



## Gladstone Ports Corporation

*Growth, Prosperity, Community.*

GPC Document No. 1540554  
GPC Ref: DA2019/07  
Your Ref.:

10 October 2019

Arete Australia  
on behalf of Central Queensland University  
c/- Russell Schuler  
Zone Planning Group  
PO Box 5332  
GLADSTONE QLD 4680

Email: [rschuler@zoneplanning.com.au](mailto:rschuler@zoneplanning.com.au)

Dear Mr Schuler

### PORT APPLICATION DECISION NOTICE – APPROVAL WITH CONDITIONS – DA2019/07

(GIVEN UNDER 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 **11 September 2019**.

Application Number:	DA2019/07
Applicant Name:	Arete Australia on behalf of Central Queensland University
Applicant Contact Details:	Russell Schuler Zone Planning Group PO Box 5332 2/172 Goondoon Street GLADSTONE QLD 4680 Email: <a href="mailto:rschuler@zoneplanning.com.au">rschuler@zoneplanning.com.au</a>
Approvals Sought:	Port Application for CQU seagrass research facility
Details of Proposed Development:	Seagrass research facility including seagrass mesocosm system
Location Street Address:	212 Alf O'Rourke Drive GLADSTONE QLD 4680
Location Real Property Description:	Lease 213 on CP883524 in Lot 210 on SP120888 and Lot 209 on SP120888
Land Owner:	Gladstone Ports Corporation Limited and Department of Natural Resources Mines and Energy
Present Zoning & Precinct	Strategic Port Land – Marine Industry Precinct

## 2. Details Of Proposed Development

Seagrass research facility including roofed seagrass mesocosm system (two sheds) and associated seawater intake and outlet pipes and pumps. The development includes a new seawater intake pipe and pump attached to an existing jetty.

## 3. Details Of Decision

This development application was **decided** on **10 October 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) Port Application for undertaking work in, on over or under premises that materially affects the premises or their use including excavating or filling (*GPC Land Use Plan 2012v2*).

## 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. 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
<b>Aspect of development: Port Application</b>				
Site Plan	Jim Moehead	31/07/2019	Draw. No. 190505-A1	B
Locality Plan and Roof Drainage Plan	Arete		Draw. No. WD-01-SK	A
Part Site	Jim Moehead	15/08/2019	Draw. No. 190505-A2	B
Layout (as amended per email 8/10/2019)	Jim Moehead	15/08/2019	Draw. No. 190505-A3	B
Diagrammatic Layout	Jim Moehead	15/08/2019	Draw. No. 190505-A4	B
General Notes	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-2	
Layout	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-3	

Drawing/report title	Prepared by	Date	Reference no.	Version
Specification Sheet	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-4	
Bracing	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-5	
Concrete Piers	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-6	
Connection Details Page 1 of 4	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-7	
Connection Details Page 2 of 4	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-7	
Connection Details Page 3 of 4	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-7	
Connection Details Page 4 of 4	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-7	
Flashing Fixing Details	TNG Engineering Pty Ltd	05/09/2019	TGLA109958-8	
Construction Environmental Management Plan	Kane Constructions Pty Ltd	23/09/2019	EMS-SYS-SCFH3-A2	2

## 9. Currency Period for the Approval

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

- For Port Applications this approval lapses 6 years after this approval decision date.

## 10. Rights of Appeal

No legislated appeal rights are afforded with this decision notice in relation to the Port Application as the application was not made under the provisions of the *Planning Act 2016*

For further information please contact Judy Horsfall, Planning Officer on 07 4976 1314 or via email [horsfallj@gpcl.com.au](mailto:horsfallj@gpcl.com.au)

Yours sincerely



**Anthea Bennett**  
**Acting Manager Planning and Development**  
10 October 2019

Enc. Attachment 1: Conditions of Approval  
Part 1 – Conditions imposed by the assessment manager

Attachment 2: Approved plans and specifications

# 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 GPC Land Use Plan 2012v2 – Port 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 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.
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 & PLANNING

7. The mesocosm sheds are to be located 3m from the side property boundary unless otherwise approved in writing by GPC.
8. The proponent is required to apply for and obtain from GPC a Permit to Dig/Excavate prior to commencing works by contacting Mr Owen Barton, Port Infrastructure Asset Manager on 4976 1332. All reasonable measures must be taken to identify and protect existing services recorded or otherwise, and where necessary the proponent will submit a plan to GPC for approval to adjust any existing services found during this excavation that was not originally shown on the proposed plans.
9. 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, under or over Port land associated with the activity.
10. The proponent is required to comply with the requirements for excluded tidal works in relation to works on the existing jetty.
11. The proponent must obtain certification for plumbing and drainage work and for building work as required by legislation.
12. 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 their cost and expense. At the end of the construction, the proponent shall provide GPC with written confirmation that the seabed is clear of foreign materials upon completion of construction.

13. If, as a result of the works, or other cause attributable to the proponent any bank or tidal structure is displaced, the proponent at its cost and expense shall restore the bank or structure to its former condition and take such other action as is necessary to ensure the stability of the bank or structure to the satisfaction of the Regional Harbour Master.
14. 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.
15. The hours for the construction of the facility (i.e. operation of any machinery and/or other equipment) shall be restricted to between 6.30am and 6:30pm Monday to Friday and 6.30am to 12.30pm Saturday. No works shall be undertaken on Sunday or on public holidays. Any variations to these times will be subject to the written approval of GPC.

## **ENVIRONMENT**

### **Construction Environmental Management Plans**

16. Prior to construction phases of the works commencing on site, a Construction Environmental Management Plan (CEMP) specific to these works, is 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.

### **Operational Environmental Management Plan**

17. Prior to operational works commencing on site, an Operational Environmental Management Plan (OEMP) (or its equivalent) specific to operational works must be submitted to GPC for approval.

The operational works must be undertaken in accordance with the approved OEMP that ensures:

- (a) environmental risks are identified, managed and continually assessed; and
- (b) that staff are trained and aware of their obligations under the OEMP; and
- (c) that reviews of environmental performance are undertaken at least annually; and
- (d) any amendments to the OEMP are to be submitted to GPC for review and approval.

### **Incident notification**

18. 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.

# ATTACHMENT 2: APPROVED PLANS AND SPECIFICATIONS

### GENERAL NOTES

These documents show the general arrangement of the building and include some items not supplied (refer to the quotation for nomination of all items to be provided). All items not nominated therein shall be supplied and installed by others.

### DESIGN CRITERIA

These building plans have been prepared to comply with the standards nominated in the engineer's letter. All plans are not to Scale.

The plans provided here are the latest at the time of print. Earlier plans provided may have become outdated due to engineering changes and should not be used. The plans and drawings are extensive and give all the information needed for a competent person to erect the building. The building is not designed to stand up by itself when it is partially complete. Consequently, construction bracing is critical during erection.

The owner has been requested to check off the BOM after the building delivery. You should check that you are able to locate all materials nominated in the BOM. You should also confirm that the length and size (including thickness), nominated in the BOM is what has been provided. Any missing items are the responsibility of the client once correct delivery has been confirmed as per Terms and Conditions of Sale.

The structure has been designed to allow for less than 50% of the cross-section exposed to the wind under the roof to be blocked by goods or materials in accordance with AS/NZS1170.2 2011. Blocking more than 50% of the cross-section under the roof with goods or materials will change the loads on the structure which have not been allowed for.

### ADDITIONAL DOCUMENTATION TO BE SUPPLIED BY PURCHASER/OWNER

- \*The Purchaser/Owner is responsible for:
  - \*Provision of Soils Report for the site and in the building area on which the building is to be erected
  - \*Site/Drainage Plans
  - \*Any other plans not covered by these engineering plans requested by the local Council or the authority

### BUILDING CONSTRUCTION REQUIREMENTS

The Purchaser/Owner is to be ensured that all building construction is carried out in accordance with the Plans, the Construction Manual and the Bill of Materials (BOM).

### PIER DETAILS - GENERAL

- \* The minimum size of Piers under the columns and End Wall Mullions are nominated on the Material Specifications Plan.
- \* Pier Reinforcement: for any piers over 1100mm, deformed bar to within 100mm of base and minimum 75mm top cover. Minimum side cover 75mm, maximum 100mm. Rod to be caged horizontally at least twice and at a maximum of 300mm spacing. Tie with a minimum of 6mm diameter cage tie. Where pier diameter is less than 450mm diameter, use 4 N12. For diameters equal to and over 450mm, use 4 N16. \* Shed design has the columns embedded into the concrete 400mm.
- \* This measurement is from the top of the desired finished level of the building.
- \* Footing design covers sites with a minimum of 100kPa safe bearing capacity soil
- \* The footing designs have been calculated with adhesion values of 0kPa, 25kPa and

- 50kPa for clay soils and dense sand soils only.
  - \* A site specific geotechnical investigation has not been performed. The builder will need to verify the soil type and conditions.
  - \* Site conditions different to those specified require a modified design.
  - \* Sub grade shall be excavated and compacted to a minimum of 100% standard dry density ratio and within 2% of the OMC to comply with AS2159.
  - \* Designs are in accordance with AS 3600:2009.
  - \* All concrete to be in accordance with AS 3600:2009. Minimum 25 Mpa, with 80mm slump.
  - \* Piers should be cured for 7 days before commencing construction of the building.\*
- Second Pour Jointing (refer to construction manual):
1. Surface of first pour must be scabbled.
  2. All loose debris must be vacuumed from hole.
  3. Apply heavy coat of bondcrete or similar adhesive prior to second pour.
  4. Apply suitable protective coating to the embedded portion of the columns.
- \* Where columns or end wall mullions have been removed, piers are not required.
  - \* End wall mullion spacing may move due to location of openings or doors. Check layout and component position plan, and relocate piers as required.

### BRACING NOTES

- \* Refer to Connection Details.
- \* Knee bracing clearance from FFL is X = Main Building; 2.680m (Left Side), 2.333m (Right Side).
- \* All Cross Bracing is achieved with 1.2mm Strap G450.
- \* Cross bracing is to be fixed taut and secured with 14.20 x 22 frame screws at each end, quantity as per connection details.
- \* All Columns and End Wall Mullions are fixed Column in Concrete.
- \* Fly bracing to be fixed to the purline/girts on all mid portal rafters, columns and end wall mullions. Fly bracing is to be fitted to every second purline/girt, or, on every one, where the spacing between fly braces would exceed the maximum specified below for the relevant column/rafter size:

C190 - maximum 1800mm spacing  
C290, C250 - maximum 2400mm spacing  
C390 - maximum 2800mm spacing  
C490 - maximum 2800mm spacing

Initial measurement is from the haunch of the column/rafter, and from the rafter for any end wall mullions.

- \* Open bays to have fly bracing fitted to every available girt supporting the header sheets.
- \* All bracing strap ends to be located as close as practical to structural members' (columns, rafters, mullions) centerline.

### BOLTS

- \* Unless otherwise nominated, all bolts are grade 4.6
- \* All tensioned bolts shall be tensioned using the part turn method (refer to AS4100). For the erector, full details are in the construction manual.

### OTHER MATERIALS NOTES

- \* All Sheeting, Flashing and framing screws are Climaseal 4.
- \* All purfin material has Z350 zinc coating with minimum strength of 450MPa.

APPROVED

Purchaser Name: Vane Constructions

Site Address: GLADSTONE QLD 4680 Australia

Drawing # TGLA190058-2

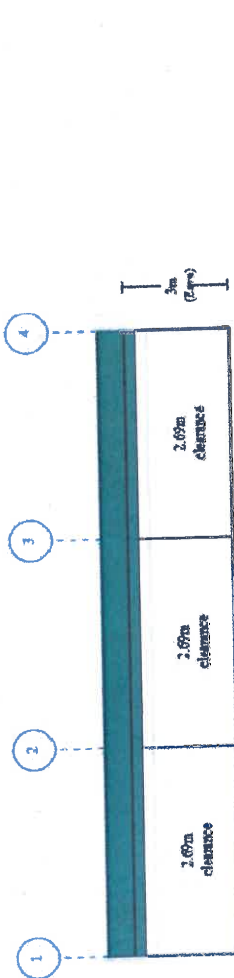
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General Notes  
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Page 1 of 1  
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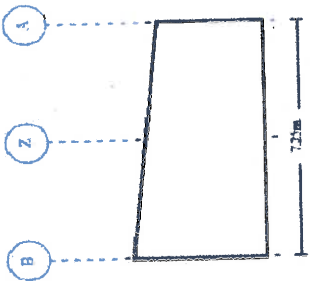
Seller: The Shed Company Gladstone  
Shed Company Pty Ltd  
Phone: (07) 4972 0880  
Fax: (07) 4972 1218  
Email: [gladstone@theshedcompany.com.au](mailto:gladstone@theshedcompany.com.au)

TNC ENGINEERING PTY LTD  
ACN: 510 855 280  
ME/Arch (Registered NER Structural & Civil) 2741240  
QLD; Regd No. 13750; VIC: EC44984; TAS: CO8888 N.T.: 226521ES;  
Practising Professional Structural & Civil Engineers

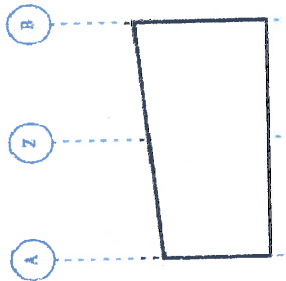
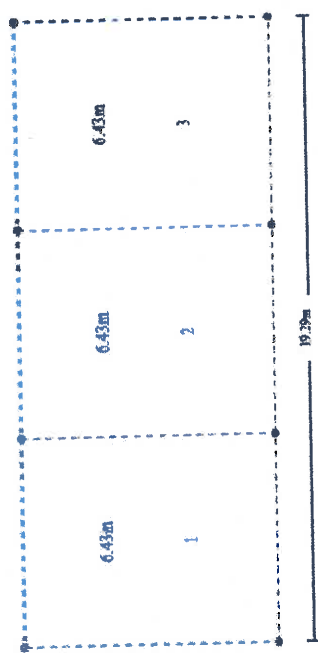
Signature:  R. Nancarrow  
Date: 05/09/19



Left Side



Right End



Left End



Right Side

**APPROVED**

Purchaser Name: K&N Constructions

Site Address: CLIFSTONE QLD 4680 Australia

Drawing # TCA180068-3

Print Date: 05/06/19

**Layout**  
**NOT FOR CONSTRUCTION**  
 Not to Scale  
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Seller: THE Steel Company (Gleghorse)  
 Tekapo Pty Ltd  
 Phone: (07) 4972 8880  
 Fax: (07) 4972 1218  
 Email: gleghorse@steelcompany.com.au

TNC ENGINEERING PTY LTD  
 ACN 619 883 280  
 ME Aust. (Registered NER Structural & Civil 2741248)  
 CLD: Reg. No. 13736; VIC: ECAR 17963; QLD: ECAR 17963  
 Practising Professional Structural & Civil Engineers

Signature: *R. Nancarrow* R. Nancarrow  
 Date: 05/06/19



**MATERIAL SPECIFICATIONS**

For further information regarding the unshaded values shown, refer to the General Notes

Categories	Building Dimensions			
	Span	Pitch	Height	Grid(s)
Main Building	7.25	10.25	06	A-B   Portal(s) 1-4

Grid / Portal Number	Portal Frame Elements			
	1	2	3	4
Columns	A	2C20015	2C20015	2C20015
Beams	B	2C20015	2C20015	2C20015
Roof Braces	A-B	C20015	C20015	C20015
Knee Braces	B-A	C18015 @ 1.7m	C15015 @ 1.7m	C20015 @ 1.7m

Grid / Portal Number	Bay Section Elements			
	1	2	3	Maximum
Roof Purlin Spacing (Rows)	A-B	6.43	Z15012	6.43
Roof Purlin Spacing (End)	A-Alex	Z15012	Z15012	Z15012
Roof Purlin Spacing (Internal Spacing)	A-B	1.041	1.041	1.041
End Girts Spacing (End)	A	2Z15012	2Z15012	2Z15012
End Girts Spacing (Internal)	A	0.21	0.21	0.21
Side Girts Spacing (End)	B	0.574	0.574	0.574
Side Girts Spacing (Internal)	B	0.21	0.21	0.21

End Girts Spacing (Internal)	End Bay Section Elements	
	A-Z	Maximum
Z-B	1.250	1.250
A-Z	1.450	1.450
Z-B	1.450	1.450

Category	Colour	Product
Roof Sheeting	COL ORBOND 0.55	Clear Fibreglass Sheeting
Roof Flashing	COL ORBOND 0.55	Blue Slope 0.55 BMT
Wall Sheeting	COL ORBOND 0.55	Blue Slope 0.55 BMT
Wall Flashing	COL ORBOND 0.55	Blue Slope 0.55 BMT

Adhesion (kPa)	Soil Description	Diameter (mm)	Pier Spacing	
			BPI (mm)	Depth - when NO Slab
0	Sandy Soil	300	1500	
25	Soft to Firm Clay	300	1500	
50	Stiff to Very Stiff Clay	300	1200	
		450	1100	
		600	1100	


APPROVED

Purchaser Name: Kene Constructions  
 Site Address: GLDSTONE QLD 4680 Australia  
 Drawing # TGLA190058 - 4  
 Print Date: 05/09/19

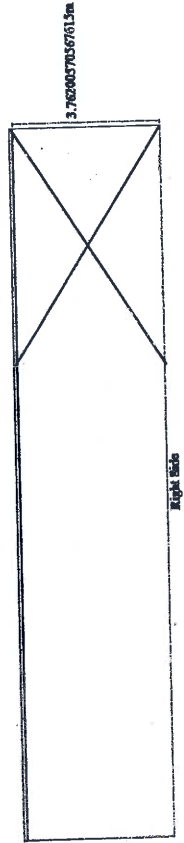
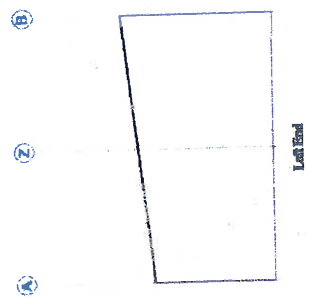
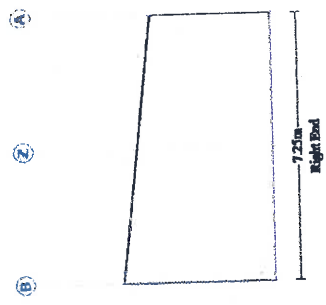
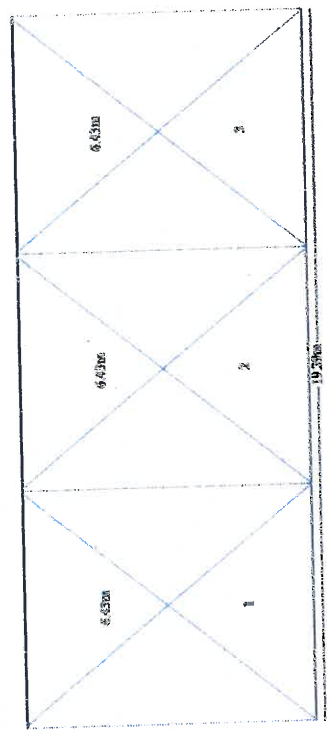
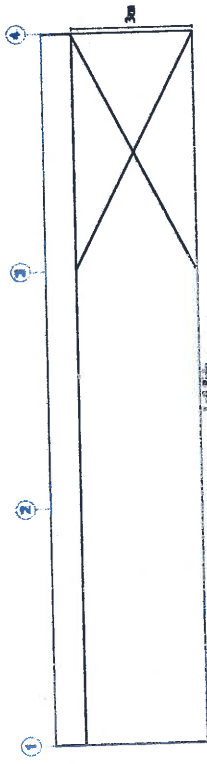
**Specification Sheet**  
**NOT FOR CONSTRUCTION**  
 Page 1 of 1  
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Seller: THE Skek'P Company Gladstone  
 The Skek'P Pty Ltd  
 Phone: (07) 4872 9890  
 Fax: (07) 4872 1219  
 Email: gls@skp.com.au

TNC ENGINEERING PTY LTD  
 ACN: 610 835 280  
 ME Austl. (Registered NER Standard & Civil) 2741210  
 QLD - RPEO No. 13750; VIC - EC44884; TAS - CC2888; NT - 2352165;  
 Practising Professional Structural & Civil Engineers

Signature:  R. Nancarrow  
 Date: 05/09/19

Cross Bracing is achieved with 1.2mm Strip. Refer to Connection Details.



**APPROVED**

TMC ENGINEERING PTY LTD  
 ACN: 619 885 280  
 ME No: (Registration No.) 2741248  
 MD: (Registration No.) 22562TES;  
 Practising Professional Structural & Civil Engineers  
 Signature: *R. Narasimh* R. Narasimh  
 Date: 05/09/19

Seller: THE Steel Company Gladstone  
 Trading Pty Ltd  
 Phone: (07) 4972 8980  
 Fax: (07) 4972 1218  
 Email: gladstone@steelcompany.com.au

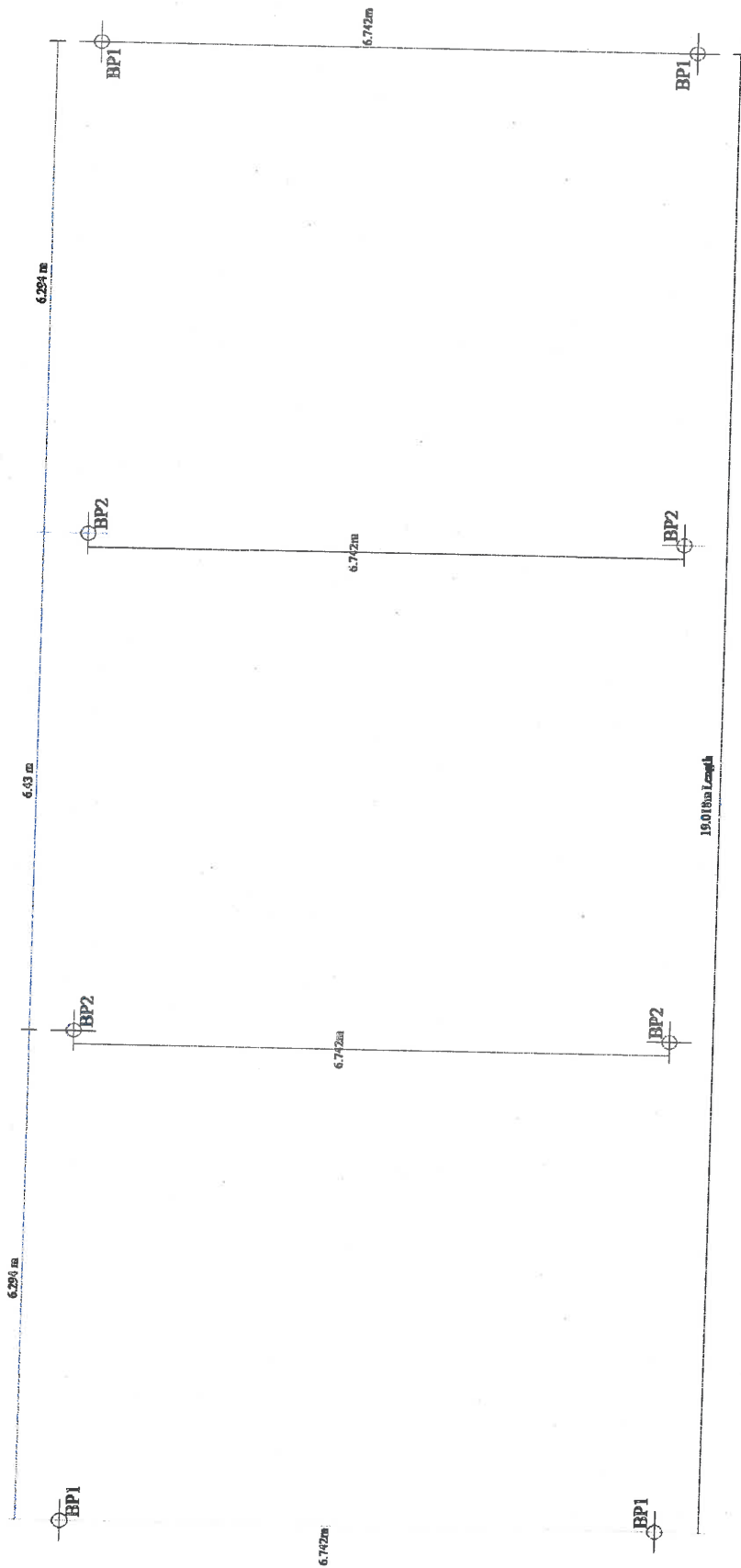
**Bracing**  
**NOT FOR CONSTRUCTION**  
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Purchaser Name: Kava Constructions

Site Address: GLADSTONE QLD 4680 Australia

Drawing # TEL1800058-5  
 Pwd Date: 05/09/19

These dimensions are provided as a guide only. It is the responsibility of the contractor to confirm that all dimensions are correct.  
Refer to Material Specifications Plan for BPI dimensions.



**APPROVED**

Purchaser Name: Kane Constructions

Site Address: GLENSTONE QLD 4680 Australia

Drawing # TGLA180038 - 6

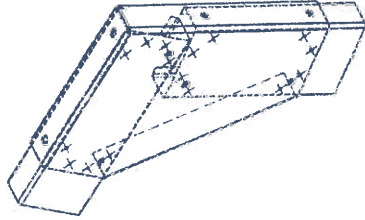
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**Concrete Piers**  
PIER MEASUREMENT ONLY. NOT FOR CONSTRUCTION  
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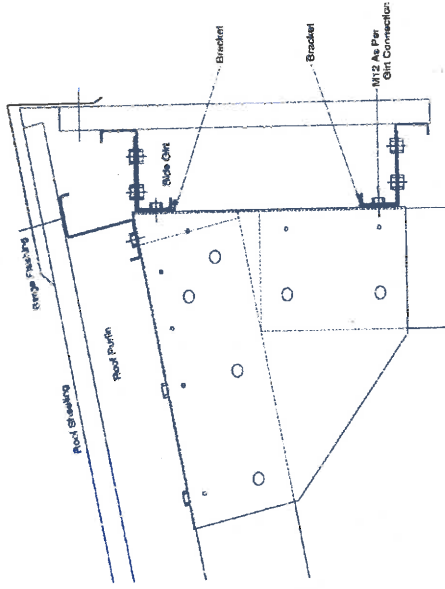
Seller: The Sleek Company Gladstone  
Taslog Pty Ltd  
Phone: (07) 4972 8950  
Fax: (07) 4972 1216  
Email: gladstone@thesleekcompany.com.au

TNC ENGINEERING PTY LTD  
ACN: 610 855 280  
RUE AVE. (Registered NER Structural & CIVIL) 2741240  
CLD: PECD No. 13750, VC: EC44964, TAS: CC6668, NT: 225521ES;  
Practising Professional Structural & Civil Engineers

Signature: *R. Nancarrow*  
R. Nancarrow  
Date: 05/09/19

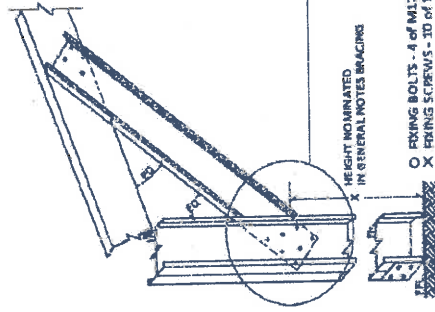


○ FIXING BOLTS - 8 of M12 x 30 (8.8)  
 X FIXING SCREWS - 16 of 14.20 x 22  
**HAUNCH BRACKET - C200, 6"**

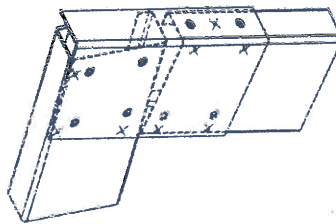


**HEADER GIRT CONNECTION - OPEN BAYS**

APPROVED



**KNEE BRACE FOR C200 COLUMN  
BACK TO BACK COLUMN - SINGLE RAFTER**



○ FIXING BOLTS - 8 of M12 x 30 (8.8)  
 X FIXING SCREWS - 8 of 14.20 x 22  
**HAUNCH BRACKET - C200, 6"**

TAC ENGINEERING PTY LTD  
 ACN: 610 855 280  
 ME Aust. (Registered NER Structural & Civil) 2741240  
 CLD: PPSQ No. 13789; VC: EC44864; WS: CCB886; NT: 255521ES;  
 Practising Professional Structural & Civil Engineers

Signature: *R. Nancarrow* R. Nancarrow  
 Date: 05/09/19

Sales: The Steel Company Gladstone  
 Trading Pty Ltd  
 Phone: (07) 4972 6930  
 Fax: (07) 4972 1218  
 Email: gladstone@thesteelcompany.com.au

**Connection Details**  
 NOT FOR CONSTRUCTION  
 Not to Scale  
 Page 1 of 4  
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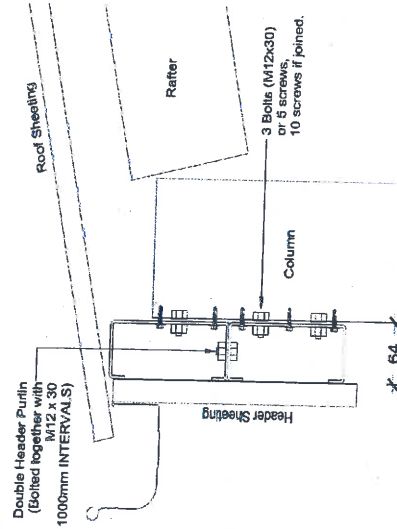
Purchaser Name: Kiew Constructions

Site Address: GLADSTONE CLD 4680 Australia

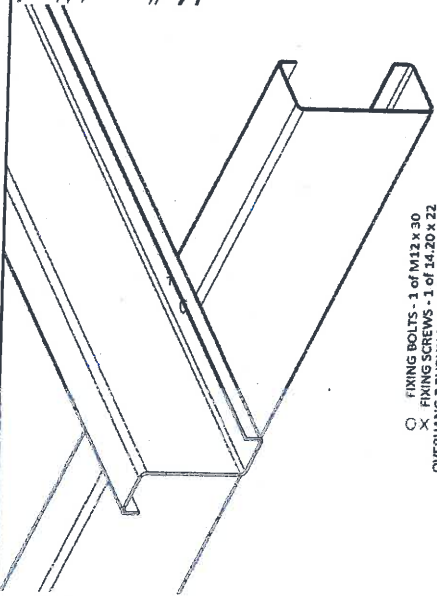
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Print Date: 05/09/19

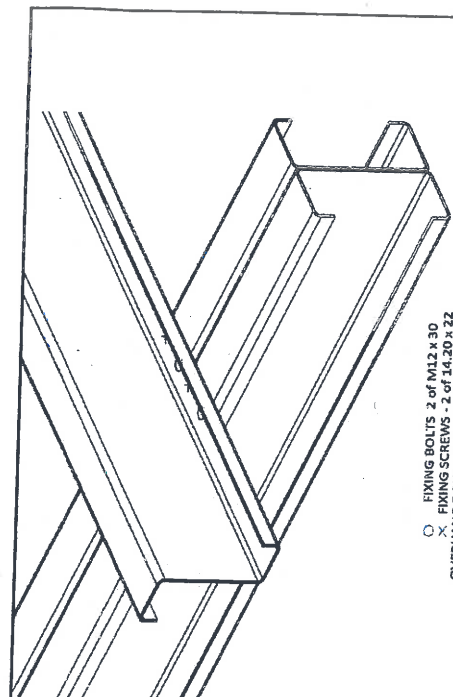
*Handwritten note:* towards the other side of the roof should not be a light to night beams prepared.



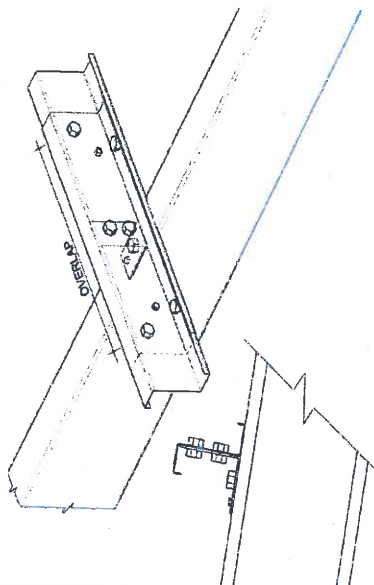
**HEADER PURLIN CONNECTION - OPEN BAYS**



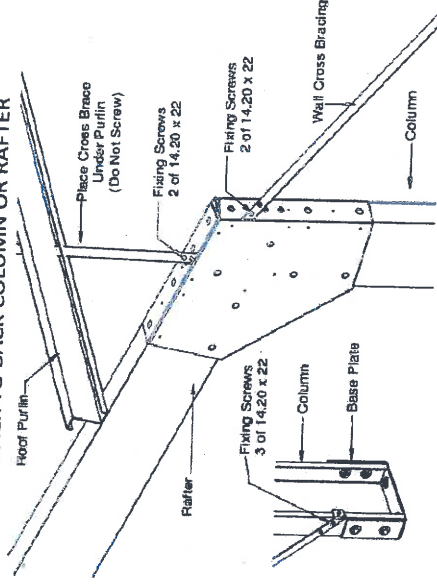
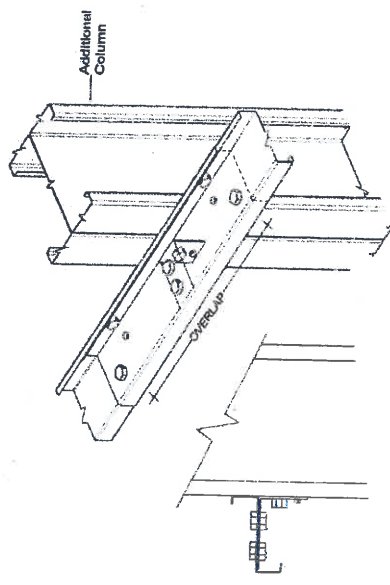
**PURLIN & SIDE GIRT END WALL FIXING - Z PURLIN SINGLE COLUMN OR RAFTER**



**PURLIN & SIDE GIRT END WALL FIXING - Z PURLIN BACK TO BACK COLUMN OR RAFTER**



**SINGLE C SECTION COLUMNS OR RAFTERS**



**BRACING CONNECTION**

**APPROVED**

Purchaser Name: Kane Constructors

Site Address: CLADSTONE QLD 4680 Australia

Drawing # TGA180058 - 7

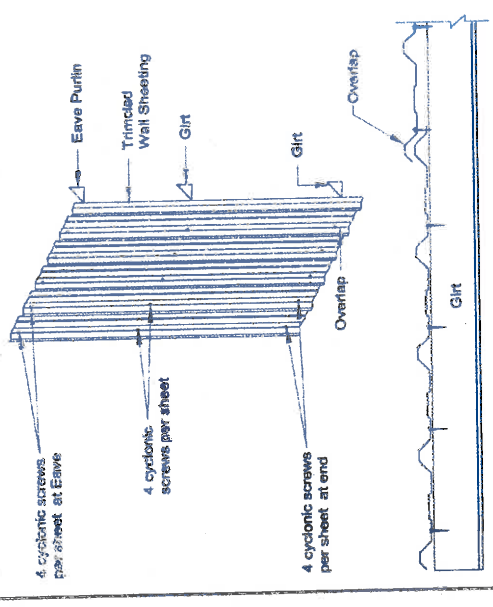
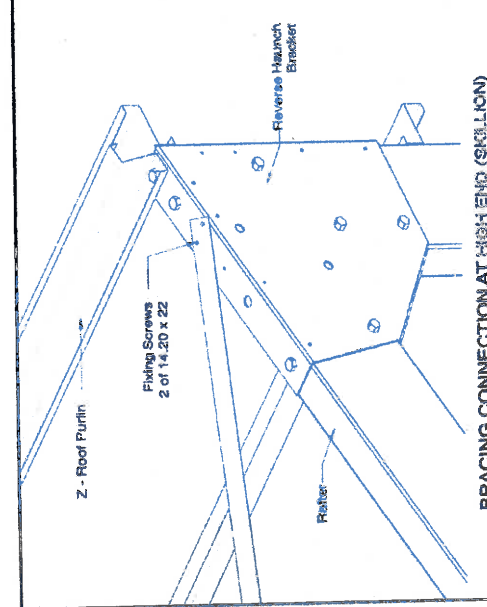
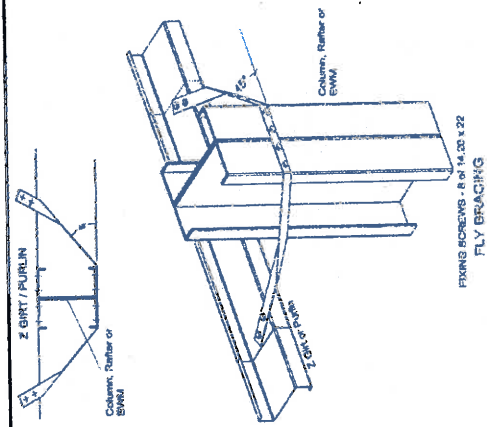
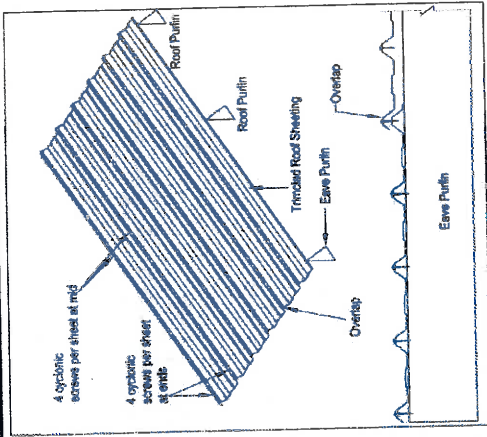
Print Date: 05/09/19

**Connection Details**  
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 Not to Scale  
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Seller: THE ShearFP Company Gladstone  
 Telling Pty Ltd  
 Phone: (07) 4972 9990  
 Fax: (07) 4972 1218  
 Email: gladstone@shearfpcompany.com.au

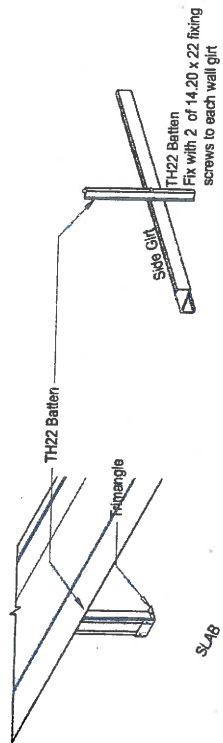
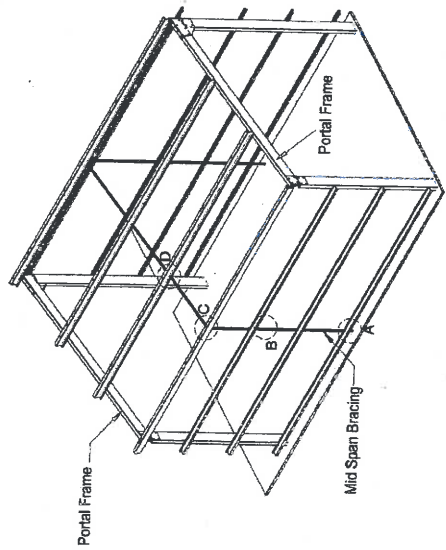
TNC ENGINEERING PTY LTD  
 ACN 610 855 260  
 ME/Est. (Registered NER Structural & Civil) 2741240  
 ID: 1052161, 13750, VIC: EC44684, TAS: CO8688, NT: Z5521ES;  
 Practising Professional Structural & Civil Engineers

Signature: *[Signature]*  
 R. Nancarrow  
 Date: 05/09/19



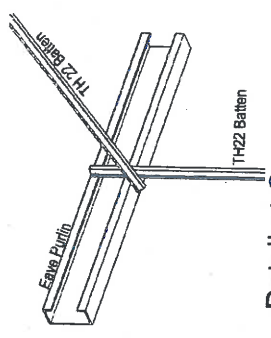
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<p><b>TMC ENGINEERING PTY LTD</b>          ACN: 610 855 280          ME Aust. (Registered NER Structural &amp; Civil) 2741246          QLD: Reg No. 13736; VIC: EC44861; TAS: CC8868; NT: 22562185;          Practising Professional Structural &amp; Civil Engineers</p> <p>Signature: <i>R. Nardaraw</i>          R. Nardaraw          Date: 05/08/19</p>	<p>Seller: TMC Steel Company/Gladstone          Toleco Pty Ltd          Phone: (07) 4872 8690          Fax: (07) 4872 1218          Email: gladstone@tmcsteelcompany.com.au</p>	<p><b>Connection Details</b>          NOT FOR CONSTRUCTION          Not to Scale          Page 3 of 4          © Copyright Steeltek Pty Ltd</p>	<p>Purchaser Name: Kave Constructions          Site Address: GUDSTONE QLD 4680 Australia          Drawing #: TCA190088 - 7          Print Date: 05/08/19</p>
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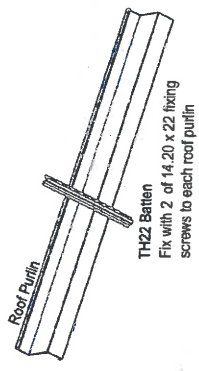


**Detail at A**  
 Fix to bracket with 2 of 14.20 x 22 fixing screws  
 Fix to concrete with 2 x M8-40 Dynabolts  
 PIERS ONLY FINISH @BOTTOM GIRTS

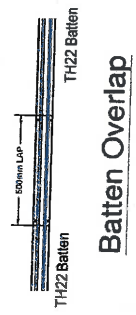
**Detail at B**



**Detail at C**  
 Fix Rafter batten with 2 of 14.20 x 22 screws to Eave Purfin  
 Fix vertical batten with 2 of 14.20 x 22 screws to each eave purfin lip



**Detail at D**



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Note: Mid Span Bracing is located midbay equidistant from each portal frame.  
 To extend battens. Lap battens 50mm with 4 screws

Purchaser Name: Kane Constructors

Site Address: CLADSTONE QLD 4680 Australia

Drawing # TGA190058 - 7

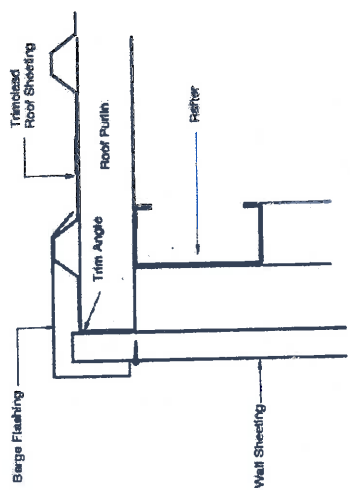
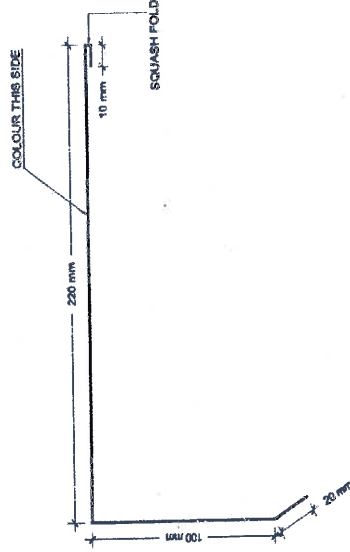
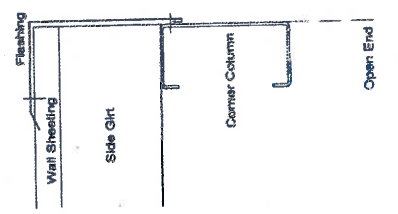
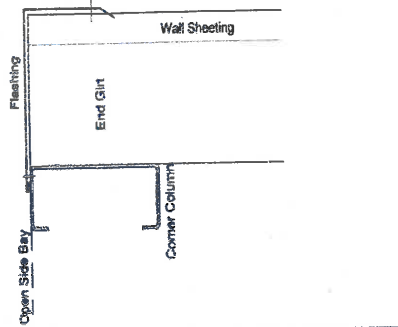
Print Date: 05/09/19

**Connection Details**  
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 Page 4 of 6  
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Seller: THE STEEL COMPANY Gladstone  
 TheSteel Pty Ltd  
 Phone: (07) 6972 9880  
 Fax: (07) 6972 1216  
 Email: gladstone@thesteelcompany.com.au

TNC ENGINEERING PTY LTD  
 ABN: 610 855 260  
 ME/Asst. (Registered NER Structural & CIV) 2741240  
 111/153A No. 13750, VIC: BC44484, TAS: CC0668; NT: 225521ES;  
 Practising Professional Structural & CIV Engineers

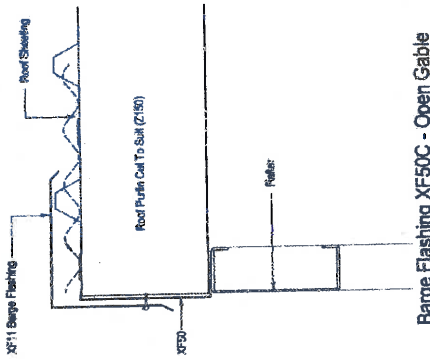
Signature:   
 R. Nincarrew  
 Date: 05/09/19



Flashing XF404 - Connection

XF 404

Barge Flashing XF11 - CT - Sheeting Gable



Barge Flashing XF50C - Open Gable



XF50

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Purchaser Name: Koro Constructions

Site Address: GUDSTONE QLD 4680 Australia

Drawing # TCLA180658-8 Print Date: 05/09/19

Flashing Fixing Details  
NOT FOR CONSTRUCTION  
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Page 1 of 1  
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Seller: The Shed Company Glashier  
Tasman Pty Ltd  
Phone: (07) 4972 8580  
Fax: (07) 4972 1218  
Email: glashier@theshedcompanytasman.au

TNC ENGINEERING PTY LTD  
ACN 519 852 380  
ME Asst. (Registered NBR Structural & Civil) Z71249  
CLD - REG NO. 13765, VIC: BC04684, TNS - CO8868, NT: 225521ES.  
Practising Professional Structural & Civil Engineers

Signature: *R. Nairnarrow*  
R. Nairnarrow  
Date: 05/09/19



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NOTE: GPS COORDINATES TAKEN FROM GOOGLE MAPS AND ARE APPROX. ONLY

**SITE PLAN**  
SCALE 1:500

**PROPERTY DESCRIPTION**

LOT 213 ON CP 883524  
PARISH OF AUCKLAND  
COUNTY OF CLINTON



TITLE: SITE PLAN	
PROJECT: PROPOSED SEAGRASS MESOCOSM	
CLIENT: CQU	
ADDRESS: ALF OROURKE DRIVE GLADSTONE	
DRAWING NO. 190505 - A1 B	
DRAWN: JHM	
SCALE: 1:500	
DATE:	
SITE DESCRIPTION:	
REVISION:	
DATE:	
ISSUE:	
SITE DETAILS FOR:	
30/07/19	

DRAWINGS PREPARED FOR RADAQUA FOR CQU.  
 APPROVED BY: ROHAN SHELL  
 COMMERCIAL BUSINESS MANAGER

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 ythohead - building design & drafting  
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 Lic: 294120 Lic: 294120

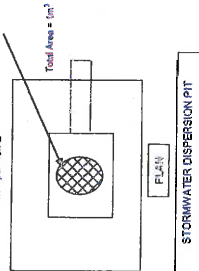




3 1. LOCALITY PLAN  
N.T.S.

**RUBBLE PIT**

MIN 5cm FROM SIDEREAR BOUNDARY  
100mm GRATE  
1m<sup>2</sup> per 40m<sup>2</sup>



**NOTES:-**

- The Rubble Pits have been positioned towards the lower end of the site
- Pits will be at least 500mm from site and rear boundaries
- Pits will be 1m<sup>2</sup> per 40m<sup>2</sup> roof area

**APPROVED**



1 3. PROPOSED ROOF DRAINAGE PLAN  
N.T.S.

**NOTES**  
VERIFY ALL DIMENSIONS AND CHECK LEVELS ON SITE BEFORE COMMENCING WORK. DO NOT SCALE FROM THE DRAWING. THIS DRAWING IS THE PROPERTY OF DESIGN/TEK CONSULTANTS PTY LTD. UNIVERSITY AND SHALL NOT BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF THE UNIVERSITY

AMENDMENTS		
REV	DATE	DESCRIPTION
A	30/09/2019	FOR REVIEW



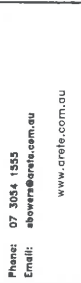
CU University Australia, Bruce Highway, Rockhampton, QLD, 4702  
Shop 4/10 Denham St,  
Rockhampton,  
QLD 4700



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Rockhampton,  
QLD 4701  
Phone: 0749 222880  
Email: mail@design/tek.com.au



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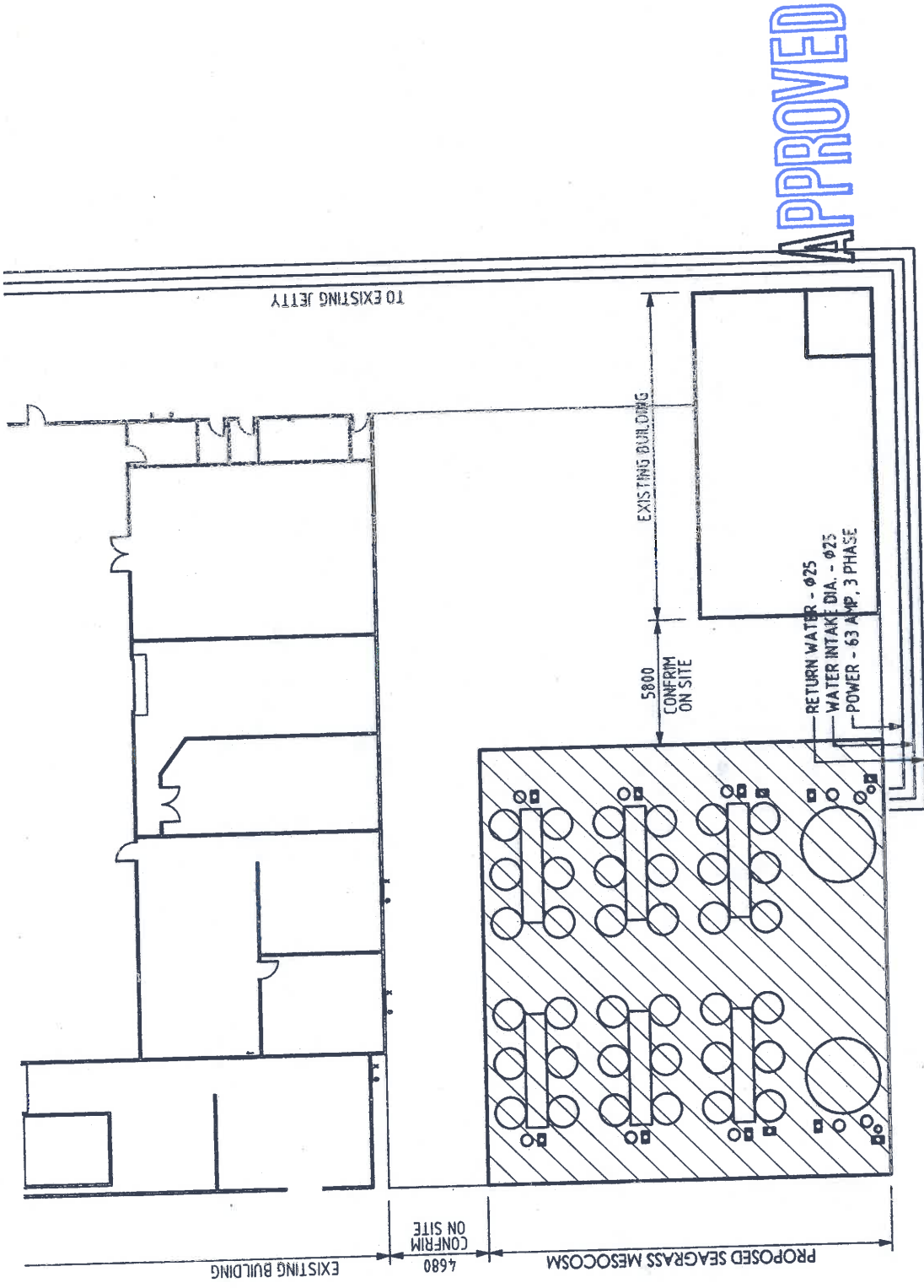


14 Fox Street,  
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QLD 4010  
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Albion,  
QLD 4010  
Phone: 07 3054 1555  
Email: showers@arete.com.au  
www.arete.com.au

ADDRESS: 213 ALF OROURKE DRIVE GLAISTONE  
PROJECT:  
**PROPOSED CIEMRC SHED**

DISCIPLINE:  
**BUILDING DESIGN SERVICES**  
TITLE:  
LOCALITY PLAN & ROOF DRAINAGE PLAN

DATE:	30/09/2019	SCALE:	As Indicated ONA1	DESIGNED BY:	Designer
CUU PROJECT MANAGER:		DRAWN BY:	OR	APPROVED BY:	Approver
CAD FILE NAME:					
CUU PROJECT NO.	1908-01	SHEET NO.:	01 of 01	DRAWING NO.	WD-01-SK
		REVISION:			A



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TITLE:	PART SITE
PROJECT:	PROPOSED SEAGRASS MESOCOSM
CLIENT:	CGU
ADDRESS:	ALF OROURKE DRIVE GLADSTONE
DATE:	19/05/20
BY:	JM
CHECKED:	JM
SCALE:	1:200
DRAWING NO.:	190505
	A2
	B

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APPROVED BY: ROHAN SHELL  
COMMERCIAL BUSINESS MANAGER

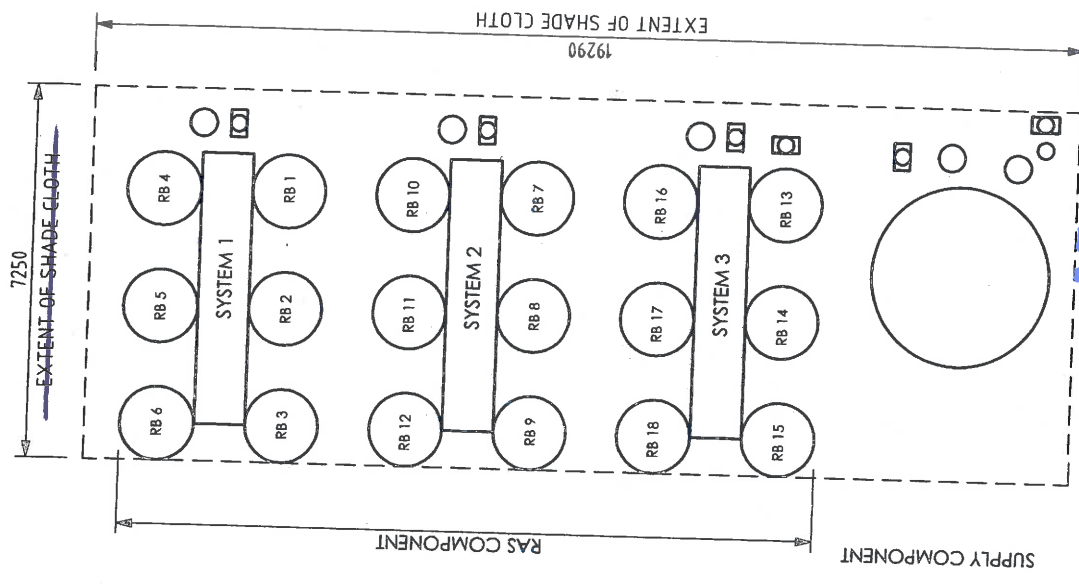
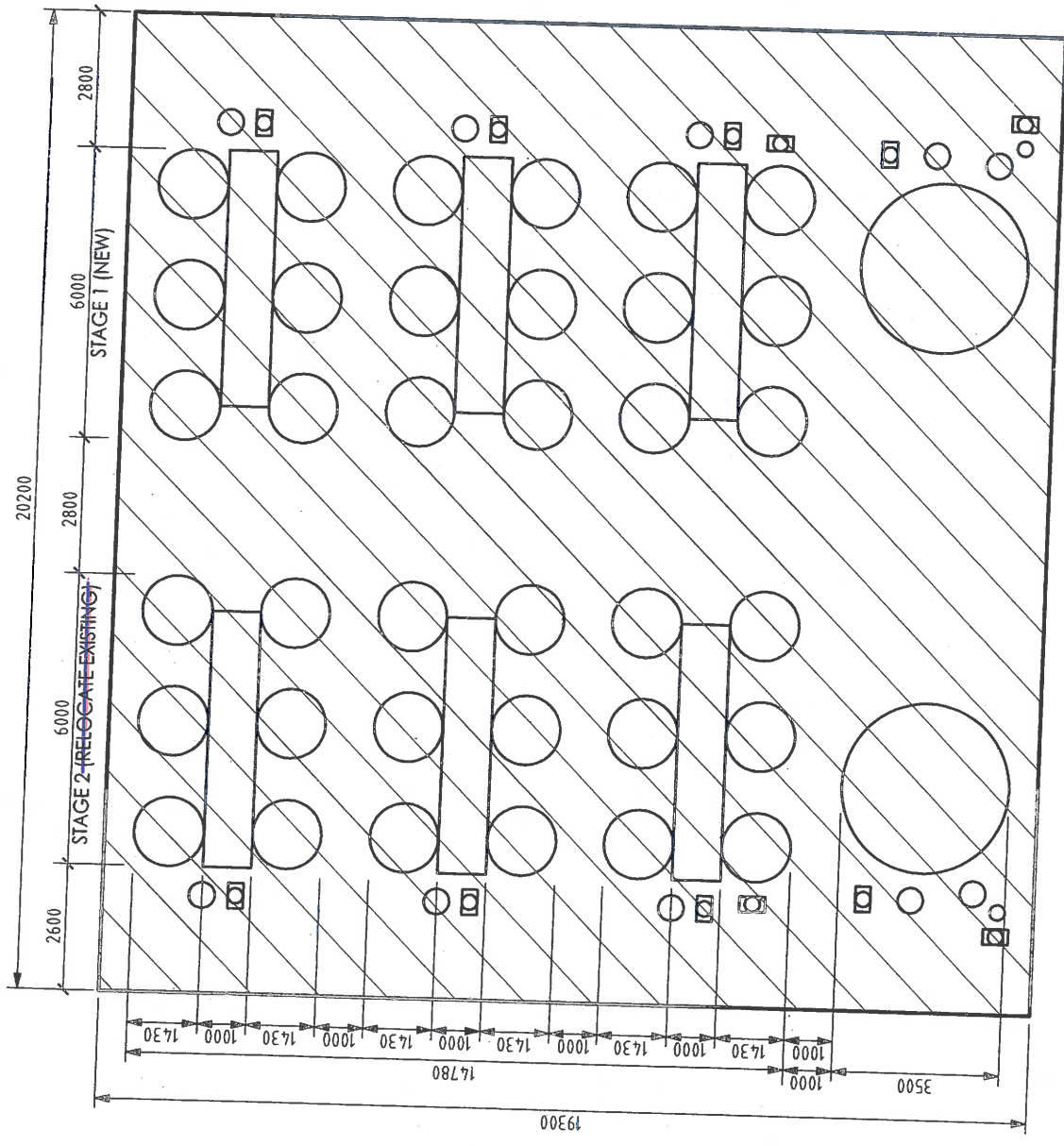
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University  
AUSTRALIA


2 4 6 8 10m

BEFORE REDUCTION

1:200



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TITLE:	LAYOUT	
PROJECT:	PROPOSED SEAGRASS MESOCOSM	
CLIENT:	CGU	
ADDRESS:	ALF OROURKE DRIVE GLADSTONE	
 iHothead - building design & drafting PH: 0407242479   info@iheadesign.com.au   110 No. 741/70   Lic. No. 6816 Act 1997		
REV	DATE	BY
A	09/04/18	JM
B	10/04/18	JM
C	10/04/18	JM
D	10/04/18	JM
E	10/04/18	JM
DRAWING NO. 190505		-A3 B



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 APPROVED BY: ROHAN SHELL  
 COMMERCIAL BUSINESS MANAGER

- SG SIGHT GLASS
- FG FLOW GAUGE
- SF1 SAND FILTER 1
- SF2 SAND FILTER 2
- SF3 SAND FILTER 3
- P1 PUMP 1
- P2 PUMP 2
- P3 PUMP 3
- TP TEMPERATURE PROBE
- MS MONITORING SYSTEM
- SK SKIMMER
- PH PH PROBE
- O3 O3 SENSOR
- BT BIO TOWER
- S SALINITY PROBE
- D DRAINAGE PIT
- CH CHILLER
- LPHV AIR COMPRESSOR
- COMP
- V ----- WATER FLOW
- B ----- WATER DRAINAGE
- A ----- AIR FLOW
- M ----- MONITORING SYSTEM
- WD ----- WATER DRAINAGE TO SUMP

APPROVED

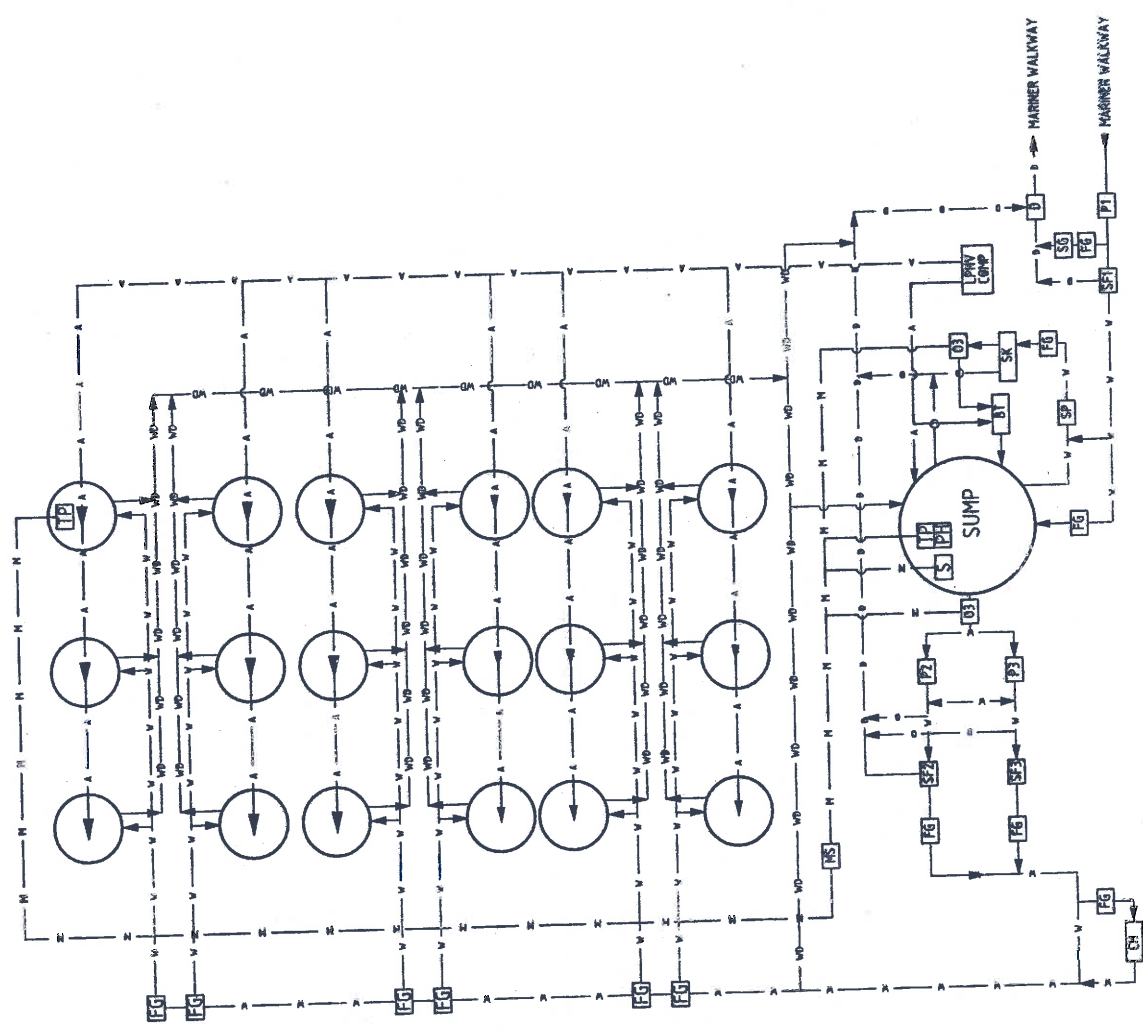
NOTE: NOT TO SCALE

E	SCALE	1:5000
D	DATE	
C	BY	
B	REVISED	
A	SCALE	
	DRAWN BY	JM
	SCALE	NTS
	DRAWING NO.	190505
		-A4
		B

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COMMERCIAL BUSINESS MANAGER

TITLE: DIA GRAMMATIC LAYOUT  
PROJECT: PROPOSED SEAGRASS MESOCOSM  
CLIENT: CGU  
ADDRESS: ALF OROURKE DRIVE  
GLADSTONE

**ymthead** - building design & drafting




# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

**Project details**

Project Number: 2221

Project Detail: Shed Structure for Coastal Marine Ecosystem Research Centre (CMERC)

**APPROVED**

REVISION HISTORY				Frequency of Review	
				<input type="checkbox"/> Monthly	
				<input checked="" type="checkbox"/> Quarterly	
				<input type="checkbox"/> Annually	
Document	Revision	Change Description	By	Sign	Date
EMP	2	First Issue Authorised for use	Project Manager		23/09/19