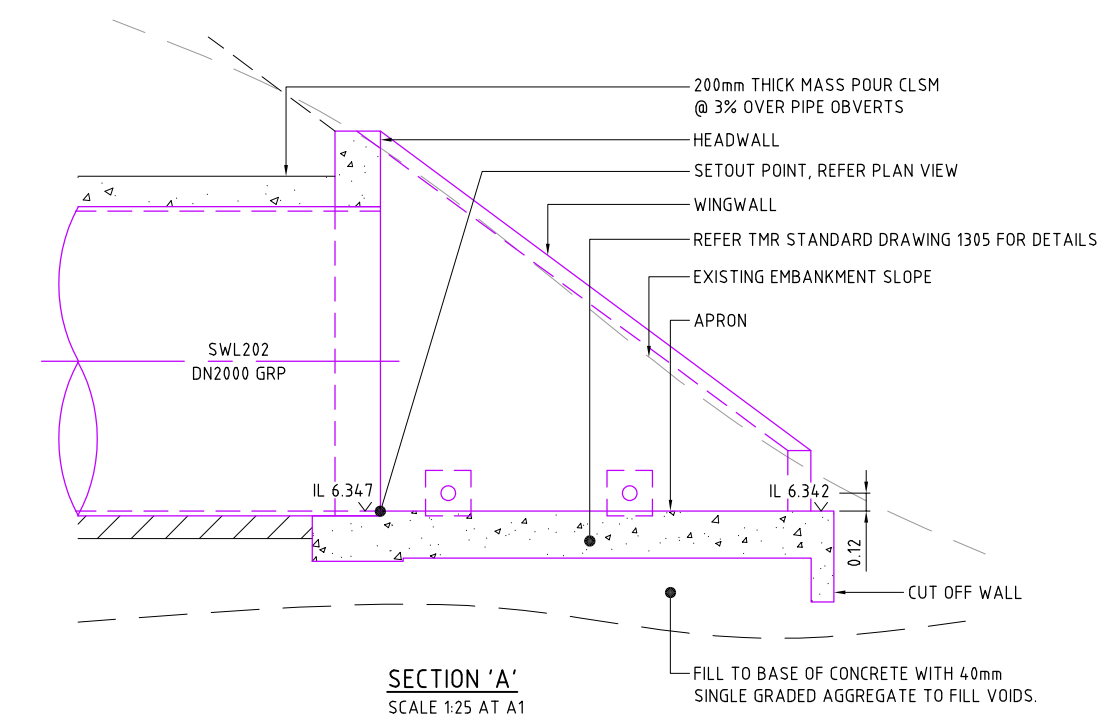
QSL NORTH QUEENSLAND BULK PORTS CORPORATION

Client				QLD SUGAR LIMITED (QSL)			
Project				QSL MBST STORMWATER/SWEETWATER OUTLET REALIGNMENT			
Designed	SB	Approved by	Title	Job No.	Drawing No.	Rev	
Drawn	TM	Checked	BH	17355.1	C09	B	
By	Date	RPEQ		TENDER			

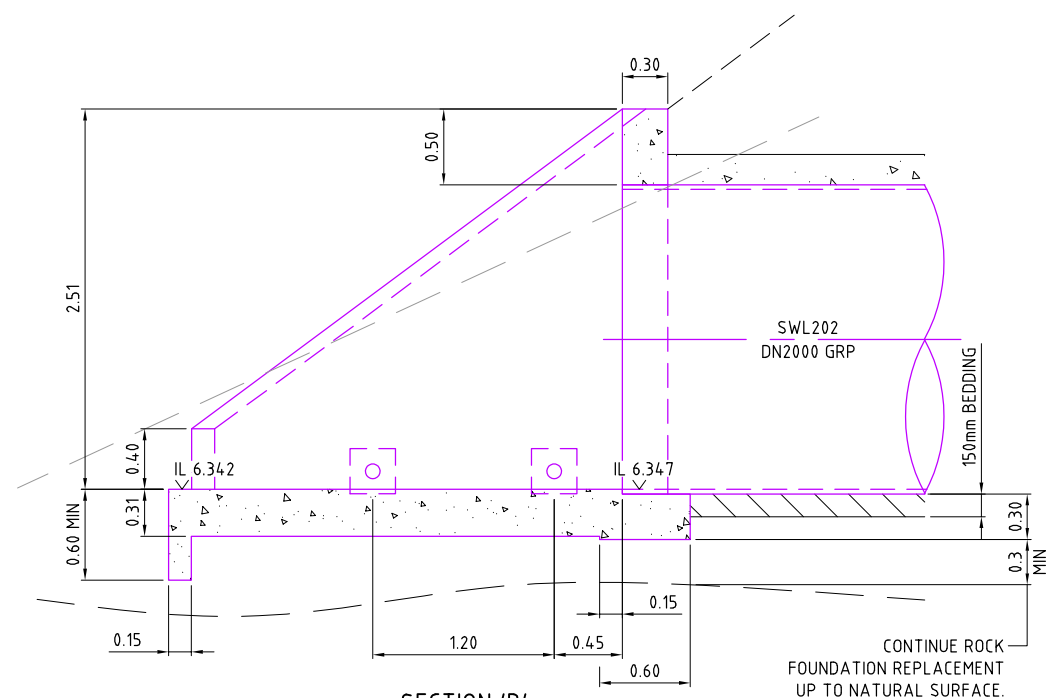
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HEADWALL DETAILS - PLAN VIEW
SCALE 1:25 AT A1



SECTION 'A'
SCALE 1:25 AT A1



SECTION 'B'
SCALE 1:25 AT A1

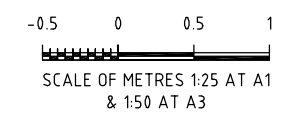
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 1711-2826 SRA
Date: 17 January 2018

NORTH QUEENSLAND BULK PORTS CORPORATION
APPROVED SUBJECT TO CONDITIONS
NQB ref: PL/04/02/00004
Signed: [Signature]
Date: 30 January 2018

PROJECT DATUM
HORIZONTAL: GDA94 ZONE 55
VERTICAL: LAT (AHD = LAT + 2.941)
SURVEYED: OCT 2017

NO FULL SIZE ROCK ARMOUR TO BE PLACED DIRECTLY ON PIPE. OVERLAY HEADWALL OR WINGWALLS.

REFER TO TMR STANDARD DRAWING 1305 FOR ALL OTHER CONSTRUCTION DETAILS. DETAILS ON THIS PLAN SUPERCEDE THE STANDARD DRAWING.



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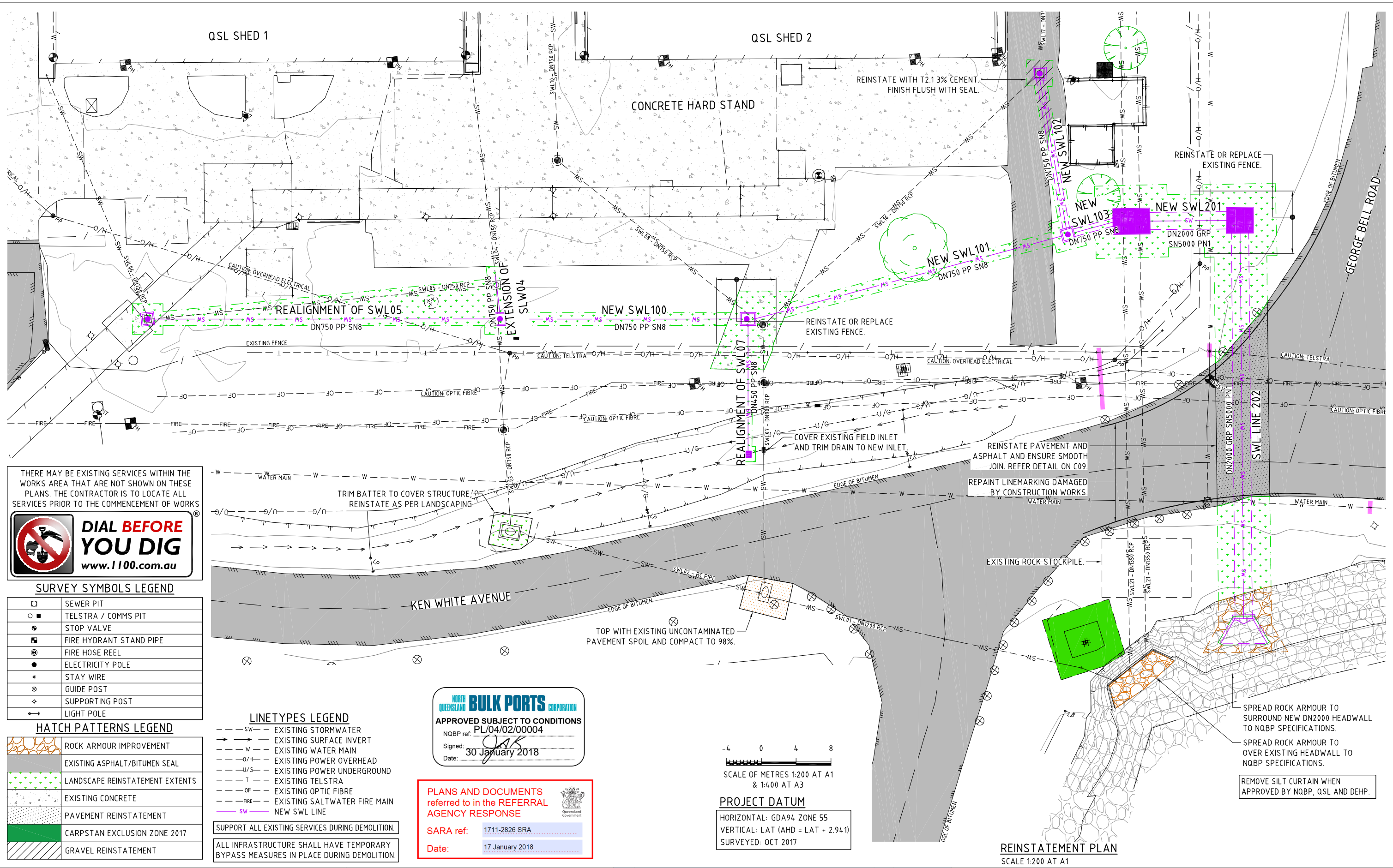
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Rev	Amendments	By	Date	RPEQ
C	ISSUED FOR TENDER - ADDENDUM 1	TM	30/11/2017	
B	ISSUED FOR TENDER	TM	22/11/2017	
A	PRELIMINARY ISSUE - TIDAL WORKS APPLICATION	TM	17/11/2017	

Client		QLD SUGAR LIMITED (QSL)		
Project		QSL MBST STORMWATER/SWEETWATER OUTLET REALIGNMENT		
Designed	SB	Approved by	Title	
Drawn	TM		STORMWATER DN2000 HEADWALL PLAN & DETAILS	
Checked	BH		Job No.	Drawing No.
			17355.1	C10
			TENDER	
				Rev
				C

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THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS

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SURVEY SYMBOLS LEGEND

□	SEWER PIT
○	TELSTRA / COMMS PIT
●	STOP VALVE
■	FIRE HYDRANT STAND PIPE
⊙	FIRE HOSE REEL
●	ELECTRICITY POLE
*	STAY WIRE
⊗	GUIDE POST
⊕	SUPPORTING POST
⊖	LIGHT POLE

HATCH PATTERNS LEGEND

	ROCK ARMOUR IMPROVEMENT
	EXISTING ASPHALT/BITUMEN SEAL
	LANDSCAPE REINSTATEMENT EXTENTS
	EXISTING CONCRETE
	PAVEMENT REINSTATEMENT
	CARPSTAN EXCLUSION ZONE 2017
	GRAVEL REINSTATEMENT

LINETYPES LEGEND

- SW --- EXISTING STORMWATER
- → → EXISTING SURFACE INVERT
- W --- EXISTING WATER MAIN
- O/H --- EXISTING POWER OVERHEAD
- U/G --- EXISTING POWER UNDERGROUND
- T --- EXISTING TELSTRA
- OF --- EXISTING OPTIC FIBRE
- FIRE --- EXISTING SALTWATER FIRE MAIN
- SW --- NEW SWL LINE

SUPPORT ALL EXISTING SERVICES DURING DEMOLITION.
ALL INFRASTRUCTURE SHALL HAVE TEMPORARY BYPASS MEASURES IN PLACE DURING DEMOLITION.

NORTH QUEENSLAND BULK PORTS CORPORATION
APPROVED SUBJECT TO CONDITIONS
PL/04/02/00004
NQB ref: *JAK*
Signed: *JAK*
Date: 30 January 2018

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

SARA ref: 1711-2826 SRA
Date: 17 January 2018

SCALE OF METRES 1:200 AT A1 & 1:400 AT A3

PROJECT DATUM
HORIZONTAL: GDA94 ZONE 55
VERTICAL: LAT (AHD = LAT + 2.941)
SURVEYED: OCT 2017

REINSTATEMENT PLAN
SCALE 1:200 AT A1

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web: www.fortisem.com.au

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				Client				QLD SUGAR LIMITED (QSL)				
				Project				QSL MBST STORMWATER/SWEETWATER OUTLET REALIGNMENT				
B		ISSUED FOR TENDER - ADDENDUM 1		TM	30/11/2017	Designed	SB	Approved by	Title	Job No.	Drawing No.	Rev
A		ISSUED FOR TENDER		TM	22/11/2017	Drawn	TM					
Rev		Amendments		By	Date	Checked	BH	REINSTATEMENT PLAN		17355.1	C14	B
										TENDER		

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