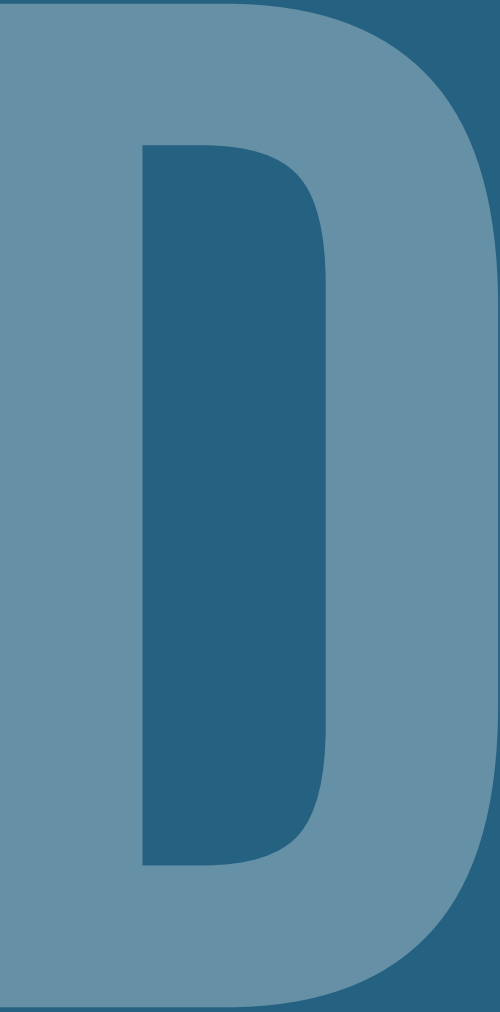




DECISION NOTICE
OPW24/0107



Date >> 20 March 2025

PO BOX 1268, Townsville
Queensland 4810

13 48 10

Cleveland Bay Industrial Park Pty Ltd
C/- Milford Planning
PO Box 5463
TOWNSVILLE CITY QLD 4810

enquiries@townsville.qld.gov.au
townsville.qld.gov.au

ABN: 44 741 992 072

Email >> info@milfordplanning.com.au

Decision Notice

Planning Act 2016

The Development Application for **Development Permit - Operational Works (OPW24/0107)** Operational Work associated with SDA Approval AP2023/013 for Reconfiguring a Lot (Civil Works, Marine Plant Clearing and Waterway Barrier Works) was assessed and **APPROVED SUBJECT TO CONDITIONS**. The decision was made on **19 March 2025**.

Details of the decision are as follows:

Application Details

Application no:	OPW24/0107
Assessment no:	3170249
Proposal:	Operational Work associated with SDA Approval AP2023/013 for Reconfiguring a Lot (Civil Works, Marine Plant Clearing and Waterway Barrier Works)
Development Type:	Development Permit - Operational Work
Street address/s:	249E Heleen Downs Road STUART QLD 4811 46 Colinta Road STUART QLD 4811 250 Racecourse Road CLUDEN QLD 4811
Real property description/s:	Lot 31 SP 341877 Part Lot 36 SP 341877 Part Lot 36 SP 341877
Assessment benchmarks:	<i>Planning Act 2016</i> <i>Planning Regulation 2017</i> State Planning Policy North Queensland Regional Plan Townsville City Plan (2024/01) • Coastal environment overlay code • Flood hazard overlay code • Natural assets overlay code • Airport environs overlay code • Healthy waters code • Landscape code • Reconfiguration of a lot code • Transport impact, access and parking code

Level of assessment • Works code
Applicant reference: Assessable development - Code assessment
M1824-ER-3

Deemed Approval

The application is not a 'deemed approval' under section 64 of the *Planning Act 2016*.

Conditions

The conditions of this approval are set out in the Schedule of Conditions. The conditions are identified to indicate whether the assessment manager or a referral agency imposed them.

Referral Agencies

Referral agency >> North Queensland State Assessment and Referral Agency
PO Box 5666
TOWNSVILLE QLD 4810

A copy of any referral agency response is attached.

Property Notes

Not Applicable.

Further Development Permits / Approvals Required

As listed in the Advice section of the Schedule of Conditions (attached).

Currency Period of Approval

Section 85 of the *Planning Act 2016* establishes when an approval lapses.

Rights of Appeal

Chapter 6, Part 1 and Part 2 of the *Planning Act 2016* detail appeal rights afforded to the applicant to the Planning and Environment Court or Development Tribunals. Further information in relation to how to proceed to an appeal is enclosed.

Other Details

If the applicant wishes to obtain more information about council's decision, electronic copies are available on line at <http://eplanning.townsville.qld.gov.au/Pages/xc.track/SearchApplication.aspx>, or at council offices.

If the applicant has any further queries in relation to the above, please do not hesitate to contact Planning and Development on telephone 13 4810 or email developmentassessment@townsville.qld.gov.au.

Yours faithfully



For Assessment Manager

Planning and Development

Appendices>> Statement of Reasons
 Schedule of Conditions
 Appeal Rights
Attachments>> Referral Agency Response
 Accepted Plans/Documents

cc. NQSARA@dsdilgp.qld.gov.au

Notice about Decision - Statement of Reasons

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

This Notice is prepared in accordance with s63(5) and s83(7) of the Planning Act 2016 to inform the public about a decision that has been made in relation to a development application. The purpose of the Notice is to enable a public understanding of the reasons for the planning decision, specifically having regard to:

- the relevant parts of the Planning Scheme and Assessment Benchmarks against which the application was assessed; and*
- any other information, documents or other material Council was either required to, or able to, consider in its assessment.*

All terms used in this Notice have the meanings given them in the Planning Act 2016.

Reasons for the Decision

Subject to the imposition of the development conditions contained within the Decision Notice, the development is able to comply with the following applicable Assessment Benchmarks against which the application was required to be assessed.

Applicable Assessment Benchmarks:

Planning Act 2016

Planning Regulation 2017

State Planning Policy

North Queensland Regional Plan

Townsville City Plan (2024/01)

- Healthy waters code
- Landscape code
- Reconfiguration of a lot code
- Transport impact, access and parking code
- Works code
- Coastal environment overlay code
- Flood hazard overlay code
- Natural assets overlay code
- Airport environs overlay code

SCHEDULE OF CONDITIONS

OPERATIONAL WORK & CERTIFICATE OF COMPLIANCE (Operational Work associated with SDA Approval AP2023/013 for Reconfiguring a Lot (Civil Works, Marine Plant Clearing and Waterway Barrier Works))

1. Accepted Plans and Supporting Documentation

Condition

- a) The development must generally comply with the plan(s) and supporting documentation referenced in the table below and attached which forms part of this approval, unless otherwise specified by any condition of this approval.

Plan Name	Plan No.	Revision No.	Revision Date
Title Page, Drawing Schedule and Locality plan	001	10	7.03.25
Notes and Typical Cross Section Plan	002	4	7.03.25
Road Layout and Long Section - Sheet 1 of 4	010	3	3.02.25
Road Layout and Long Section - Sheet 2 of 4	011	5	17.02.25
Road Layout and Long Section - Sheet 3 of 4	012	4	17.02.25
Road Layout and Long Section - Sheet 4 of 4	013	6	17.02.25
Cross Section - Sheet 1 of 6	014	1	27.08.24
Cross Section - Sheet 2 of 6	015	1	27.08.24
Cross Section - Sheet 3 of 6	016	1	27.08.24
Cross Section - Sheet 4 of 6	017	1	27.08.24
Cross Section - Sheet 5 of 6	018	1	27.08.24
Cross Section - Sheet 6 of 6	019	1	27.08.24
Road Cut/Fill Plan	020	2	12.11.24
Earthworks Layout Plan	021	2	29.11.24
Pipe Outlet - Sheet 1 of 2	022	1	27.08.24
Pipe Outlet - Sheet 2 of 2	023	1	27.08.24
Earthworks Cut/Fill Plan	024	0	27.08.24
Stormwater Pit Details	025	0	28.05.24
SESC Plan - Sheet 1 of 2	030	0	28.05.24
SESC Plan - Sheet 2 of 2	031	0	28.05.24
SESC Notes Plan	032	0	28.05.24
Culvert Reinforcement Detail	040	1	6.02.25
Culvert A - Reinforcement Detail	041	1	6.02.25
Culvert B, C & D Reinforcement Detail	042	1	6.02.25
Concrete Notes	043	2	17.02.25
Associated Reports			
Cleveland Bay Industrial Park: Lots 31, 35 and 37 - Flood Impact Assessment dated 20 December 2024 referenced as L.M00506.001.06.docx prepared by Venant Solutions			
Erosion and Scour Protection for CBIP East Stage 4 Access Road Rev B dated 21/12/2024 referenced as TM-AR0213 prepared by Langtree Consulting Engineers			

- b) This permit is issued on the understanding that the design complies with Council's development manual, with Council's planning scheme and with all conditions of relevant decision notices.
- c) Council's assessment of the design has been an audit only. In the issuing of this permit Council makes no acknowledgement that the design meets the above requirements.
- d) It is a condition of this permit that any errors in the design are the responsibility of the consulting engineer / landscape architect, and that any rectification costs which may be applicable are to be borne by the developer. Council bear no responsibility for any errors associated with the design or any costs arising therefrom.
- e) One full set of the most up to date approved plans must be held on site and available for inspection for the duration of the construction phase.
- f) All civil works associated with this development permit must be constructed and delivered as per the accepted design plans, and as per Council Construction specifications as outlined in SC6.4 Development manual planning scheme policy of the Townsville City Plan.

Reason

The development must comply with all planning scheme requirements as approved by this development permit.

Timing

During the operation and life of the development.

2. Pre-construction

Condition

Prior to the commencement of work, and in accordance with SC6.4 Development manual planning scheme policy specifically SC6.4.23.1 (3) Pre-construction guidelines of the Townsville City Plan, Planning and Development must be contacted to arrange/conclude all necessary pre-construction documentation.

Reason

To ensure that the construction process is undertaken in accordance with relevant code/s and policy direction.

Timing

Prior to commencement of construction.

3. Hours of Work

Condition

Works involving machinery of any description must only be carried out on site in accordance with SC6.4 Development manual planning scheme policy, specifically SC6.4.23.1 (4) Construction standards and guidelines of the Townsville City Plan.

Reason

To have regard to amenity and to ensure that the construction process is undertaken in accordance with relevant code/s and policy direction.

Timing

During the construction phase of the development.

4. Works Inspection Fee**Condition**

- a) A works inspection fee (at the rate applicable at the time of payment) must be paid.
- b) A reinspection fee (at the rate applicable at the time of payment) will be applicable where an additional inspection is required due to works being incomplete or unsatisfactory at the initial inspection.

Reason

In accordance with policy direction (Fees and charges).

Timing

- a) Prior to the works being accepted on Final Completion.
- b) The reinspection fee must be paid prior to the additional inspection being conducted.

5. Inspections**Condition**

Each inspection must be certified and documented in accordance with SC6.4 Development manual planning scheme policy of the Townsville City Plan. All approved works are required to be inspected by Townsville City Council.

Note: Inspections required to be witnessed by Council Officers are set out in SC6.4.23.1 (5) Quality management system of the Townsville City Plan.

Planning and Development must be given at least two (2) business days' notice to arrange attendance by a representative for the purposes of joint witnessing these inspections.

The Planning and Development representative must be authorised to conduct other regular site inspections, subject to normal OH&S requirements, in order to monitor development progress and general compliance with the development approval.

Reason

To ensure that the construction process is undertaken in accordance with relevant code/s and policy direction.

Timing

During the construction phase of the development.

6. Relocation of utility services**Condition**

Any relocation and/or alteration to any public utility installation required as a result of any works carried out in connection with this development must be carried out at no cost to council in accordance with SC6.4 Development manual planning scheme policy, specifically SC6.4.23.1 (4) Construction standards and guidelines of the Townsville City Plan.

Reason

To ensure development is appropriately serviced by public services and/or facilities in accordance with relevant code/s and policy direction.

Timing

Prior to the release of the Plan of Survey.

7. Final Completion**Condition**

The works will be accepted as finally complete subject to the satisfactory demonstration, that all works have been completed in accordance with SC6.4 Development manual planning scheme policy, specifically SC6.4.24.3 On maintenance/final completion/off maintenance requirements of the Townsville City Plan.

Reason

To ensure that the development is being appropriately serviced by infrastructure in accordance with relevant code/s and policy direction.

Timing

Following the completion of the construction phase of the development.

8. Haulage of Materials**Condition**

Haulage of material must be undertaken in accordance Part 9.3.6 Works code and SC6.4 Development manual planning scheme policy of the Townsville City Plan.

Reason

Ensure materials are imported and exported from the site in accordance with relevant code/s and policy direction.

Timing

During the construction phase.

REFERRAL AGENCY CONDITIONS**Concurrence Agency Conditions - NORTH QUEENSLAND STATE ASSESSMENT AND REFERRAL AGENCY**

Pursuant to Section 56 of the *Planning Act 2016*, the NORTH QUEENSLAND STATE ASSESSMENT AND REFERRAL AGENCY advises that it has no objection to Townsville City Council issuing a Development Permit for Operational Work associated with SDA Approval AP2023/013 for Reconfiguring a Lot (Civil Works, Marine Plant Clearing and Waterway Barrier Works), subject to the conditions, as attached.

ADVICE**1. Satisfaction of Approval Conditions****Advice**

Unless explicitly stated elsewhere in this permit, all requirements of the conditions of this approval must be satisfied prior to Council accepting the works Finally Complete. Council may, at its absolute discretion, agree to accept other forms of security to guarantee compliance with conditions yet enable early acceptance of the works Finally Complete.

2. Limitation of Approval

Advice

The Council and its officers make no representations and provide no warranties as to the accuracy of the information contained in the application (including its supporting material provided to it by the Applicant). The Council and its officers rely upon the Applicant and certification by a Registered Professional Engineer Queensland concerning the accuracy and completeness of the application and its supporting material and accepts the application and supporting material as constituting a representation by the Applicant as to its accuracy and completeness. The Applicant must indemnify the Council against any claim from a third party arising from inaccuracy or incompleteness of the Application or its supporting material.

3. Flood Overlay Management

Advice

Where the development will address the flood risk for the 1% AEP flood, the applicant can seek to have the Flood Overlay mapping amended to remove the property (or a portion thereof) from the high and medium flood hazard areas. Should the applicant wish to apply this mapping amendment, the applicant must provide council a digital map clearly showing a polygon of areas of the development site where land is now situated above the 1% AEP flood level. The polygon supplied must be as follows:

File format:	ESRI Feature Class; Shapefile; Digital Exchange Format (DXF); or AutoCAD Drawing (DWG).
Coordinate System:	MGA94, Zone 55

Mapping updates will be compiled following the development being accepted as complete, but will not be formally incorporated as mapping amendment until the following annual planning scheme amendment is made.

The provision of mapping information must be provided as part of 'as constructed' documentation prior to the release of the Plan of Survey.

4. Contaminated Soils

Advice

Where contaminated soils are evident remedial works must be undertaken in accordance with *Environmental Protection Act 1994*. Where contaminated soils are identified Council must be notified and provided with an appropriate Contaminated Soil Remedial Plan.

5. Specifications and Drawings

Advice

Details of Council's specifications and standard drawings can be viewed in SC6.4 Development manual planning scheme policy of the Townsville City Plan.

6. Contiguous Construction

Advice

Notwithstanding Council's examination of construction plans, all contiguous works must be constructed correctly as to level, alignment and grade, and where necessary, existing construction must be altered to achieve this.

7. Further Approvals Required

Advice

Roadworks Approval / Letter of No Objection

A Roadworks approval must be obtained in accordance with Local Laws 4 for the installation of any hoardings, gantries or temporary road closures of the footpath or road prior to the commencement of works. The application must include the following:

- (i) Completed Roadworks approved application form.
- (ii) Prescribed fee.
- (iii) Traffic Management Plan prepared by a suitably qualified professional detailing the traffic management measures put in place to manage all roadworks including pedestrians, cyclists and vehicles in accordance with the *Manual of Uniform Traffic Control Devices Part 3 - Works on Roads*.

If the works require closure of part of the road reserve, a temporary Road Closure will be required. This permit allows for a section of road reserve to be closed for the purpose of works. The Queensland Police Service is the issuing authority for these permits. An application will need to be made to Council for a letter of no objection prior to applying to the Queensland Police Service for the permit. The Traffic Management Plan will need to be included with the application to Council.

8. Workplace Health and Safety

Advice

Work must not commence unless the requirements of the Workplace Health and Safety Act have been met. The contractor, developer and consulting engineer must take all necessary steps to ensure public safety in relation to construction activities. A copy of the application for a Notifiable Project must be provided to Council for record purposes.

9. Environmental Considerations

Advice

Construction must comply with the *Environmental Protection Act 1994*, Policies and Guidelines.

10. Survey Control

Advice

- a) Prior to Council signing any survey plans associated with the development, a minimum of two (2) Permanent Survey Marks levelled to AHD (class LD or better) must be located within the development or within 150m of the development.

In addition, two (2) Permanent Survey Marks located within the development or within 500m of the development must be coordinated on MGA'94 (class D or better).

- b) All new and updated Permanent Survey Mark sketches must be forwarded to the Department of Natural Resources and Mines to be added to the SCDB.

Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

Applicants have appeal rights under Chapter 6, Part 1 of the *Planning Act 2016*. Information about how to proceed with an appeal to the Planning and Environment Court can be found on the Court's website:

Planning and Environment Court

website www.courts.qld.gov.au/courts/planning-and-environment-court

Planning and Environment Court (Townsville)

post PO Box 1032 Townsville Qld 4810

visit 31 Walker Street Townsville Qld 4810

telephone (07) 4781 8689 (general enquiries) / (07) 4781 8686 (registrar)

email townsville.hcregistry@justice.qld.gov.au

In addition, Chapter 6, Part 2 of the *Planning Act 2016* affords the opportunity to proceed to an appeal to the Development Tribunal. Information about how to proceed with an appeal to the Development Tribunals can be found on the Department of Energy and Public Works website:

Development Tribunals

website <https://www.qld.gov.au/housing/building-home/building-complaints/appealing-development-tribunals>

Department of Energy and Public Works, The Registrar Development Tribunals

post GPO Box 2457 Brisbane Qld 4001

telephone 1800 804 833

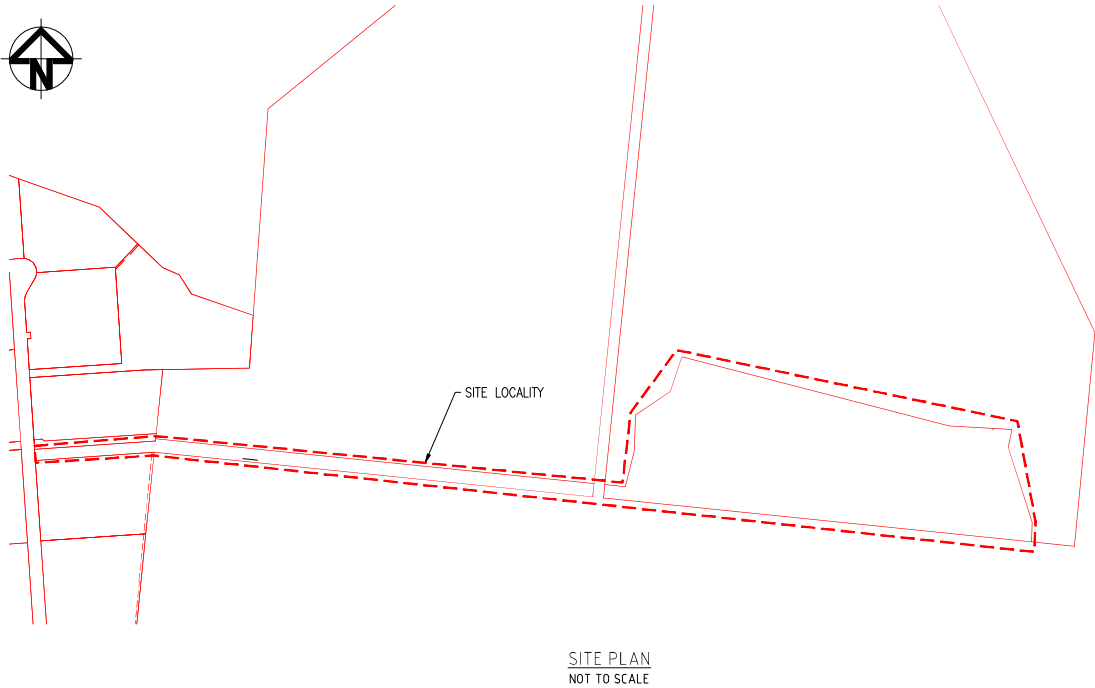
email registrar@epw.qld.gov.au

website www.epw.qld.gov.au

To stay informed about any appeal proceedings which may relate to this decision visit:

<https://planning.statedevelopment.qld.gov.au/planning-framework/dispute-resolution/court-database>

CLEVELAND BAY INDUSTRIAL PARK FAR EAST DEVELOPMENT



DRAWING INDEX

DRAWING NUMBER	DRAWING NAME	REVISION
1241-001	TITLE PAGE, DRAWING SCHEDULE AND LOCALITY PLAN	10
1241-002	NOTES AND TYPICAL CROSS SECTION PLAN	4
1241-010	ROAD LAYOUT AND LONG SECTION - SHEET 1 OF 4	3
1241-011	ROAD LAYOUT AND LONG SECTION - SHEET 2 OF 4	5
1241-012	ROAD LAYOUT AND LONG SECTION - SHEET 3 OF 4	4
1241-013	ROAD LAYOUT AND LONG SECTION - SHEET 4 OF 4	6
1241-014	CROSS SECTION - SHEET 1 OF 6	1
1241-015	CROSS SECTION - SHEET 2 OF 6	1
1241-016	CROSS SECTION - SHEET 3 OF 6	1
1241-017	CROSS SECTION - SHEET 4 OF 6	1
1241-018	CROSS SECTION - SHEET 5 OF 6	1
1241-019	CROSS SECTION - SHEET 6 OF 6	1
1241-020	ROAD CUT/FILL PLAN	2
1241-021	EARTHWORKS LAYOUT PLAN	2
1241-022	PIPE OUTLET - SHEET 1 OF 2	1
1241-023	PIPE OUTLET - SHEET 2 OF 2	1
1241-024	EARTHWORKS CUT/FILL PLAN	1
1241-025	STORMWATER PIT DETAILS	0
1241-030	SESC PLAN - SHEET 1 OF 2	0
1241-031	SESC PLAN - SHEET 2 OF 2	0
1241-032	SESC NOTES PLAN	0
1241-040	CULVERT REINFORCEMENT DETAIL	1
1241-041	CULVERT A - REINFORCEMENT DETAIL	1
1241-042	CULVERT B, C & D - REINFORCEMENT DETAIL	1
1241-043	CONCRETE NOTES	2

Townsville City Council
Accepted Subject to Conditions
OPW24/0107
19/03/2025

10	A.R	7.03.25	UPDATED PAVEMENT DESIGN
9	A.R	17.02.25	MINOR AMENDMENTS
8	A.R	14.02.25	AMENDED CULVERT 1 TEXT
7	A.R	3.02.25	MINOR AMENDMENTS
6	A.R	29.01.25	UPDATED CULVERTS
5	A.R	19.12.24	UPDATED TYPICAL SECTION
4	A.R	29.11.24	ADDED FLOOD SURFACE
3	A.R	12.11.24	UPDATED TO SUIT NEW FLOOD MODEL
2	A.R	19.09.24	RESPONSE TO CONDITIONS
1	A.R	27.08.24	DRAWINGS AMENDED
0	A.R	28.05.24	FOR OPW APPLICATION

HORIZ. DATUM	MGA	CERTIFICATION
VERT. DATUM	AHD	<i>B. Langtree</i> B.LANGTREE RPEQ 11932
DRG. FILE	DATE	COPYRIGHT (C)
DESIGN	A.REINAUDO 28.05.24	These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING RPEQ 11932 (A.C.N. 59 611 355 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.
DRAWN	A.REINAUDO 28.05.24	

Langtree Consulting
m 0400 699 979
e brett@langtreeconsulting.com.au

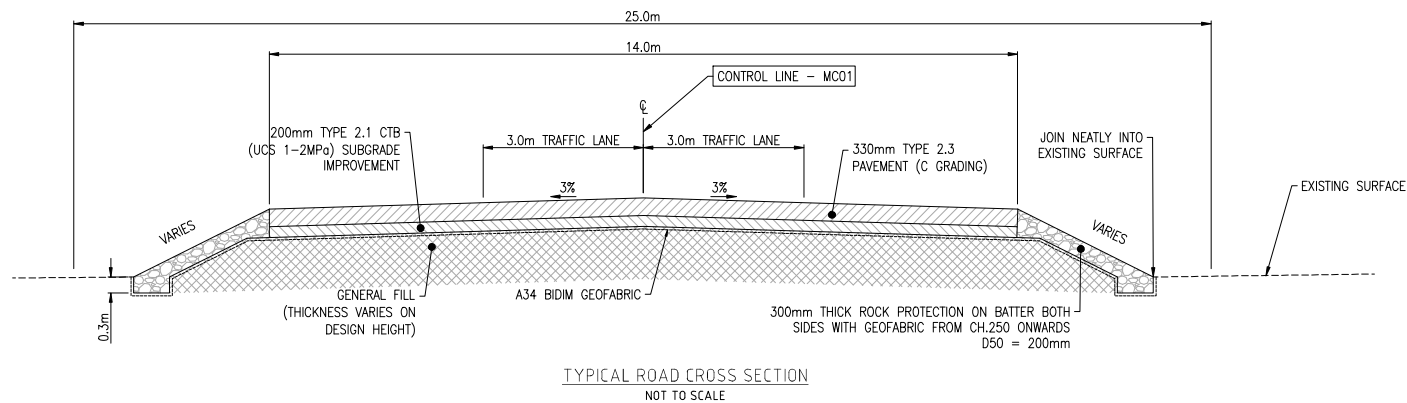
CLEVELAND BAY INDUSTRIAL PARK		SCALE	AS SHOWN
TOWNSVILLE PORT ROAD, STUART		SHEET	1 OF 25
FAR EAST DEVELOPMENT		REVISION	1 2 3 4 5 6 7 8 9 10
TITLE PAGE, DRAWING SCHEDULE AND LOCALITY PLAN		DRG NO.	1241-001

GENERAL:

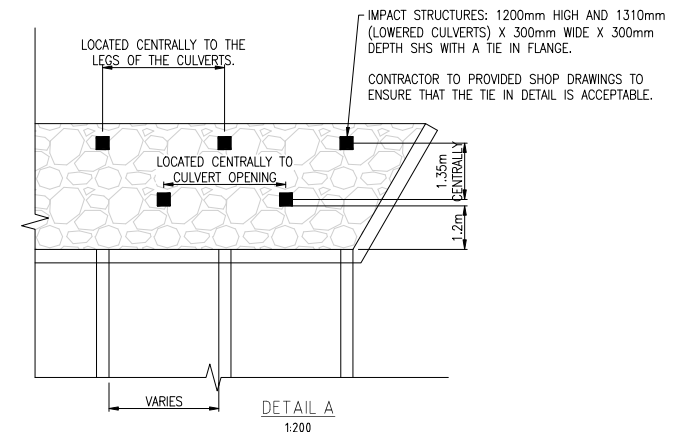
1. ALL WORKS AND MATERIALS MUST BE IN ACCORDANCE WITH CURRENT LOCAL AUTHORITY POLICIES, SPECIFICATIONS, STANDARD DRAWINGS AND AUSTRALIAN STANDARDS.
2. THE CONTRACTOR MUST TAKE ALL NECESSARY MEASURES TO PROTECT NEARBY PROPERTY OWNERS FROM DUST POLLUTION DURING ALL PHASES OF WORKS. FINISHED AREAS OF EARTHWORKS MUST BE KEPT WATERED WHERE NECESSARY UNTIL A SATISFACTORY GRASS COVER IS ACHIEVED.
3. ALL CONSTRUCTION WORKS ARE TO BE JOINED NEATLY TO EXISTING SURFACE.
4. PUBLIC UTILITIES - DESPITE THE POSITION OF PUBLIC UTILITIES, FITTINGS, PIPES, POLES, MANHOLES, ETC MAY BE INDICATED ON THE DRAWINGS, NO RESPONSIBILITY WILL BE ACCEPTED BY THE PRINCIPLE FOR THE ACCURACY OF HE REPRESENTATION OR THE OMISSION THEREOF.
5. LOCATION AND LEVEL OF EXISTING SERVICES AND STRUCTURES HAS BEEN PLOTTED FROM AVAILABLE RECORDS AND IS TO BE CONSIDERED INDICATIVE ONLY. THE CONTRACTOR MUST ACCURATELY LOCATE THESE ON SITE PRIOR TO COMMENCING WORKS AND MUST PROTECT ALL EXISTING SERVICES DURING CONSTRUCTION. ANY DAMAGE TO EXISTING SERVICES MUST BE REPAIRED AT THE CONTRACTORS EXPENSE.
6. VEGETATION OUTSIDE WORKS AREAS MUST NOT BE DISTURBED UNLESS SPECIFICALLY AUTHORISED BY THE SUPERINTENDENT.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE STABILITY OF ANY TEMPORARY WORKS ON THE SITE.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE STABILITY OF ANY TEMPORARY WORKS ON THE SITE.
9. THE CONTRACTOR MUST CONFIRM THE ACCURACY OF ALL SET OUT AND CONFIRM ALL LEVELS WITH THE SUPERINTENDENT PRIOR TO COMMENCING CONSTRUCTION.
10. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE LOCAL AUTHORITY SPECIFICATIONS AND THE PROJECT SPECIFICATIONS. IN THE EVENT OF A DISCREPANCY, REFER TO THE SUPERINTENDENTS FOR CLARIFICATION.
11. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH DRAWINGS PREPARED BY OTHER RELATED CONSULTANTS, ALL PROJECT SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORK. ALL THE DISCREPANCIES MUST BE REFERRED TO THE SUPERINTENDENT FOR HE DECISION BEFORE PROCEEDING WITH THE WORKS.
12. ALL DIMENSIONS RELEVANT TO THE SETTING OUT AND OFF-SITE WORK MUST BE AS INDICATED ON THESE DRAWINGS AND MUST BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND/OR FABRICATION IS COMMENCED. THE ENGINEERS DRAWINGS MUST NOT BE SCALED, UNLESS SPECIFICALLY NOTED OTHERWISE.
13. DURING CONSTRUCTION THE CONTRACTOR MUST BE RESPONSIBLE FOR MAINTAINING PROPOSED AND EXISTING WORKS IN A STABLE CONDITION AND ENSURING NO PART MUST BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES.
14. SAFETY REQUIREMENTS MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORKPLACE, HEALTH AND SAFETY ACT.
15. THE APPROVAL FOR SUBSTITUTION MAY BE SOUGHT FROM THE SUPERINTENDENT BUT IS NOT AN AUTHORISATION FOR A VARIATION. ANY VARIATION MUST BE APPROVED BY THE SUPERINTENDENT BEFORE WORK COMMENCES.
16. THE ACCESS FOR THE SITE MUST BE AS INDICATED ON THE CONTRACT OR AS APPROVED BY THE SUPERINTENDENT AND THE LOCAL AUTHORITIES. THE CONTRACTOR MUST OBTAIN ALL NECESSARY AND RELEVANT PERMITS. IT IS THE CONTRACTORS RESPONSIBILITY TO CONSTRUCT AND MAINTAIN THE ACCESS AS REQUIRED TO ALL PARTS OF THE CONTRACTORS WORK AREA.
17. THE CONTRACTORS COMPOUND MUST BE LOCATED AS APPROVED BY THE SUPERINTENDENT.
18. ANY WORKS WITHIN A STATE CONTROLLED ROAD RESERVE MUST BE CARRIED OUT IN ACCORDANCE WITH DTMR CURRENT SPECIFICATIONS AND STANDARD DRAWINGS.
19. THE CONTRACTOR MUST UNDERTAKE ALL WORKS IN PROXIMITY TO EXISTING SERVICES AND INFRASTRUCTURE IN ACCORDANCE WITH THE RELEVANT UTILITY / AUTHORITY POLICIES AND PROCEDURES.

VEGETATION PROTECTION:

1. PRIOR TO CLEARANCE WORKS COMMENCING ON SITE, A JOINT INSPECTION MUST BE UNDERTAKEN TO IDENTIFY SELECTED TREES AND / OR SHRUBS WHICH ARE TO REMAIN UNDISTURBED. THESE MUST BE MARKED BY THE SUPERINTENDENT WITH COLOURED TAPE OR SIMILAR MARKS. THE CONTRACTOR MUST TAKE CARE NOT TO DAMAGE OR REMOVE ANY OF THESE TREES AND SHRUBS IN CARRYING OUT THE WORKS OF THE CONTRACT.
2. UNLESS DIRECTED BY A PROJECT ARBORIST / ECOLOGIST, WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 18m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
3. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY A PROFESSIONAL ARBORIST.
4. THE CONTRACTOR IS NOT TO DISTURB OR CUT VEGETATION WITHOUT THE SUPERINTENDENT'S APPROVAL.
5. THE CONTRACTOR MUST EMPLOY A PROFESSIONAL ARBORIST WHO MUST ASSIST WITH THE WORK TO PROTECT TREES (IF NECESSARY).



Set Out Table for Road Alignment							
TAG		CHAINAGE	EASTING	NORTHING	LENGTH	RADIUS	BEARING
L26	BP EP	0.000 231.952	84119.896 84351.318	8637361.688 863777.352	231.952		086° 07' 40"
C5	TP	231.952	84351.318	863777.352	16.979	100.0	090° 59' 30.91"
	IP	240.462	84359.809	863777.927			
	TP	248.931	84368.275	863777.059			
L27	BP EP	248.931 1184.467	84368.275 85298.928	863777.059 863681.607	935.535		095° 51' 22"



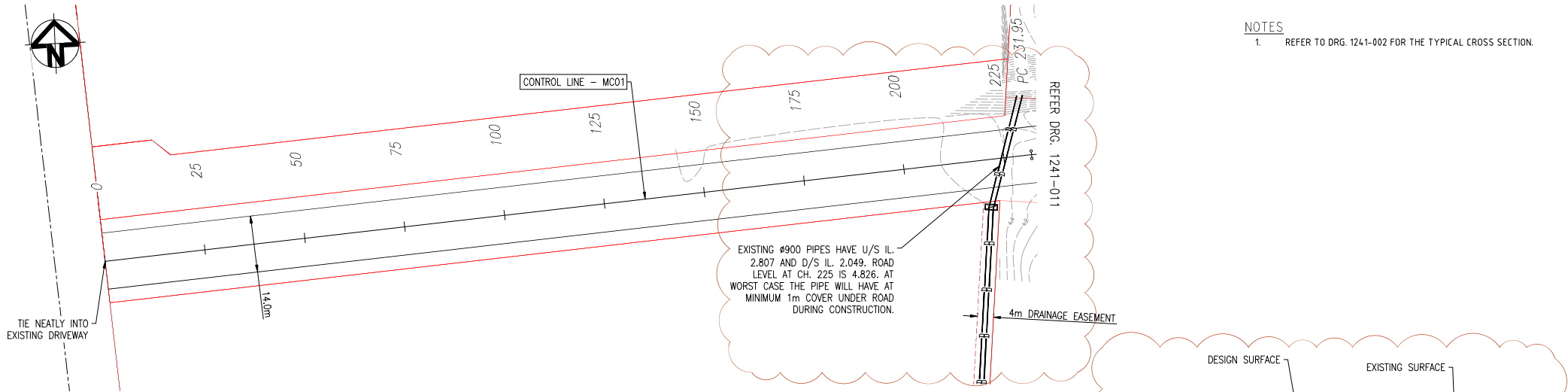
Townsville City Council

Accepted Subject to Conditions

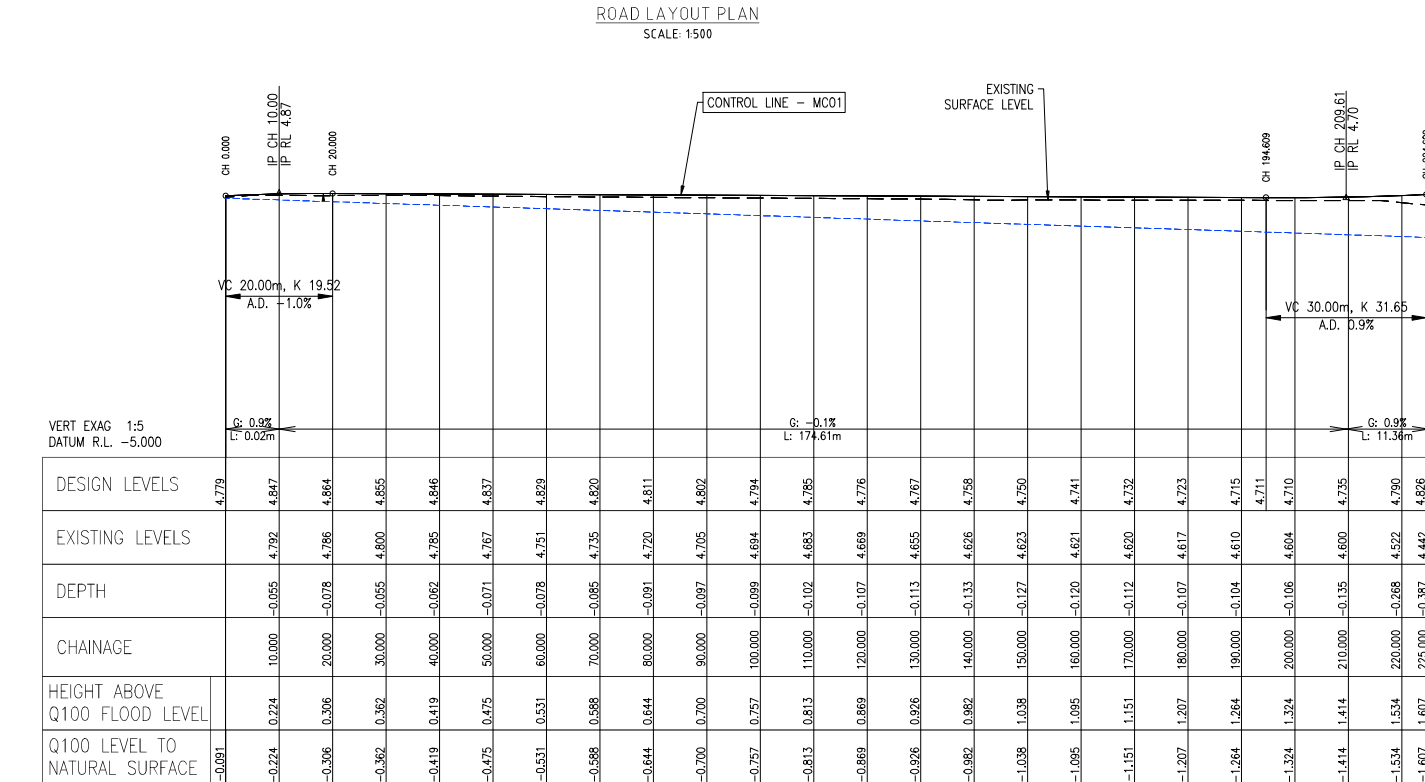
OPW24/0107

19/03/2025

REVISIONS	4	A.R.	7.03.25	UPDATED PAVEMENT DESIGN	HORIZ. DATUM		MGA	CERTIFICATION	 Langtree Consulting TOWNVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT NOTES AND TYPICAL CROSS SECTION PLAN	SCALE	AS SHOWN					
	3	A.R.	3.02.25	UPDATED DETAIL A AND TYPICAL CROSS SECTION	VERT. DATUM		AHD	 B.J. LANGTREE RPEQ 11932			SHEET	2 OF 25				
	2	A.R.	19.12.24	UPDATED TYPICAL SECTION	DRG. FILE		DATE	COPYRIGHT ©			REVISION	0	1	2	3	4
	1	A.R.	27.08.24	UPDATED SETOUT TABLE	DESIGN	A.REINAUDO	28.05.24	These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 26 811 366 030). The contents of this drawing are electronically generated, are confidential and may only be used for the purposes for which they were intended. This is an uncontrolled document signed and approved. Pictured dimensions take precedence over scale. Use and modification at user's discretion.			m	0400 699 979				
	0	A.R.	28.05.24	FOR OPW APPLICATION	DRAWN	A.REINAUDO	28.05.24	e			brett@langtreeconsulting.com.au					
	PROJECT ID: 2645906											DRG NO.	1241-002			

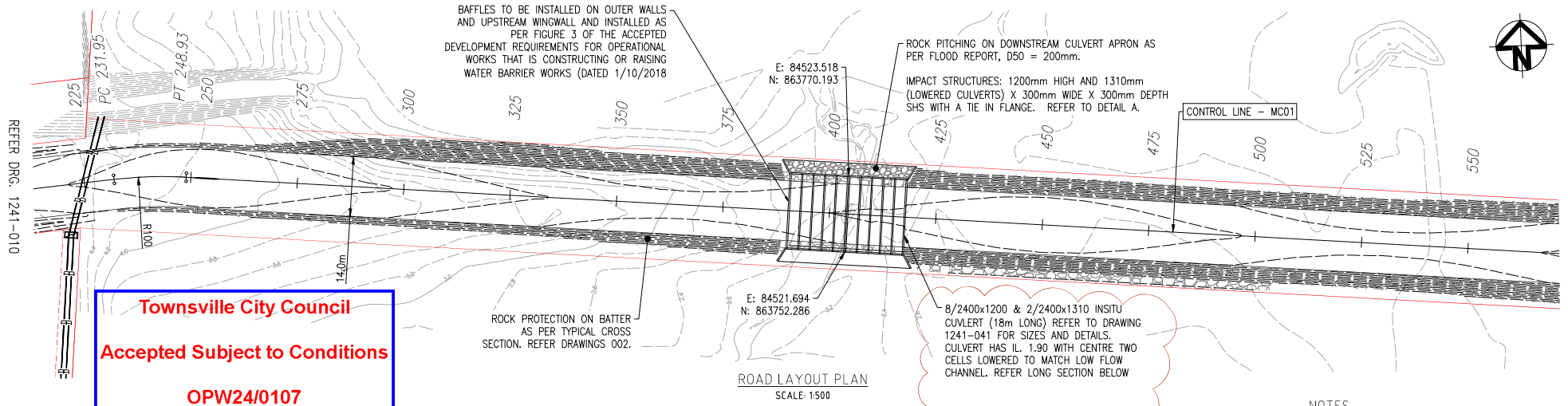


NOTES
1. REFER TO DRG. 1241-002 FOR THE TYPICAL CROSS SECTION.



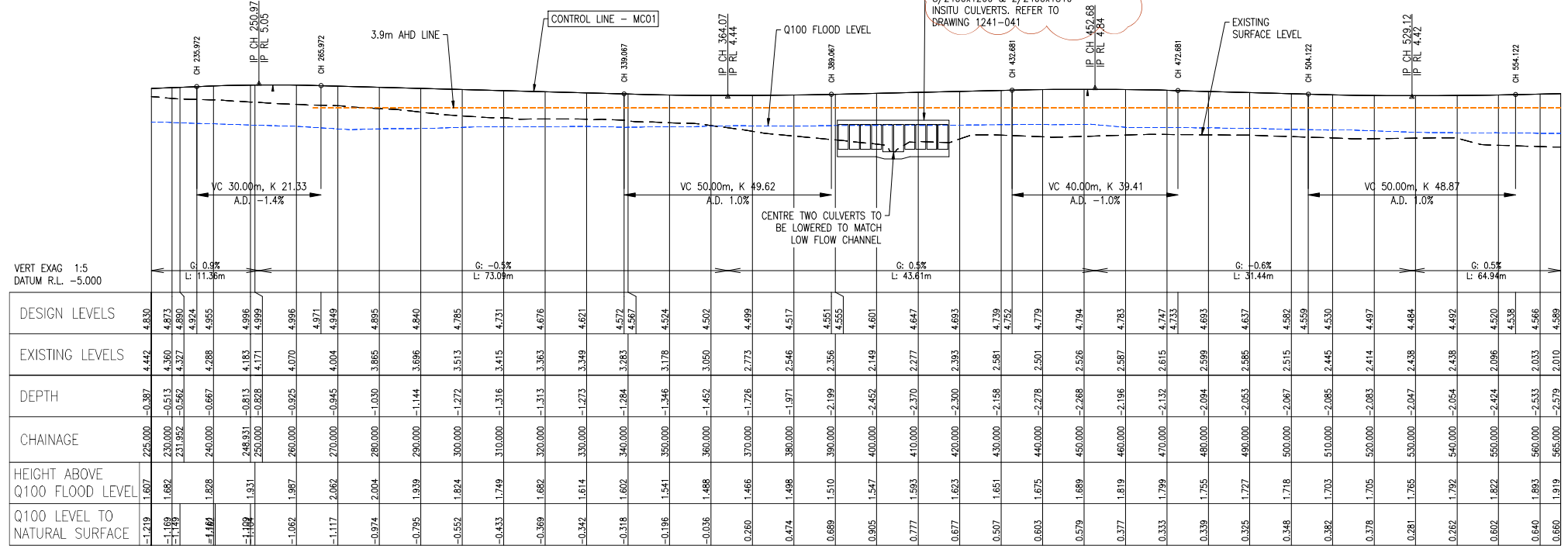
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REVISIONS					HORIZ. DATUM		MCA		CERTIFICATION		CLEVELAND BAY INDUSTRIAL PARK				SCALE	AS SHOWN
					VERT. DATUM		AHD		B. LANGTREE RPEQ 11932		TOWNSVILLE PORT ROAD, STUART				SHEET	3 OF 25
					DRG. FILE		DATE		COPYRIGHT (C)		FAR EAST DEVELOPMENT				REVISION	0 1 2 3
					DESIGN		DATE		DRAWN		ROAD LAYOUT AND LONG SECTION - SHEET 1 OF 4				DRG NO.	1241-010
3	A.R.	3.02.25	ADDED EXISTING STORMWATER PIPES													
2	A.R.	29.11.24	UPDATED Q100 FLOOD LEVEL													
1	A.R.	27.08.24	LAYOUT AND LONGSECTION AMENDMENTS													
0	A.R.	28.05.24	FOR OPW APPLICATION													



ROAD LAYOUT PLAN
SCALE: 1:500

NOTES
1. REFER TO DRG. 1241-002 FOR THE TYPICAL CROSS SECTION.



REVISIONS	5	A.R.	17.02.25	AMENDED BAFFLES AND ROCK PITCHING
	4	A.R.	14.02.25	AMENDED CULVERT TEXT
	3	A.R.	28.01.25	AMENDED CULVERTS
	2	A.R.	29.11.24	UPDATED Q100 FLOOD LEVEL
	1	A.R.	27.08.24	LAYOUT AND LONGSECTION AMENDMENTS
	0	A.R.	28.05.24	FOR OPW APPLICATION

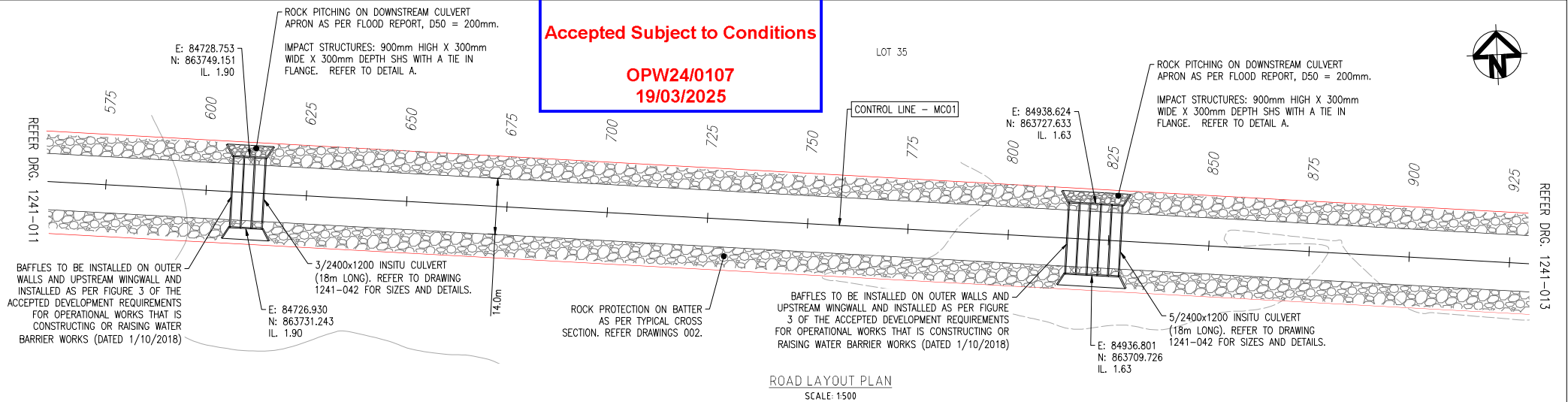
HORIZ. DATUM	MGA
VERT. DATUM	AHD
DRG. FILE	
DATE	
DESIGN	A.REINAUDO 28.05.24
DRAWN	A.REINAUDO 28.05.24

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e brett@langtreeconsulting.com.au

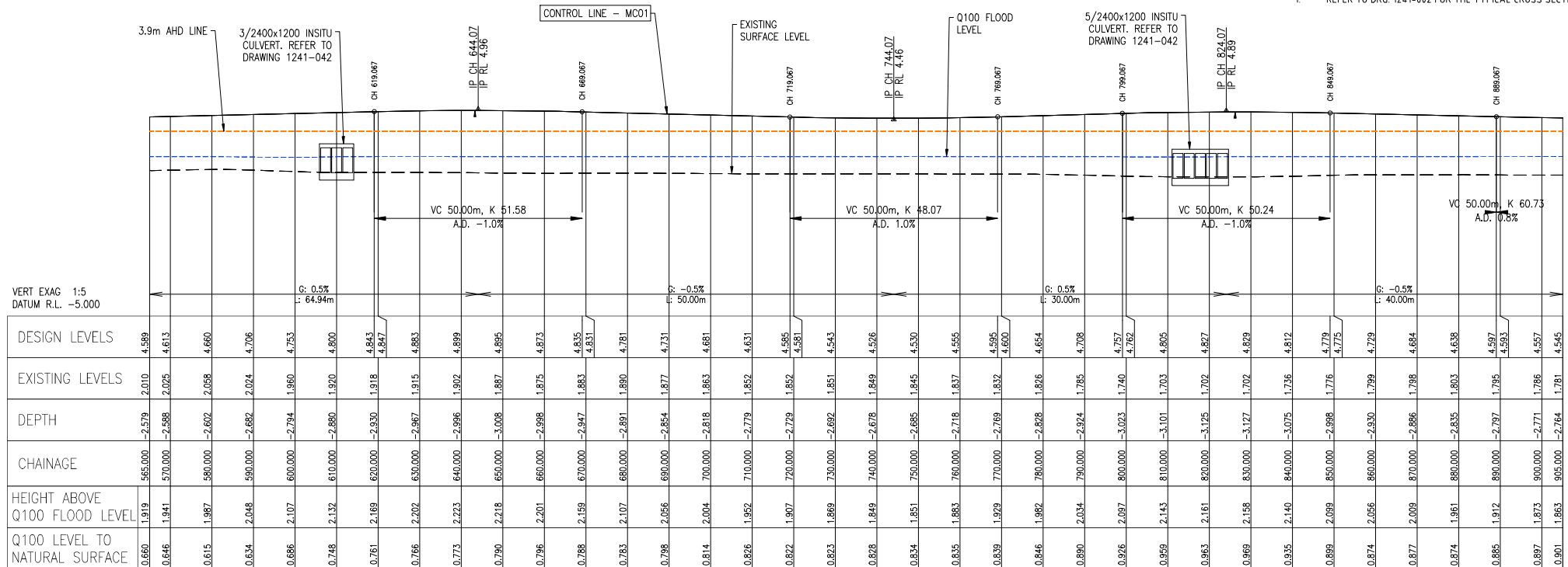
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT
ROAD LAYOUT AND LONG SECTION - SHEET 2 OF 4

SCALE	AS SHOWN
SHEET	4 OF 25
REVISION	0 1 2 3 4
DRG NO.	1241-011



NOTES

- REFER TO DRG. 1241-002 FOR THE TYPICAL CROSS SECTION.



REV	NO	DATE	DESCRIPTION	HORIZ. DATUM		MGA		CERTIFICATION
				VERT. DATUM		AHD		
4	AR	17.02.25	AMENDED BAFFLES AND ROCK PITCHING	DRG. FILE			DATE	COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of Langtree Consulting Pty Ltd (ACN 09 611 365 024). The contents of this drawing are for informational purposes only. It is not to be used for any other purpose for which they were intended. This is an uncontrolled document issued for informational purposes only. Unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.
3	AR	28.01.25	AMENDED CULVERTS	DESIGN	A.REINAUDO	28.05.24		
2	AR	29.11.24	UPDATED Q100 FLOOD LEVEL	DRAWN	A.REINAUDO	28.05.24		
1	AR	27.08.24	LAYOUT AND LONGSECTION AMENDMENTS					
0	AR	27.05.24	FOR OPW APPLICATION					



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CLEVELAND BAY INDUSTRIAL PARK

TOWNSVILLE PORT ROAD, STUART

FAR EAST DEVELOPMENT

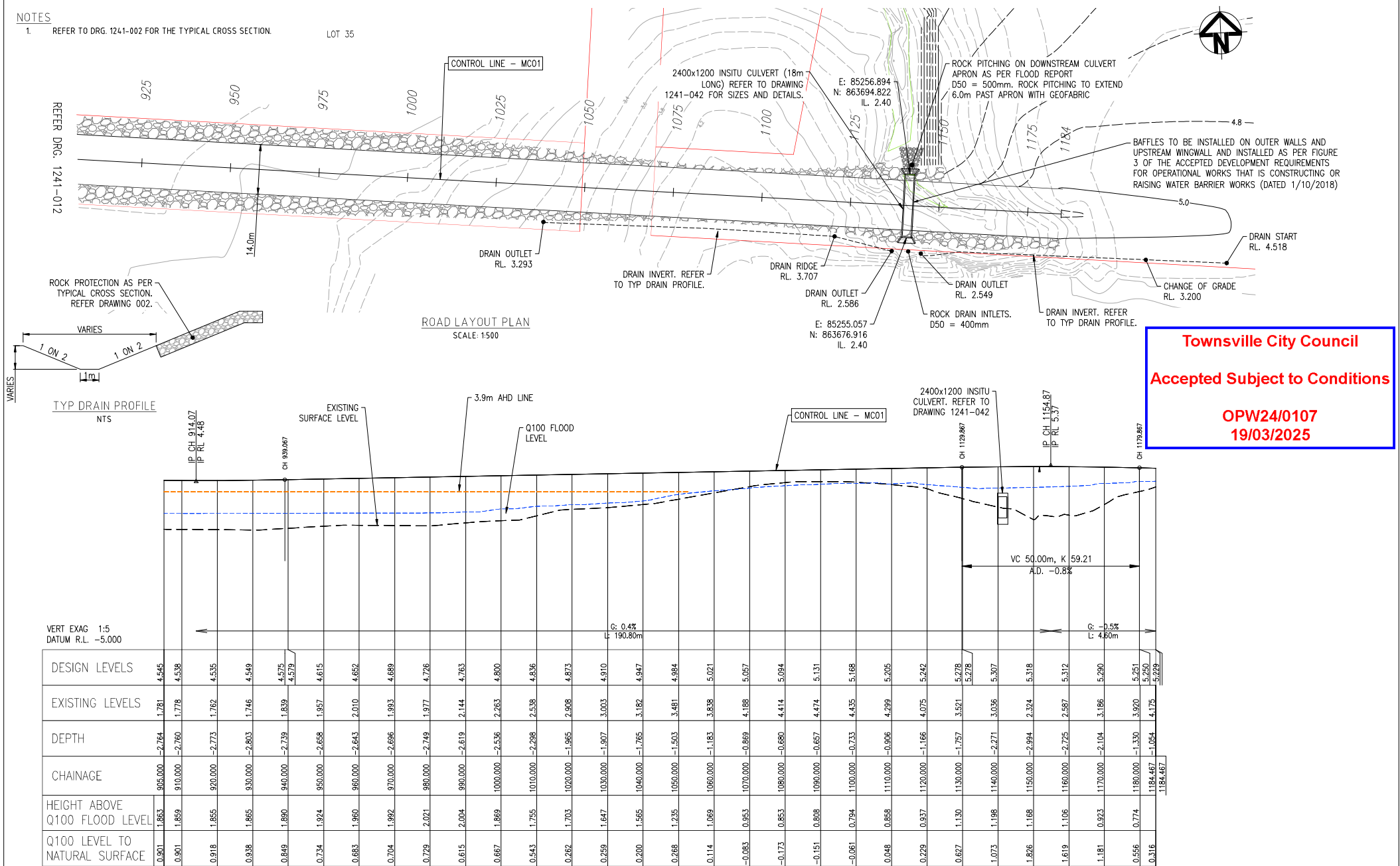
ROAD LAYOUT AND LONG SECTION - SHEET 3 OF 4

SCALE	AS SHOWN				
	SHEET 5 OF 25				
REVISION	0	1	2	3	4
DRG NO.		1241 - 012			

NOTES

1. REFER TO DRG. 1241-002 FOR THE TYPICAL CROSS SECTION.

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19/03/2025

REVISED	NO.	DATE	DESCRIPTION	DESIGN	DATE
	6	17.02.25	AMENDED BAFFLES AND ROCK PITCHING		
	5	28.01.25	UPDATED CULVERTS		
	4	29.11.24	UPDATED Q100 FLOOD LEVEL		
	3	12.11.24	UPDATED TO SUIT NEW FLOOD MODEL		
	2	19.09.24	RESPONSE TO CONDITIONS		
	1	27.08.24	LAYOUT AND LONGSECTION AMENDMENTS		

HORIZ. DATUM	MGA
VERT. DATUM	AHD
DRG. FILE	DATE
DESIGN	A.REINAUDO 28.05.24
DRAWN	A.REINAUDO 28.05.24

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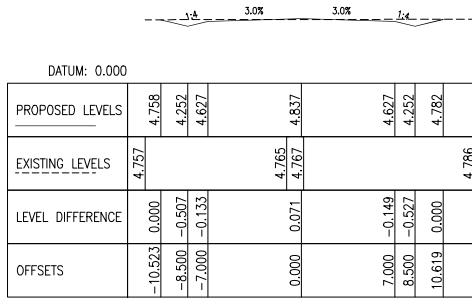
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e brett@langtreeconsulting.com.au

CLEVELAND BAY INDUSTRIAL PARK

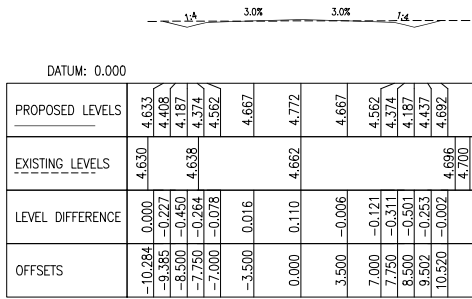
TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT

ROAD LAYOUT AND LONG SECTION - SHEET 4 OF 4

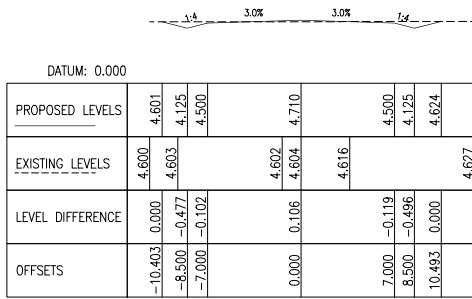
SCALE	AS SHOWN
SHEET	6 OF 25
REVISION	0 1 2 3 4 5 6
DRG NO.	1241 - 013



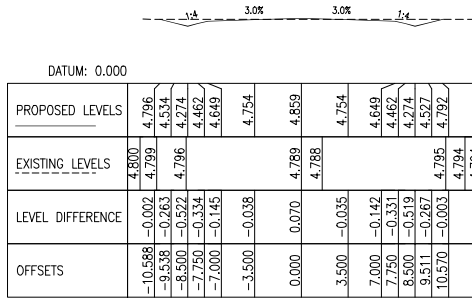
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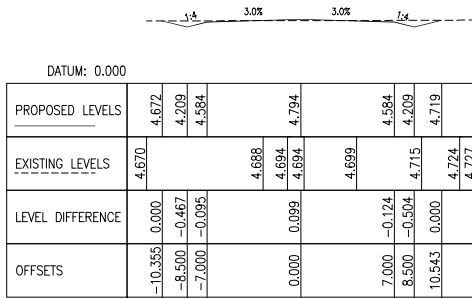
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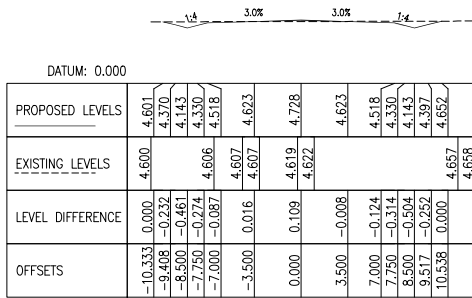
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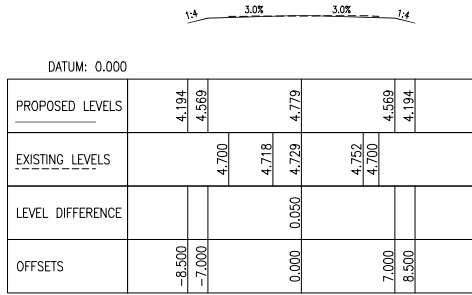
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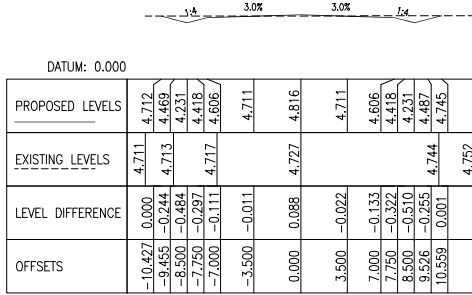
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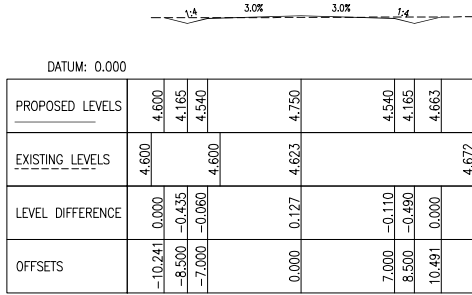
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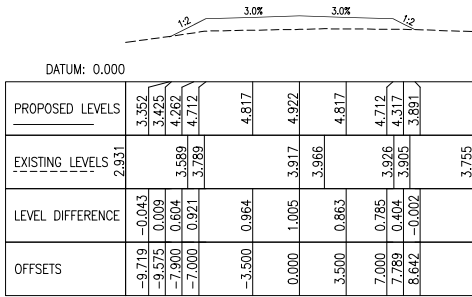


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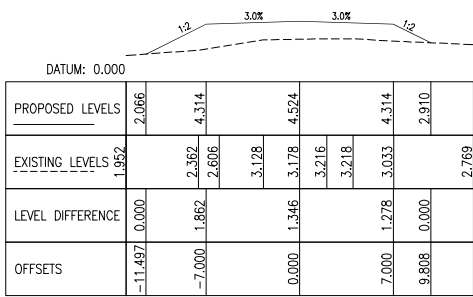


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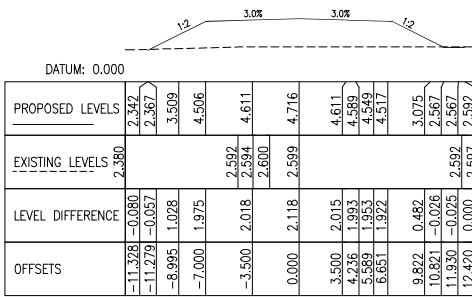
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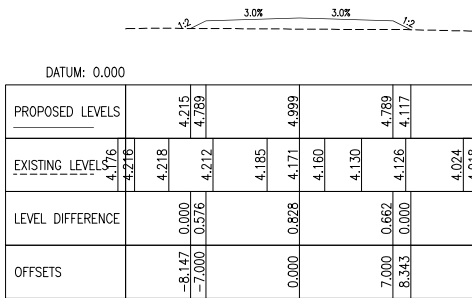
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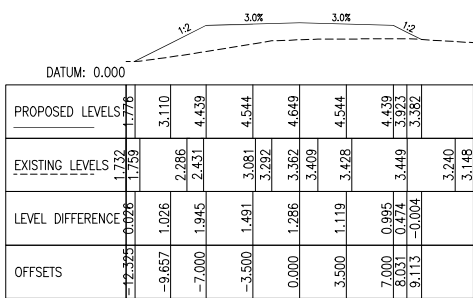
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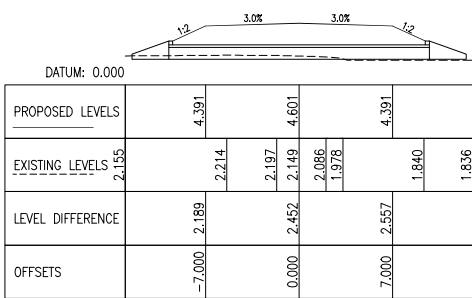
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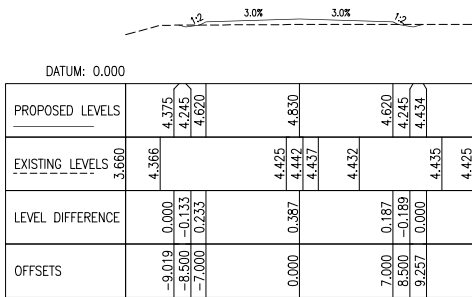
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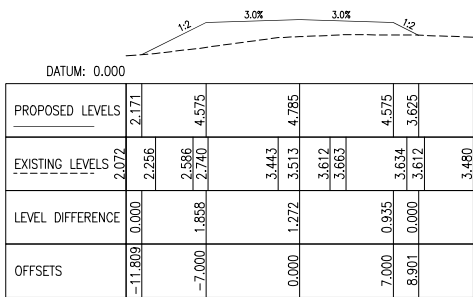
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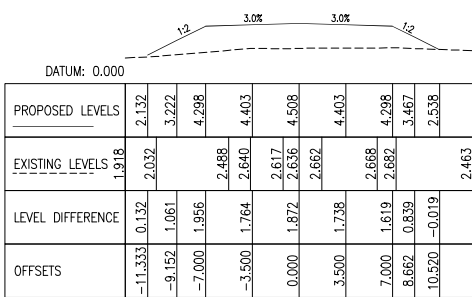
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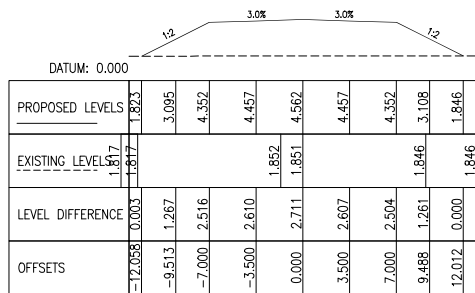
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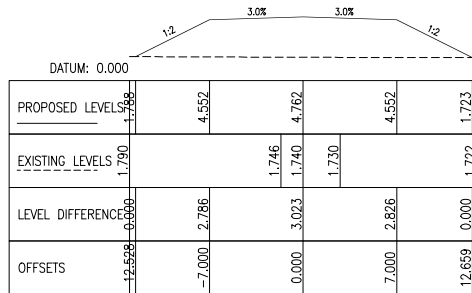
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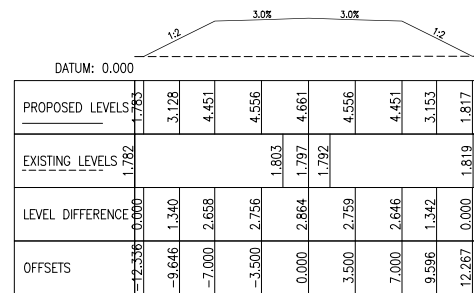
REVISIONS					HORIZ. DATUM	MGA	CERTIFICATION <i>B. Langtree</i> BJANGTREE RPEQ 11932 COPYRIGHT (C) These designs and drawings are copyright and are not to be used or reproduced without the written permission of B. Langtree Consulting Pty Ltd (ACN 59 611 365 024). The contents of this drawing are electronically generated and controlled and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only. Unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	 m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK				SCALE	AS SHOWN
					VERT. DATUM	AHD			TOWNSVILLE PORT ROAD, STUART				SHEET	8 OF 25
					DRG. FILE	DATE			FAR EAST DEVELOPMENT				REVISION	0 1
					DESIGN	A.REINAUDO 28.05.24			CROSS SECTION – SHEET 2 OF 6				DRG NO.	1241 – 015



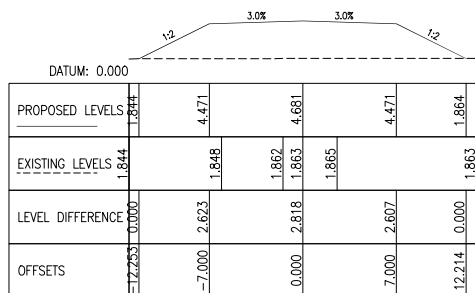
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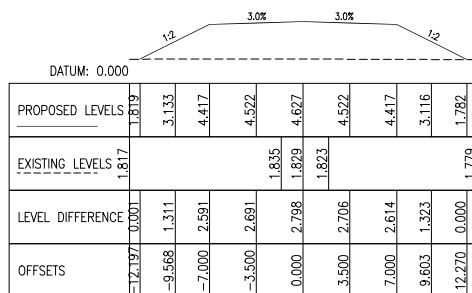
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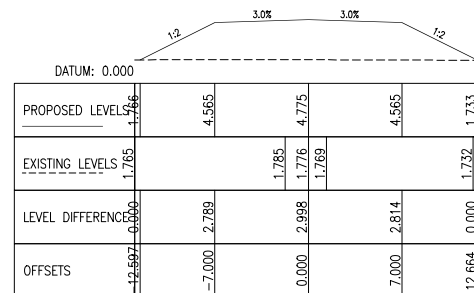
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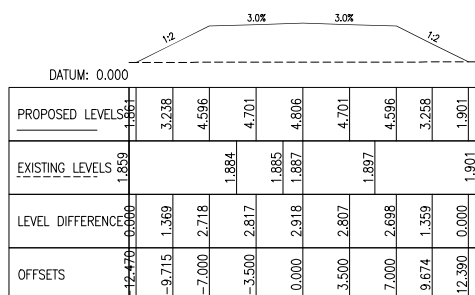
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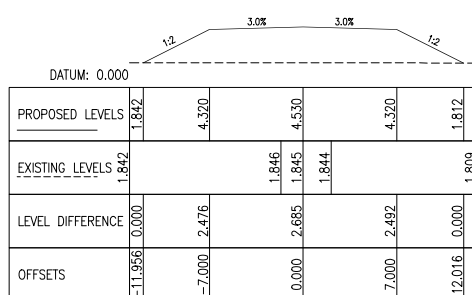
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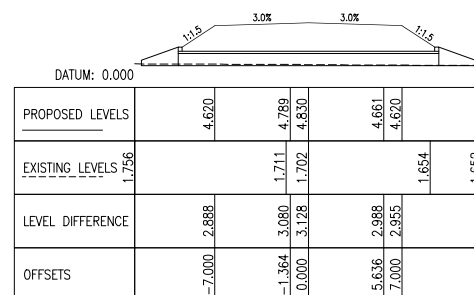
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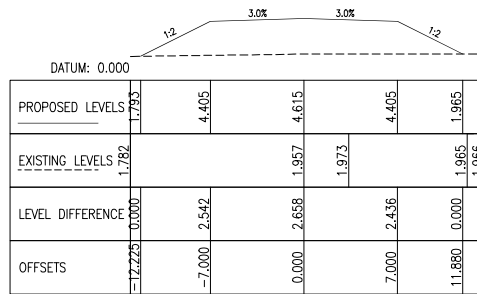
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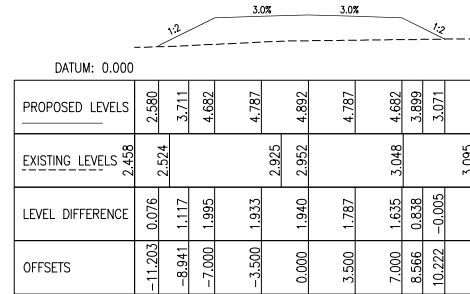
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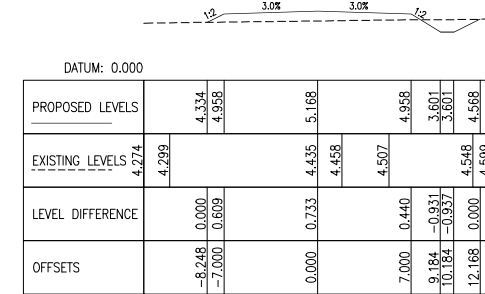
REVISIONS					HORIZ. DATUM	MGA	CERTIFICATION  B. LANGTREE RPEQ 11932 COPYRIGHT (C) These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING RPEQ LTD (ACN 59 611 365 024). The contents of this drawing are electronically generated, are controlled and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	 m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK			SCALE	AS SHOWN
					VERT. DATUM	AHD						SHEET	10 OF 25
	1	A.R.	27.08.24	CROSS SECTIONS ADDED	DRG. FILE	DATE						REVISION	0 1
	0	A.R.	28.05.24	FOR OPW APPLICATION	DESIGN	A.REINAUDO	28.05.24					DRG No.	1241 - 017



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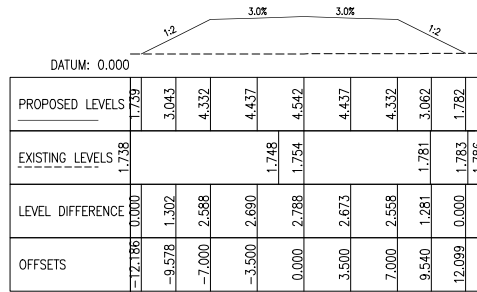


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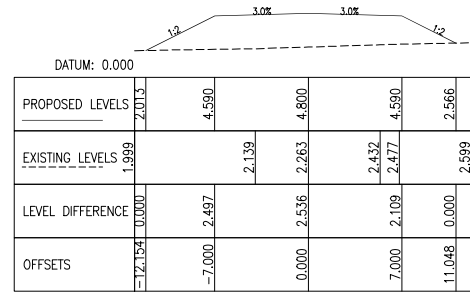


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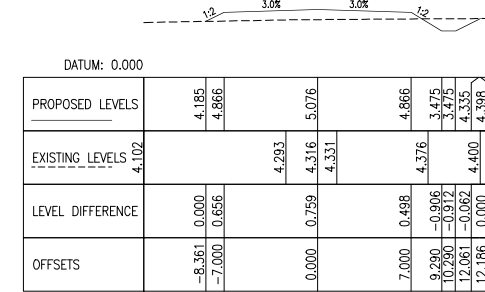
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19/03/2025



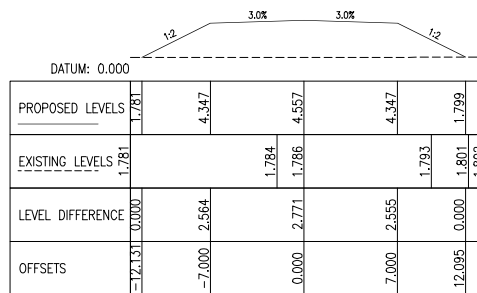
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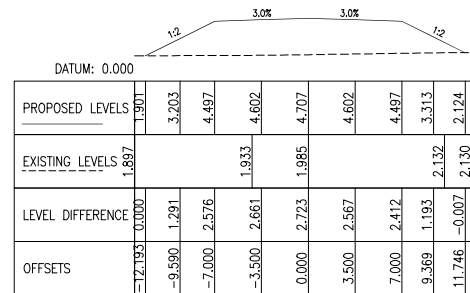
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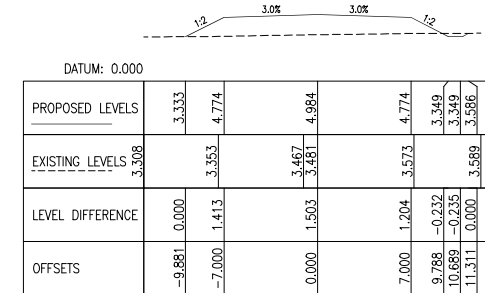
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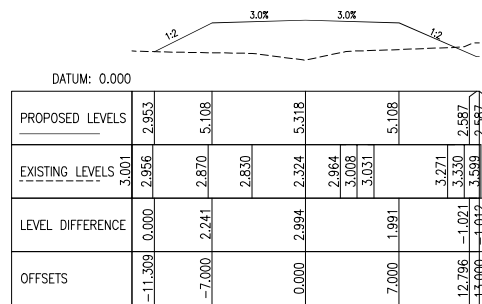


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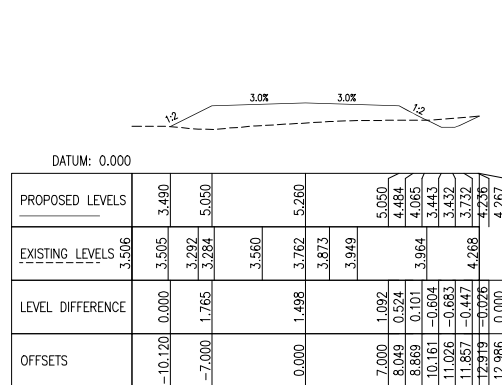


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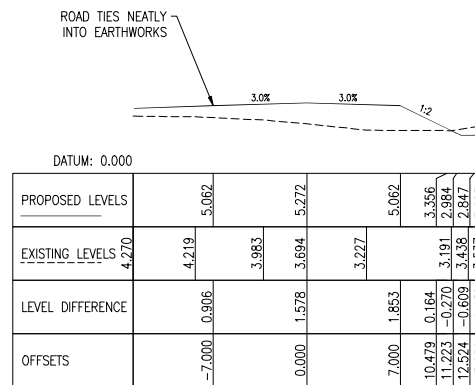
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					VERT. DATUM	AHD					SHEET	11 OF 25
					DRG. FILE	DATE					REVISION	0 1
					DESIGN	A.REINAUDO 28.05.24					DRG No.	1241 – 018
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CHAINAGE 1150.000



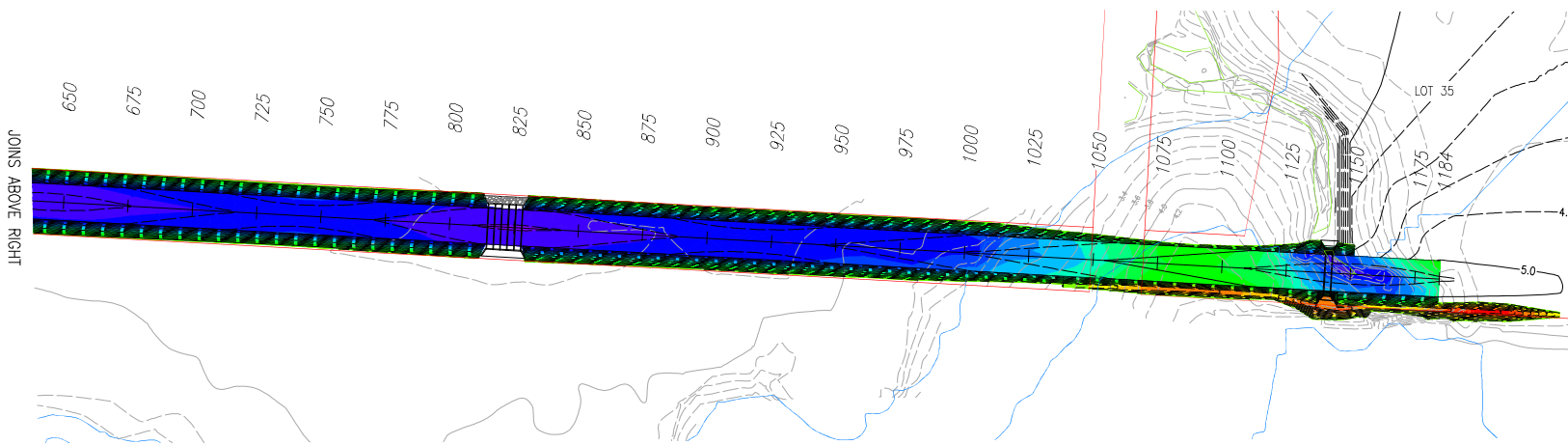
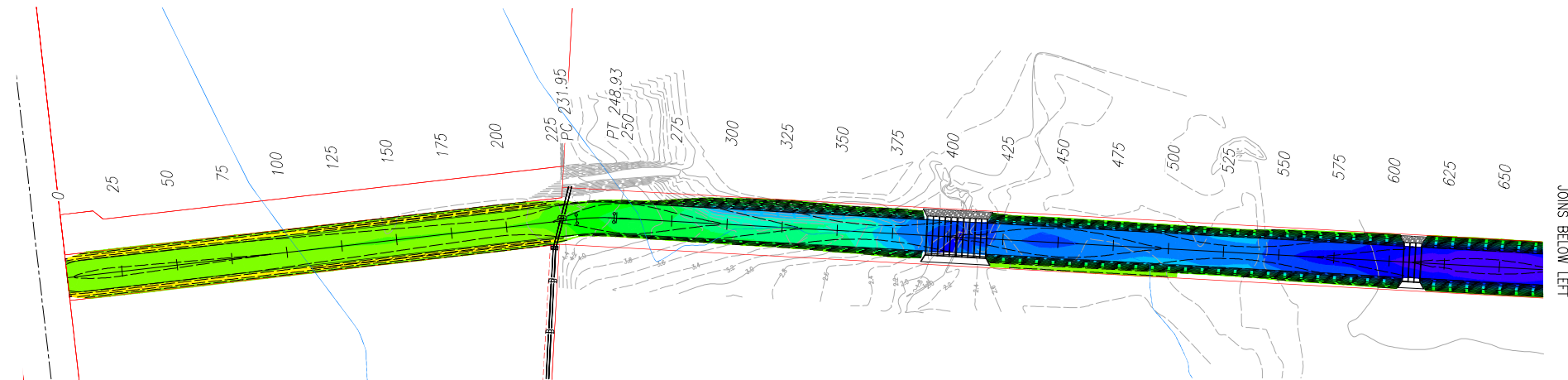
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CHAINAGE 1175.000

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19/03/2025

REVISIONS					HORIZ. DATUM		MGA		CERTIFICATION  B.JLANGTREE RPEQ 11932		 0400 699 979 brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK					SCALE	AS SHOWN									
					VERT. DATUM		AHD							SHEET	12 OF 25												
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	0	A.R.	28.05.24	FOR OPW APPLICATION	DESIGN		A.REINAUDO		28.05.24																		
Document No. 26459067					DRAWN		A.REINAUDO		28.05.24		COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 358 024). The contents of this drawing are effective as drawn and may only be used for the stated purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.										TOWNSVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT CROSS SECTION – SHEET 6 OF 6					DRG NO.	1241 – 019



ROAD			
Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1		-2.000	-1.700
2		-1.700	-1.400
3		-1.400	-1.100
4		-1.100	-0.800
5		-0.800	-0.500
6		-0.500	-0.200
7		-0.200	0.100
8		0.100	0.400
9		0.400	0.700
10		0.700	1.000
11		1.000	1.300
12		1.300	1.600
13		1.600	1.900
14		1.900	2.200
15		2.200	2.500
16		2.500	2.800
17		2.800	3.100
18		3.100	3.400

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19/03/2025

0 10 20 40m
SCALE 1:1000 (A1)

REV	NO	DATE	DESCRIPTION	HORIZ. DATUM		MGA		CERTIFICATION	
				VERT. DATUM		AHD			
2	A.R.	12.11.24	UPDATED TO SUIT NEW FLOOD MODEL	DRG. FILE				COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 59 611 355 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figure dimensions take precedence over scale. Do not scale from this drawing.	BJLANGTREE RPEQ 11932
1	A.R.	27.08.24	AMENDED LAYOUT	DESIGN	A.REINAUDO	28.05.24			
0	A.R.	28.05.24	FOR OPW APPLICATION	DRAWN	A.REINAUDO	28.05.24			



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e brett@langtreeconsulting.com.au

CLEVELAND BAY INDUSTRIAL PARK

TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT
ROAD CUT/FILL PLAN

SCALE	AS SHOWN			
	SHEET 13 OF 25			
REVISION	0	1	2	
DRG NO.	1241 - 020			

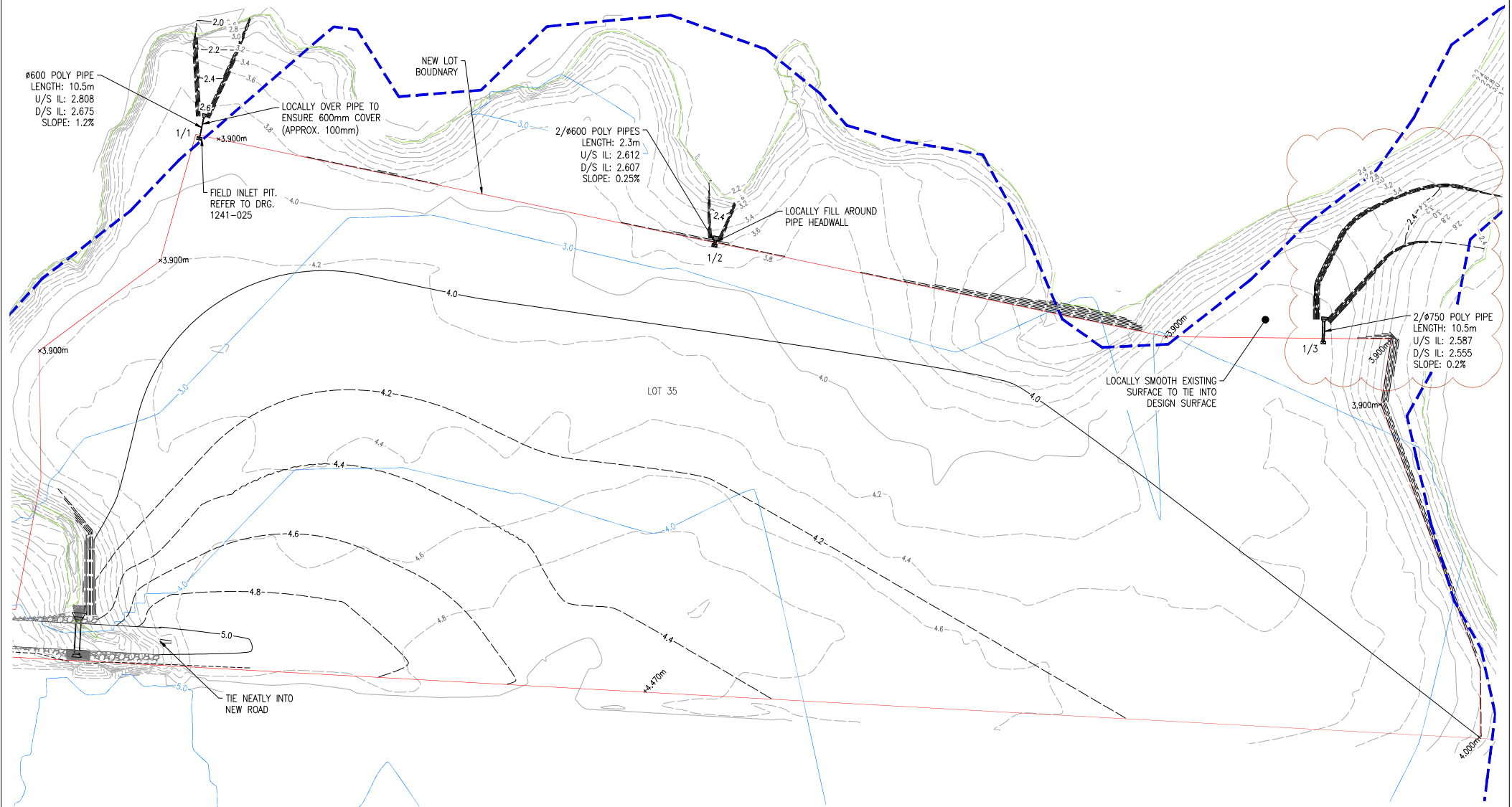
LEGEND:

- HIGHEST ASTRONOMICAL TIDE (2.36 AHD)
- WATERWAYS FOR WATER BARRIER WORKS (TIDAL)
- DESIGN CONTOUR MAJOR (1.0m INTERVALS)
- DESIGN CONTOUR MINOR (0.2m INTERVALS)
- EXISTING CONTOUR
- Q100 SURFACE CONTOURS (1.0m INTERVALS)

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19/03/2025

EARTHWORKS NOTES:

- ALL EARTHWORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- REFER TO DRAWING 022 FOR PIPE OUTLET DETAILS.



REVISIONS				HORIZ. DATUM		MGA		CERTIFICATION		CLEVELAND BAY INDUSTRIAL PARK				SCALE	
				VERT. DATUM		AHD				TOWNSVILLE PORT ROAD, STUART				SHEET	
				DRG. FILE		DATE		COPYRIGHT (C)		FAR EAST DEVELOPMENT				REVISION	
				DESIGN		DRAWN				EARTHWORKS LAYOUT PLAN				DRG NO.	
2	A.R.	29.11.24	ADDED FLOOD LEVELS											0	1
1	A.R.	28.08.24	AMENDED DRAWING											2	
0	A.R.	28.05.24	FOR OPW APPLICATION												

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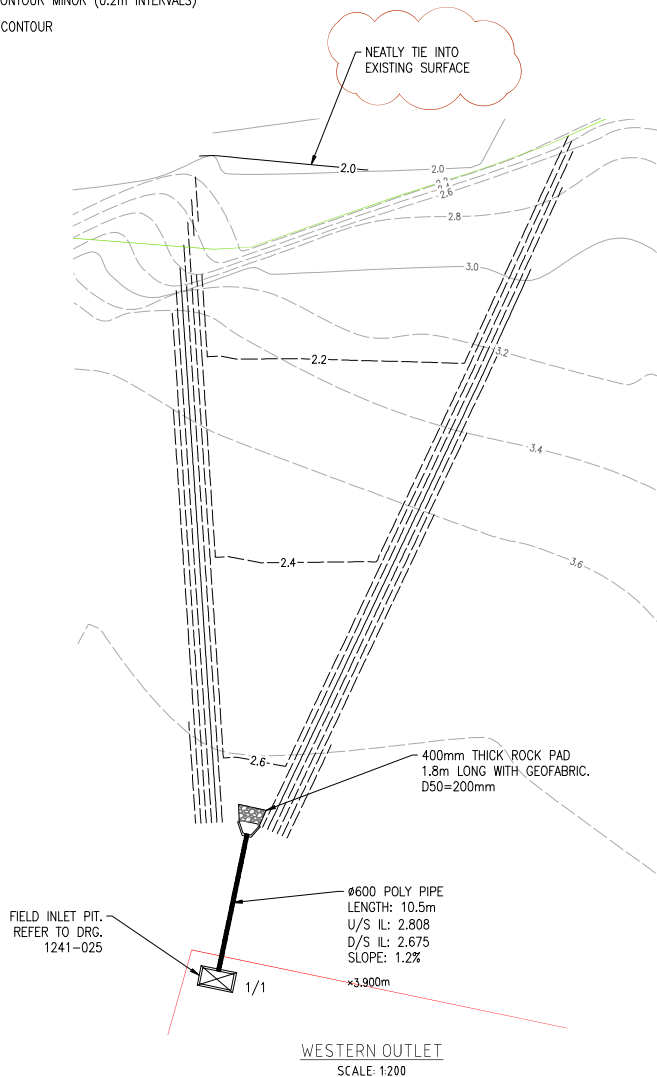
Version: 7, Version Date: 20/03/2025



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LEGEND:

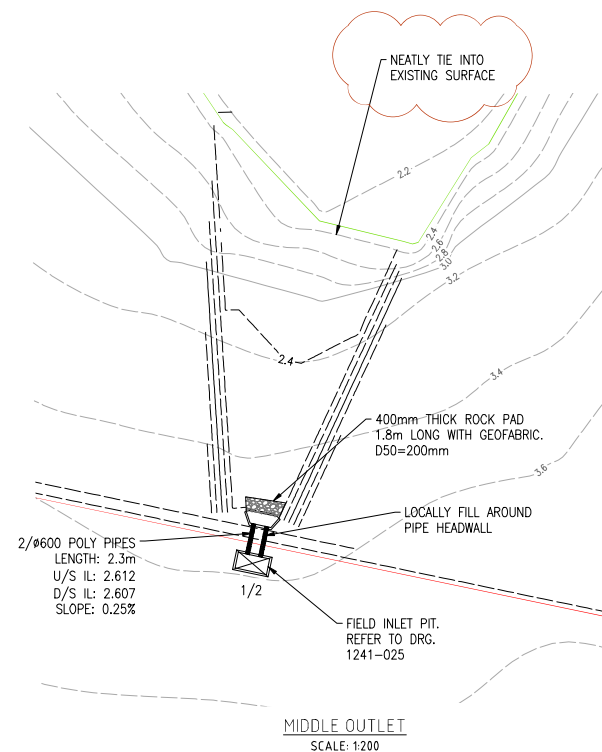
- DESIGN CONTOUR MAJOR (1.0m INTERVALS)
- DESIGN CONTOUR MINOR (0.2m INTERVALS)
- EXISTING CONTOUR



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0 2 4 8m
SCALE 1:200 (A1)

REVISE				HORIZ. DATUM	MGA	CERTIFICATION	
				VERT. DATUM	AHD	B. LANGTREE RPEQ 11932	
1	A.R.	27.08.24	DRAWING AMENDED	DRG. FILE	DATE		COPYRIGHT (C) These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 59 611 355 034). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figure dimensions take precedence over scale. Do not scale from this drawing.
				DESIGN	A.REINAUDO	28.05.24	
0	A.R.	28.05.24	FOR OPW APPLICATION	DRAWN	A.REINAUDO	28.05.24	



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e brett@langtreeconsulting.com.au

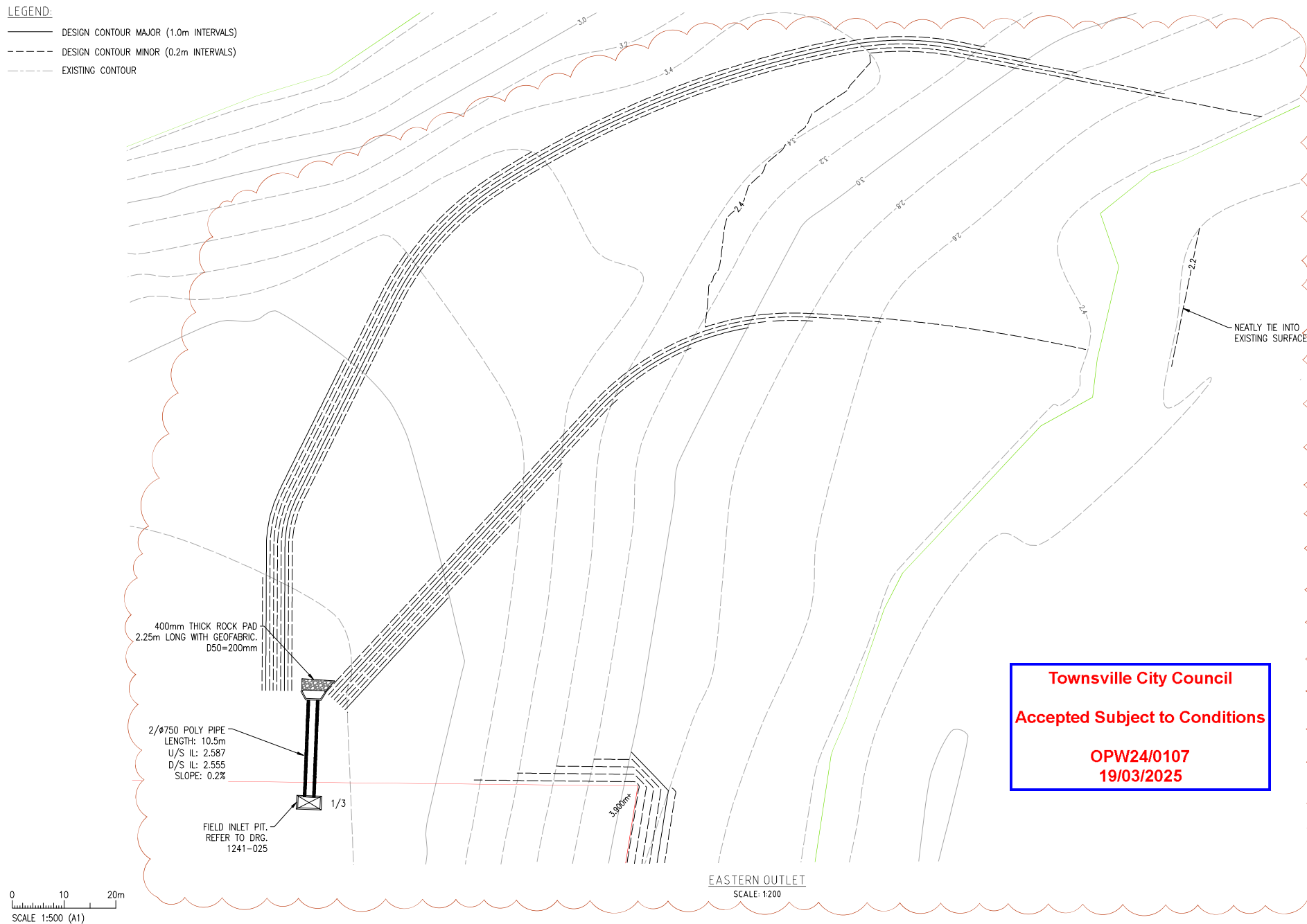
CLEVELAND BAY INDUSTRIAL PARK

TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT
PIPE OUTLET - SHEET 1 OF 2

SCALE	AS SHOWN			
SHEET	15 OF 25			
REVISION	0	1		
DRG No.	1241 - 022			

LEGEND:

- DESIGN CONTOUR MAJOR (1.0m INTERVALS)
- DESIGN CONTOUR MINOR (0.2m INTERVALS)
- EXISTING CONTOUR

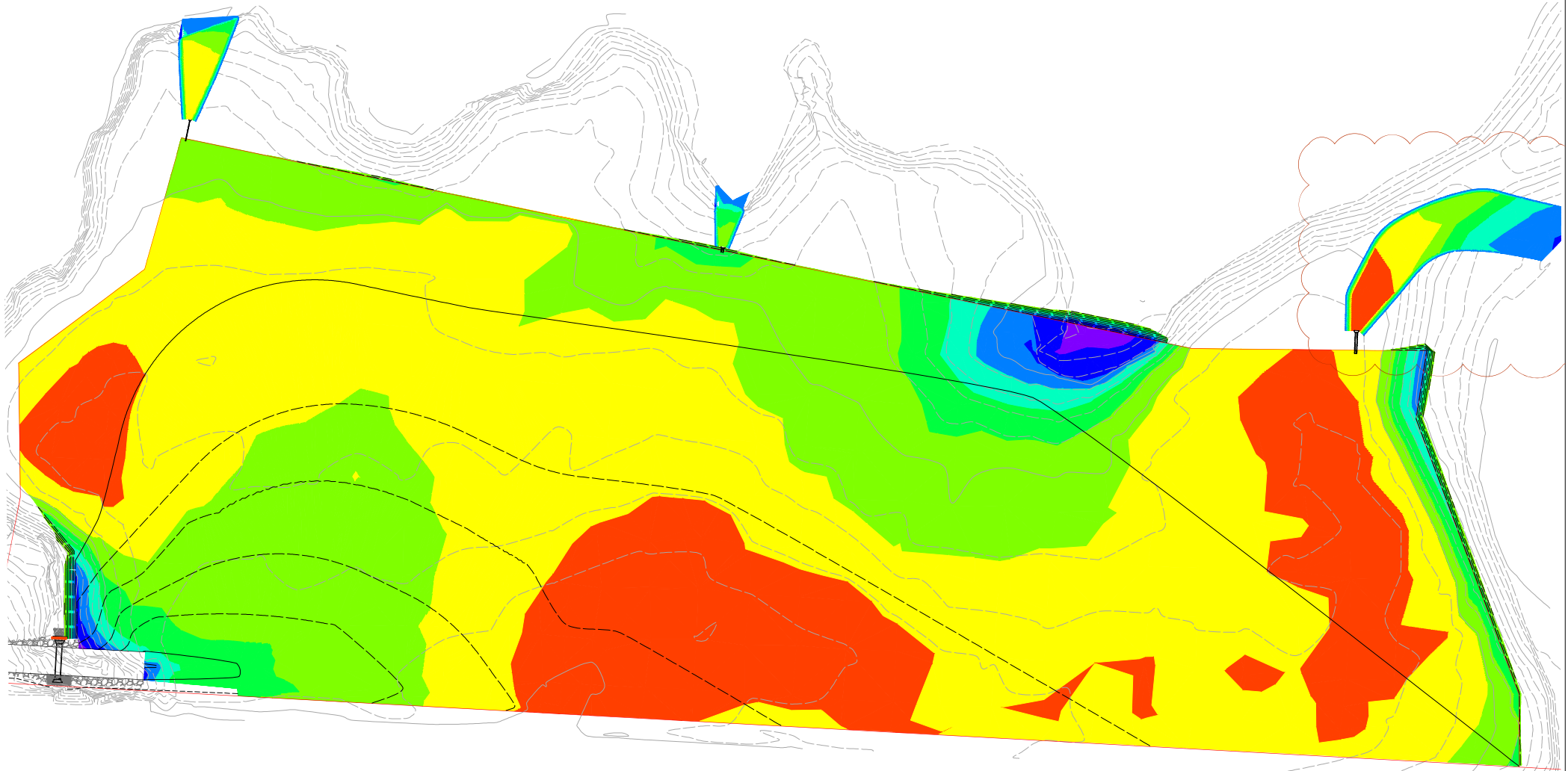


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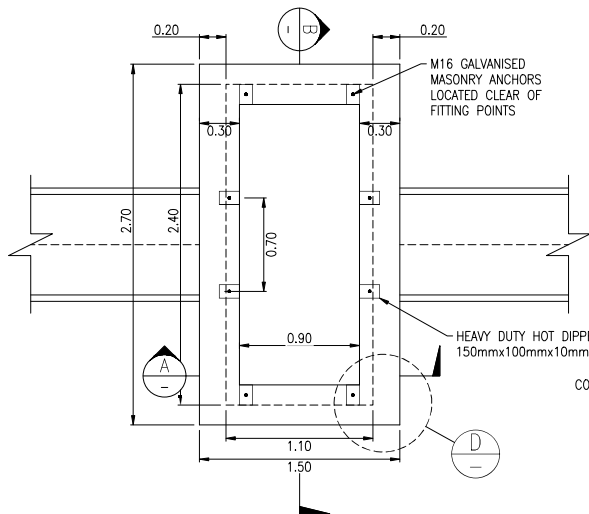
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	NO.	DATE	DESCRIPTION	DRG. FILE	VERT. DATUM	AHD			TOWNVILLE PORT ROAD, STUART		SHEET	16 OF 25
	1	27.08.24	DRAWING AMENDED	DESIGN	A.REINAUDO	28.05.24			FAR EAST DEVELOPMENT		REVISION	0 1
	0	28.05.24	FOR OPW APPLICATION	DRAWN	A.REINAUDO	28.05.24			PIPE OUTLET – SHEET 2 OF 2		DRG NO.	1241 – 023

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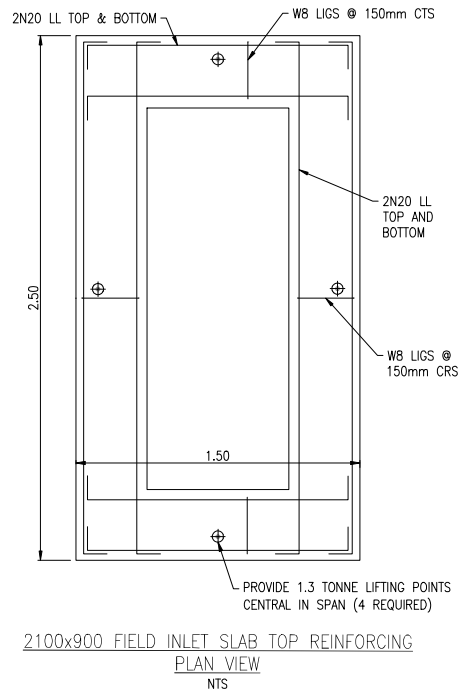
EARTHWORKS			
Number	Color	Minimum Elevation	Maximum Elevation
1	Red	-1.000	-0.700
2	Orange	-0.700	-0.400
3	Yellow	-0.400	-0.100
4	Light Green	-0.100	0.200
5	Green	0.200	0.500
6	Light Blue	0.500	0.800
7	Blue	0.800	1.100
8	Dark Blue	1.100	1.400
9	Purple	1.400	1.700



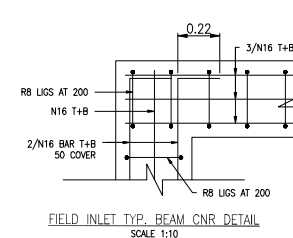
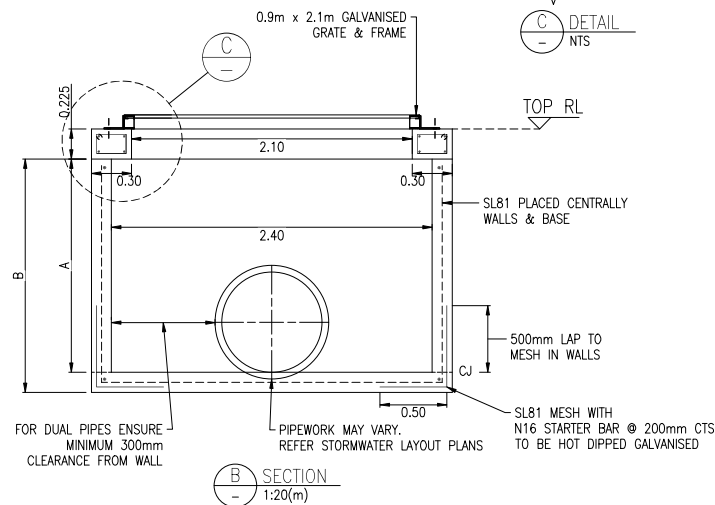
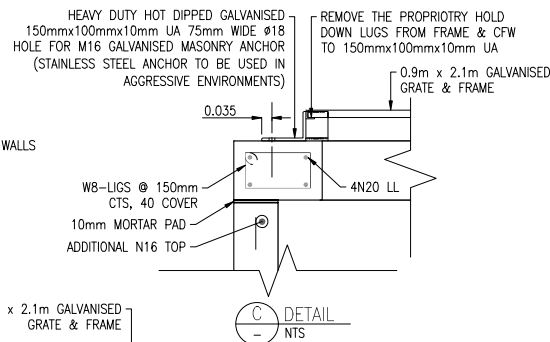
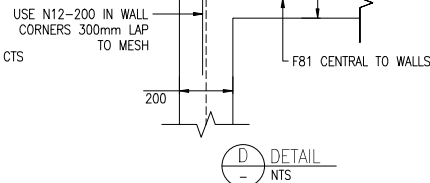
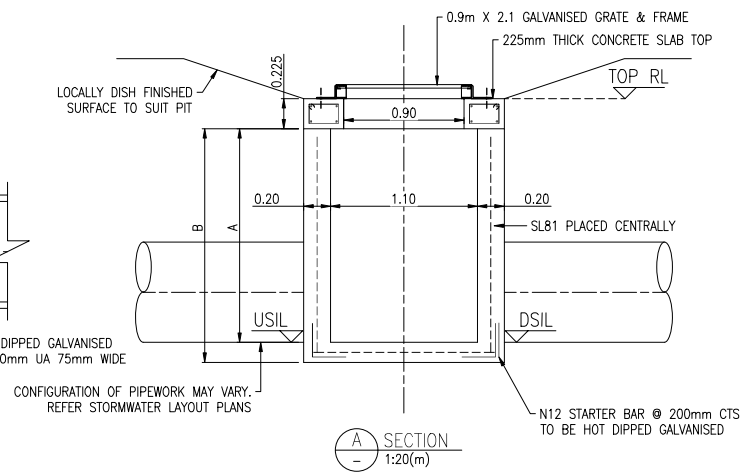
REVISIONS					HORIZ. DATUM	MGA	CERTIFICATION <i>BLangtree</i> BLANGTREE RPEQ 11932 COPYRIGHT (C) These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 59 611 365 024). The contents of this drawing are electronically generated, are considered and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	 m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK					SCALE	AS SHOWN
					VERT. DATUM	AHD			TOWNSVILLE PORT ROAD, STUART					SHEET	17 OF 25
					DRG. FILE	DATE			FAR EAST DEVELOPMENT					REVISION	0
	0	AR	28.05.24	FOR OPW APPLICATION	DESIGN	A.REINAUDO 28.05.24			EARTHWORKS CUT/FILL PLAN					DRG NO.	1241 - 024
	DRAWN A.REINAUDO 28.05.24														



2100x900 FIELD INLET GENERAL ARRANGEMENT
SCALE: 1:20(m)
(GRATE NOT SHOWN FOR CLARITY)



2100x900 FIELD INLET SLAB TOP REINFORCING
PLAN VIEW
NTS



PIT STRUCTURE	A (m)	B (m)
1/1	1.095	1.245
1/2	1.290	1.440
1/3	1.328	1.478

2100 x 900 FIELD INLET NOTES:

1. REFER TCC STD. DRG. SD-215 FOR CONCRETE AND REINFORCEMENT NOTES UNLESS NOTED OTHERWISE HEREIN.
2. GRATE TO BE A 3 COMPONENT ASSEMBLY. GRATES & FRAMES TO BE AN APPROVED PRODUCT DESIGNED FOR CLASS B LOADINGS TO AS3996.
3. FRAME, GRATE AND ANGLES TO BE HEAVY DUTY HDG AFTER FABRICATION.

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19/03/2025

REV	DATE	DESCRIPTION
0	AR 28.05.24	FOR OPW APPLICATION

HORIZ. DATUM	MGA
VERT. DATUM	AHD
DRG. FILE	DATE
DESIGN	A.REINAUDO 28.05.24
DRAWN	A.REINAUDO 28.05.24

CERTIFICATION
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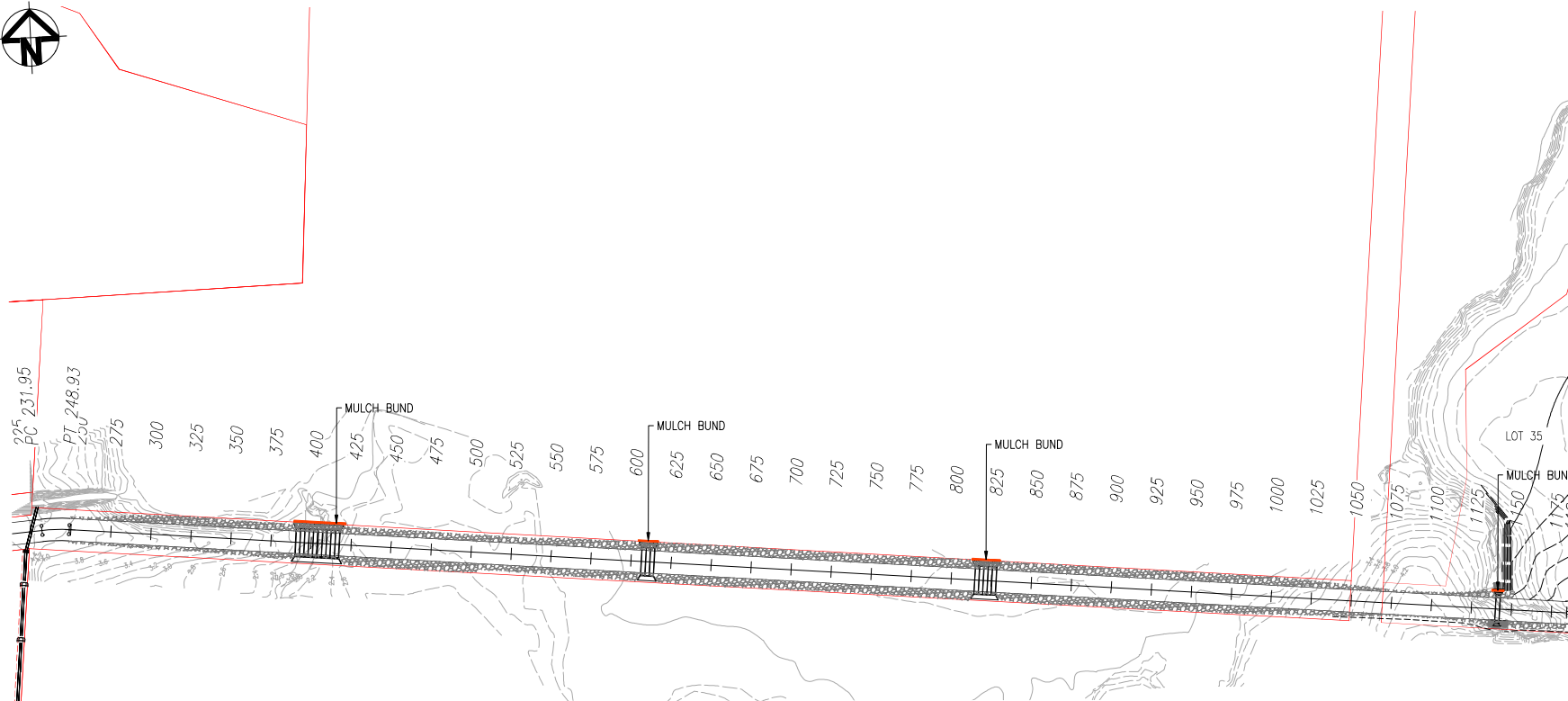


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CLEVELAND BAY INDUSTRIAL PARK

TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT
STORMWATER PIT DETAILS

SCALE	AS SHOWN
SHEET	18 OF 25
REVISION	0
DRG NO.	1241 - 025



- LEGEND:
- ROCK PROTECTION
 - SILTS SOCKS AROUND PITS
 - DIVERSION BANK
 - SEDIMENT FENCE

SOIL EROSION & SEDIMENT CONTROL NOTES

- FOR NOTES AND DETAILS REFER TO SOIL EROSION AND SEDIMENT CONTROL DETAILS PLAN.
- STOCKPILE LOCATIONS TO BE DESIGNATED BY THE CONTRACTOR ON SITE DURING CONSTRUCTION AND CONFIRMED WITH THE SUPERINTENDENT.
- EXISTING SOIL TYPE – CLAYEY SAND, SANDY CLAY OR SILTY CLAY (FINE OR FINE TO MEDIUM GRAINED SAND WITH PLASTICITY RANGING FROM HIGH TO LOW).
- EARTHWORKS TO BE STAGED SUCH THAT CUT TO FILL INCLUDING COMPACTION & TOPSOILING IS COMPLETED WITHIN 2 WEEKS OF STRIPPING OF TOPSOIL.
- ALL MEASURES FOR EROSION AND SEDIMENTATION CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND THE MAINTENANCE PERIOD.
- ALL MEASURES FOR EROSION AND SEDIMENTATION CONTROL SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR IN SUCH A MANNER SO AS NOT TO PRESENT POTENTIAL HAZARD TO ANY PERSON OR PROPERTY.
- IF TOWNSVILLE CITY COUNCIL'S LEVEL 3 OR 4 WATER RESTRICTIONS ARE IN PLACE THEN CONSTRUCTION WATER FOR DUST CONTROL MUST NOT BE DRAWN FROM THE RETICULATED SUPPLY. A BORE WATER SUPPLY MUST BE UTILISED AND TRUCKED IN FOR DUST SUPPRESSION OR AS AGREED WITH COUNCIL.
- THE SUPERINTENDENT OR CONTRACTOR WILL MONITOR AND APPROVE FURTHER MITIGATION MEASURES NOT LIMITED TO:
 - PREVENT DUST LEAVING THE SITE BY PROACTIVE USE OF WATER TRUCK PRIOR TO AND DURING ANY EXCAVATION, BACK FILLING, GRADING AND SHAPING OF EARTH.
 - INCREASE FREQUENCY OF WATER TRUCK USAGE WHILE EXCAVATIONS AND GROUND WORKS ARE IN PROGRESS TO THE POINT DUST IS NOT AN ISSUE.

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19/03/2025

REVISIONS					HORIZ. DATUM		MGA		CERTIFICATION		CLEVELAND BAY INDUSTRIAL PARK				SCALE	AS SHOWN	
					VERT. DATUM		AHD		B. LANGTREE RPEQ 11932						DRG. FILE	DATE	SHEET
									COPYRIGHT (C)				REVISION	0			
	0	AR	28.05.24	FOR OPW APPLICATION		DESIGN		A.REINAUDO		28.05.24				DRG No.	1241	—	030
						DRAWN		A.REINAUDO		28.05.24							

		0400 699 979	
m		brett@langtreeconsulting.com.au	
e			

TOWNSVILLE PORT ROAD, STUART			
FAR EAST DEVELOPMENT			
SESC PLAN – SHEET 1 OF 2			



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e brett@langtreeconsulting.com.au

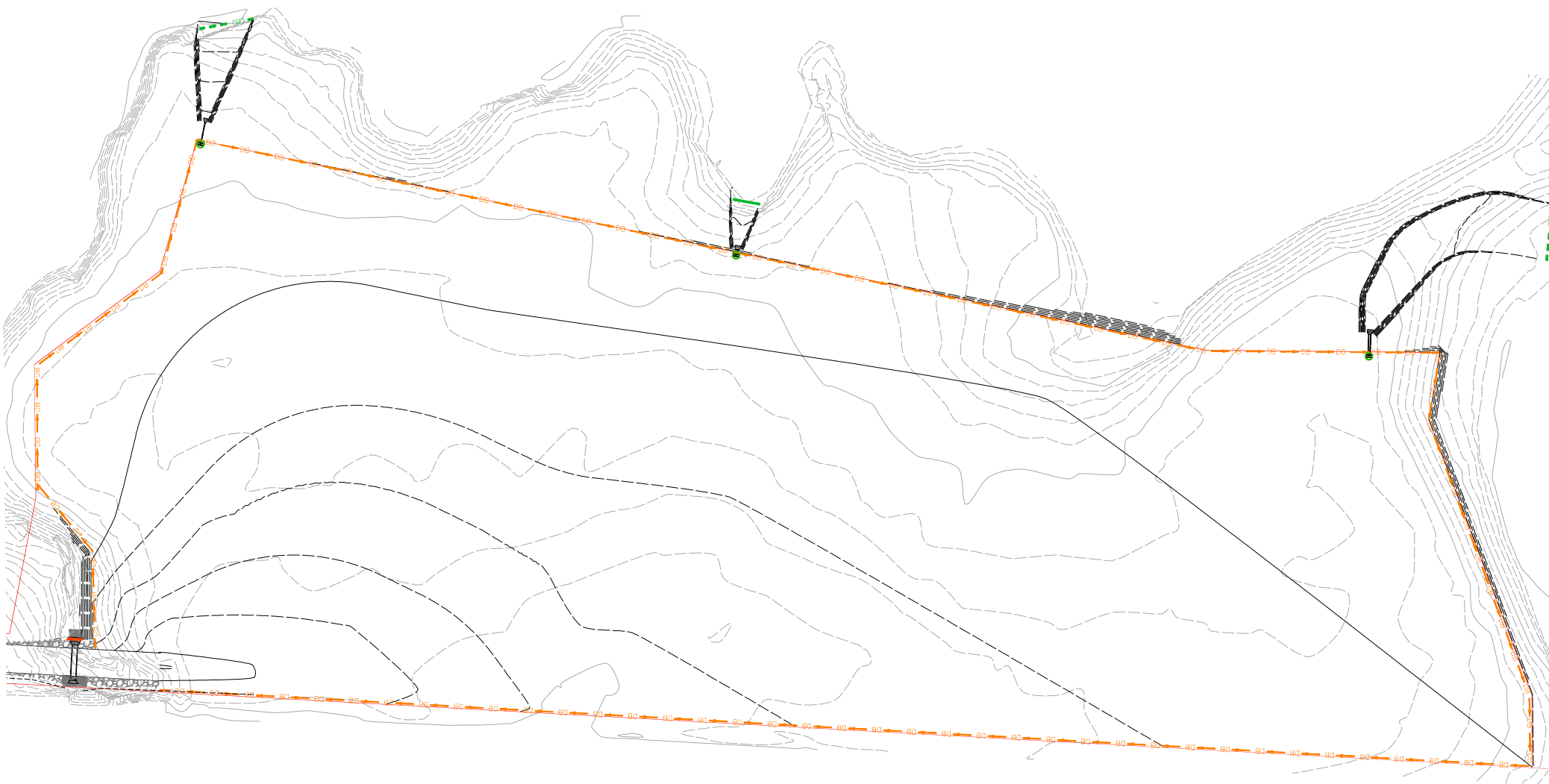
LEGEND:

-  ROCK PROTECTION
-  SILT SOCKS AROUND PITS
-  DIVERSION BANK
-  (SF) SEDIMENT FENCE

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19/03/2025

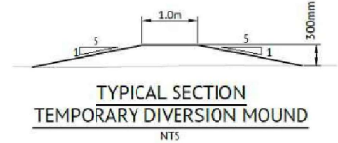
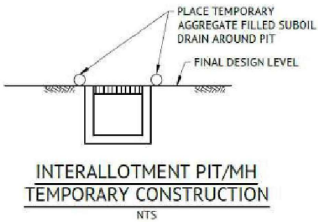


REVISIONS						HORIZ. DATUM	MGA	CERTIFICATION  B.LANGTREE RPEQ 11932	 m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK				SCALE	AS SHOWN				
						VERT. DATUM	AHD							SHEET	20 OF 25				
	0	A.R	28.05.24	FOR OPW APPLICATION		DRG. FILE		DATE						REVISION	0				
						DESIGN	A.REINAUDO	28.05.24						DRG No.	1241 - 031				
	DRAWN A.REINAUDO 28.05.24						TOWNSVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT SESC PLAN – SHEET 2 OF 2												

SEQUENCE OF ACTIONS TO BE UNDERTAKEN BY CONTRACTOR

1. NOTIFICATION	- THE SUPERINTENDENT IS TO BE GIVEN NOTIFICATION FOR EACH OF THE FOLLOWING POINTS: - AFTER THE AREA TO BE CLEARED HAS BEEN NOMINATED ON SITE. - ONCE THE LOCATION OF THE DIVERSION DRAINS HAVE BEEN DETERMINED ON SITE. - AFTER THE EROSION CONTROL OUTLET STRUCTURES HAVE BEEN INSTALLED.
2. SITE POSSESSION	- ERECTION OF BARRIER FENCING TO BUFFER AREAS AND DRAINAGE RESERVES AS DIRECTED BY SUPERINTENDENT. - INSTALLATION OF CONSTRUCTION EXIT. - CONSTRUCT TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILT FENCING AND DIVERSION BANKS. - CONSTRUCT SEDIMENT BASIN TO DIMENSIONS NOMINATED BY SUPERINTENDENT, IF REQUIRED, INSTALL DIVERSION BANKS TO DIRECT WATER FROM DISTURBED AREAS TO BE BASIN.
3. CONSTRUCTION	- TOPSOIL TO BE STRIPPED AND STOCKPILED IN LOCATIONS AGREED WITH THE SUPERINTENDENT. A SEDIMENT FENCE IS TO BE CONSTRUCTED ON THE DOWNHILL SIDE OF THE STOCKPILE TO TRAP SEDIMENT. A DIVERSION DRAIN IS TO BE INSTALLED UPSTREAM OF THE STOCKPILE. - AT ALL TIMES THE CONTRACTOR SHALL ENSURE THAT DUST RESULTING FROM THE PROPOSED WORKS, INCLUDING EXCAVATION, BACKFILLING, GRADING AND STOCKPILES IS KEPT TO AN ABSOLUTE MINIMUM. - SEDIMENT CONTROL DEVICES REQUIRED TO BE REMOVED TO ALLOW CONSTRUCTION ACCESS ARE TO BE REINSTATED AT THE COMPLETION OF EACH WORKDAY. - MOVEMENT OF CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO THE AREA OF WORK AND EXISTING ROADS. - DISTURBED AREAS ARE TO BE GRASSED FOLLOWING FINAL TRIMMING IN ACCORDANCE WITH THE DRAWINGS. AREAS ARE TO BE DISTURBED AND RESTORED PROGRESSIVELY. - TURF STRIPS (1000mm WIDE) SHALL BE LAID TO THE BASE OF ALL DOWNSTREAM EARTHWORKS BATTERS STEEPER THAN 1 IN 4. BATTERS SHALL BE TOPSOILED AND GRASS SEEDDED IMMEDIATELY UPON COMPLETION OF EARTHWORKS. - KERB SEDIMENT TRAPS ARE TO BE PROVIDED AT EACH DRAINAGE PIT ADJACENT TO DISTURBED AREAS.
4. MAINTENANCE	CHECK INTEGRITY OF EROSION AND SEDIMENT CONTROL DEVICES: DAILY DURING THE MONTHS OF NOVEMBER TO MARCH, AND FOLLOWING EACH RAINFALL EVENT, AND WEEKLY AT OTHER TIMES OF THE YEAR, AND PRIOR TO IMPENDING RAINFALL EVENTS.
5. GENERAL	- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES FROM THE POSSESSION OF THE SITE UNTIL THE SITE IS ACCEPTED BY THE LOCAL AUTHORITY "OFF MAINTENANCE" OR UNTIL STABILISATION HAS OCCURRED TO THE SATISFACTION OF THE SUPERINTENDENT. - ADDITIONAL CONTROL DEVICES MAY BE REQUIRED BY THE SUPERINTENDENT. - ALTERNATIVE DESIGNS ARE TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION.

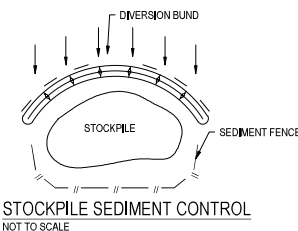
DEVICE	CONSTRUCTION REQUIREMENTS	MAINTENANCE REQUIREMENTS
SEDIMENT FENCES USED TO TEMPORARILY REDUCE THE VELOCITY OF CONTAMINATED SHEET FLOW AND TO INDUCE GRAVITATIONAL SETTLEMENT OF THE ENTRAINED SEDIMENT.	- REFER TO DETAIL ON THIS PLAN - ALL SEDIMENT FENCES TO BE INSTALLED PARALLEL TO CONTOURS. - REGULAR TURN-BACKS AND A FIRM WIRE MESH BACKING ARE REQUIRED TO PREVENT THE FURTHER CONCENTRATION OF FLOW. - THE FENCE SHOULD BE SEGMENTED INTO A SERIES OF L SHAPED FENCES TO AVOID THE CONCENTRATION OF FLOW ALONG THE FENCE. - SEDIMENT FENCE RETURNS AT 20m INTERVALS MAX.	- REGULAR INSPECTIONS AND MAINTENANCE ARE REQUIRED TO REPAIR DAMAGE CAUSED BY ON-SITE VEHICLES OR THE MOVEMENT OF STOCKPILE MATERIAL. - INSPECT AFTER EACH STORM EVENT THAT RESULTS IN RUN-OFF. - REMOVE EXCESSIVE SEDIMENT DEPOSITS. - INVESTIGATE THE SOURCE OF EXCESSIVE SEDIMENT AND APPLY REMEDIAL ACTIONS IMMEDIATELY. - IF THE FENCE IS REGULARLY DAMAGED, INSTALL A SECOND FENCE AT LEAST 1 METRE DOWNSLOPE OF THE EXISTING FENCE.
DIVERSION DRAIN/PERIMETER BANKS USED TO DIVERT FLOW AROUND DISTURBED AREAS OR USED WITHIN DISTURBED AREAS TO DIRECT CONTAINMENT FLOW TO SEDIMENT TRAP.	- REFER TO DETAIL ON THIS PLAN - CHANNELS MUST HAVE A STABLE OUTLET. - DRAINS AND BANKS SHOULD BE SEEDDED AND MULCHED IF THEIR WORKING LIFE IS EXPECTED TO EXCEED 30 DAYS.	- REGULARLY INSPECT BANKS AND REPAIR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD. - SEDIMENT SHOULD BE REMOVED TO AVOID PONDING.
GULLY INLET PROTECTION USED TO LIMIT SEDIMENT BUILD UP IN STORMWATER DRAINS	- REFER TO DETAIL ON THIS PLAN - PROVIDE AT GULLY PITS. - PONDING MUST BE ALLOWED TO OCCUR UPSLOPE OF THE TRAP IN ORDER FOR PARTICLE SETTLEMENT.	- COVERS TO GULLY GRATES TO BE REMOVED ONCE THE GRASS STRIKE IS SUFFICIENT. - REGULAR MAINTENANCE AND INSPECTION AFTER EACH RINOFF PRODUCING STORM EVENT. - BULK SEDIMENT SHOULD BE REGULARLY REMOVED.



MATERIAL STOCKPILING:

THE CONSTRUCTION CONTRACTOR IS TO ADHERE TO THE FOLLOWING SOIL AND STOCKPILE MANAGEMENT PRACTISES. IN ADDITION, AS THE SITE IS WITHIN THE FIRE ANT BIOSECURITY ZONE 1, RECOMMENDATIONS FOR ADEQUATE STOCKPILING IN ACCORDANCE WITH THE BIOSECURITY ACT 2014 ARE ALSO PROVIDED BELOW. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED MUST BE:

- APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS;
- LOCATED AT LEAST 2m FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE;
- LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM;
- PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
- PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK;
- PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK;
- A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500m2.



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19/03/2025

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						VERT. DATUM	AHD				SHEET	21 OF 25
						DRG. FILE					REVISION	0
	0	AR	28.05.24	FOR OPW APPLICATION		DESIGN	A.REINAUDO	28.05.24			DRG NO.	1241 - 032

1. FOR ANY ADDITIONAL INFORMATION OR DETAILS
REFER TO DTMR STANDARD DRAWING SD1240 AND
SD1043 FOR BAR DETAILS

OPW24/0107
19/03/2025



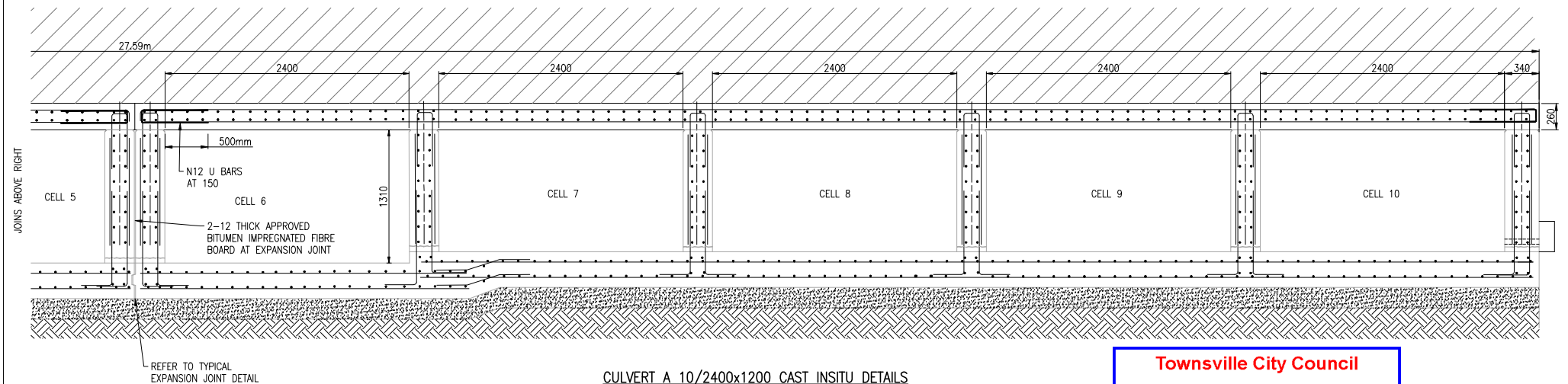
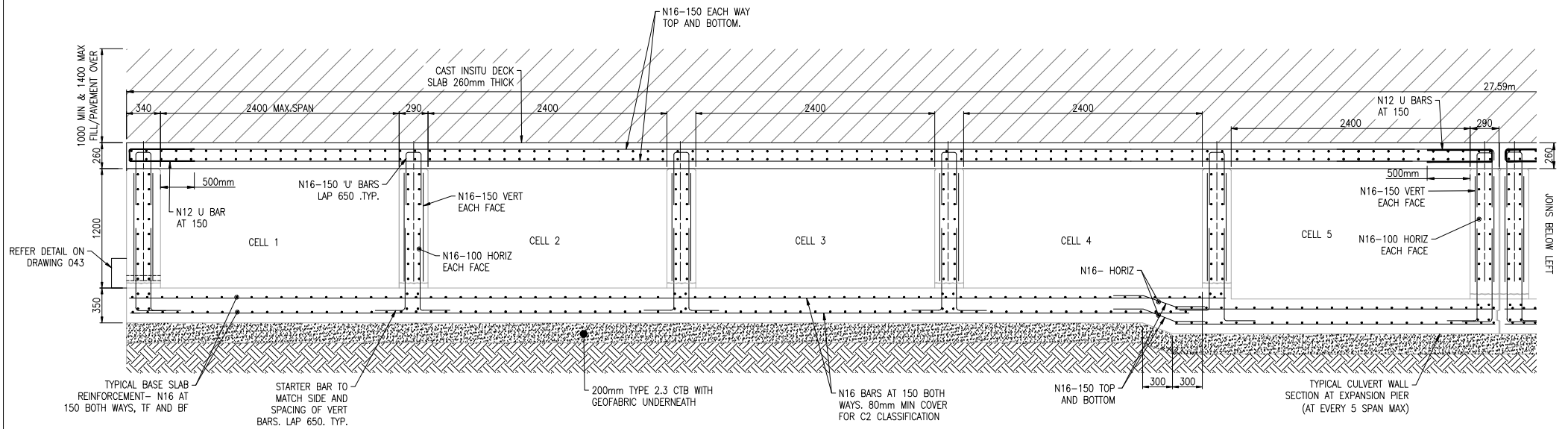
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Langtree Consulting

TOWNSVILLE PORT ROAD, STUART
FAR EAST DEVELOPMENT
CULVERT REINFORCEMENT DETAILS

SCALE	AS SHOWN				
SHEET	22 OF 25				
REVISION	0	1			
DRG No.	1241-040				



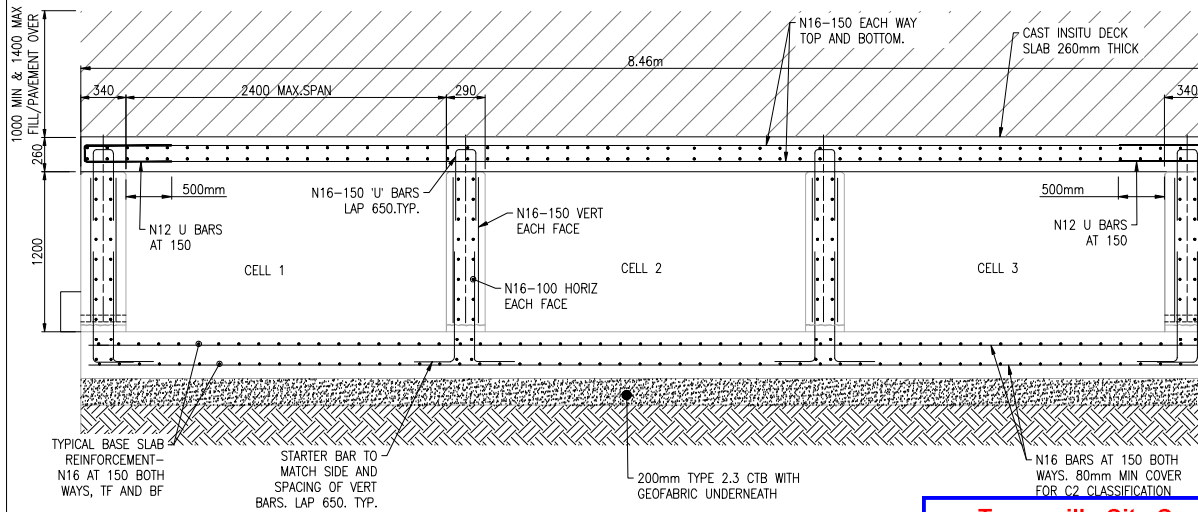
CULVERT A 10/2400x1200 CAST INSITU DETAILS
1:20

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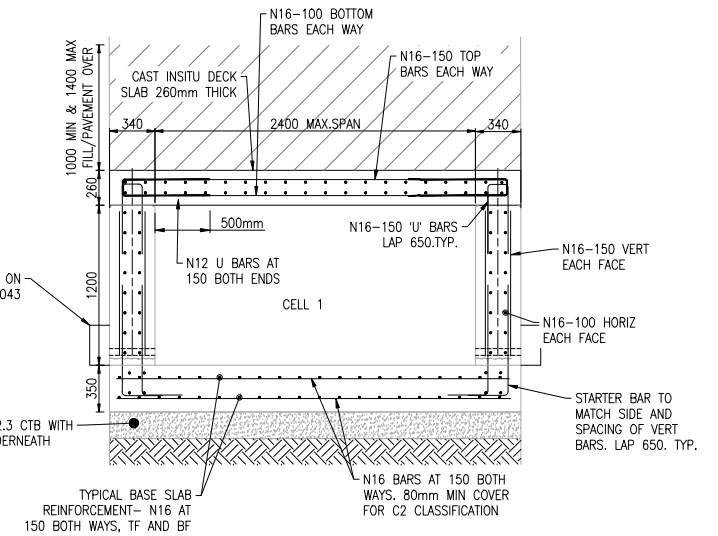
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OPW24/0107
19/03/2025

REVISIONS				HORIZ. DATUM		MGA	CERTIFICATION	 Langtree Consulting m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK					SCALE	AS SHOWN	
				VERT. DATUM		AHD			MLANCIN RPEQ Q18786	TOWNSVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT CULVERT A – REINFORCEMENT DETAILS					SHEET	22 OF 25
	1	A.R.	6.02.25	CULVERTS AMENDED		DRG. FILE	DATE		COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	REVISION	0	1				
	0	A.R.	28.01.25	FOR CONSTRUCTION		DESIGN	A.REINAUDO				11.12.24	DRG No.	1241–041			
DRAWN		M.AMIN		11.12.24												

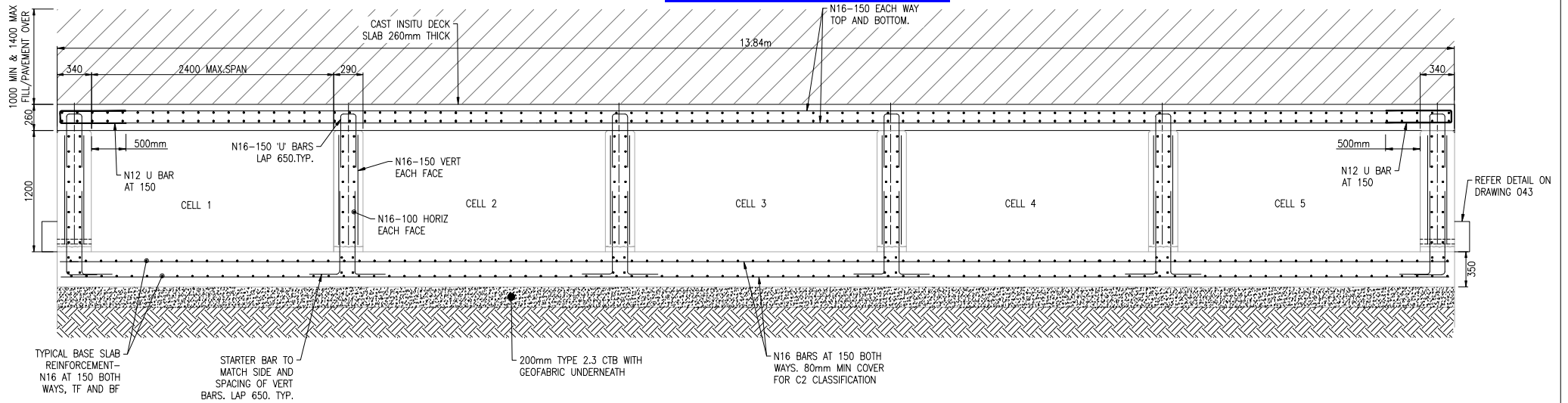


CULVERT B 3/2400x1200 CAST INSITU DETAILS
1:20



CULVERT D 1/2400x1200 CAST INSITU DETAILS
1:20

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OPW24/0107
19/03/2025



CULVERT C 5/2400x1200 CAST INSITU DETAILS
1:20

REV	NO	DATE	DESCRIPTION	HORIZ. DATUM		MGA	CERTIFICATION	Langtree Consulting		CLEVELAND BAY INDUSTRIAL PARK		SCALE	AS SHOWN
				DRG. FILE	DATE							SHEET	23 OF 25
1	A.R.	6.02.25	CULVERT AMENDMENTS	DESIGN	A.REINAUDO	11.12.24	COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	m 0400 699 979 e brett@langtreeconsulting.com.au		TOWNSVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT CULVERT B, C & D – REINFORCEMENT DETAILS		REVISION	0 1
0	A.R.	28.01.25	FOR CONSTRUCTION	DRAWN	M.AMIN	11.12.24						DRG No.	1241-042

CONCRETE

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH CURRENT EDITIONS OF MRTS70, MRTS73 AS 1379, AS 3600 AND AS3610 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. REFER ALSO TO TMR STANDARD DRAWING SD1240 AND SD1250.
2. CONCRETE STRENGTH GRADE FOR PARTICULAR ELEMENTS SHALL BE AS NOTED ON THE DRAWINGS.
3. SIZE OF ELEMENTS IS EXCLUSIVE OF APPLIED FINISHES. BEAMS DEPTHS INCLUDE SLAB THICKNESS AND ARE THE FIRST DIMENSION SPECIFIED, FOLLOWED BY WIDTH. UNLESS NOTED OTHERWISE ALL FORMED EDGES AND CORNERS OF CONCRETE MEMBERS SHALL HAVE 20mm CHAMFERS.
4. CONSTRUCTION JOINTS SHALL BE MADE ONLY AT APPROVED LOCATIONS, AND, IN BEAMS AND SLABS SHALL BE CONSTRUCTED WITH A SHEAR KEY TO ENGINEER'S DETAIL U.N.O. SURFACES OF CONCRETE AT ALL JOINTS SHALL BE THOROUGHLY MECHANICALLY SCABBLED, FULLY EXPOSING THE AGGREGATE MIX, UNLESS OTHERWISE NOTED.
5. ALL REINFORCEMENT SHALL BE TO AS/NZS 4671 AND REINFORCEMENT GRADE IS DESIGNATED AS FOLLOWS:
R: PLAIN ROUND BAR, GRADE 250
N: DEFORMED BAR, GRADE 500
SL/RL: WIRE REINFORCING FABRIC GRADE 500
6. REINFORCEMENT SHALL BE BENT COLD IN ACCORDANCE WITH AS3600 EXCEPT WHERE APPROVED BY THE STRUCTURAL ENGINEER. NO REBENDING SHALL BE PERMITTED.
7. DO NOT CUT REINFORCEMENT ON SITE TO CLEAR PENETRATIONS. DISPLACE REINFORCEMENT SLIGHTLY AS NECESSARY TO CLEAR BLOCKOUTS.
8. CONCRETE COVER AND LAPS TO REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS.
9. APPLY EVAPORATION RETARDER AND CURE ALL CONCRETE IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS.
10. FORMWORK SHALL REMAIN UNDISTURBED FOR THE MINIMUM STRIPPING TIMES SPECIFIED IN AS3610, UNLESS OTHERWISE APPROVED.

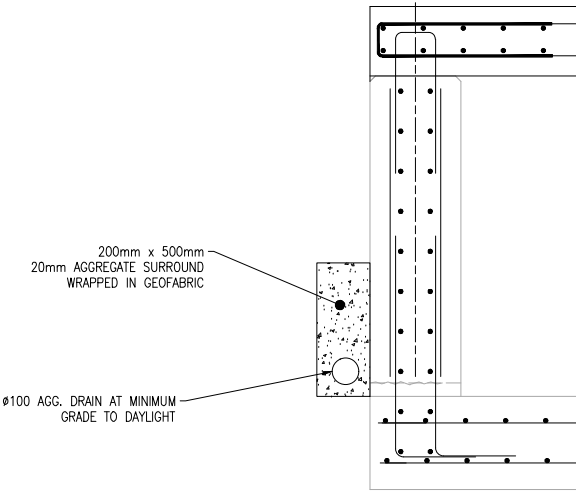
TABLE 1 – CONCRETE QUALITY			
ELEMENT	STRENGTH GRADE	SLUMP (mm)	MAX. AGGREGATE SIZE (mm)
CULVERT WALL AND BASE SLAB.	S55	80 ± 15	20
DECK SLAB	S55	80 ± 15	20

TABLE 2 – CLEAR COVER TO REINFORCEMENT. (UNO)			
ELEMENT	TOP (mm)	BOTTOM (mm)	SIDE (mm)
CULVERT WALL AND BASE SLAB.	80	80	80
DECK SLAB	60	80	80

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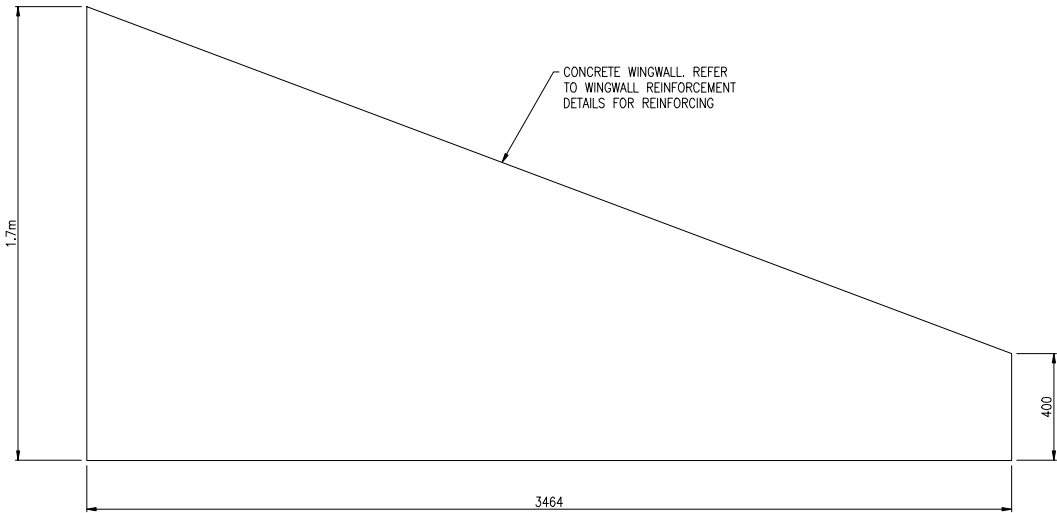
ABUTMENT WEEPHOLE AND BACKFILL DETAIL
1:10

REINFORCEMENT

1. ALL REINFORCING BARS SHALL BE GRADE D500N TO AS4671 AND MRTS71 UNLESS NOTED OTHERWISE. IT SHALL BE CUT AND BENT IN ACCORDANCE WITH AS3600. ACCEPTABLE MANUFACTURERS AND PROCESSORS OF STEEL REINFORCEMENT MUST HOLD A VALID CERTIFICATE OF APPROVAL, ISSUED BY THE AUSTRALIAN CERTIFICATION AUTHORITY FOR REINFORCING STEELS (ACRS), OR TO SUCH AN EQUIVALENT CERTIFICATION SYSTEM AS MAY BE APPROVED IN WRITING BY THE SPECIFIER. EVIDENCE OF COMPLIANCE WITH THIS CLAUSE MUST BE OBTAINED WHEN CONTRACT BIDS ARE RECEIVED. ALL MESH SHALL BE GRADE 500L TO AS4671 AND SHALL BE SUPPLIED IN FLAT SHEETS. THE FIGURES FOLLOWING THE FABRIC SYMBOLS RL, SL, L, TM IS THE REFERENCE NUMBER FOR FABRIC TO AS4671.
2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
3. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS 3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR, AS SHOWN IN THE TABLE BELOW.

TABLE 6 – LAP SCHEDULE			
BAR DIA.	LENGTH (mm)	BAR DIA.	LENGTH (mm)
R6	300	N20	800
R10	400	N24	1000
N12	500	N28	1800
N16	600	N32	2200

4. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER. WHERE APPROVED, WELDING MUST COMPLY WITH AS1554.3 STANDARD STEEL WELDING, PART 3 : WELDING OF REINFORCING STEEL. NO WELDING IS ALLOWED WITHIN 120mm OF BENDS.
5. FABRIC SHALL BE LAPPED TWO TRANSVERSE WIRES PLUS 25mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER UNLESS WITH 3 WRAPS OF THE WIRE.
6. WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12–300 SPLICED WHERE NECESSARY AND LAP WITH MAIN BARS 400 mm UNLESS NOTED
7. JOGGLES TO BARS SHALL COMPRISE A LENGTH OF 12 BAR DIAMETERS BETWEEN BEGINNING AND END OF AN OFFSET OF 1 BAR DIAMETER.
8. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS, AND 800 EACH WAY FOR FABRIC. WHEN POURED ON GROUND AS FORMWORK PROVIDE PLATES UNDER ALL BAR CHAIRS. PLASTIC TIPPED STEEL CHAIRS SHALL NOT BE USED ON EXPOSED FACES IN EXPOSURE CLASSIFICATION B1, B2 AND C ONLY PLASTIC OR CONCRETE CHAIRS.
9. SITE BENDING OF REINFORCEMENT SHALL BE AVOIDED IF POSSIBLE. WHERE SITE BENDING IS UNAVOIDABLE IT SHALL BE CARRIED OUT COLD, WITHOUT THE APPLICATION OF HEAT, AND IN ACCORDANCE WITH THE PRACTICE NOTE RPN1 OF THE STEEL REINFORCEMENT INSTITUTE OF AUSTRALIA. REINFORCEMENT SHALL NOT BE REBENT WITHOUT APPROVAL OF THE SUPERINTENDENT.
10. THE STRUCTURAL ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL HAS BEEN OBTAINED FROM THE STRUCTURAL ENGINEER.



WINGWALL DETAIL
1:10

REVISIONS					HORIZ. DATUM	MGA	CERTIFICATION		 Langtree Consulting m 0400 699 979 e brett@langtreeconsulting.com.au	CLEVELAND BAY INDUSTRIAL PARK				SCALE	AS SHOWN		
					VERT. DATUM	AHD	MLANGTREC RPEQ Q18786					SHEET	25 OF 25				
	2	A.R.	17.02.25	AMENDED ABUTMENT DRAINAGE	DRG. FILE		DATE	COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.		TOWNSVILLE PORT ROAD, STUART FAR EAST DEVELOPMENT CONCRETE NOTES				REVISION	0	1	2
	1	A.R.	6.02.25	MINOR AMENDMENTS	DESIGN	A.RENAUDO	11.12.24										
	0	A.R.	28.01.25	FOR CONSTRUCTION	DRAWN	M.AMIN	11.12.24										
men. Ser ID: 2645908														DRG No. 1241-043			