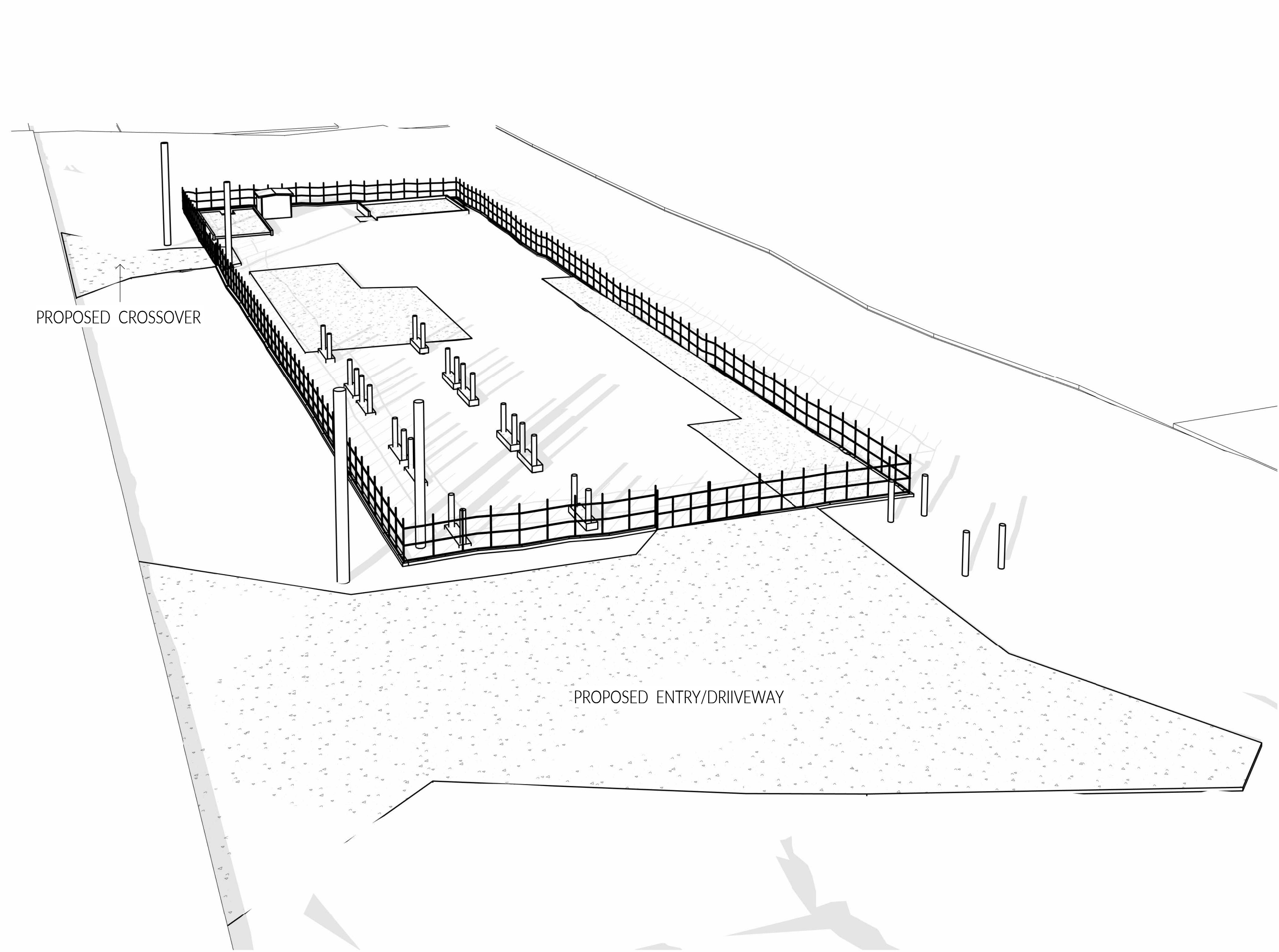


BOWEN POLE YARD

19 - 41 NORRIS ST , BOWEN , QLD



PERSPECTIVE

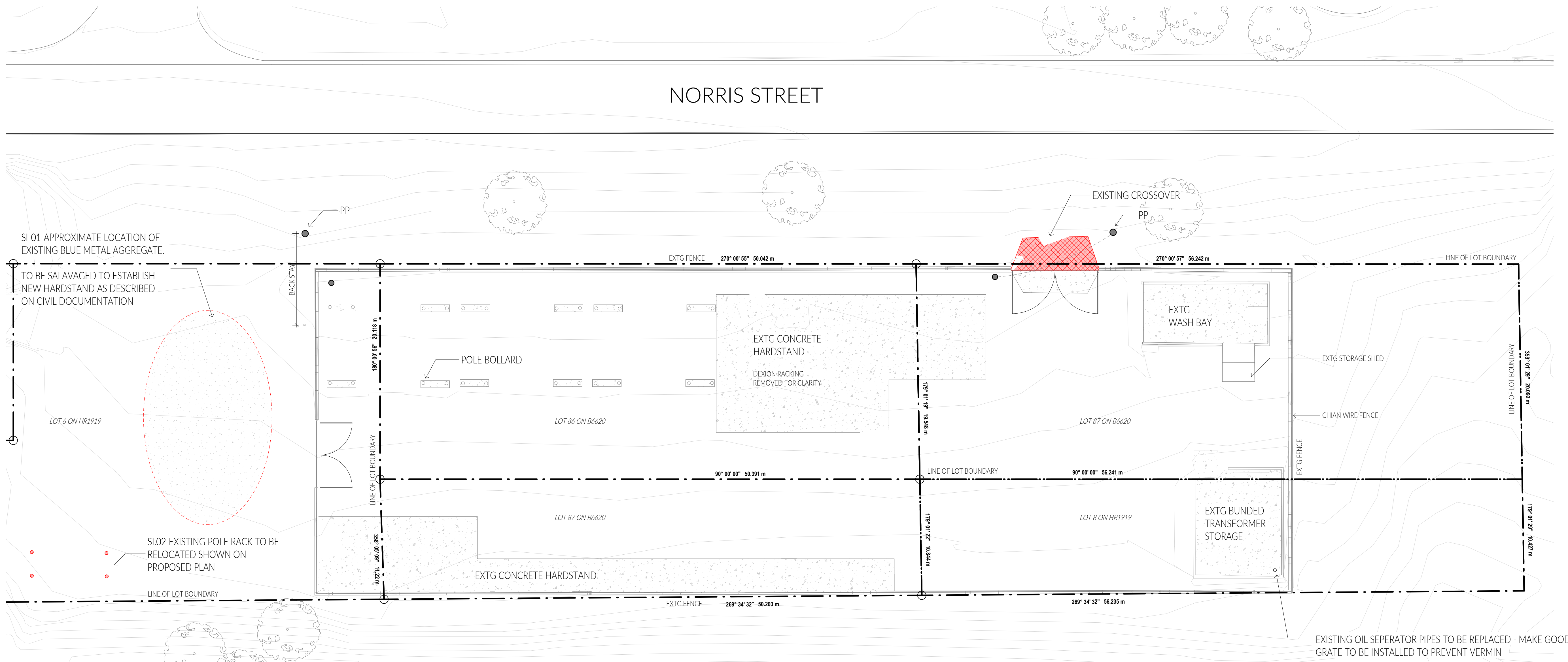
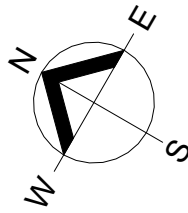


PROPOSED WORK AREA

DRAWING LIST - ARCHITECTURAL		
PROJECT NO.	DWG NO.	SHEET NAME
1 - ARCHITECTURAL		
0030	A-000	COVER SHEET
0030	A-101	DEMO PLAN
0030	A-102	PROPOSED PLAN

DRAWING LIST - CIVIL		
PROJECT NO.	DWG NO.	SHEET NAME
2 - CIVIL - LANGTREE		
1278	001	TITLE PAGE, LOCALITY PLAN AND DRAWING INDEX
1278	002	GENERAL CONSTRUCTION NOTES AND DETAILS
1278	003	SWEPT PATHS - PRIME MOVER AND SEMI TRAILER (19m) A
1278	004	SWEPT PATHS - PRIME MOVER AND SEMI TRAILER (19m) B
1278	005	SWEPT PATHS - PRIME MOVER AND SEMI TRAILER (19m) C
1278	006	LAYOUT PLAN AND OIL SEPERATOR INSET
1278	007	HARDSTAND SLAB PLAN

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AMENDMENTS	DATE
- FOR TENDER	10/12/24

1 FLOOR PLAN
SCALE - 1 : 200

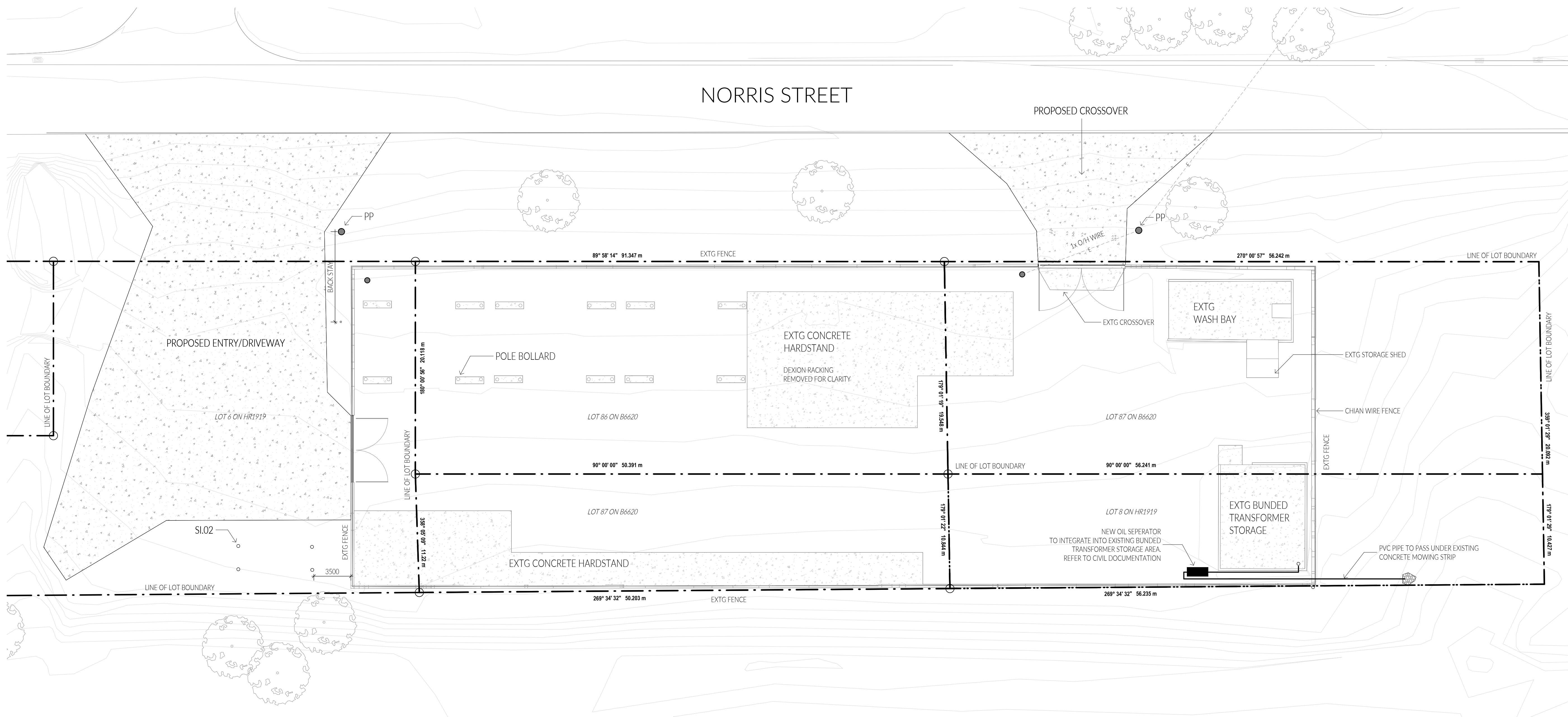
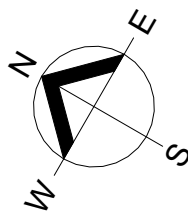


IMAGES OF EXISTING OIL SEPERATOR TO BE REPLACED WITH NEW



DRAWN AW	SCALE 1 : 200	SIZE A1
APPROVED DI		
PROJECT BOWEN POLE YARD		
19 - 41 NORRIS ST, BOWEN, QLD FOR ERGON ENERGY LIMITED		
DWG DEMO PLAN		
DWG No: 0030 - A-101		
STAMP PRELIMINARY	ISSUE -	

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1 FLOOR PLAN
SCALE - 1 : 200

2 0 2 4 6 8 10
SCALE 1 : 200 @ A3

AMENDMENTS DATE
FOR TENDER 10/12/24



DRAWN
AW

SCALE
1 : 200

SIZE
A1

PROJECT
BOWEN POLE YARD

19 - 41 NORRIS ST, BOWEN,
QLD
FOR
ERGON ENERGY LIMITED

DWG.
PROPOSED PLAN

DWG No.
0030 - A-102

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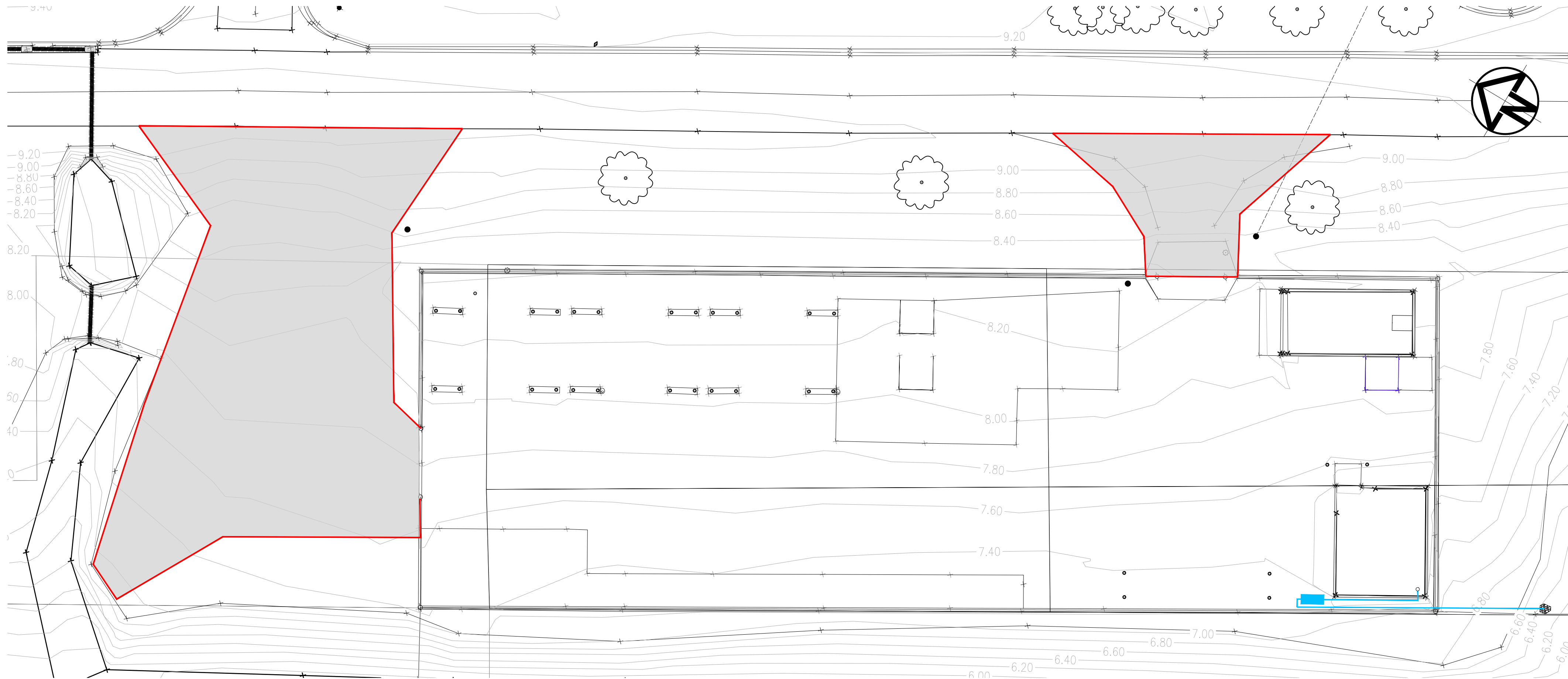
TENDER ISSUE

TENDER ISSUE

ENERGY QUEENSLAND
BOWEN POLE YARD
19-41 NORRIS STREET, BOWEN



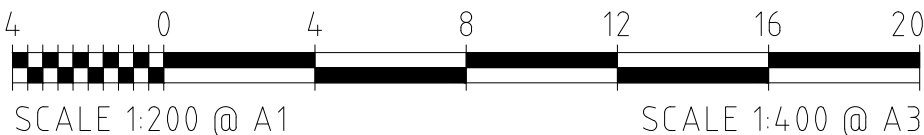
LOCALITY PLAN
SCALE NTS



SITE PLAN
SCALE NTS

DRAWING INDEX

DRAWING NUMBER	DRAWING NAME	REVISION
1278-001	TITLE PAGE, LOCALITY PLAN AND DRAWING INDEX	A
1278-002	GENERAL CONSTRUCTION NOTES AND DETAILS	A
1278-003	SWEPT PATHS – PRIME MOVER AND SEMI-TRAILER (19m) A	A
1278-004	SWEPT PATHS – PRIME MOVER AND SEMI-TRAILER (19m) B	A
1278-005	SWEPT PATHS – PRIME MOVER AND SEMI-TRAILER (19m) C	A
1278-006	LAYOUT PLAN AND OIL SEPARATOR INSET	A
1278-007	HARDSTAND SLAB PLAN	A



REVISIONS					HORIZ. DATUM	MCA		CERTIFICATION  B. LANGTREE RPEQ 11932
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					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.
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	No.	BY	DATE	DESCRIPTION	DRAWN	M VISSER	10.10.24	



ENERGY QUEENSLAND

BOWEN POLE YARD
19-41 NORRIS STREET, BOWEN
TITLE PAGE, LOCALITY PLAN AND DRAWING INDEX

SCALE	SCALE				
SHEET	1 OF 7				
REVISION	A				
DRG No.	1278-001				

GENERAL

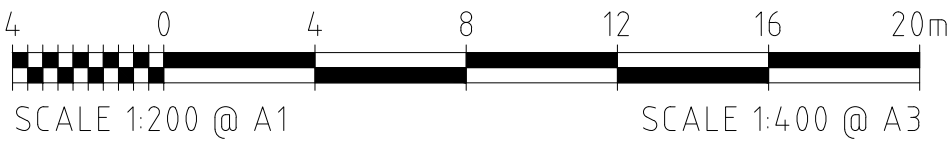
1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
2. THE INFORMATION CONTAINED ON THESE DRAWINGS IS FOR STRUCTURAL ENGINEERING PURPOSES ONLY. ALL DISCREPANCIES THAT COULD RESULT IN CHANGES TO THE STRUCTURAL DETAILS SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. IF IN DOUBT – ASK.
3. CONSTRUCTION FROM THESE DRAWINGS AND ASSOCIATED CONSULTANTS' DRAWINGS SHALL NOT COMMENCE UNTIL APPROVED BY THE LOCAL AUTHORITIES.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES AND THE NCC EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
5. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS' DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
6. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
7. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.

DESIGN CRITERIA

1. THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND LOCAL GOVERNMENT ORDINANCES FOR THE FOLLOWING DESIGN CRITERIA:
2. CONCRETE ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING DURABILITY EXPOSURE TO AS 3600 (B1 EXPOSURE U.N.O.)
EXTERNAL – B1
FOOTINGS – B1
3. VEHICLES
VEHICLE LOAD – 8 TONNE AXLE
REPETITIONS – UNLIMITED

EARTHWORKS NOTES:

1. BULK EARTHWORKS IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF AS3798 AND THE GEOTECHNICAL REPORT.
2. MATERIAL WITH LESS THAN 100 kPa, SHOULD BE REMOVED AND A GRANULAR FILL (CBR 15) PLACED AND COMPACTED.
3. THE CONTRACTOR SHALL ALLOW TO PAY ALL ASSOCIATED COSTS TO ENGAGE AN APPROVED GEOTECHNICAL CONSULTANT TO CARRY OUT ALL INSPECTIONS, TESTING AND CERTIFICATIONS AS NECESSARY OF THE EARTHWORKS SHOWN IN THE DOCUMENTATION.
4. THE GEOTECHNICAL ENGINEER SHALL PROVIDE ALL SERVICES AS REQUIRED TO SATISFY LEVEL 2 SUPERVISION AS SPECIFIED IN AS3798. THE CONTRACTOR SHALL PROVIDE DETAILS OF ALL TESTING TO THE ENGINEER PROGRESSIVELY THROUGHOUT THE WORKS AND NOTIFY THE ENGINEER OF ANY NON CONFORMANCES. ALL NON–CONFORMING WORK IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE. FOLLOWING THE COMPLETION OF THE EARTHWORKS AND INSTALLATION OF FOOTINGS AND SERVICES THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT STATING THAT ALL EARTHWORKS AND FOUNDATION MATERIAL SUPPORTING FOOTINGS COMPLIES WITH THE REQUIREMENTS OF THE DOCUMENTATION AND AS3798.5.
3. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR IS TO IDENTIFY AND BE SATISFIED OF THE CORRECT LOCATIONS OF ALL EXISTING SERVICES WHETHER INDICATED OR NOT ON THE PLANS. ANY DAMAGE TO EXISTING SERVICES IS TO BE RECTIFIED AS SOON AS POSSIBLE AT THE CONTRACTORS EXPENSE.
7. REMOVE ALL VEGETATION, ORGANIC TOPSOIL, AND OTHER DELETERIOUS MATERIAL AND DISPOSE OF ALL SUCH MATERIAL OFF SITE. EXCAVATE AND TRIM THE BUILDING OR PAVEMENT PLATFORMS AS REQUIRED.
8. PROOF ROLL THE EXPOSED SUBGRADE IN THE PRESENCE OF A GEOTECHNICAL ENGINEER TO IDENTIFY ANY SOFT SPOTS. THESE AREAS MUST BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO ASSESS EXTENT.
9. SOFT SPOTS SHALL BE EXCAVATED AND REPLACED WITH SELECT GRANULAR BACKFILL COMPACTED IN LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS TO COMPACTION AS NOTED.
10. FILL MATERIAL SHALL BE EITHER IMPORTED SELECT MATERIAL OR EXISTING EXCAVATED SOILS (IF APPROVED BY THE GEOTECHNICAL ENGINEER & FREE OF ORGANIC MATERIAL). IMPORTED FILL MATERIAL SHALL BE LOW PLASTICITY, GRANULAR FILL HAVING THE FOLLOWING CHARACTERISTICS:
–MINIMUM CBR 15%
PLASTICITY INDEX <15%
% PASSING 0.075mm SIEVE <25%
11. FILL MATERIAL SHALL BE COMPACTED IN MAXIMUM 200mm THICK LAYERS (COMPACTED THICKNESS) TO 98% STANDARD DRY DENSITY RATIO IN ACCORDANCE WITH AS1298 U.N.O.
12. SUB–BASE FILL MATERIAL SHALL HAVE MINIMUM CBR 15% AND MAX PLASTICITY INDEX OF 15% AND IS TO BE PLACED TO FINAL THICKNESS AS DOCUMENTED COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 U.N.O.
13. FILL SHALL BE COMPACTED AND MAINTAINED AT MOISTURE CONTENTS AT PLACEMENT WITHIN THE RANGE OF PLUS 2% TO MINUS 2% OF STANDARD OPTIMUM MOISTURE CONTENT.
14. THE MINIMUM FREQUENCY OF TESTING FILL COMPACTION SHALL BE IN ACCORDANCE WITH TABLE 8.1 OF AS3798 FOR TYPE 2 EARTHWORKS.
15. ALL EXCAVATED BATTERS AND FILL EMBANKMENTS ARE TO BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
16. REFER ALSO CIVIL DESIGN DRAWINGS FOR ADDITIONAL WORKS AND REQUIREMENTS.
17. PRIOR TO COMMENCEMENT OF WORK CONFIRM ALL BULK EXCAVATION LEVELS WITH THE CIVIL ENGINEER.
18. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT THE SITE AND SURROUNDING AREAS FROM DAMAGE RESULTING FROM STORM WATER RUNOFF. TEMPORARY DIVERSION DRAINS AND OR OTHER DRAINAGE CONTROL DEVICES ARE TO BE



IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION TO MINIMISE THE EFFECTS OF WEATHER.

CONCRETE

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH CURRENT EDITIONS OF AS 1379, AS 3600 AND AS3610 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. REFER ALSO TO IN–SITU CONCRETE, FORMWORK AND REINFORCEMENT SECTION OF THE SPECIFICATIONS.
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)
EXTERNAL HARDSTAND SLAB	N40	80 ± 15	20
BLINDING	N7	80 ± 15	

TABLE 2 – CLEAR COVER TO REINFORCEMENT. (UNO)			
ELEMENT	TOP (mm)	BOTTOM (mm)	SIDE (mm)
EXT SLAB ON GROUND	50	50	50

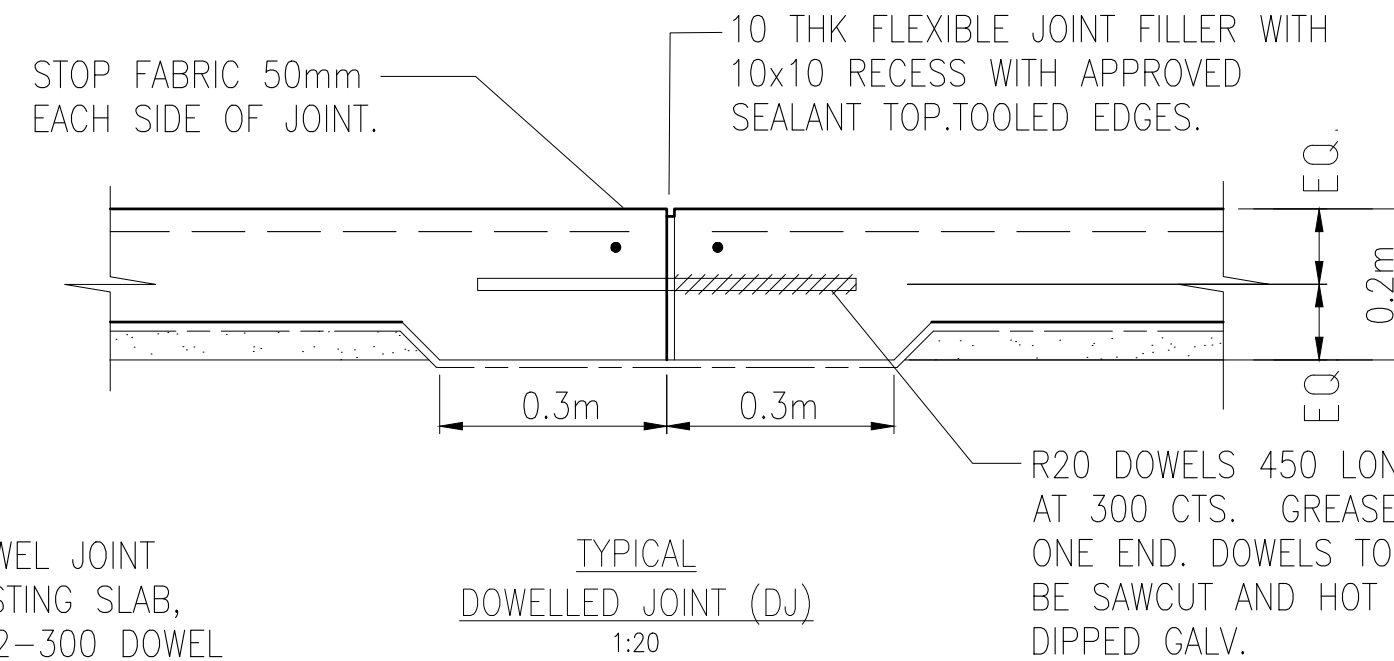
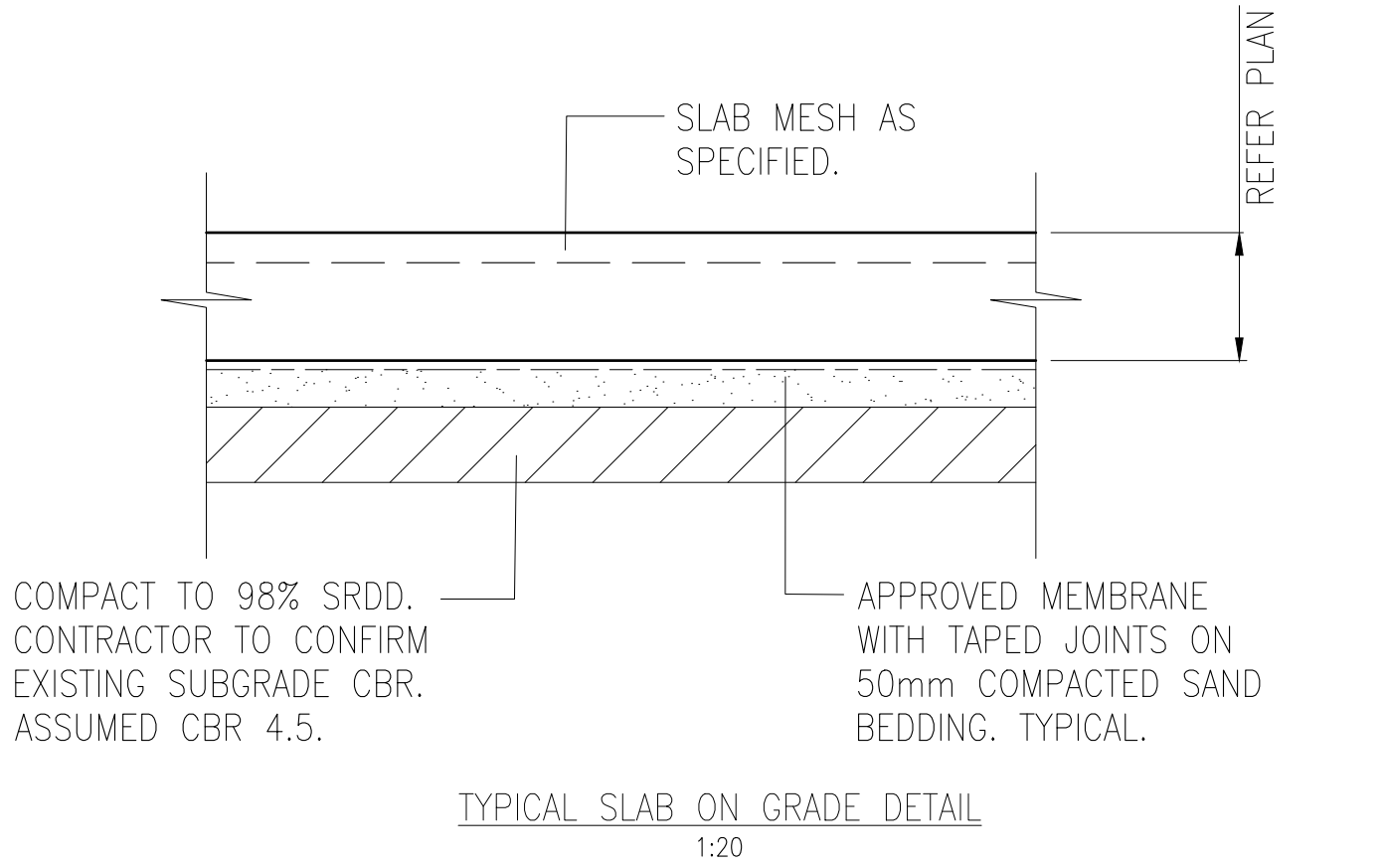
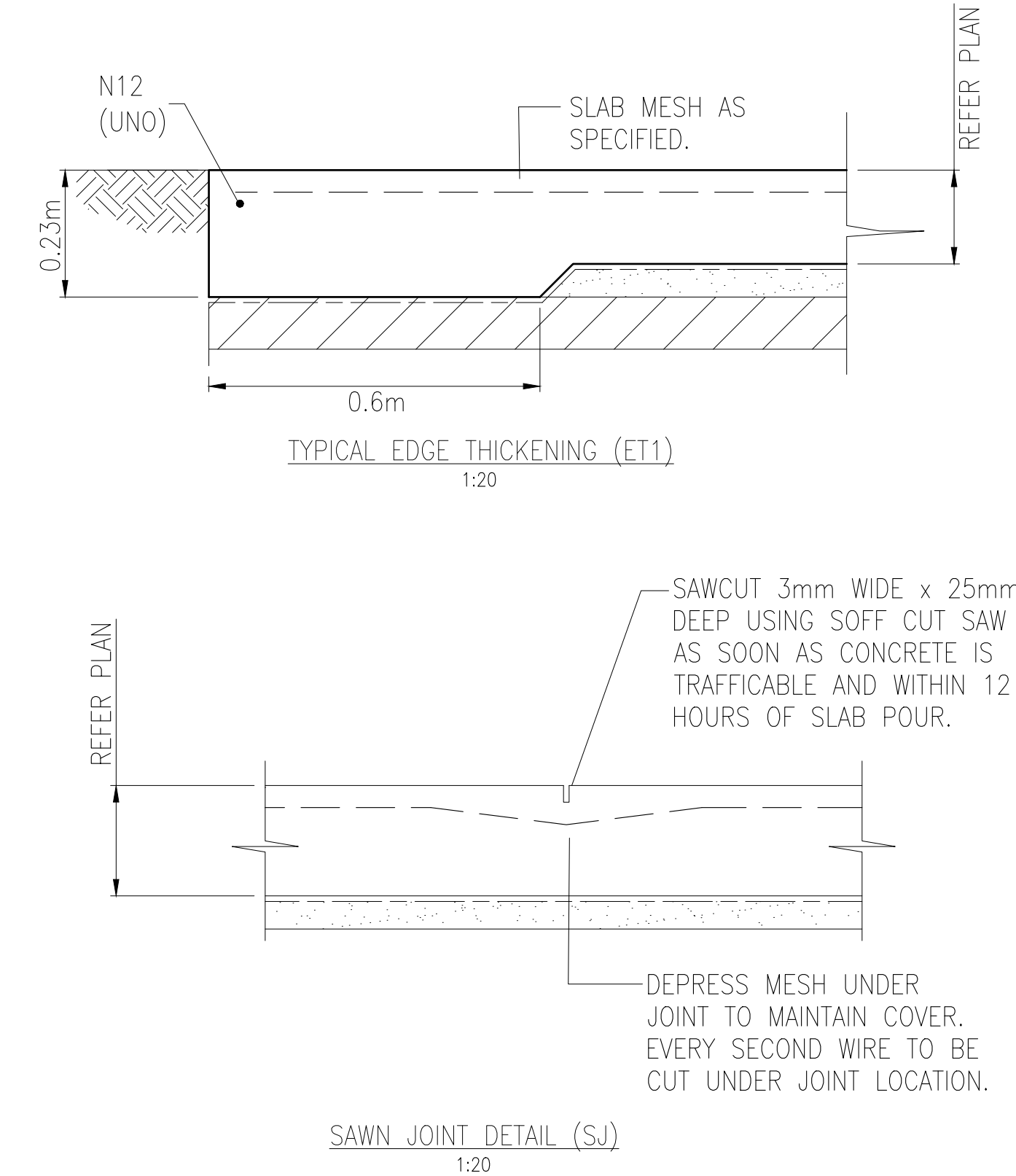
REINFORCEMENT

1. ALL REINFORCING BARS SHALL BE GRADE D500N TO AS4671 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. REINFORCEMENT ABBREVIATIONS:
EF – EACH FACE T OR TOP – TOP
NF – NEAR FACE B OR BTM – BOTTOM
FF – FAR FACE HORIZ – HORIZONTAL
EW – EACH WAY VERT – VERTICAL
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 CENTRES 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. THE STRUCTURAL ENGINEER SHALL BE GIVEN 48 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL HAS BEEN OBTAINED FROM THE STRUCTURAL ENGINEER.
10.



NOTE:
WHERE DOWEL JOINT ABUTS EXISTING SLAB, PROVIDE N2–300 DOWEL DRILL AND EPOXIED 150mm

TENDER ISSUE

02.12.24

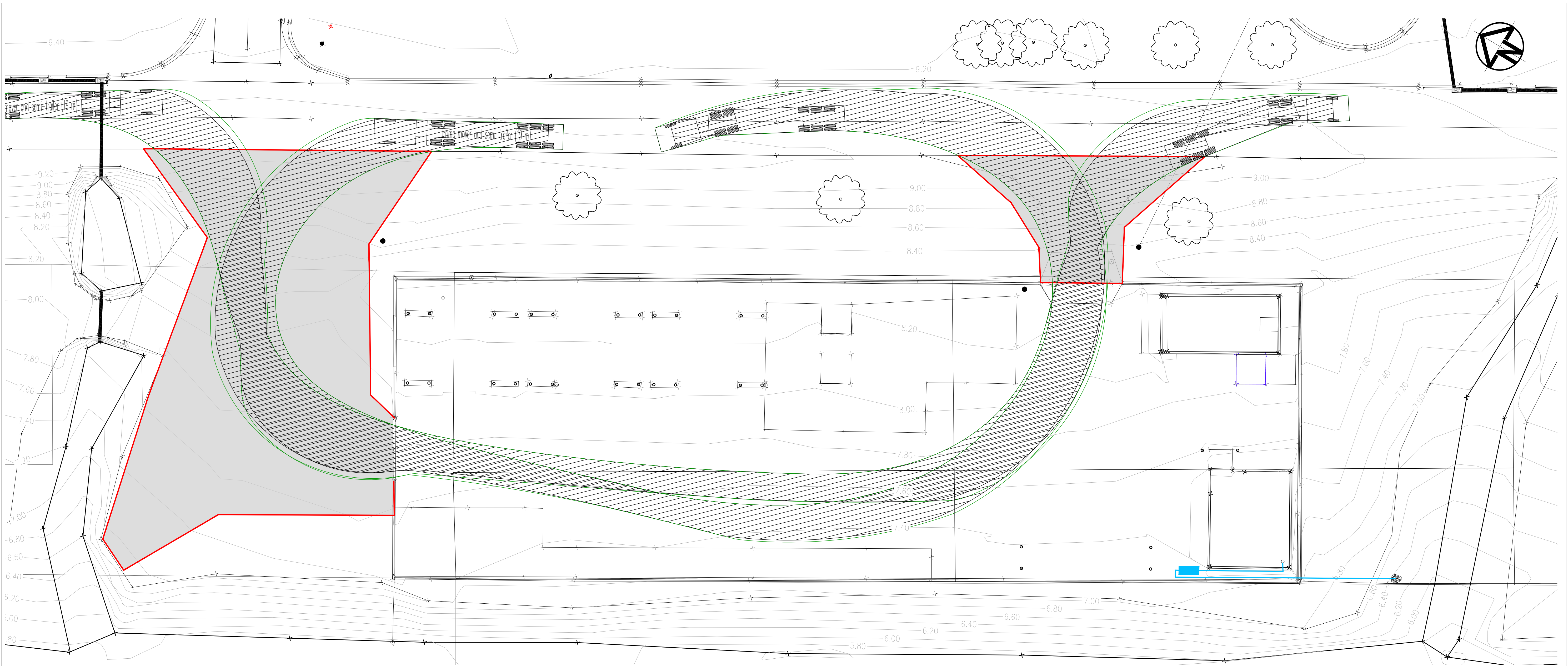
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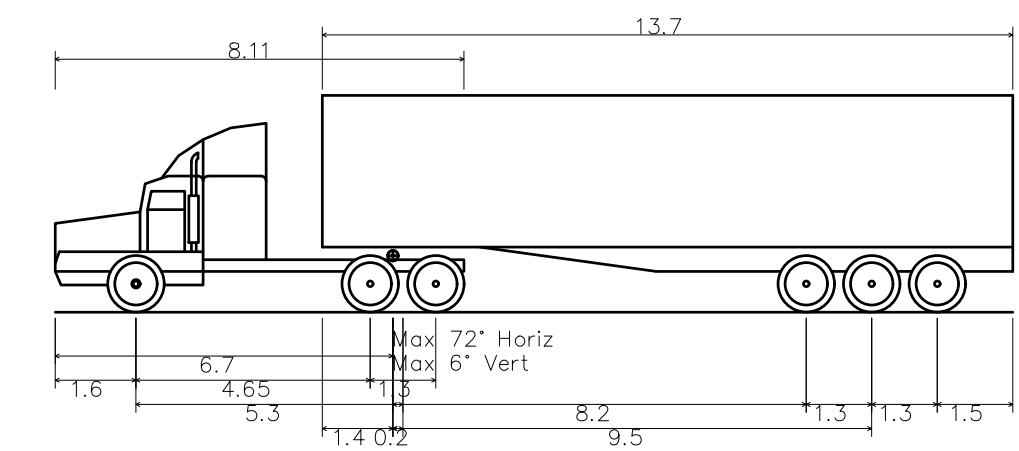
LANGTREE
Consulting Engineers

informed
ARCHITECTS

ENERGY QUEENSLAND		SCALE	SCALE			
BOWEN POLE YARD 19–41 NORRIS STREET, BOWEN		SHEET	2 OF 7			
GENERAL CONSTRUCTION NOTES AND DETAILS		REVISION	A			
		DRG No.	1278–002			



SWEPT PATHS: PRIME MOVER AND SEMI-TRAILER (19m) A
SCALE 1:200

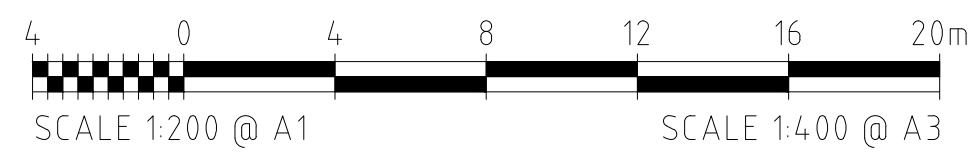


Prime mover and semi-trailer (19 m)
Overall Length 19.000m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.540m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

PRIME MOVER AND SEMI-TRAILER (19m)
SCALE 1:150

TENDER ISSUE

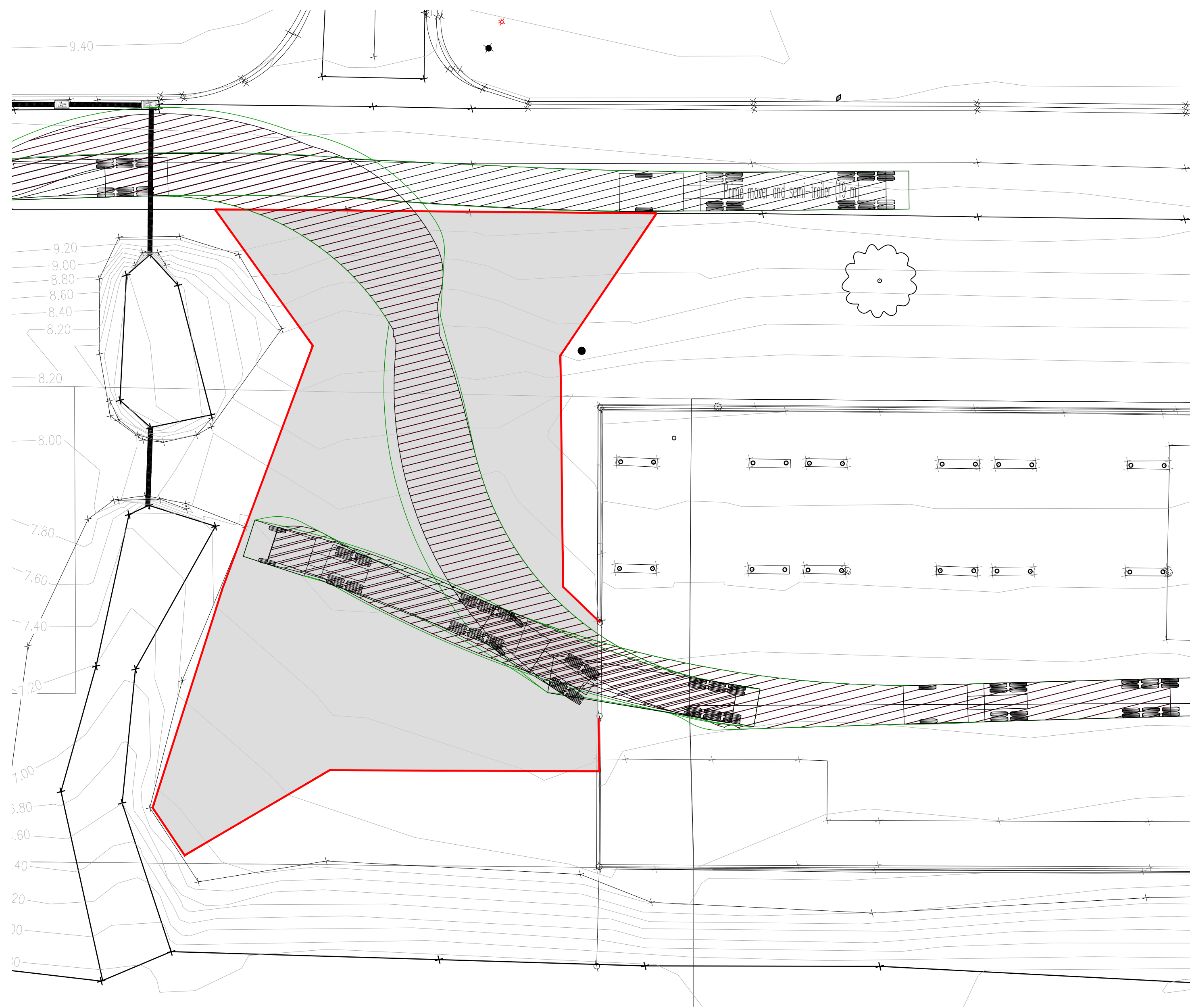
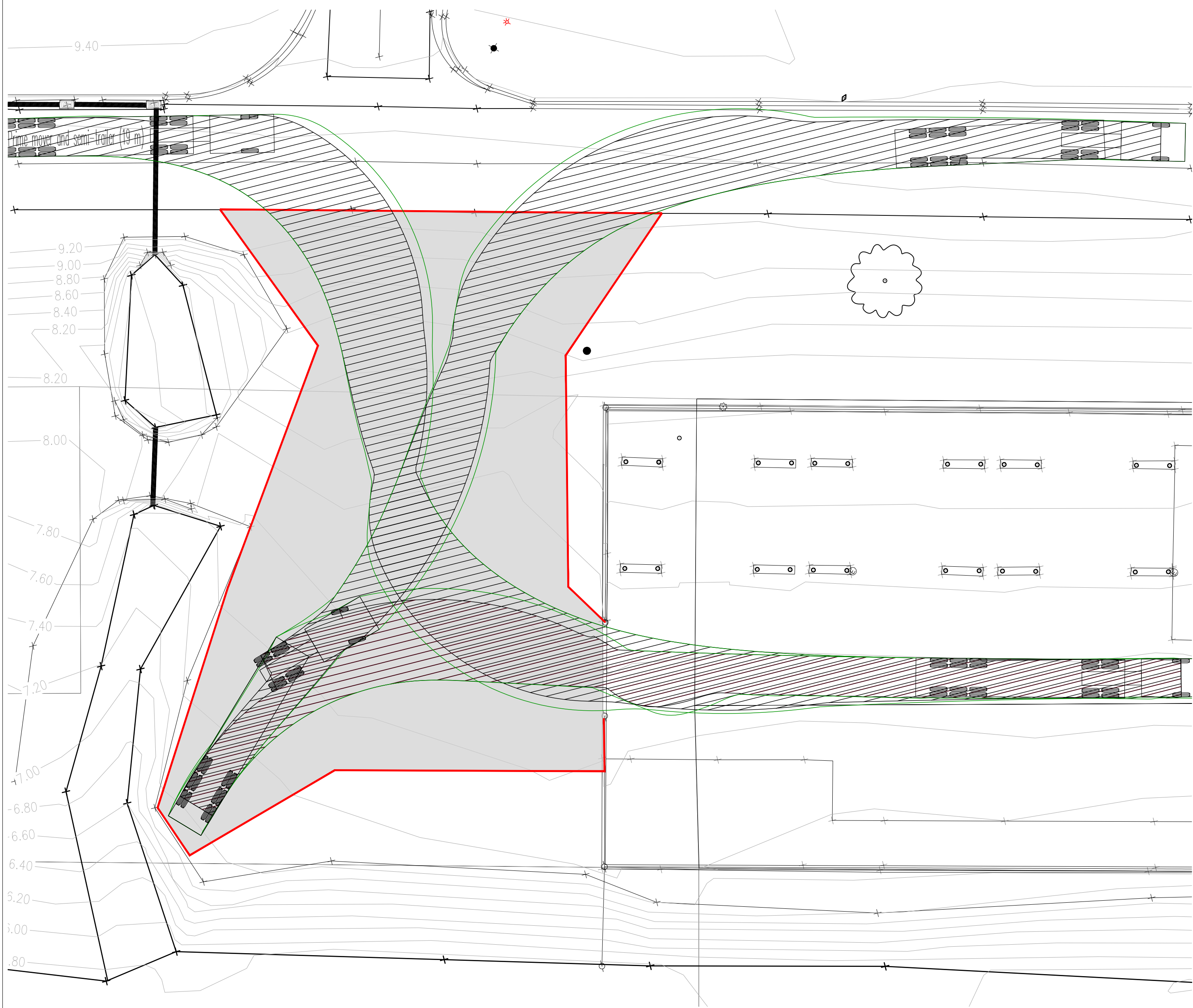
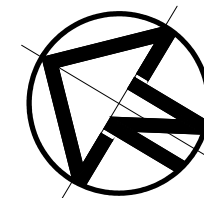
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					VERT. DATUM		AHD								SHEET	3 OF 7				
					DRG. FILE				DATE		COPYRIGHT ©				REVISION	A				
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	No.	BY	DATE	DESCRIPTION	DRAWN		M. VISSER		10.10.24								DRG No. 1278-003			
														BOWEN POLE YARD		19-41 NORRIS STREET, BOWEN		SWEPT PATHS – PRIME MOVER (19m) A		

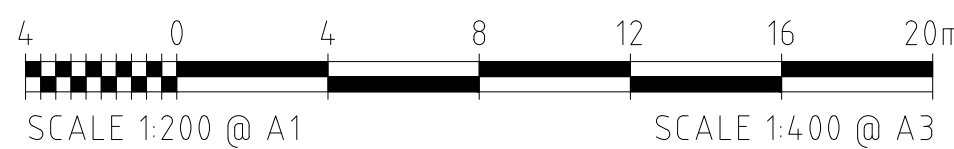
TENDER ISSUE

02.12.24



SWEPT PATHS: PRIME MOVER AND SEMI-TRAILER (19m) B

SCALE 1:200



REVISIONS				
	No.	BY	DATE	DESCRIPTION
	A	MV	02.12.24	TENDER ISSUE

HORIZ. DATUM	MGA	
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DRG. FILE		DATE
DESIGN	B. LANGTREE	10.10.24
DRAWN	M. VISSER	10.10.24

CERTIFICATION	
	
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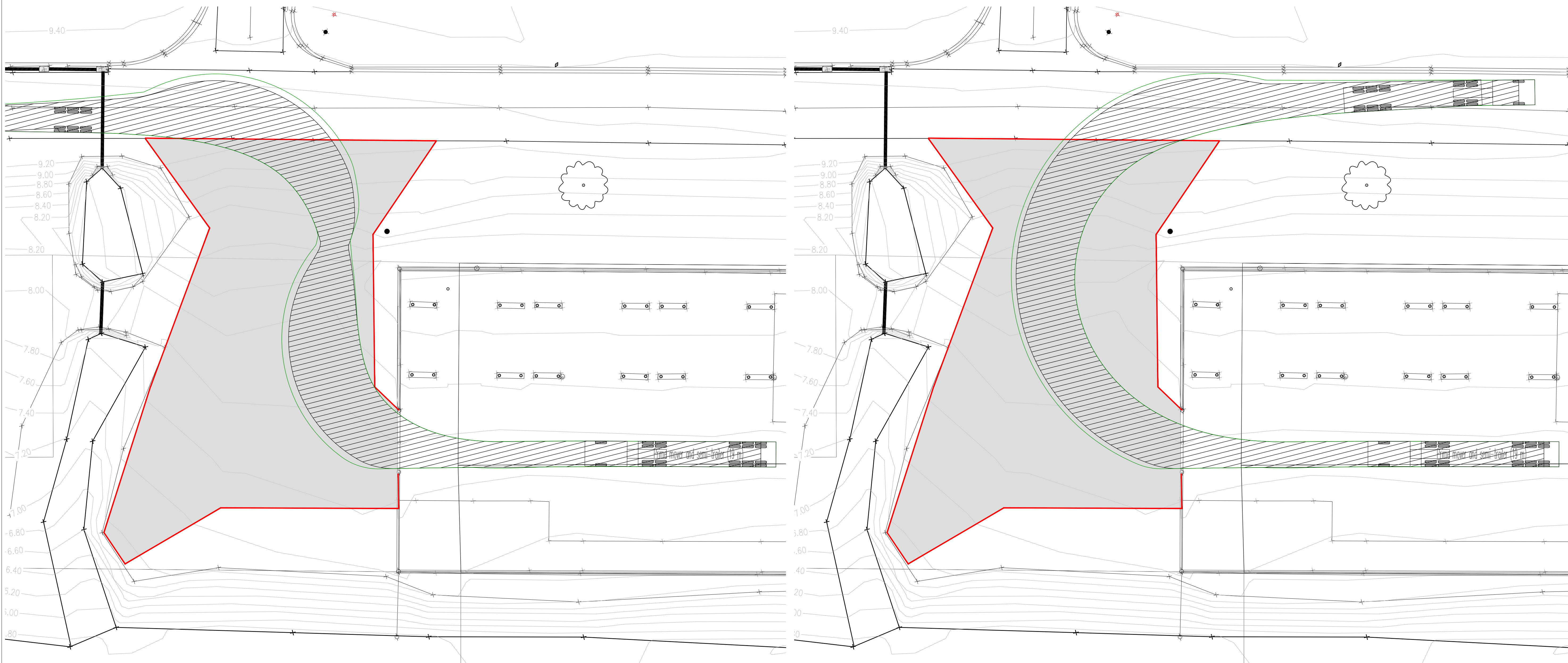
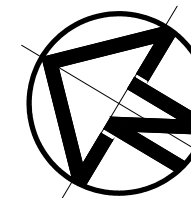


ENERGY QUEENSLAND	
BOWEN POLE YARD	
19-41 NORRIS STREET, BOWEN	
SWEPT PATHS - PRIME MOVER (19m) B	

SCALE	SCALE			
SHEET	4 OF 7			
REVISION	A			
DRG No.	1278-004			

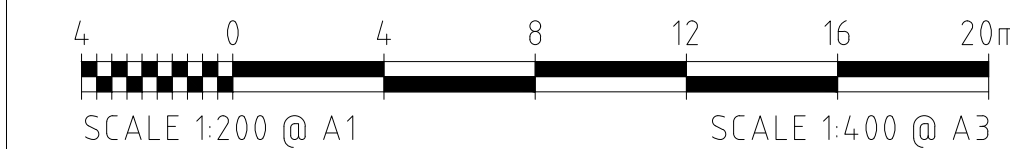
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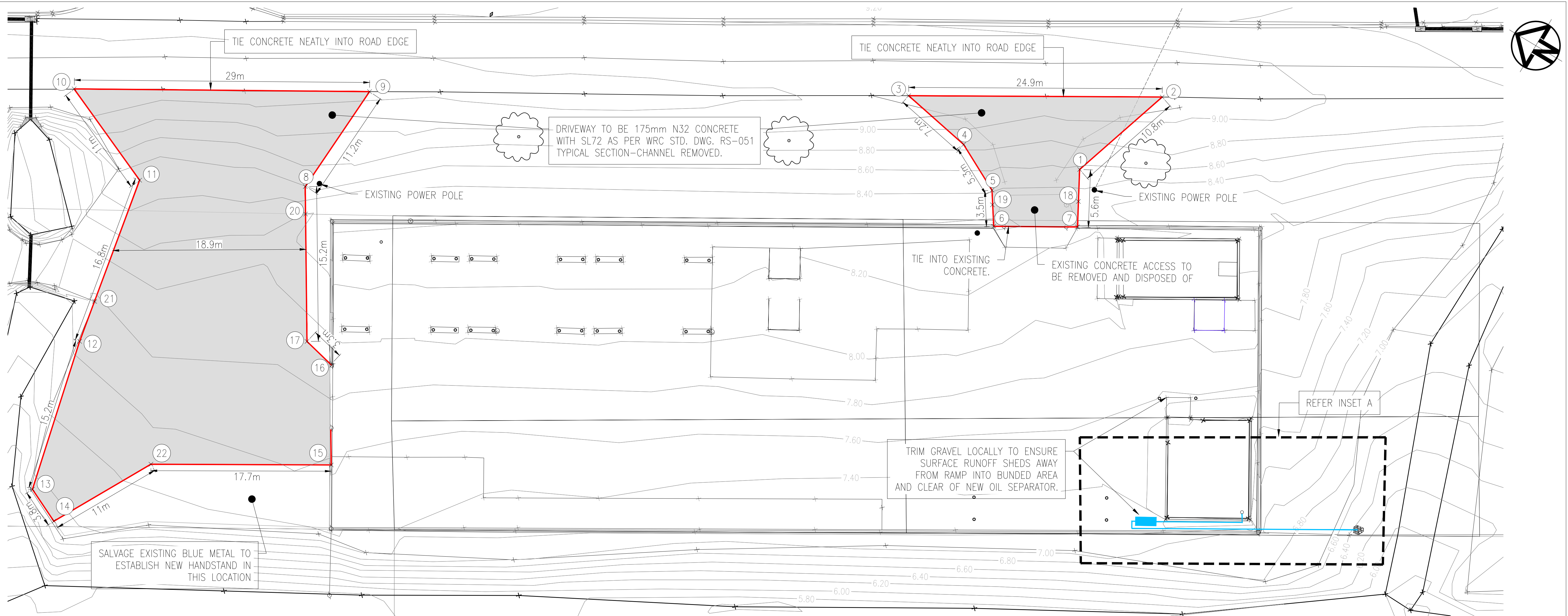


SWEPT PATHS: PRIME MOVER AND SEMI-TRAILER (19m) C

SCALE 1:200



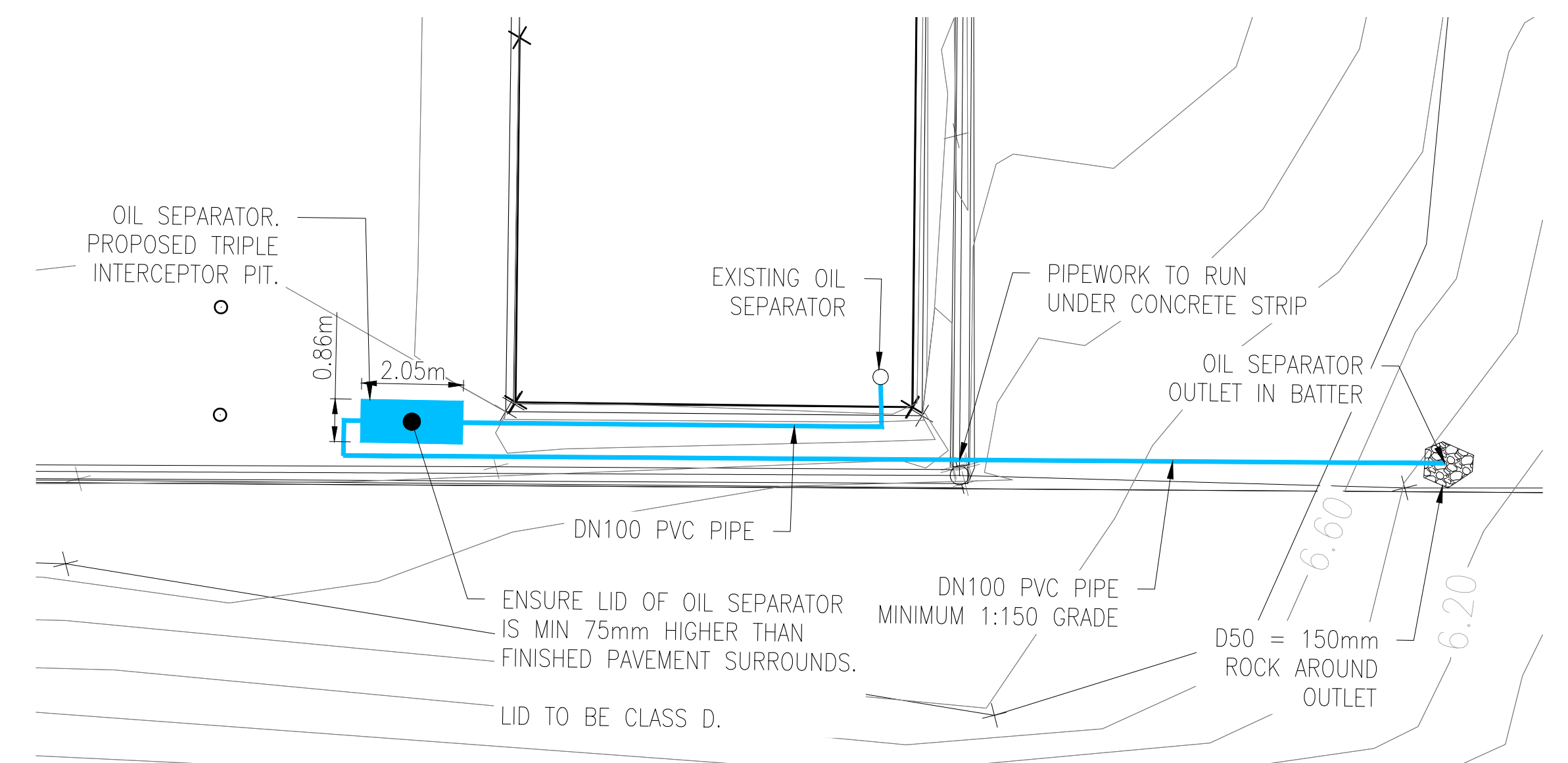
REVISIONS					HORIZ. DATUM		MGA	CERTIFICATION		 		ENERGY QUEENSLAND		SCALE	SCALE	
					VERT. DATUM		AHD	COPYRIGHT ©				BOWEN POLE YARD		SHEET	5 OF 7	
					DRG. FILE		DATE	These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purposes 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.				19-41 NORRIS STREET, BOWEN		REVISION	A	
	A	MV	02.12.24	TENDER ISSUE	DESIGN	B LANGTREE	10.10.24					SWEPTH PATHS – PRIME MOVER (19m) C		DRG No.	1278-005	
No.	BY	DATE	DESCRIPTION	DRAWN	M VISSER	10.10.24										



DRIVEWAY LAYOUT PLAN
SCALE 1:200

POINT TABLE			
POINT #	EASTING	NORTHING	ELEVATION
1	629130.347	7786378.753	8.600
2	629140.589	7786375.434	9.000
3	629127.970	7786396.856	9.000
4	629126.622	7786389.774	8.852
5	629124.200	7786385.095	8.400
6	629121.244	7786383.137	8.400
7	629125.396	7786376.045	8.255
8	629090.007	7786443.127	8.600
9	629101.231	7786442.477	9.200
10	629086.621	7786467.503	9.200
11	629082.225	7786457.399	8.522
12	629065.644	7786454.364	7.670

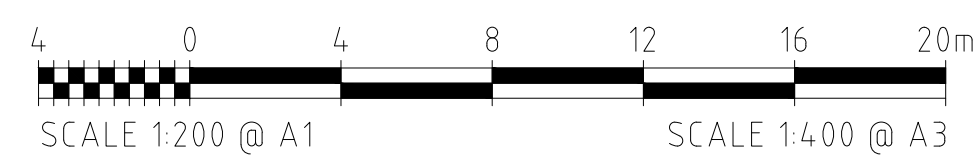
POINT TABLE			
POINT #	EASTING	NORTHING	ELEVATION
13	629050.823	7786450.918	7.200
14	629049.207	7786447.511	7.200
15	629067.879	7786426.960	7.600
16	629076.292	7786431.927	8.000
17	629077.059	7786435.210	7.925
18	629127.590	7786377.252	8.407
19	629122.990	7786384.331	8.350
20	629087.712	7786441.724	8.200
21	629069.762	7786455.101	7.778
22	629058.883	7786442.189	7.550



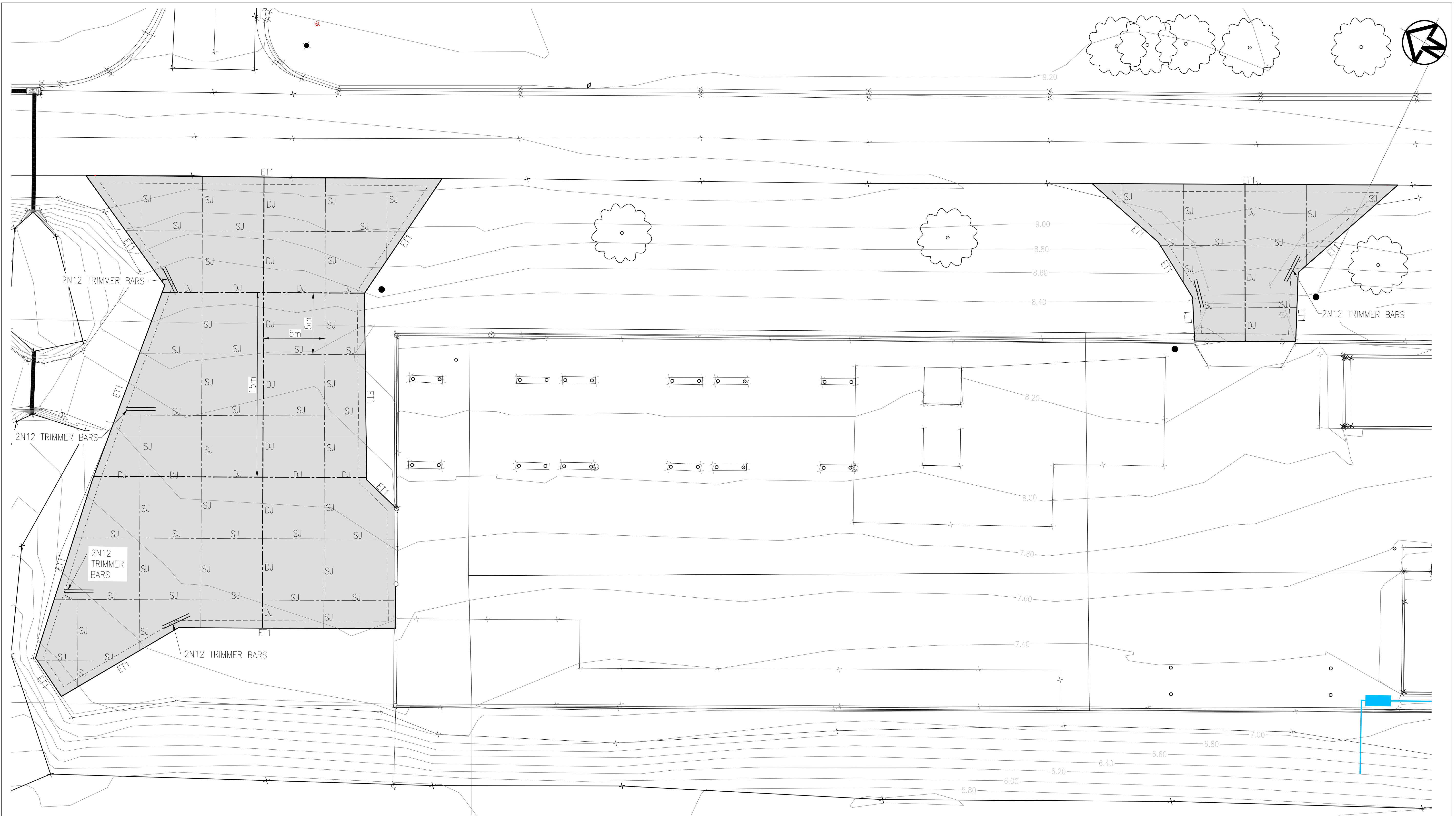
OIL SEPARATOR – INSET A
SCALE 1:100

TENDER ISSUE

02.12.24



REVISIONS					HORIZ. DATUM	MGA		CERTIFICATION		  	ENERGY QUEENSLAND		SCALE	SCALE					
					VERT. DATUM	AHD		 B. LANGTREE RPEQ 11932			BOWEN POLE YARD		SHEET	6 OF 7					
	B	MV	02.12.24	TENDER ISSUE	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.		19-41 NORRIS STREET, BOWEN		REVISION		B				
	A	MV	10.10.24	PRELIMINARY ISSUE	DESIGN	B. LANGTREE	10.10.24				LAYOUT PLAN AND OIL SEPARATOR INSET								
	No.	BY	DATE	DESCRIPTION	DRAWN	M. VISSER	10.10.24						DRG No.	1278-006					

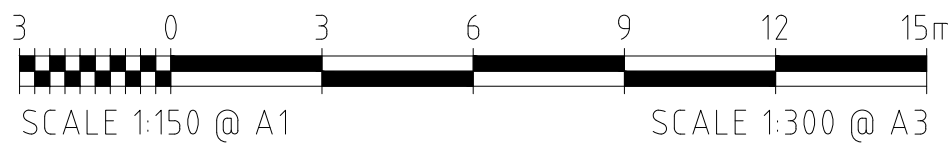


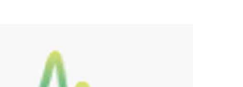
HARDSTAND SLAB PLAN
SCALE 1:150

HARDSTAND SLAB LEGEND

- ET1 - - - - - 230 DEEP x 600 WIDE SLAB EDGE THICKENING.
SJ - - - - - SLAB SAWN JOINT.
DJ - - - - - SLAB DOWEL JOINT.
DENOTES 175mm THICK SLAB WITH SL72 MESH TOP.

TENDER ISSUE
02.12.24



REVISIONS						HORIZ. DATUM	MGA		CERTIFICATION  B. LANGTREE RPEQ 11932	  	ENERGY QUEENSLAND					SCALE	SCALE					
						VERT. DATUM	AHD					SHEET	7 OF 7									
						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.			BOWEN POLE YARD					REVISION	A				
	A	MV	02.12.24	TENDER ISSUE		DESIGN	B LANGTREE	10.10.24				19-41 NORRIS STREET, BOWEN										
	No.	BY	DATE	DESCRIPTION		DRAWN	M VISSER	10.10.24				HARDSTAND SLAB PLAN					DRG No.	1278-007				

SPECIFICATION FOR ARCHITECTURAL BUILDING WORKS

Prepared for:



Bowen Depot – Pole Yard Hardstand project

Prepared by:



REV	DATE	CHECKED	ISSUE
1.0	10/12/2024	DI	Tender Issue

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0172 Environmental Requirements	5
0201 Demolition	4

Appendices

Appendix 1 Environment and Cultural Heritage Conditions for Contracted Work R128 - Doc ID 690515.pdf
Appendix 2 Generic EQL Major & Minor Works Handover Takeover Checklist.doc
Appendix 3 Standard for Fatigue Management S009 - Doc ID 692143 - Rel 5.pdf
Appendix 4 Standard for the Management of Alcohol and Other Drugs S008 - 690228 - Rel 6.pdf
Appendix 5 Safety Advice Request Form BS001405F107.docx
Appendix 6 Safety Management Plan (SMP) Review Checklist F183 - 689562 - Rel 3.docx
Appendix 7 High Risk Construction SWMS Review Checklist F182 - 689692 - Rel 4.pdf
Appendix 8 Trenching and Excavations SWMS R328 - 1887982 - Rel 3.pdf
Appendix 9 Health and Safety Policy P009 - 692225 - Rel 9.pdf
Appendix 10 Working Near OH and UG Electric Lines - Doc ID 2915457 - Rel 6.pdf

End of section

0131 PRELIMINARIES

1.1 GENERAL

1.1.1 TENDER

Tender conditions

Refer to *Ergon Energy Corporation Limited (EECL) Conditions of Contract*.

Separate prices

Refer to *EECL Conditions of Contract*.

1.1.2 GENERAL

General conditions

The *Form of Contract* is referenced in the *EECL Conditions of Contract* section of the project documentation.

Interpretation

Cross reference: The clause **Interpretation**, in the *General requirements* worksection, also applies.

EECL Tender Pack

Refer also to the *EECL Conditions of Contract*, which includes, but is not limited to the following:

Conditions of tendering;

- Introduction and description of contract
- Annexure to the contract
- Insurance conditions
- WH&S conditions
- Contractor induction requirements
- Fatigue Guidelines

List of drawings

Refer to *Drawing 0030- A-000 - COVER SHEET*

Contractor-supplied documents

Number of copies required: 3

Documents required to be checked by superintendent: 3

Separate Contracts

Refer to *EECL Conditions of Contract*.

1.1.3 PROVISIONAL SUMS

Provisional sums

General: Provisional sums identified in the **Provisional sums schedule** are for purposes stated in relevant worksections of the specification.

Provisional sums schedule

Item	Where specified	Provisional sum (\$)
NA		
NA		

1.1.4 THE SITE

Existing infrastructure

Refer to *EECL Conditions of Contract*, and also the following:

Allow to inspect the site during the Tender Period.

Allow to record the existing site, roads, ancillary services and the like, within and adjacent to the proposed Builders Area as specified in this section, and to make good any damage caused by the works.

Nominated time for site visit

Refer to *EECL Tendering*.

1.1.5 LEGISLATIVE REQUIREMENTS

Compliance

The principal, before entering into the contract, has given the notices, paid the fees, and obtained the permits, approvals and other authorisations stated in the **Prior applications and approvals schedule**.

Schedule of prior applications and approvals		
Prior notices given and applications made	Fees paid	Permits, approvals and Authorisations received
Building Approval	By Owner	<i>EECL</i> is deemed self-assessable under the Queensland Building Act, and will engage and pay the fees of a third party building certifier.
Plumbing & Drainage fees including Archival retrieval	By Builder	Contractor to apply for, and to pay all fees.
Q Leave	By Owner	Refer also to the <i>EECL Tender Pack</i> .
QFRS assessment fee	By Owner	<i>EECL</i> to apply for, and to pay all fees
<i>EECL</i> electricity connection	By Builder	Contractor to apply for, and to pay all fees.
Water Supply & Sewage Act	By Builder	Contractor's Plumber to submit the necessary forms to the <i>Local Authority</i> and to pay all fees.

Schedule of Authority conditions		
Authority	Document	Condition
Building Certifier	Building Approval	The Contractor will be advised of any conditions of approval during the Tender Period.
<i>Local Authority</i>	<i>Development Application</i>	Not applicable
<i>Local Authority</i>	<i>Operational Works</i>	Not applicable
<i>Local Authority</i>	<i>Trade Waste Applications</i>	<i>EECL</i> to apply for, and pay all fees if applicable

1.1.6 PROTECTION OF PEOPLE AND PROPERTY

Occupied premises

For the parts of the site designated as occupied premises in the **Occupied premises schedule**:

- Permit occupants to continue in secure possession and occupancy of the premises for the required period
- Make available safe access for occupants
- Arrange work to minimise nuisance to occupants and ensure their safety
- Protect occupants against weather, dust, dirt, water or other nuisance
- Proposals: Submit details of proposed methods to protect people and property 5 working days before commencement of work
- Purpose of submission: Information only

Occupied premises schedule

Occupants	Occupied premises	Period of occupancy
<i>Nil</i>	Note this is a functioning depot. EECL require access to depot at all times.	<i>The duration of the works</i>

No smoking policy

No smoking on the premises.

Incident reporting

Report all incidents to *EECL*. This includes spills, and damage to *EECL* property and equipment.

Safety

Refer to the *EECL Conditions of Contract*.

Accidents: Promptly notify the *superintendent* of the occurrence of the following:

- Accidents involving death or personal injury
- Accidents involving loss of time
- Incidents with accident potential such as equipment failure, slides and cave-ins

Accident reports: Submit reports of accidents.

- Purpose of submission: Information only

WH&S and Electrical Safety performance reports: must be provided at least monthly unless directed otherwise by the Superintendent.

Safety Officer

Refer to the *EECL Conditions of Contract*, and also the following:

Principal Contractor Induction:

Where *EECL* engages a Principal Contractor for Construction, or Contractor has control of the nominated work site, the Principal Contractor, or Contractor, or a nominated representative (1 person only) must complete an online Generic Contractor Worker Induction. The course fee is \$60 and can be completed on any computer when given a password to access the site and will take 90 minutes to complete. This online induction must be completed regardless of the nature of the works under the contract. Contractor is to include this course in their tender.

Safety Management Plan and Work Method Statements

Refer to the *EECL*, and also the following:

Submit a site-specific Safety Management Plan within 2 weeks of Acceptance of Tender.

Submit all site-specific Work method Statements 1 week before commencing Works.

These plans must be reviewed and approved by *EECL* prior to commencement of works and in accordance with *EECL Conditions of Contract*.

Submit Performance Reports at least monthly, unless directed otherwise by the *EECL* Principal Representative.

Protective clothing

Clothing: The site is open, and offers limited shaded working areas or hard stands. Comply with the *EECL* Policy for protective clothing, and with AS/NZS 4602. Ensure that all persons engaged in the Works wear high visibility cotton long sleeve shirts, long cotton trousers, and hard-toe safety footwear at all times.

Safety helmets: Make available safety vests and helmets for the use of visitors.

- Standard: To AS/NZS 1801, Type 1
- Standards Mark: Required

Number of vests and helmets: 4

Adjoining property

Protection: Do not interfere with or damage property which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

Notice: *EECL* will submit to owners and occupants of adjoining property written notice of intention to commence work and an outline description of the type and extent of work.

Conditions for work on adjoining property: Minimise damage to existing vegetation.

Records: For properties described in the **Adjoining properties to be recorded schedule**:

- Inspect the properties with the superintendent, before commencement of work
- Make detailed records of conditions existing within the properties
- Arrange for at least 2 copies of each record, including drawings, written descriptions, and photographs, as evidence of conditions existing before commencement of work

Endorsed copies: Submit one copy of each record. Keep the other copy on site.

- Purpose of submission: Information only

Adjoining properties to be recorded schedule

Location	Description
Refer to Locality Plan	Refer Drawing 0030- A-000 - COVER SHEET

Services

General: Do not obstruct or damage roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Determine the location of such services.

Cyclone preparedness

Requirement	Keep the worksite in a state of preparedness during the official cyclone season beginning 1 st November and ending at the end of March in the following year. Maintain the worksite free of debris that could become missiles in high winds. Program this work on a regular basis, especially before worksite closures for weekends and holidays. Secure uncompleted cladding and items that could become windblown debris to the structure.
Requirement in remote areas.	Maintain an emergency kit on the site. Prepare an evacuation plan if secure shelter is not available on the site, or if the site is in a storm surge area, and have transport fuelled and ready.
On-site work when cyclone approaching	- Clean up debris. Remove building materials from the site and/or store securely. - Ensure tools, ladders, wheelbarrows and the like are removed and/or stored securely - Ensure new building materials and claddings are securely fixed to the structure. - Dismantle loose scaffolding components and store securely. - Make good the stability of Builders poles and connections. - Remove portable site amenities from the site and/or make secure. - Remove all signage from the site and/or make secure. - Keep the workforce informed of the issued cyclone advices.
Emergency kit for remote areas.	Provide an emergency kit containing food, water, radio, torch, cooking gear, and the like, as recommended in the BCC Fact Sheet – Cyclone preparedness for building contractors. www.buildingcoordinationcentre.qld.gov.au .
Cyclone “watch” and “warning”,	Ensure the workforce is familiar with the Bureau of Meteorology terminology. A cyclone watch is issued when a cyclone is likely to affect communities within <u>24 to 48 hours</u> , and will include an estimate of the cyclone’s position, intensity, and movement. . A cyclone warning is issued when a cyclone is likely to affect communities within <u>24 hours</u> . Undertake cyclone preparedness measures if the worksite is in an area advised likely to be affected by the cyclone.
Cyclone categories	Ensure the workforce is familiar with the Bureau of Meteorology terminology, namely: Category 1 = wind gusts less than 125 km/hr. Category 2 = wind gusts 125 to 169 km/hr Category 3 = wind gusts 170 to 224 km/hr Category 4 = wind gusts 225 to 279 km/hr Category 5 = wind gusts more than 280 km/hr.

1.1.7 SAFE DESIGN REPORT

General: A “Safe Design – Construction Safety Report” has been prepared for the site and will be provided upon request or commencement of construction. During the Tender Period the *Contractor* is to review the scope of works and advise any items that are not part of normal

construction practices. Any items raised during construction are to be provided at the Builders own cost/s. Allow to fully review within the tender period to complete the proposed works in a safe method to comply within all current regulations and standards.

1.1.8 CARE OF THE WORK AND REINSTATEMENT OF DAMAGE

Existing services

Refer to the *EECL Conditions of Contract*, and also the following:

Attendance: Attend to existing services as follows:

- If the service is to be continued, repair, divert or relocate as required. If such a service crosses the line of a required trench, or will lose support when the trench is excavated, provide permanent support for the existing service.
- If the service is to be abandoned, cut and seal or disconnect, and make safe.

Proposals: Submit proposals for action to be taken with respect to existing services 5 working days before starting this work. Minimise the number and duration of interruptions.

- Purpose of submission: For review.

1.1.9 DAMAGE TO PERSONS AND PROPERTY OTHER THAN WORK UNDER CONTRACT

Property on the site

Repair of services: Rectify immediately any obstruction or damage to roadways and footpaths, drains and watercourses and other existing services in use on the site. Provide temporary services whilst repairs are carried out.

Repair of property: Rectify immediately any interference or damage to property which is to remain on the site, including trees.

Reinstatement

General: Clean and repair damage caused by installation or use of temporary work used during construction to original condition.

Adjoining property

Repair of services: Rectify immediately any obstruction or damage to roadways and footpaths, drains and watercourses and other existing services adjacent to the site. Provide temporary services whilst repairs are carried out.

Direction

Oral direction not permitted: Permitted only if followed up with a written direction.

1.1.10 SUPERINTENDENT & CONTRACT OFFICER

Superintendent

Refer to the *EECL Conditions of Contract*.

Contract Officer

Refer also to the *EECL Conditions of Contract*.

1.1.11 SITE

Refer to the *EECL Conditions of Contract*.

Possession

Approved uses not connected with WUC: The Contractors transportable office and facilities may be located on the site, subject to negotiation with the Superintendent.

Site restrictions

Security: Be responsible for the security of the site at all times, including the security fence and gates.

Site limitations: Comply with the following limitations on the use of the site: Allow EECL's workforce access to the site, other than the WUC Builders Area, on a 24/7 basis.

Restrictions: Access on to and around the site, and use of the site for temporary works and constructional plant, including working and storage areas, location of offices, workshops, sheds, roads and parking is restricted to the site. Negotiate this area with the *Superintendent* prior to establishment on the site.

1.1.12 SETTING OUT THE WORKS

Schedule of surveys	
Item	Required
Setting out	Set out the new works to the set-out indicated.
Site survey	Refer to the drawings for site levels.
Boundary pegs	Allow to engage an Authorised Surveyor to locate the boundaries suitable for any new fencing. Do not remove the new pegs for the fencing. Submit the surveyors' documentation, and include in the <i>Operation & Maintenance Manuals</i> .
As-built survey	Submit <i>Record Drawings</i> of new and altered structures to the <i>Superintendent</i> , and include in the <i>Operation & Maintenance Manuals</i> .

Prior to works commencing all services around the work location will be identified with ground penetrating radar, survey and presented on a drawing 48 hours prior to works commencing.

Contractor is to allow for all pot holing and locating services to being undertaken with a hydraulic vacuum pump, or approved equal method.

1.1.13 CLEANING UP**Final cleaning**

General: Before practical completion, clean throughout, including interior and exterior surfaces exposed to view. Clean debris from site, roofs, gutters, downpipes and drainage systems. Remove waste, surplus materials and rubbish.

Removal of temporary works and constructional plant

Time for removal: Within 10 working days of the Date of Practical Completion.

Groundworks final trimming

- Provide final grading and trimming to earthwork areas.
- Rake, compact, dress and remove all stones and debris to provide an area suitable for mowing.
- The trimmed surface of all earthwork areas shall be stable and freely draining.
- This clause refers to existing grades that have been disturbed by the building works, and by the installation of underground conduits and the like. Allow to remove excess material caused by building and trenching operations from the site totally, or as directed otherwise.

1.1.14 MATERIALS, LABOUR AND CONSTRUCTION PLANT**Items supplied by principal**

General: Materials and other items identified in the **Items to be supplied schedule** will be supplied free of charge to the contractor for installation in the execution of the works. Unload and take delivery of them and inspect them for defects. If defects are found, advise. Return unused items to the principal.

Notice: Provide 5 working days notice to the *Superintendent* of the required delivery dates.

Schedule of items supplied by principal	
<i>Door & Window Hardware</i>	Lock cylinders as specified in <i>Door & Window Hardware</i>

Use of existing services

Existing services may be used as temporary services for the performance of the contract subject to conditions stated in the **Existing services schedule**.

Schedule of Existing Services	
Service	Conditions of use
Water	Supply is available to the site, and Contractor is to make all connections and pay all fees, required to provide the works.

Schedule of Existing Services	
Service	Conditions of use
Electricity	Supply is available to the site, and Contractor is to make all connections and pay all fees, required to provide the works.
Sanitary	There is no suitable amenities available for use by the contractor at the site. Contractor is to make all arrangements to ensure that appropriate amenities are provided in accordance with <i>Work Health and Safety (Amenities for Construction Work) Amendment Regulation 2024</i> .
Phone / fax	No supply is available to the site, and Contractor is to make all connections and pay all fees, required to provide the works. Contractor to make own arrangements.
Lifting	Lifting equipment is not available on the site. Contractor to make own arrangements.

Parking

Parking: Park only as directed by the *Principle Representative*.

Temporary fence

Provide as required to WH&S requirements.

Project signboard

General: A project-specific signboard is not required for this project. Provide WH&S signage as required for a construction site, and remove on completion.

Other signboards: Obtain approval before display of advertisements or provision of other signboards.

Run off

Prevent run-off water carrying cement or silt from entering pipes or drains both on or off the site.

1.1.15 WORKING HOURS**General**

Working days and hours: Conform to the requirements of the *Local Authority*

1.1.16 PROGRAMMING**Order of work schedule**

Portion of work	Order of work	Time of work
All new WUC	As required to complete works.	Negotiate with EECL

Program of work

Construction program: Within 10 working days after the date for possession of the site, submit a construction program showing the following:

- Sequence of work.
- Critical paths of activities related to the work.
- Allowance for holidays and RDO's.
- Activity inter-relationships.
- External dependencies including provision of access, document approvals and work by others.
- Periods within which various stages or parts of the work are to be executed.

Revisions: Revise the construction program as required by the progress of the work. Submit revisions with each progress claim. Identify changes since the previous version, and show the estimated percentage of completion for each item of work.

Program chart: Display in the contractor's site office an up-to-date bar chart and network diagram based on construction program.

Site meetings

General: Hold and attend site meetings throughout the contract and ensure attendance of appropriate subcontractors, the superintendent, and appropriate consultants.

Frequency: As advised during the Contract.

Minutes: Keep minutes of site meetings. Within 5 working days after each meeting, submit to each party written copies of the minutes.

- Purpose of submission: Review

Contacts: At the first site meeting, submit names and telephone numbers of responsible persons who may be contacted after hours during the course of the contract.

- Purpose of submission: Information only

Progress photographs

General: Take colour progress photographs within 5 working days before each site meeting. At each site meeting submit 2 sets of glossy prints, and a digital record. Identify project, date, time, location and orientation.

- Purpose of submission: Information only.
- Minimum frequency: Weekly
- Minimum number: 12
- Format: JPG format

1.1.17 ENVIRONMENTAL MANAGEMENT PLAN

Builder is to supply their own *Environmental Management Plan [EMP]* for client review and comply fully with these requirements.

1.1.18 SOIL TEST

NA

1.1.19 PAYMENT

Payment

Refer to *EECL Conditions of Contract*.

Method of measurement

General: In accordance with the principles of the Australian Standard Method of Measurement of Building Works (ASMM).

Other civil engineering work: To AS 1181.

End of section

0171 GENERAL REQUIREMENTS

2.1 GENERAL

2.1.1 RESPONSIBILITIES

Performance

Structural: If required, provide structures, installations and components as follows:

- Fixed accessways: To AS 1657.
- Structural design actions: To AS/NZS 1170.0 and as documented in this *Worksection*. Refer also to the Notes on the *Civil/Structural Drawings*.

Structural criteria

Design and provide to the requirements detail on CIVIL/ *STRUCTURAL DRAWINGS*.

Design

Design by contractor: If the contractor provides design, use only appropriately qualified persons and conform to all statutory requirements.

Conflict with the documents: If it is believed that a conflict exists between statutory requirements and the documents, notify the contract administrator immediately and provide a recommendation to resolve the conflict.

2.1.2 CROSS REFERENCES

Conform to associated worksections as follows:

All other sections in the tender documents

Precedence

Requirements of subsequent worksections of the specification override conflicting requirements in this worksection.

2.1.3 REFERENCED DOCUMENTS

Contractual relationships

Responsibilities and duties of the principal, contractor and contract administrator are not altered by requirements in referenced documents.

Current editions

Use referenced documents which are the editions, with amendments, current 3 months before the closing date for tenders, except where other editions or amendments are required by statutory authorities.

- Site copies: One, if requested by the Principal's Representative.

2.1.4 INTERPRETATION

General

Unless the context otherwise requires, the following definitions apply:

- Approved: "Approved", "reviewed", "directed", "rejected", "endorsed" and similar expressions mean "approved (reviewed, directed, rejected, endorsed) in writing by the contract administrator".
- Geotechnical site investigation: The process of evaluating the geotechnical characteristics of the site in the context of existing or proposed construction.
- Give notice: "Give notice", "submit", "advise", "inform" and similar expressions mean "give notice (submit, advise, inform) in writing to the contract administrator".
- Maintenance period: Synonymous with "Defects liability period".
- Obtain: "Obtain", "seek" and similar expressions mean "obtain (seek) in writing from the contract administrator".
- Professional engineer: A person who is listed on the National Professional Engineers Register (NPER) in the relevant discipline at the relevant time.
- Proprietary: "Proprietary" mean identifiable by naming manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
- Provide: "Provide" and similar expressions mean "supply and install".
- Registered testing authority:
 - The CSIRO Division of Manufacturing and Infrastructure Technology (CSIRO-MIT); or

- An authority registered by the National Association of Testing Authorities (NATA) to test in the relevant field; or
- An organisation outside Australia recognised by NATA through a mutual recognition agreement.
- Required: Means required by the contract documents, the local council or statutory authorities.
- Samples: Includes samples, prototypes and sample panels.
- Supply: "Supply", "furnish" and similar expressions mean "supply only".

Abbreviations

APAS: Australian Paint Approval Scheme.

AS: Australian Standard.

BCA: Building Code of Australia.

NATA: National Association of Testing Authorities.

NZS: New Zealand Standard.

SSL: Scientific Services Laboratory.

Technical

Metallic-coated steel: Includes zinc-coated steel, zinc/iron alloy-coated steel, and aluminium/zinc-coated steel.

Pipe: Includes pipe and tube.

Tests

Pre-completion tests: Tests carried out before completion tests.

- Type tests: Tests carried out on an item identical with a production item, before delivery to the site.
- Production tests: Tests carried out on a purchased item, before delivery to the site.
- Site tests: Tests carried out on site.

Completion tests: Acceptance tests and final tests.

- Acceptance tests: Tests carried out on completed installations or systems and, except for final tests, before the date for practical completion, to demonstrate that the installation or system, including components, controls and equipment, operates correctly, safely and efficiently, and meets performance and other requirements.
- Final tests: Acceptance tests carried out before completion of the maintenance period.

2.1.5 CONTRACT DOCUMENTS

Diagrammatic layouts

Layouts of service lines, plant and equipment shown on the drawings are diagrammatic only, except where figured dimensions are provided or calculable. Before commencing work, obtain measurements and other necessary information.

Levels

Spot levels take precedence over contour lines and ground profile lines.

Drawings and manuals for existing services

Warranty: No warranty is given as to the completeness or accuracy of drawings and/or manuals of existing services.

2.2 QUALITY

2.2.1 INSPECTION

General:

- The Contractor shall prepare an inspection test plan within 14 days of acceptance by Ergon Energy Corporation Limited. Submit 3 copies to the Principal's Representative.
- Show programmed dates for the following:
 - Submission of workshop drawings and contractors submissions
 - Inspection Hold Points.
 - Submission of installation and test certificates by the Contractor.

Mandatory Hold Points:

- Refer to schedule of Hold Points.
- The Contractor is to provide written notice of inspection prior to all works nominated in the schedule of Hold Points.

- Work is not to proceed beyond a mandatory Hold Point, or to conceal works nominated as Hold Points without first obtaining written approval to proceed from the Principal's Representative or Clerk of Works representing the Principal.

Schedule of Mandatory Hold Points – Building Works

Building Element:	Work Stage:
All Steelwork	Prior to pouring of any stage of concrete

Notice

Witness points: If notice of inspection is to be given in respect of parts of the works, advise if and when those parts are to be concealed.

Hold points: If notice of inspection is to be given in respect of parts of the works, do not conceal those parts without approval.

Minimum notice for inspections to be made: 4 hours for on-site inspectors, otherwise 8 working days.

Concealed services: Give notice so that inspection may be made of services to be concealed.

2.2.2 TESTS

Testing authorities

Except for site tests, have tests carried out by authorities accredited by NATA to test in the relevant field, or an organisation outside Australia recognised by NATA through a mutual recognition agreement. Cooperate as required with testing authorities.

Except for site tests, have tests carried out by a Registered testing authority.

Reports

General: Submit copies of test reports, including certificates for type tests, showing the observations and results of tests and compliance or non-compliance with requirements.

Number of copies of test certificates: 3

Endorsement

If tests are to be carried out on parts of the works, do not conceal those parts and do not commence further work on those parts until the tests have been satisfactorily completed and compliance verified.

2.2.3 SAMPLES

Timing

Delays: Coordinate submissions of related samples. Do not cause delays by making late submissions or submitting inadequate samples.

Quantity

General: Submit a sample of each designated item and 2 copies of supporting documentation. Include ancillary items such as fasteners, flashings and seals.

Identification

Identify the project, contractor, subcontractor or supplier, manufacturer, applicable product, model number and options, as appropriate and include pertinent contract document references. Include service connection requirements and product certification. Identify non-compliances with project requirements, and characteristics which may be detrimental to successful performance of the completed work.

Approval

General: Do not commence work affected by samples until the samples have been approved. Submit further samples as necessary.

Retention

Keep approved samples in good condition on site, until practical completion.

Incorporation

Incorporate in the works samples which have been approved for incorporation. Do not incorporate other samples.

Criteria

Match approved samples throughout the works.

2.2.4 SUBMISSIONS

Timing

General: Submit documents in a timely manner, to suit the construction program. Advise if any of the documents are to be returned.

Delays: Coordinate submissions of related items. Do not cause delays by making late or inadequate submissions.

Quantity

Bound documents: 3 copies.

Loose documents up to and including A3: One copy.

Loose documents larger than A3: One transparency on heavyweight plastic film the same size as the standard contract drawings.

Standard contract drawing size: A1

Identification

Identify the project, contractor, subcontractor or supplier, manufacturer, applicable product, model number and options, as appropriate and include pertinent contract document references. Include service connection requirements and product certification. Identify non-compliances with project requirements, and characteristics which may be detrimental to successful performance of the completed work.

Endorsement

Witness points: Give notice before commencing work affected by contractor's submissions, unless the submissions have been endorsed as satisfactory.

Hold points: Do not commence work affected by contractor's submissions until, if appropriate, the submissions have been endorsed as satisfactory,

Errors: If a document contains errors, submit a new or amended document as appropriate, indicating changes since the previous submission.

Design

General: If part or all of an installation is to be designed by the contractor, submit documents showing the layout and details of the installation.

Variation documents: If it is proposed to change the installation from that shown on the contract documents, or if changes are required by statutory authorities, submit variation documents showing the proposed changes.

Shop drawings

General: Submit dimensioned drawings showing details of the fabrication and installation of services and equipment, including relationship to building structure and other services, cable type and size, and marking details.

Diagrammatic layouts: Coordinate work shown diagrammatically in the contract documents, and submit dimensioned set-out drawings.

Authorities

Authorities' approvals: If required, submit documents showing approval by the authorities whose requirements apply to the work.

Correspondence: Submit copies of correspondence and notes of meetings with authorities.

Samples

If it is intended to incorporate samples into the works, submit proposals.

Materials and components

Product data: For proprietary items, submit the manufacturer's product data including

- technical specifications and drawings;
- type test reports;
- performance and rating tables; and
- recommendations for installation and maintenance.

Proposed products schedules: For major products not specified as proprietary items, within 3 weeks of site possession submit a schedule of those proposed for use.

Product certification: If products must comply with product certification schemes, submit evidence of compliance.

Execution

Embedded services: Submit proposals for embedding services in concrete walls or floors, or chasing into concrete or masonry walls.

Acceptance of substrate: Submit installers' statements verifying that the substrate is satisfactory for receiving the installation.

Electronic submissions

File format: as agreed with Principal's Representative.

Transmission medium: as agreed with Principal's Representative.

Notice

Minimum notice: 5 working days for offsite submissions, otherwise 10 working days.

Submission points: If a submission is required for a part of the works, do not commence work on the part until the submission is endorsed that the work may proceed. Coordinate related submissions and do not cause delays by making late or inadequate submissions.

2.3 EXECUTION**2.3.1 MATERIALS AND COMPONENTS****Sources policy**

Refer to Tender Pack contents by Ergon Energy Corporation Limited.

Consistency

For the whole quantity of each material or product use the same manufacturer or source and provide consistent type, size, quality and appearance.

Corrosion resistance

Steel products: Conform to the **Corrosion resistance table** or provide proprietary products with metallic and/or organic coatings of equivalent corrosion resistance.

Manufacturers' or suppliers' recommendations

General: Select, if no selection is given, and transport, deliver, store, handle, protect, finish, adjust, prepare for use, and provide manufactured items in accordance with the current written recommendations and instructions of the manufacturer or supplier.

Project modifications: Advise of activities that supplement, or are contrary to, manufacturer's or suppliers' written recommendations and instructions.

Product certification: If products must comply with product certification schemes, provide them in accordance with the certification requirements.

Proprietary items

Implication: Identification of a proprietary item does not necessarily imply exclusive preference for the item so identified, but indicates the necessary properties of the item.

Alternatives: If alternatives are proposed, submit proposed alternatives and include samples, available technical information, reasons for proposed substitutions and cost. If necessary, provide an English translation. State if provision of proposed alternatives will necessitate alteration to other parts of the works and advise consequent costs.

2.3.2 COMPLETION**Samples**

Remove unincorporated samples on completion.

Contractor's submissions

A formal Handover Takeover process with on-site meeting between Contractor, Principal's Representative and any other relevant parties must be met to achieve Practical Completion, refer EECL Handover Takeover Document in Appendix.

'As-Constructed' drawings of the completed works will be required prior to a Practical Completion certificate being issued.

Ergon Equipment Creation Template Document and Asset Class Break up Forms are to be completed by the contractor and submitted with Operation and Maintenance Manuals.

Warranties

General: Name the principal as warrantee. Register with manufacturers as necessary. Retain copies delivered with components and equipment.

Commencement: Commence warranty periods at practical completion or at acceptance of installation, if acceptance is not concurrent with practical completion.

Approval of installer: If installation is not by manufacturer, and product warranty is conditional on the manufacturer's approval of the installer, submit the manufacturer's written approval of the installing firm.

Warranty schedule

Warranty	Form	Duration
All Mechanical ventilation and A/C Equipment	Parts and labour	Extended warranty as offered by the Manufacturer
All Electrical Equipment	Parts and labour	Extended warranty as offered by the Manufacturer
All Hydraulic Equipment	Parts and labour	Extended warranty as offered by the Manufacturer

Warranty	Form	Duration
Electrically operated Rollerdoors	Parts and labour	Extended warranty as offered by the Manufacturer
Loose Furniture	Parts and labour	Extended warranty as offered by the Manufacturer
And as specified in the relevant specification sections.		

2.3.3 DEFECT RECTIFICATION AND INSPECTION COSTS

Access: Access to the site for rectification of defects after practical completion will be by arrangement with the Principal.

Time for rectification: The contractor will be responsible for the rectification of defects in accordance with the period stated in the rectification schedule

Rectification schedule

Defect	Time for Rectification
Defects affecting occupation or operation by the Principal	5 working days
All other defects	As required by the Conditions of Contract

Inspection and acceptance: Within the period stated in the rectification schedule the Contractor will be required to provide written confirmation of the completion of any rectification works to allow inspection by the Principal's Representative and acceptance by the Principal.

In the event that the Contractor has advised completion of any defect identified by the Principal's Representative or the Principal and that defect has been found after inspection not to be rectified, then the Contractor shall be responsible for cost of re-inspection. The cost of re-inspection shall include actual costs incurred for re-inspection including but not limited to normal time charge rates for inspection and reporting plus disbursements for travel and other expenses. Costs incurred will be adjusted by the Principal's Representative against the final contract amount or taken from securities held.

2.3.4 RECORD DRAWINGS

General

For Building and Civil Works within 30 days of practical completion.

Submit record drawings. Show the "as installed" locations of building elements, plant and equipment. Show off-the-grid dimensions where applicable.

Submit surveyor certified record drawings. Show the "as installed" locations of building elements, locations and height of building platforms and site grading, plan location of fence and service connections.

Services

Show dimensions, types and location of equipment, cables and other underground services. Include relationship to building structure and other services, and changes made during commissioning and the maintenance period. Include diagrammatic drawings of each system showing piping and wiring, and principal items of equipment.

Format

Use electronic format suitable for AUTOCAD Release 2021 or previous versions.

Use the same borders and title block as the contract drawings.

2.3.5 OPERATION AND MAINTENANCE MANUALS

General

General: Submit operation and maintenance manuals for installations.

Format – hard copy

A4 size loose leaf, in commercial quality, 4 ring binders with hard covers, each indexed, divided and titled. Include the following features:

- Cover: Identify each binder with typed or printed title "*OPERATION AND MAINTENANCE MANUAL*", to spine. Identify title of project, volume number, volume subject matter, and date of issue.
- Dividers: Durable divider for each separate element, with typed description of system and major equipment components. Clearly print short titles under laminated plastic tabs.

- Drawings: Fold drawings to A4 size and accommodate them in the binders so that they may be unfolded without being detached from the rings. Provide with reinforced punched binder tabs.
- Pagination: Number pages consecutively.
- Ring size: 50 mm maximum, with compressor bars.
- Text: Manufacturers' printed data, including associated diagrams, or typewritten, single-sided on bond paper, in clear concise English.

Contents - general

Include the following:

- Drawings and technical data: As necessary for the efficient operation and maintenance of the installation.
- Equipment descriptions:
 - Name, address and telephone and facsimile numbers of the manufacturer and supplier of items of equipment installed, together with catalogue list numbers.
 - Schedules (system by system) of equipment, stating locations, duties, performance figures and dates of manufacture. Provide a unique code number cross-referenced to the record and diagrammatic drawings and schedules, including spare parts schedule, for each item of equipment installed.
- Maintenance procedures:
 - Manufacturer's technical literature as appropriate. Register with manufacturer as necessary. Retain copies delivered with equipment.
 - Safe trouble-shooting, disassembly, repair and reassembly, cleaning, alignment and adjustment, balancing and checking procedures. Provide logical step-by-step sequence of instructions for each procedure.
- Drawings:
 - Record drawings, full size.
 - Use electronic format suitable for AUTOCAD Release 2024 or previous versions.

Contents - services

Include the following in addition to *Contents - general*:

- Installation description: General description of installation.
- Equipment descriptions:
 - Manufacturers' technical literature for equipment installed, assembled specifically for the project, excluding irrelevant matter. Mark each product data sheet to clearly identify specific products and component parts used in the installation, and data applicable to the installation.
- Operation procedures:
 - Control sequences and flow diagrams for systems installed.
- Certificates:
 - Copies of test certificates for the mechanical installation and equipment used in the installation.
 - Test and balancing reports.

Timing and quantity

Final copies: Submit 3 sets of final volumes within 2 weeks after practical completion. Incorporate feedback from review and from training of principal's staff, including preparation and insertion of additional data.

Revisions: Submit 3 sets of loose leaf amendments for insertion in the manuals, incorporating feedback from the maintenance period, within 2 weeks after completion.

2.3.6 TRAINING

Operation

Immediately after practical completion, explain and demonstrate to the principal's staff the purpose, function and operation of the installations.

Maintenance

Immediately after practical completion, explain and demonstrate to the principal's staff the purpose, function and maintenance of the installations.

2.3.7 COMPLETION TESTS

General

Carry out acceptance tests and final tests.

Hydraulic site tests

Preparation for pressure testing: Securely anchor pipes and fittings in position to prevent movement during tests. Leave pipe joints exposed to enable observation during tests. Disconnect equipment which is not designed to carry the test pressure.

2.3.8 MAINTENANCE

General

General: During the maintenance period, carry out periodic inspections and maintenance work as recommended by manufacturers of supplied equipment, and promptly rectify faults.

Emergencies: Attend emergency calls promptly.

Maintenance records

Referenced documents: If referenced documents or technical sections require that log books or records be submitted, include this material in the maintenance records.

Certification: On satisfactory completion of the installation, submit certificates stating that each installation is operating correctly.

END OF SECTION

0172 ENVIRONMENTAL REQUIREMENTS

1 GENERAL

1.1 GENERAL

Application

This section applies to all activities associated with work under the Contract which are required to be undertaken in compliance with the Environmental Protection Act 1994 and subordinate legislation, and with due regard to health and safety requirements associated with such work.

1.2 EXECUTION

Statutory requirements

Comply with the following as applicable:

- *Environmental Protection Act 1994.*
- *Environmental Protection (Air) Policy 2008.*
- *Environmental Protection (Noise) Policy 2008.*
- *Environmental Protection (Water) Policy 2009.*
- *Environmental Protection Regulation 2008.*
- *Waste Reduction and Recycling Act 2011.*
- *Land Protection (Pest and Stock Route Management) Act 2002.*
- *Aboriginal Cultural Heritage Act 2003.*
- *Vegetation Management Act 1999.*
- *Nature Conservation Act 1992.*
- *Water Act 2000.*
- *Sustainable Planning Act 2009.*
- *Coastal Protection and Management Act 1995.*
- *Fisheries Act 1994.*
- *Environment Protection and Biodiversity Conservation Act 1999.*

Reference guidelines

Where applicable, comply with requirements of the following guideline documents:

- *Best Practice Erosion and Sediment Control (Books 1 -4),* International Erosion Control Association (IECA) Australasia, November 2008.
- *Monitoring and Sampling Manual 2009, Environmental Protection (Water) Policy 2009 – Version 2* (Department of Environment and Resource Management, 2010).
- *AS 4970 Protection of Trees on Development Sites.*
- *Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines v4.0* (Department of Science, Information Technology, Innovation and the Arts, 2014).

1.3 GENERAL ENVIRONMENTAL CONTROLS

Dust control

Restrict dust caused by the Works to a minimum.

Noise control

Take all practical precautions to minimise noise resulting from the work under the Contract. Fit all construction equipment with noise suppressors and manage use so noise is minimised.

Plan: Prepare a noise and vibration control plan to protect adjoining owners, residents and the public from noise and vibration impacts. Include the following details:

- Noise control and vibration: To the recommendations of AS 2436.
- Maximum noise level at the site boundary.
- Noise control.
- Vibration assessment.
- Vibration control.

Demolition works to be limited to between the hours of 8am to 5pm to minimise disturbance to adjoining and surrounding neighbours.

Erosion control

Plan and carry out the work so as to avoid erosion, contamination, and sedimentation of the site, surrounding areas, and drainage systems.

Runoff

Control runoff to minimise sediment loss from the site and pollution of natural waterways and municipal drainage systems. Additionally comply with any specific Local Authority requirements in addition to governing statutory requirements.

Water quality

Wash out: Make sure that wash out does not enter waterways or stormwater drains.

Cross connection: Make sure that there are no cross connections between the stormwater and the public sewerage system.

Dewatering

Keep earthworks free of water. Provide and maintain slopes, crowns and drains on excavations and embankments to ensure free drainage. Place construction, including fill, masonry, concrete and services, on ground from which free water has been removed. Prevent water flow over freshly laid work.

Fire protection

Burning of refuse or other materials or lighting of any fires on site is not permitted.

Storage on site

Store materials and equipment on site to prevent damage to the site and minimise hazards to persons, materials and equipment. Keep storage areas neat and tidy.

Site activities

Do not form new tracks, alter existing tracks, erect camps, remove trees or shrubs, cut fences, water, sewerage, power or telecommunication lines, or perform other activities not specified or indicated on the drawings or otherwise required under the Contract without prior advice by the Superintendent.

Disposal of wastes

Dispose of all construction wastes, site refuse and any solid or liquid contaminants resulting from work under the Contract in accordance with statutory and local authority requirements.

Acid sulfate soil

Treat and manage any disturbed or oxidised acid sulfate soil in accordance with the current *Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines* document. This will ensure any disturbance to acid sulfate soils is managed to prevent impacts to the coastal environment and public safety.

1.4 EXISTING FLORA

Protection

Protect from damage all trees and other plants which are shown or specified to be retained, or need not be removed or damaged for construction operations.

Tree protection

Tree protection zone: To AS 4970 Section 3.

Tree protective measures: To AS 4970 Section 4.

Work near trees

Harmful materials: Keep the area within the dripline free of sheds and paths, construction material and debris.

Work under trees: Do not remove topsoil from, or add topsoil to, the area within the dripline of the trees.

Hand methods: Use hand methods to locate, expose and cleanly remove the roots on the line of excavation.

1.5 SITE CLEARING

Extent

Limit extent of clearing only to the limits indicated on the Drawings or as otherwise advised by the Superintendent.

Clearing and grubbing

Clearing: Remove everything on or above the site surface, including rubbish, scrap, grass, vegetable matter and organic debris, scrub, trees, timber, stumps, boulders and rubble.

Grubbing: Grub out stumps and roots over 75mm diameter to a minimum depth of 500mm below subgrade under buildings, embankments or paving, and 300mm below the finished surface in unpaved areas. Backfill holes remaining after grubbing with sand material to prevent ponding of water. Compact the material to the relative density of the existing adjacent ground material.

Disposal

Unless otherwise advised by the Superintendent, no off-site disposal or burning of cleared vegetation is permitted. Put all cleared vegetation through a chipper and stockpile for re-use as mulch where directed. Materials may be reused in conjunction with environmental control measures if suitable. Dispose of excess or unwanted material in accordance with Local Authority requirements and guidelines.

1.6 ENVIRONMENTAL MANAGEMENT OF THE WORKS

Contractor's responsibility

Document the planned sequence, methodology and program proposed for managing environmental responsibilities on the site in conformance with statutory requirements, environmental best practice, and this specification.

Submit this information in accordance with the timeframes outlined in the Contract, or at such later time as may be agreed with the Superintendent. Obtain the Superintendent written advice regarding proposed management methods prior to proceeding with the Works.

Liability of Principal limited

Acceptance of proposed management methods shall in no way relieve the Contractor of responsibility under the Contract to ensure compliance with environmental legislation and any approvals issued by the Department of Environment and Heritage Protection (DEHP) or other statutory authority in respect to work under the Contract.

Details

Consider at least the following topics (as applicable to individual projects):

- Order of work under the Contract,
- Soil Erosion and Sediment Control Plan,
- Earthworks Controls,
- Stock Piling Area Plan,
- Dust Control,
- Noise Control,
- Weed Control,

- Temporary fencing, barricading and/or other access controls,
- Temporary sanitary and waste services,
- Storage of plant and materials including any chemicals, fuels or other hazardous substances,
- Engagement of a competent Environmental Officer,
- Environmental training of employees and subcontractors where appropriate,
- Any other items considered warranted in protecting the surrounding environment.

1.7 SOIL EROSION AND SEDIMENT CONTROL

General

Avoid erosion, contamination and sedimentation of the site, surrounding areas and drainage systems. Do not commence external work on the site prior to obtaining the Superintendent advice of proposed soil erosion and sediment control measures.

Control measures

Adopt such control measures as may be necessary including the following where applicable:

- Staging of operations and sequence of works (eg clearing, stripping, rehabilitation).
- Restoration of disturbed areas in progress with the work under the Contract.
- Use of mulch materials to protect disturbed or exposed areas where suitable.
- Provision of temporary drains and catch drains.
- Application of diversion, dispersal and/or retention measures to concentrated flows to control and dissipate stormwater through the site without damage.
- Spreader banks or other structures to disperse concentrated runoff.
- Silt traps to prevent discharge sediment material to downstream areas.
- Temporary grassing or other treatments (eg contour ploughing/bunding) to disturbed areas and long term stockpiles.
- Silt fencing.

Maintenance

Continually inspect and maintain control measures throughout the course of the work under the Contract and during the Defects Liability Period, and following each incidence of rain. Rearrange and reposition control measures as required to maintain their efficacy. Handle and dispose of sediment collected by control measures in an appropriate manner.

Removal

Remove all temporary control measures following rehabilitation or when no longer required.

1.8 IMPORTED SOIL MATERIALS

Testing

All imported soil materials shall be sampled and tested or otherwise obtained from a certified source as being free from contaminants. Testing from non-certified sources shall be at a minimum rate of 1 sample per 50 m³ or as otherwise approved by the Environmental Protection Agency or Superintendent. Supply all test results and/or certificates to the Superintendent for verification prior to any site delivery of materials.

1.9 GROUND CONTAMINATION

Control plan

Plan: Prepare a ground contamination control plan for land suspected of being contaminated or the presence of acid sulphate soil is found, in conformance with the state Environmental Protection Authority (EPA) and the relevant state planning guidelines. Include the following details:

- Preliminary investigation.
- Detailed investigation.
- Site Remedial Action Plan (RAP).
- Stockpile sites.
- Site auditing and reporting procedures.
- Record of maintenance procedures, including record of remediation work, certificates issued and restrictions placed on the site.

No soil is to be removed from site prior to being tested for contaminants.

1.10 HEALTH PROTECTION

Precautions

Take the precautions necessary to protect the health of persons on or within the vicinity of the site from conditions which are or may be dangerous to health, including the noxious effects of dust, fumes, liquids, infection, fire explosion or other hazards.

Hazardous materials

Notify the Superintendent immediately if any of the following are found:

- Asbestos.
- Flammable or explosive liquids or gases.
- Toxic, infective or contaminated materials.
- Noxious or explosive chemicals.
- Tanks or other containers which have been used for storage of explosives, toxic, infective or contaminated substances.

End of section