
Appendix C

Design solutions

Koala Crossing - Type 1: Under Fence Crossing Bill of Quantities

Bill of Quantities_V1

Prepared by TBLD P/L for DPE on 29.05.2023

NOTE: It is the responsibility of the Contractor to confirm all quantities from the drawings.

No.	Description	Qty	Item	Rate	TOTAL
1.0	General				
1.1	Setout of all four Under Fence Crossings by Surveyor and inspection of setout by Superintendent and Landscape Architect	4	Item		\$0
1.2	Transportation of all materials and storage in a secure fenced area	1	Item		\$0
1.3	Site establishment preliminaries including secure site fencing with gates, vehicle control, silt control, Environmental Management Plan, site signage, etc.	1	Item		\$0
1.4	Proving and protection of underground and overhead services within proximity of works including liaison with service providers as required and 'building over' applications as required for all four Under Fence Crossings	1	Item		\$0
1.5	Make area around works good after completion of work including minor surface trimming and turfing of any adjacent disturbed areas	1	Item		\$0
1.6	Any other preliminary requirements noted in the drawings or technical specification not included above	1	Item		\$0
	Subtotal General				\$0
2.0	Under Fence Crossing Works				
2.1	Excavation of Under Fence Crossing sites as per site Setout Plans dwg UFC-03-04 and removal of spoil off-site in accordance with specified notes on dwg UFC-02	4	Item		\$0
2.2	Supply and construction of 3 Under Fence structures (U7,U12,U15) as per dwg UFC-05,06 in accordance with specified notes on dwg UFC-02	3	Item		\$0
2.3	Supply and construction of 1 Modified Under Fence structure U2 as per UFC-06/4 in accordance with specified notes on dwg UFC-02	1	Item		\$0
2.4	Supply and install bollards at site U7 as per site Setout Plans dwg UFC-04	2	No.		\$0
2.5	Cut opening in fence as required and make good fence connection to rub beam as per dwg UFC-06	4	Item		\$0
2.6	Supply and install socked and slotted AG drains with closed off ends of sock on both ends (L 1.8m each)	7	Item		\$0
2.7	Supply and plant tubestock native grasses (6/m ²) on each site as per dwg UFC-05	72	Item		\$0
2.7	Supply and plant Kikuyu turf on each site as per dwg UFC-05 (0.25 m ² / site)	1	m ²		\$0
	Subtotal Under Fence Crossing Works				\$0
3.0	Maintenance				
3.1	Maintenance of all Under Fence Crossings and planted soft landscape works, including watering of all plants and weed control, replacement of plants as required.	12	Weeks		\$0
	Subtotal Maintenance				\$0
4.0	Defects liability				
4.1	Defects Liability for all constructed works for 52 weeks.	52	Weeks		No additional cost
	Subtotal Defects Liability				No additional cost
	SUBTOTAL BILL OF QUANTITY COST (TYPE 1 - UNDER FENCE CROSSING) (Ex. GST)				\$0
	GST (10%)				\$0
	TOTAL INCLUDING GST				\$0

Koala Crossing - Type 2: Over Pipeline Crossing Bill of Quantities

Bill of Quantities_V1

Prepared by TBLD P/L for DPE on 29.05.2023

NOTE: It is the responsibility of the Contractor to confirm all quantities from the drawings.

No.	Description	Qty	Item	Rate	TOTAL
1.0	General				
1.1	Preparation of 3D feature level survey of the marked area as per dwg OPC-04	1	Item		\$0
1.2	Setout of Over Pipeline Crossing by Surveyor and inspection of setout by Superintendent and Landscape Architect	1	Item		\$0
1.3	Transportation of all materials and storage in a secure fenced area	1	Item		\$0
1.4	Site establishment preliminaries including secure site fencing with gates, vehicle control, silt control, Environmental Management Plan, site signage, etc.	1	Item		\$0
1.5	Proving and protection of underground and overhead services within proximity of works, protection of all WaterNSW infrastructure, including liaison with service providers as required and 'building over' applications as required for Over Pipeline Crossing	1	Item		\$0
1.6	Make area around works good after completion of work including minor surface trimming and turfing of any adjacent disturbed areas	1	Item		\$0
1.7	Any other preliminary requirements noted in the drawings or technical specification not included above	1	Item		\$0
	Subtotal General				\$0
2.0	Over Pipeline Crossing Works				
2.1	Preparation of 3D shop drawings and gain approval from the Structural Engineer and Landscape Architect	1	Item		\$0
2.2	Fabrication of aluminium structure in factory as per the approved shop drawings	1	Item		\$0
2.3	Full pre-assembly of completed structure including truss ramp, hinges and gas struts (not including mesh) in factory environment for testing and inspection with Superintendent and Landscape Architect. Bridge truss structures must be fully compliant with opening and closing mechanism. Allow to undertake any modification required to ensure bridge and gas strut, hinges, tongue-guide and stopper mechanism, and bridge components opening and closing tolerance is as per design. If any defects found, undertake additional inspection and modification to sign off 100% operability and accuracy of structure and gas strut mechanisms	1	Item		\$0
2.4	Install mesh and supply photographs of completed mesh to Superintendent for approval	1	Item		\$0
2.5	Pack and protect all fabricated structural components with gas struts disassembled	1	Item		\$0
2.6	Transport all fabricated components to site and place in locked enclosure or container	1	Item		\$0
2.7	Setout of structure & mark out on site for Superintendent and Landscape Architect approval prior to any excavation for rock bolts or concrete footings. Gain written sign off prior to installation and commencement	1	Item		\$0
2.8	Install entire structure as per the drawing OPC-04	1	Item		\$0
	Subtotal Over Pipeline Crossing Works				\$0
3.0	Maintenance				
3.1	Maintenance of Over Pipeline Crossing structure, all fittings and opening-closing mechanism as required.	52	Weeks		\$0
	Subtotal Maintenance				\$0
4.0	Defects liability				
4.1	Defects Liability for all constructed works for 52 weeks.	52	Weeks		No additional cost
	Subtotal Defects Liability				No additional cost
	SUBTOTAL BILL OF QUANTITY COST (TYPE 2 - OVER PIPELINE CROSSING) (Ex. GST)				\$0
	GST (10%)				\$0
	TOTAL INCLUDING GST				\$0

Koala Crossing - Type 3: Log Climb Crossing Bill of Quantities

Bill of Quantities_V1

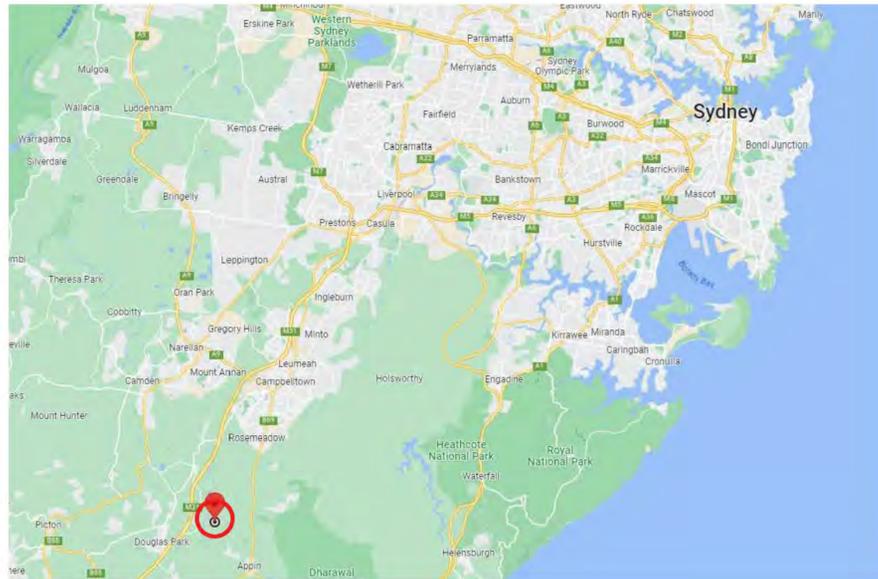
Prepared by TBLD P/L for DPE on 29.05.2023

NOTE: It is the responsibility of the Contractor to confirm all quantities from the drawings.

No.	Description	Qty	Item	Rate	TOTAL
1.0	General				
1.1	Preparation of 3D feature level survey of the marked area as per dwg LC-04	1	Item		\$0
1.2	Setout of Log Climb Crossing by Surveyor and inspection of setout by Superintendent and Landscape Architect	1	Item		\$0
1.3	Transportation of all materials and storage in a secure fenced area	1	Item		\$0
1.4	Site establishment preliminaries including secure site fencing with gates, vehicle control, silt control, Environmental Management Plan, site signage, transport of material from storage to Log Climb location etc.	1	Item		\$0
1.5	Proving and protection of underground and overhead services, all WaterNSW infrastructure within proximity of works including liaison with service providers as required and 'building over' applications as required for Log Climb Crossing	1	Item		\$0
1.6	Make area around works good after completion of work including minor surface leveling of any adjacent disturbed areas	1	Item		\$0
1.7	Any other preliminary requirements noted in the drawings or technical specification not included above	1	Item		\$0
	Subtotal General				\$0
2.0	Log Climb Crossing Works				
2.1	Excavation of the footings and placement of soil and scree rocks in an approved area on site	1	Item		\$0
2.2	Fabrication and supply of brackets (rod length 0.5m)	32	Item		\$0
2.3	Supply and installation of concrete footings with brackets into footing or solid rock as per site conditions, as per dwg LC-06	32	Item		\$0
2.4	Supply of Nom. 200 dia. Class 2 H/W logs (log length 1.5m max) (allow 2 spares)	18	No.		\$0
2.5	Installation of logs onto brackets including cutting rebate into log and installation of M20 Galv. Bolts	32	Item		\$0
	Subtotal Log Climb Crossing Works				\$0
3.0	Maintenance				
3.1	Maintenance of Log Climb Crossing structure, repair and or replacement of logs as required.	52	Weeks		\$0
	Subtotal Maintenance				\$0
4.0	Defects liability				
4.1	Defects Liability for all constructed works for 52 weeks.	52	Weeks		No additional cost
	Subtotal Defects Liability				No additional cost
SUBTOTAL BILL OF QUANTITY COST (TYPE 3 - LOG CLIMB CROSSING) (Ex. GST)					\$0
GST (10%)					\$0
TOTAL INCLUDING GST					\$0

UPPER CANAL KOALA CROSSING TYPE 1: UNDER FENCE CROSSING DETAILED DOCUMENTATION

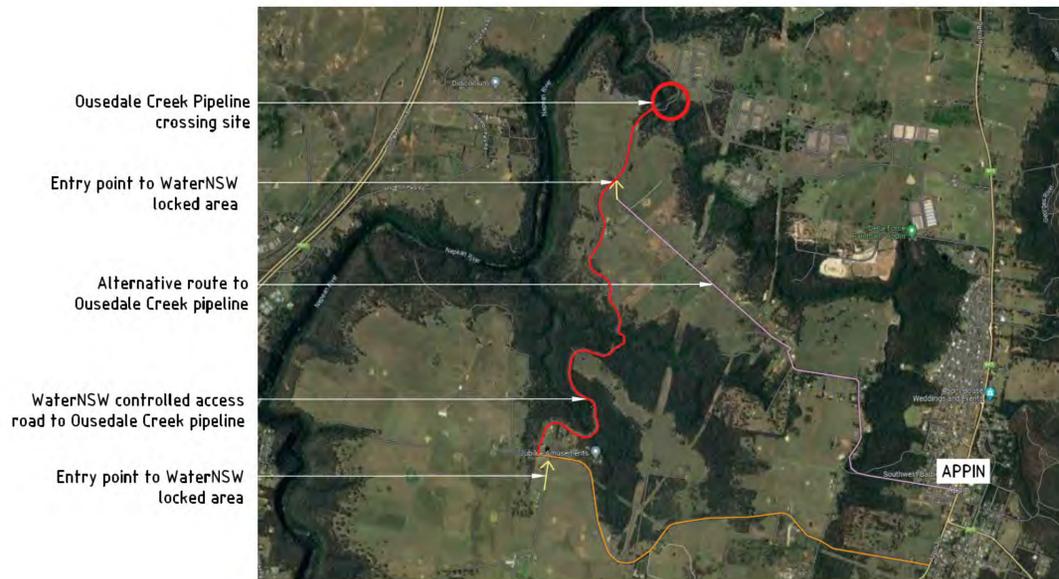
SITE LOCATION



DRAWING INDEX

DWG	TITLE
KC-UFC-01	COVER PAGE
KC-UFC-02	SPECIFIED NOTES
KC-UFC-03	LOCATION PLAN
KC-UFC-04	SETOUT PLAN
KC-UFC-05	PLAN AND SECTION
KC-UFC-06	ELEVATIONS

ROUTE TO SITE



ACCESS TO WATER NSW CONTROLLED AREA:

1. Contractor must make arrangement in advance with WaterNSW prior to entry WaterNSW controlled area.
2. Contractor must be accompanied by WaterNSW personnel when entering to the site.

SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



WARNING

BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN. THE CONTRACTOR MUST VERIFY ALL SERVICES ON SITE PRIOR TO ANY EXCAVATION WORKS.

SHOP DRAWINGS NOTE:

As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:

All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT



THOMPSON BERRILL LANDSCAPE DESIGN P/L
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Woolacotts
CONSULTING ENGINEERS

CLIENT
NSW GOVERNMENT

DRAWING NAME
**TYPE 1: UNDER FENCE CROSSING
COVER PAGE**



SCALE BAR

SCALE AS SHOWN
DATE 29/05/2023
DRAWN AY/PL/VM
DESIGN TBLD
CHECKED GB
DATUM AHD
DWG No. **KC-UFC-01**

ACAD REF:

1. ACCESS & SET OUT NOTES:

- THE SUPERINTENDENT WILL DEFINE AND MAKE AVAILABLE ACCESS POINTS FOR THE CONTRACTOR TO ENABLE CONSTRUCTION MATERIALS TO BE BOUGHT TO THE SITES. THE PLANS SHOW WORK STORAGE SITES. THE CONTRACTOR IS REQUIRED TO CARRY ALL COMPONENTS AND EQUIPMENT INTO THE SITES.
- THE CONTRACTOR IS REQUIRED TO UNDERTAKE 3D SURVEY OF EACH SITE AS PER THE AREAS SHOWN.
- THE CONTRACTOR IS REQUIRED TO PREPARE AND PROVIDE DETAILED SHOP DWGS OF ALL WORKS FOR THE SUPERINTENDENT AND ENGINEERS REVIEW AND APPROVAL.
- THE CONTRACTOR IS REQUIRED TO EMPLOY THE SERVICES OF A REGISTERED SURVEYOR WITH PROVEN EXPERIENCE IN THE ACCURATE SET OUT OF LANDSCAPE CONSTRUCTION WORKS USING ELECTRONIC CAD FILES, PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS. THE SUPERINTENDENT WILL PROVIDE A DIGITAL AUTOCAD FILE COPY OF THE DRAWINGS TO THE SUCCESSFUL CONTRACTOR ONLY, FOR USE BY THE CONTRACTOR'S SURVEYOR TO ELECTRONICALLY DETERMINE AND SET OUT ALL WORKS. NO CAD FILES WILL BE DISTRIBUTED AT TENDER.
- THE CONTRACTOR MUST ALLOW SUFFICIENT TIME FOR ADJUSTMENT TO SET-OUT OF WORKS AS REQUIRED, UNTIL FINAL CONFIRMATION IS OBTAINED FROM THE SUPERINTENDENT. THE SETOUT OF WORKS MAY REQUIRE MINOR ADJUSTMENT IN ACCORDANCE WITH SITE CONDITIONS, AND THIS IS TO BE REGARDED AS NORMAL AND EXPECTED IN THE WORKS, DUE TO THE NATURE OF THE SITE CONDITIONS.
- ONCE SETOUT OF WORKS IS COMPLETED AND APPROVED, THE CONTRACTOR IS WHOLLY RESPONSIBLE FOR ACCURATELY MEASURING ALL EXISTING STRUCTURES, AND EXISTING SURFACE LEVELS AND ROCK OUTCROPS, TO INFORM PREPARATION OF THE WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATELY SETTING OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SURVEY INFORMATION SUPPLIED (REFER BELOW), PERMANENTLY MARKING NOMINATED KEY SET OUT POINTS AND CHECKING WORKS IN PROGRESS. NO MARKING OF HERITAGE STRUCTURES ALLOWED.
- NO ALLOWANCE FOR VARIATIONS WILL BE CONSIDERED FOR INADEQUATE ALLOWANCE BY THE CONTRACTOR FOR TIME, MATERIALS, LABOR TO COMPLETE ALL SET-OUT AND SITE MEASUREMENTS, SHOP DRAWINGS, AND TO MAKE ALL NECESSARY AMENDMENTS AND ADJUSTMENTS IN ORDER TO FABRICATE AND INSTALL THE WORKS IN ACCORDANCE WITH THE SCOPE OF WORKS CONTAINED IN THE DRAWINGS, AND TO THE SUPERINTENDENT'S SATISFACTION.
- THE CONTRACTOR IS TO ESTABLISH AND MARK THE HORIZONTAL ALIGNMENTS / CHAINAGE LINES, PANEL AND POSTS, INFRASTRUCTURE, SIGNIFICANT CHANGES IN GRADE AND ANY AND ALL OTHER FEATURES AS REQUIRED, IN ACCORDANCE WITH DRAWINGS, AND DETERMINE AND ESTABLISH ANY AND ALL REFERENCE POINTS AS REQUIRED TO SET-OUT THE WORKS IN SUCH A WAY THAT THEY WILL NOT BE DISTURBED BY THE CONTRACTOR'S OPERATIONS. THIS INCLUDES ESTABLISHMENT OF OFFSETS, SCALED FROM DRAWINGS, INDICATED ON THE DRAWINGS. NOTE: DO NOT DISFIGURE, DISTURB OR MARK NATURAL FEATURES I.E. ROCKS OR TREES.
- ALL TEMPORARY BENCH MARKS (TBM) IN THE SURVEY AND CONTROL POINTS ARE TO BE MAINTAINED AND PROTECTED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL SEEK APPROVAL FROM THE SUPERINTENDENT IMMEDIATELY ONCE THE LINES HAVE BEEN SET OUT AND BEFORE ANY OTHER WORK IS CARRIED OUT.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK AND PROVE ALL DESIGN DRAWINGS AND LEVELS ON SITE TO ENSURE NO DISCREPANCIES ARE FOUND, PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WORKS, AND DOES NOT IN ANY WAY LIMIT THE CONTRACTORS RESPONSIBILITY TO COMPLETE THE WORKS IN ACCORDANCE WITH THE INTENT OF THE DESIGN. SHOULD THE CONTRACTOR DISCOVER ANY MAJOR ERROR OR DISCREPANCY IN THE LINES ON THE PLAN OR THE SITE, THEY SHALL IMMEDIATELY NOTIFY THE SUPERINTENDENT AND AWAIT ADVISEMENT BEFORE PROCEEDING WITH THE AFFECTED WORKS.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE SUPERINTENDENT A MINIMUM OF 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- THE NOMINATION OF THESE INSPECTIONS DOES NOT PREVENT THE SUPERINTENDENT AND OR A NOMINATED REPRESENTATIVE FROM INSPECTING THE WORKS AT ANY TIME.
- SHOULD THE CONTRACTOR DISCOVER ANY ERROR OR DISCREPANCY IN THE SET OUT ON SITE, IT IS THEIR RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SUPERINTENDENT AND DETERMINE THE CONFIRM DISCREPANCY AND APPROPRIATE ACTION ON SITE WITH THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

2. DEFLECTION MANAGEMENT DURING CONSTRUCTION NOTES:

- DURING ERECTION PROVISION SHALL BE MADE TO LIMIT DEFLECTIONS TO DEAD LOADS ONLY. THE CONSTRUCTOR SHALL ENSURE THE STRUCTURE IS ADEQUATELY SUPPORTED WITH TEMPORARY PROPS AND FALSEWORK DURING CONSTRUCTION/ERECTION TO CONTROL DEFLECTIONS.
- NO TEMPORARY CONSTRUCTION LOADS, PACKS OF MATERIALS OR OTHER SURCHARGES SHALL BE IMPOSED UPON THE STRUCTURE DURING ERECTION.
- THE CONSTRUCTOR SHALL WARRANTEE THAT THE DEFLECTIONS OF PRINCIPAL MEMBERS UPON COMPLETION DO NOT EXCEED THE DESIGNERS STATED "DEAD LOAD DEFLECTIONS".
- ANY SUSPENDED CAST IN-SITU CONCRETE SLABS SHALL BE PROPPED DURING CONSTRUCTION UNTIL THE SLAB HAS CURED.

3. STRUCTURAL STEELWORK NOTES (WHERE APPLICABLE):

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.
- ALL MATERIAL INCLUDING FIXINGS TO BE SOURCED FROM AUSTRALIAN MANUFACTURES / SUPPLIERS HAVING BEEN MANUFACTURED AND TESTED TO REQUIREMENTS OF RELEVANT AUSTRALIAN STANDARDS.
- ALL HOT ROLLED SECTIONS ARE TO BE GRADE 300 PLUS.
- ALL STRUCTURAL HOLLOW SECTIONS ARE TO BE GRADE 350 MPA.
- WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554, INSPECTED AND CERTIFIED BY A QUALIFIED PERSON AS DESCRIBED IN AS 2214.
- THE BOLTING PROCEDURES ARE TO BE IN ACCORDANCE WITH AS 1111 AND AS 1252.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED. SUCH TEMPORARY BRACING AS IS NECESSARY TO STB. CONCRETE ENCASED STEELWORK SHALL BE COMPLETELY WRAPPED WITH FGW41 GIRDER WRAP FABRIC, UNLESS OTHERWISE SHOWN.
- THE ENDS OF ALL HOLLOW SECTION MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN.
- EXCEPT WHERE OTHERWISE SHOWN, WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS. ALL WELDS ARE TO BE STRUCTURAL PURPOSE U.N.O.
- THE CONTRACTOR IS TO ALLOW FOR ALL THE NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHING AT ROOF OR WALL INTERSECTIONS.
- UNLESS OTHERWISE SHOWN, PROVIDE SINGLE LINE OF BOLTS CLEAT CONNECTIONS, 10mm CLEAT PLATE, 6mm CONTINUOUS FILLET WELD AND M20 8.8/S BOLTS. PROVIDE 2 NO. BOLTS TO MEMBERS 200mm DEEP & LESS. A.I.S.C. STANDARDIZED STRUCTURAL CONNECTIONS.
- IN ADDITION THE FABRICATOR SHALL SUBMIT THREE SETS OF SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. APPROVAL OF THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO COMMENCEMENT OF THE STEELWORK MANUFACTURE.
- REMOVE ALL BURS, SHARP EDGES, DAGS, SLAG, DUST, RUST, DIRT, MILL SCALE AND OTHER DEBRIS ABILISE THE STRUCTURE.

4. TYPICAL STEEL CONNECTION NOTES (WHERE APPLICABLE):

- ALL PLATES AND FLATS SHALL BE GRADE 300 PLUS AND SHALL BE 16mm THK (MIN) - UNO.
- ALL WELDS SHALL BE 6CFW ALL AROUND, BOTH SIDES - UNO.
- ALL BOLTS SHALL BE M20 - UNO.
- ALL BOLTS SHALL BE GRADE 8.8S - UNO.
- PROVIDE A MINIMUM OF TWO BOLTS PER FIXING - UNO.
- PROVIDE THREE BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 300 AND 399mm - UNO. PROVIDE FOUR BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 400 AND 499mm - UNO.
- WHERE OVERSIZE HOLES HAVE BEEN USED FOR ERECTION TOLERANCE - SITE WELD MATING PLATE TOGETHER WITH 100mm LENGTH OF 6CFW (MIN) AFTER BOLTING. MAKE GOOD ALL DAMAGED PAINTWORK.
- ALL BOLTS SHALL HAVE GALVANISED PRESSURE WASHERS UNDER BOLT HEAD AND NUT.

5. REINFORCEMENT NOTES (WHERE APPLICABLE):

- ALL HOOKS AND COGS SHALL COMPLY WITH AS 3600 UNLESS OTHERWISE SHOWN
- ALL REINFORCEMENT SHALL BE HELD RIGIDLY IN POSITION WITHIN THE SPECIFIED TOLERANCES BEFORE AND DURING CONCRETE PLACING:
 - NON CORROSIVE BAR CHAIRS SHALL BE USED FOR ALL OFF FORM SURFACES
- CONDUITS ETC. SHALL BE FABRICATED AND INSTALLED SO THAT NO CUTTING, BENDING OR DISPLACEMENT OF THE REINFORCEMENT FROM IT'S PROPER POSITION WILL BE REQUIRED
- DETAILS OF REINFORCEMENT AT APPROVED PENETRATIONS SHALL BE AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER ON-SITE
- CONCRETE BELOW GROUND IN WALLS, BEAMS, COLUMNS OR PEDESTALS SHALL BE PLACED INTO PROPERLY CONSTRUCTED FORMS:
 - IF APPROVED BY THE ENGINEER, CONCRETE MAY BE PLACED AGAINST AN EARTH FACE BUT THE CONCRETE DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE INCREASED TO PROVIDE 20mm ADDITIONAL COVER TO THE REINFORCEMENT ADJACENT TO THE EARTH FACE
- SPLICES SHALL ONLY BE USED AS SHOWN ON THE DRAWINGS OR WHEN BARS LONGER THAN NORMAL STOCK LENGTH WOULD BE REQUIRED:
 - IN LAP SPLICES, THE OVERLAP LENGTH SHALL BE TO THE REQUIREMENTS OF AS 3600 OR AS OTHERWISE DIMENSIONED ON THE DRAWINGS
- WELDING OF REINFORCEMENT SHALL NOT BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER
- IN WALLS THE VERTICAL REINFORCEMENT SHALL BE PLACED INSIDE THE HORIZONTAL REINFORCEMENT, UNLESS OTHERWISE SHOWN ON DRAWINGS
- ALL REINFORCEMENT MINIMUM COVER 65mm UNLESS STATED OTHERWISE.

6. ALUMINIUM COATING NOTES:

- ALL EXPOSED STRUCTURAL ALUMINIUM SHALL NOT BE TREATED.

7. CONCRETE NOTES:

- ALL WORKMANSHIP, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH AS 3600.
- THE FINISHED SURFACE AROUND THE SLAB & FOOTINGS SHALL BE GRADED AWAY FROM THE FOUNDATIONS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- AT RE-ENTRANT CORNERS, ONE STRIP OF 3 x N16 BARS SHALL BE PLACED DIAGONALLY ACROSS POTENTIAL CRACK
- DIMENSIONS SHOWN ARE THE MINIMUM REQUIRED. SET-OUT & SLAB DIMENSIONS ARE TO BE DERIVED FROM THE ARCHITECTURAL DRAWINGS
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT CODE OF THE STANDARDS ASSOCIATION OF AUSTRALIA AS 2870 & THE BUILDING REGULATIONS
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- WELDING OF REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- FOOTINGS INC. EDGE BEAMS & PADS ARE TO BE FOUNDED IN ORIGINAL UN-DISTURBED GROUND HAVING A SAFE BEARING CAPACITY OF 500kPa. BEFORE ANY CONCRETE IS PLACED, THE SAFE BEARING CAPACITY SHALL BE VERIFIED BY A QUALIFIED ENGINEER, OR A REGISTERED BUILDING PRACTITIONER. THE CONTRACTOR IS TO ALLOW THEIR TENDER PRICE FOR THOSE INSPECTIONS AND REPORTING TO BE UNDERTAKEN BY THEIR GEOTECHNICAL ENGINEER. ALL DOCUMENTATION IS TO BE SUBMITTED TO THE PRINCIPAL WITHIN 48 HOURS OF THE INSPECTION
- EXCAVATIONS BEYOND THE DIMENSIONS SPECIFIED SHALL BE FILLED WITH MINIMUM 15mPa CONCRETE
- THE CONTRACTOR IS TO UNDERTAKE ALL OF THE NECESSARY INVESTIGATIONS TO LOCATE UNDERGROUND SERVICES WITHIN THE SITE OR LIKELY TO BE INFLUENCED BY THE PROPOSED WORKS. THE CONTRACTOR SHALL INFORM THE PRINCIPAL IF ANY SERVICES ARE FOUND PRIOR TO PROCEEDING
- ALL FOUNDATIONS ARE TO BE FREE OF WATER & LOOSE MATERIAL PRIOR TO POURING ANY CONCRETE
- CONCRETE PROPERTIES SHALL BE AS FOLLOWS:
 - ELEMENT & LOCATION
 - FOOTINGS
 - SLABS ON GROUND
 - SUSPENDED SLABS
 - PRECAST PANELS
- THE CONTRACTOR TO GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTIFICATION OF HIS INTENTION TO POUR CONCRETE.
- ALL REINFORCEMENT SHALL BE SUPPORTED IN IT'S CORRECT POSITION DURING CONCRETING BE APPROVED BAR CHAIRS, SPACER OR SUPPORT BARS.
- PROVIDE 0.2mm WATER-PROOF VAPOUR BARRIER, ALL LAPS 200mm MIN. & JOISTS TO BE TAPED. ANY TERMITE TREATMENTS TO BE UNDER VAPOUR BARRIER TO AS 3666 & TO THE BUILDING SURVEYORS REQUIREMENTS
- THE CONTRACTOR IS TO ALLOW FOR ANY ADDITIONAL INVESTIGATIONS, TESTING, ANALYSIS OR ANY OTHER WORK TO BE UNDERTAKEN NECESSARY TO SATISFY THEMSELVES OF THE GROUND CONDITIONS, SUCH THAT THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL MATERIAL QUANTITIES & CONSTRUCTION TECHNIQUES NECESSARY TO ACHIEVE THE MINIMUM SAFE SOIL BEARING PRESSURE NOMINATED
- CONCRETE F'c = N40 GRADE @ 28 DAYS, 80 SLUMP. CONCRETE TO BE COMPACTED & WORKED AROUND REINFORCEMENT BY USE OF MECHANICAL VIBRATOR. CONCRETE TO BE CURED FOR 7 DAYS BY APPROVED METHOD. CONCRETE IS TO BE AVAILABLE FOR TESTING DURING POURING

- REINFORCED CONCRETE AS PER AS 3600 - 1994. TRENCH MESH SHALL HAVE ALL CROSS WIRES CUT FLUSH WITH OUTER MAIN WIRES & A MINIMUM LAP OF 500mm. REINFORCEMENT CLEAR COVER 50mm TOP OF SLAB. 50mm COVER TO BOTTOM BEAMS, REINFORCEMENT LAPS ON FABRIC TO BE ONE FULL MESH PANEL, BOTH SIDES & END LAPPED. REINFORCING STEEL TO BE FREE OF LOOSE RUST, GREASE, OIL OR SOIL TO BE IN ACCORDANCE WITH AS / NZ 4671
- PROVIDE BAR CHAIRS @ 1.0m CTRS MAX.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CSIRO SHEET BTF18, WHICH REPLACES INFORMATION SHEET 10/91
- ANY TRAFFICABLE (VEHICULAR) AREAS TO BE 40MPa CONCRETE.
- THE USE OF CHLORINE ADDITIVES AND FLY ASH IS EXPRESSLY FORBIDDEN IN ALL CONCRETE.
- UNLESS OTHERWISE SHOWN, PROVIDE N12-500N DISTRIBUTION REINFORCEMENT, LAPPED 450 AT SPLICES, 2 x N12 DIAGONAL CORNER BARS 2000 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS SLABS AND WALLS.
- ALL CONCRETE ON THIS PROJECT IS TO BE GRADED N40 MPa. U.N.O. THE OWNERS SHOULD BE ADVISED OF GENERAL FOUNDATION MAINTENANCE REQUIREMENTS AS OUTLINED ON CSIRO DOCUMENT "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE".
- THE CONTRACTOR IS REQUIRED TO PROVIDE AS CONSTRUCTED TESTS FOR ALL POURED CONCRETE FOOTINGS ON SITE, VERIFIED BY INDEPENDENT LABORATORY TESTS AND REPORTING TO MEET RELEVANT AUSTRALIAN STANDARDS.

8. ROCK ANCHOR NOTES:

- FOR ROCK ANCHOR SPECIFICATIONS, REFER TO TECHNICAL DWGS

SETOUT NOTE:
 Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



WARNING
 BEWARE OF UNDERGROUND SERVICES
 THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN. THE CONTRACTOR MUST VERIFY ALL SERVICES ON SITE PRIOR TO ANY EXCAVATION WORKS.

GENERAL NOTES:
 Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

SHOP DRAWINGS NOTE:
 As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
 All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joins or details without prior written approval of the Engineer.

DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT


DRAWING NAME
TYPE 1: UNDER FENCE CROSSING

SPECIFIED NOTES



DWG No.
KC-UFC-02

THOMPSON BERRILL LANDSCAPE DESIGN P/L
 PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

Woolacotts
 CONSULTING ENGINEERS

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VH
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
ACAD REF:	

Fenced Work Areas:
Contractor to install 2m security fencing and locked gate to the perimeter of WA 01 and WA 02



U2 - FORMALISED UNDERFENCE CROSSING



U7 - FORMALISED UNDERFENCE CROSSING



U12 - FORMALISED UNDERFENCE CROSSING



U15 - FORMALISED UNDERFENCE CROSSING

GENERAL NOTES:
1. All works to be setout on site at 4No. locations and approved by TBLD before commencement of works.
2. All excavated material to be taken offsite.
3. All timber Class 1 H/W.
4. WPC to be charcoal color.

SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.

1 DESIGN SOLUTIONS LOCATION PLAN
SCALE 1:1000 @ A3 1:500 @ A1

2 UNDERFENCE CROSSING LOCATION PHOTOS
NTS



WARNING
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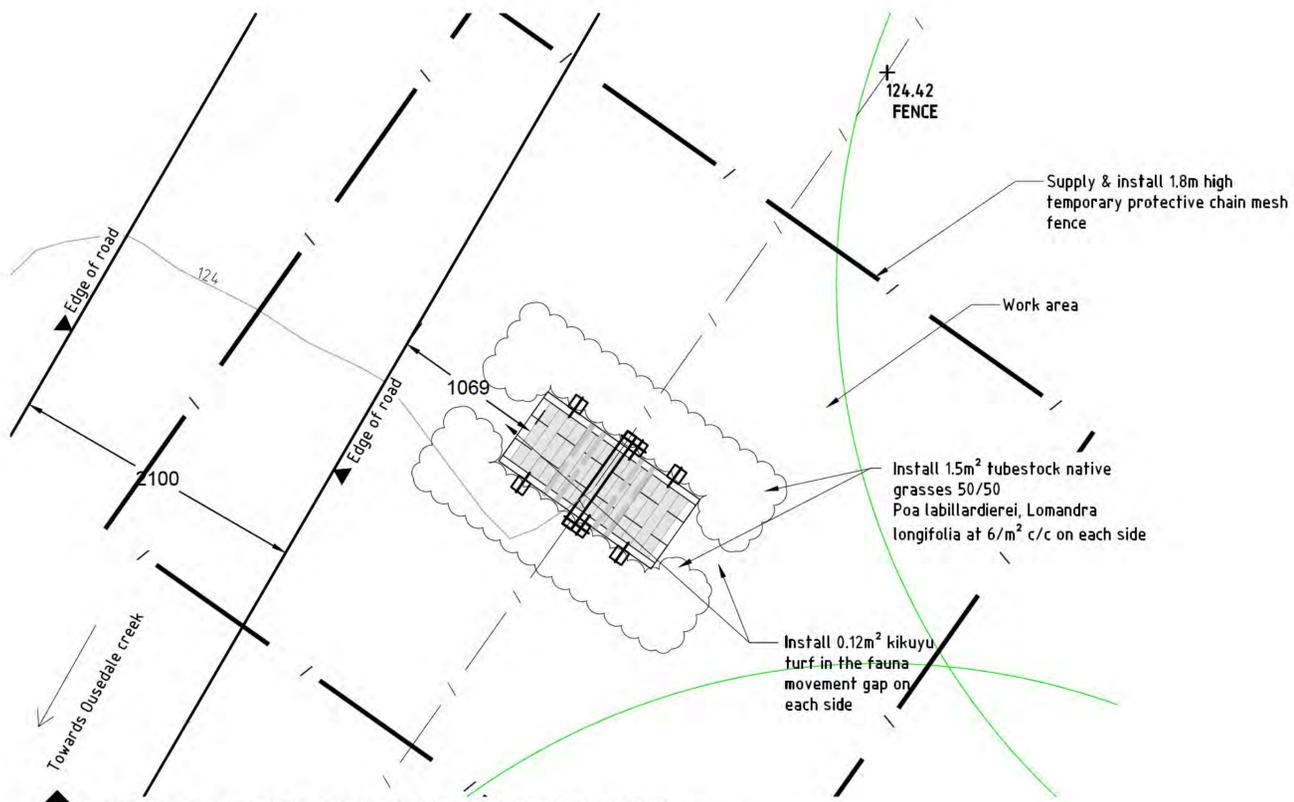
SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

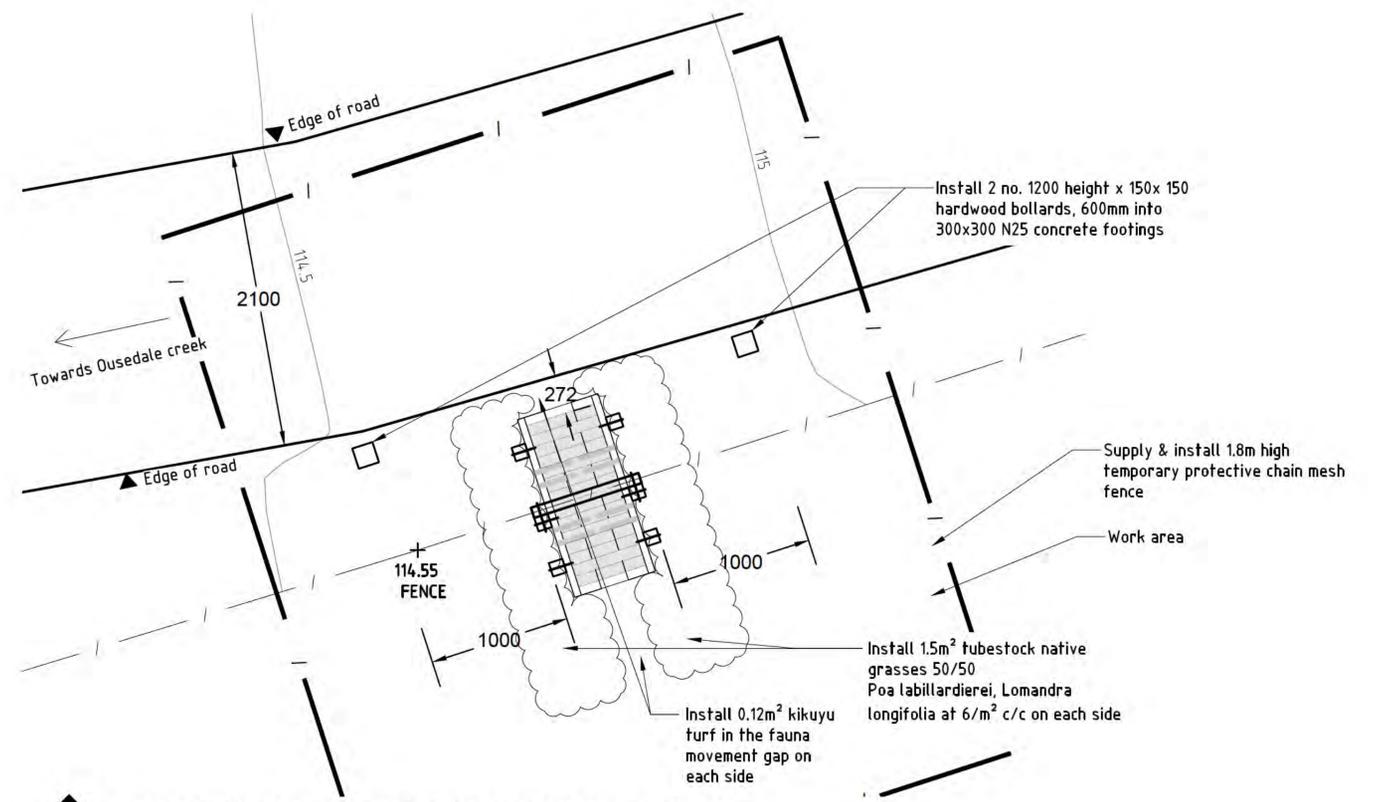
DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE DPE KOALA PROJECT		SCALE BAR	
CLIENT NSW GOVERNMENT	DRAWING NAME TYPE 1: UNDER FENCE CROSSING LOCATION PLAN	SCALE	AS SHOWN
		DATE	29/05/2023
		DRAWN	AY/PL/VH
		DESIGN	TBLD
		CHECKED	GB
		DATUM	AHD
		DWG No.	KC-UFC-03
THOMPSON BERRILL LANDSCAPE DESIGN P/L PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tblc.com.au		Woolacotts CONSULTING ENGINEERS	
		ACAD REF:	

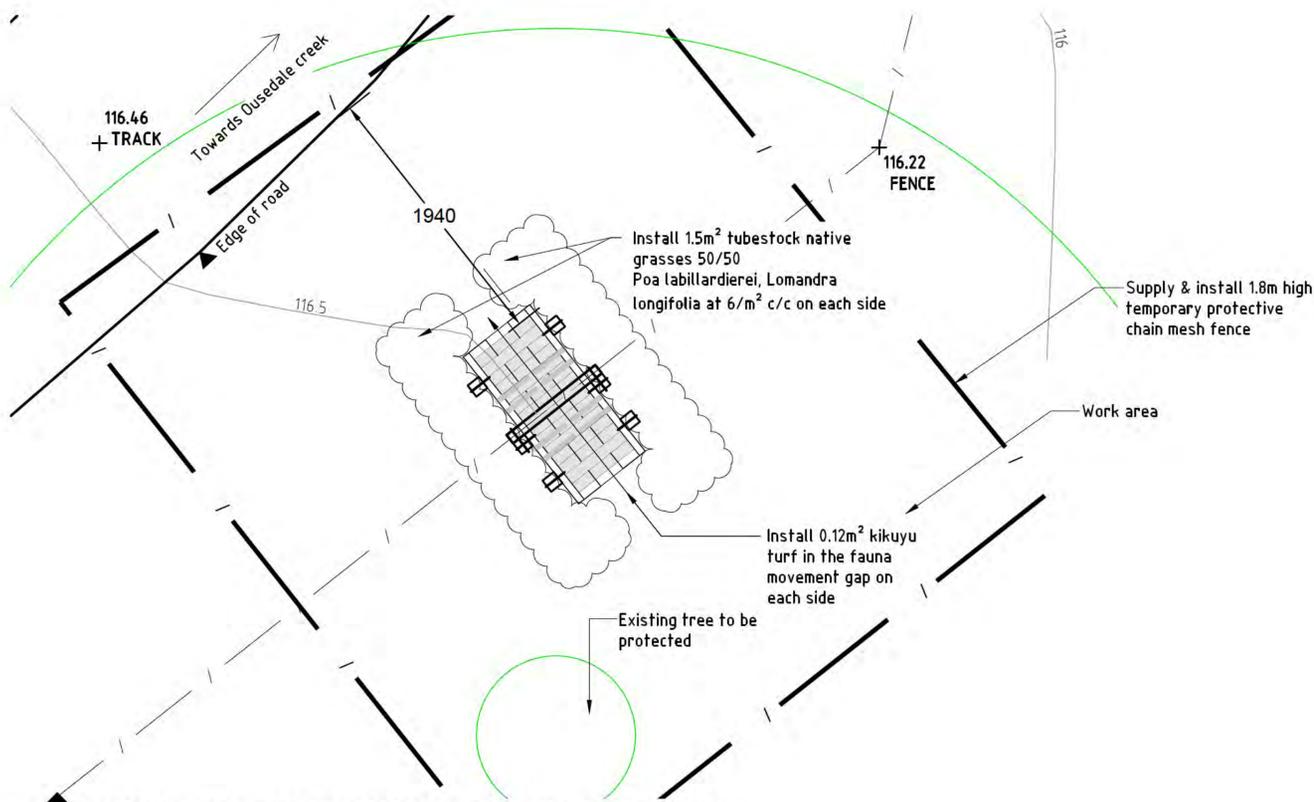
GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.



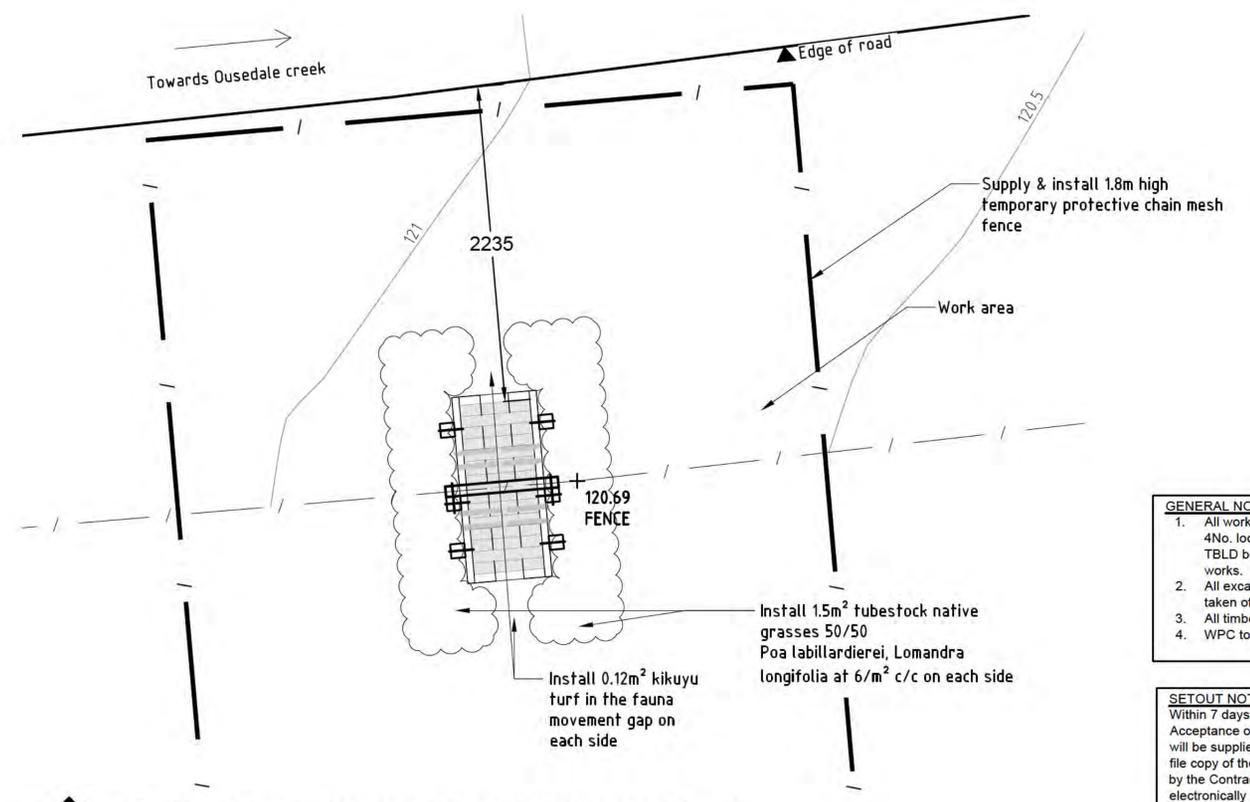
1 SETOUT PLAN - NORTHEASTERN UNDER FENCE CROSSING - U2
SCALE 1:50 @ A3 1:25 @ A1



2 SETOUT PLAN - NORTHEASTERN UNDER FENCE CROSSING - U7
SCALE 1:50 @ A3 1:25 @ A1



3 SETOUT PLAN - SOUTHWESTERN UNDER FENCE CROSSING - U12
SCALE 1:50 @ A3 1:25 @ A1



4 SETOUT PLAN - SOUTHWESTERN UNDER FENCE CROSSING - U15
SCALE 1:50 @ A3 1:25 @ A1

- GENERAL NOTES:**
- All works to be setout on site at 4No. locations and approved by TBLD before commencement of works.
 - All excavated material to be taken offsite.
 - All timber Class 1 H/W.
 - WPC to be charcoal color.

SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



WARNING
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SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
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DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 1: UNDER FENCE CROSSING SETOUT PLAN

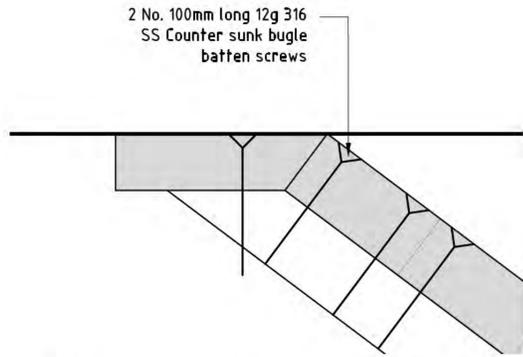
THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

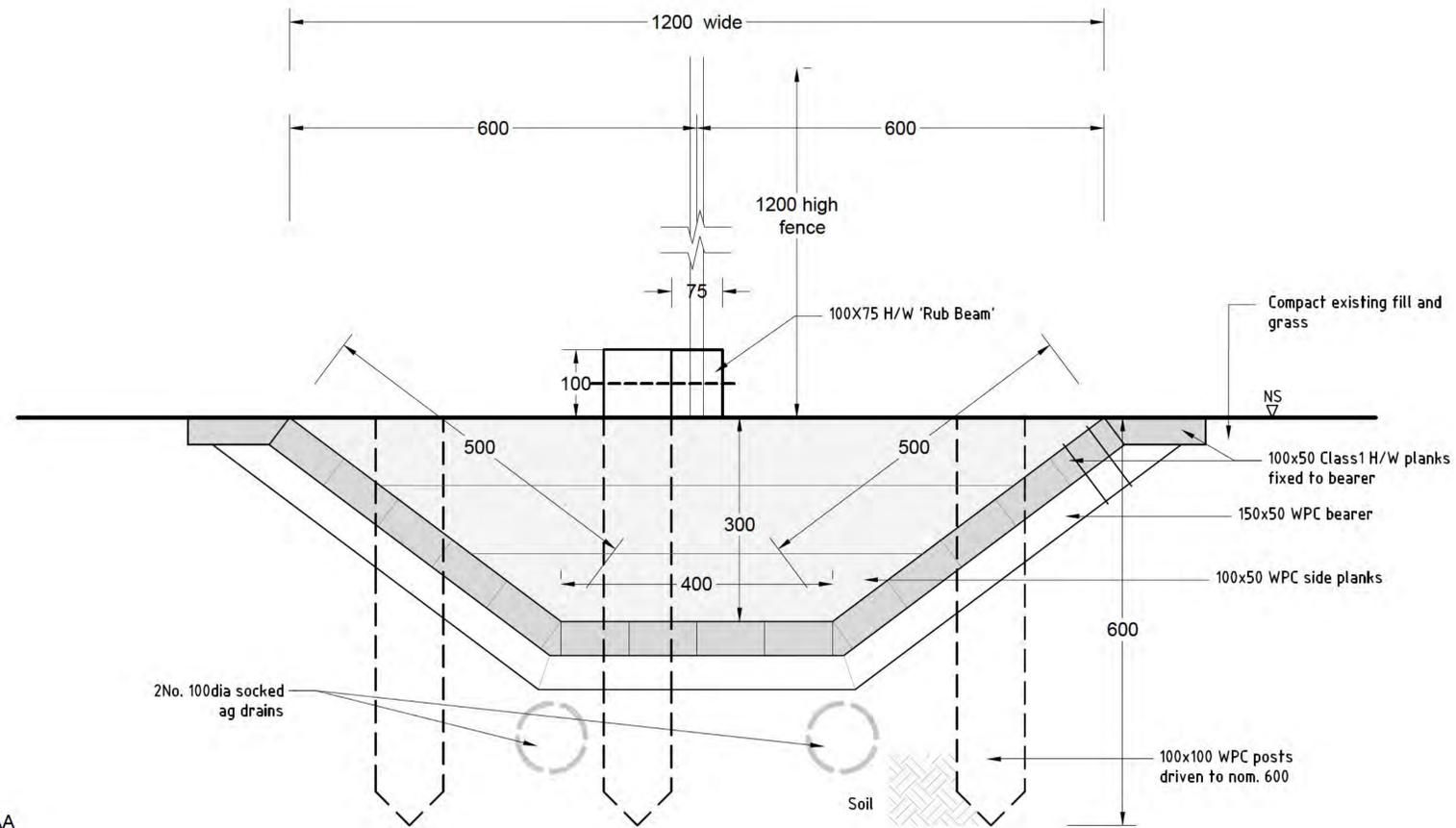
SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-UFC- 04
ACAD REF:	

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

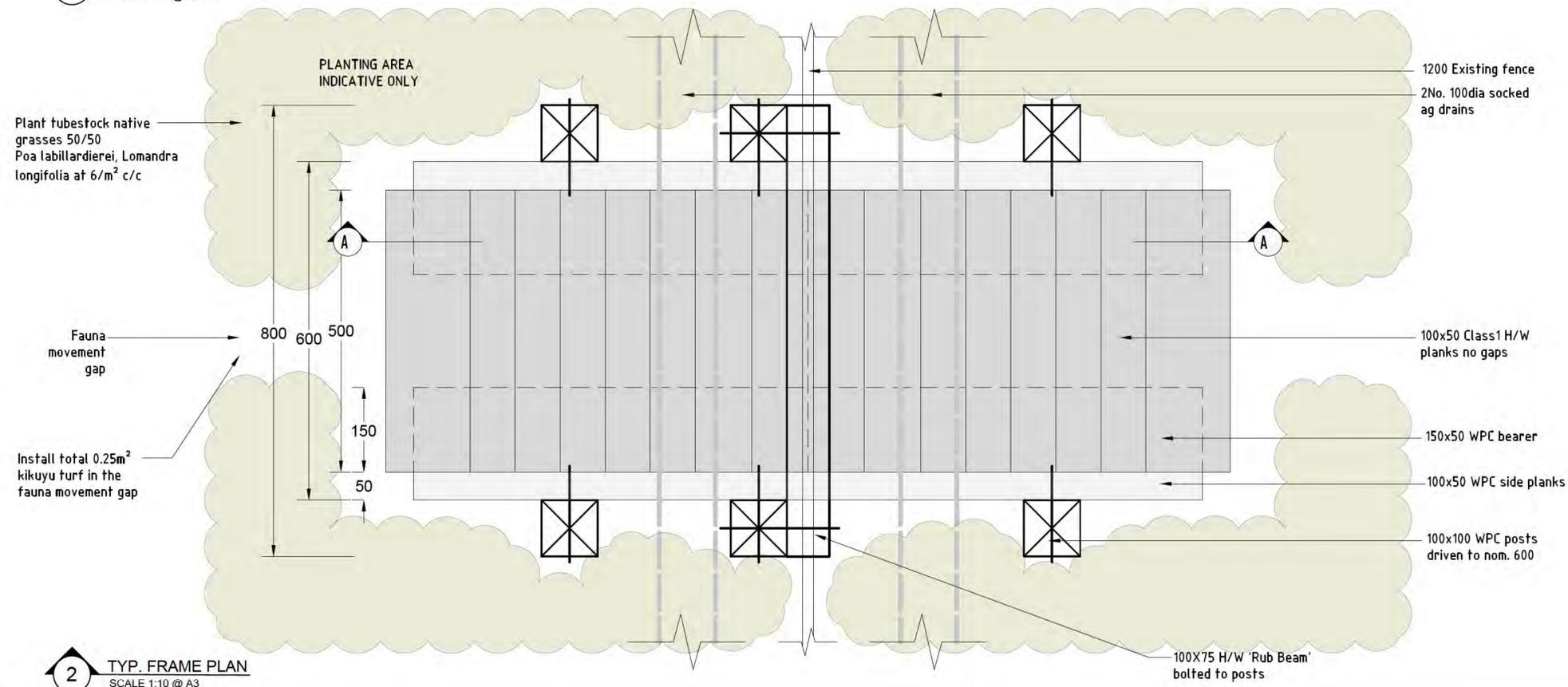


3 TYP. END FIXING DETAIL
SCALE 1:5 @ A3



1 TYP. SECTION AA
SCALE 1:10 @ A3

WPC Suppliers:
Integrated Recycling
WPC Bearer - PRO 750
150x 50 x 2400mm
<http://www.integratedrecycling.com.au/wp-content/uploads/2017/12/Integrated-Recycling-Product-List-2017A.pdf>



2 TYP. FRAME PLAN
SCALE 1:10 @ A3

GENERAL NOTES:
1. All works to be set out on site at 4No. locations and approved by TBLD before commencement of works.
2. All excavated material to be taken offsite.
3. All timber Class 1 H/W.
4. WPC to be charcoal color.

SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.

UNDER FENCE CROSSING PLANTING SCHEDULE

EACH SITE

	Plants per m2	% of species per m2	TOTAL
NATIVE GRASSES (TUBESTOCK)	6		3m ²
Shrubs			
Poa labillardierei		50%	9
Lomandra longifolia		50%	9
Subtotal Shrubs & Native Grasses		100%	18
Total 4 sites			72
TURF			
Total 4 sites			1m ²

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DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

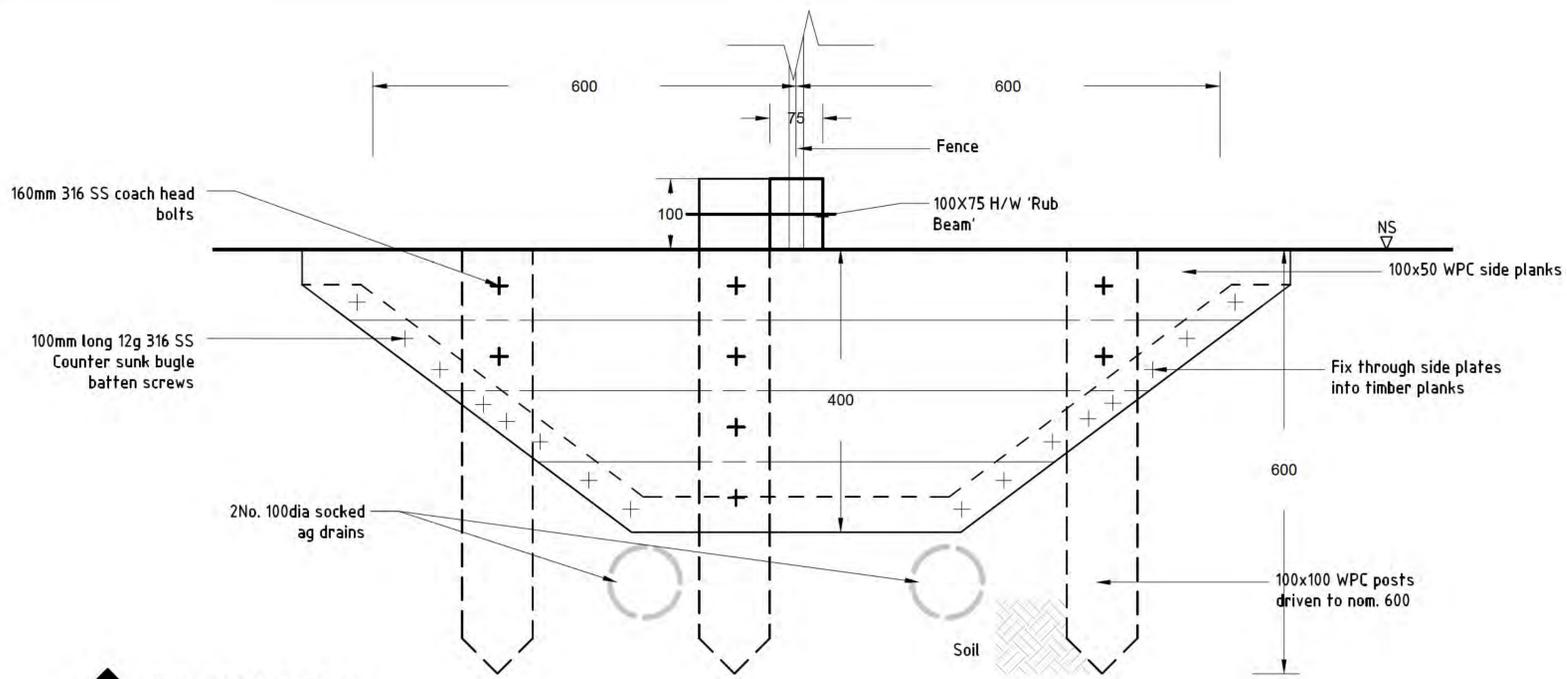
CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 1: UNDER FENCE CROSSING PLAN AND SECTION

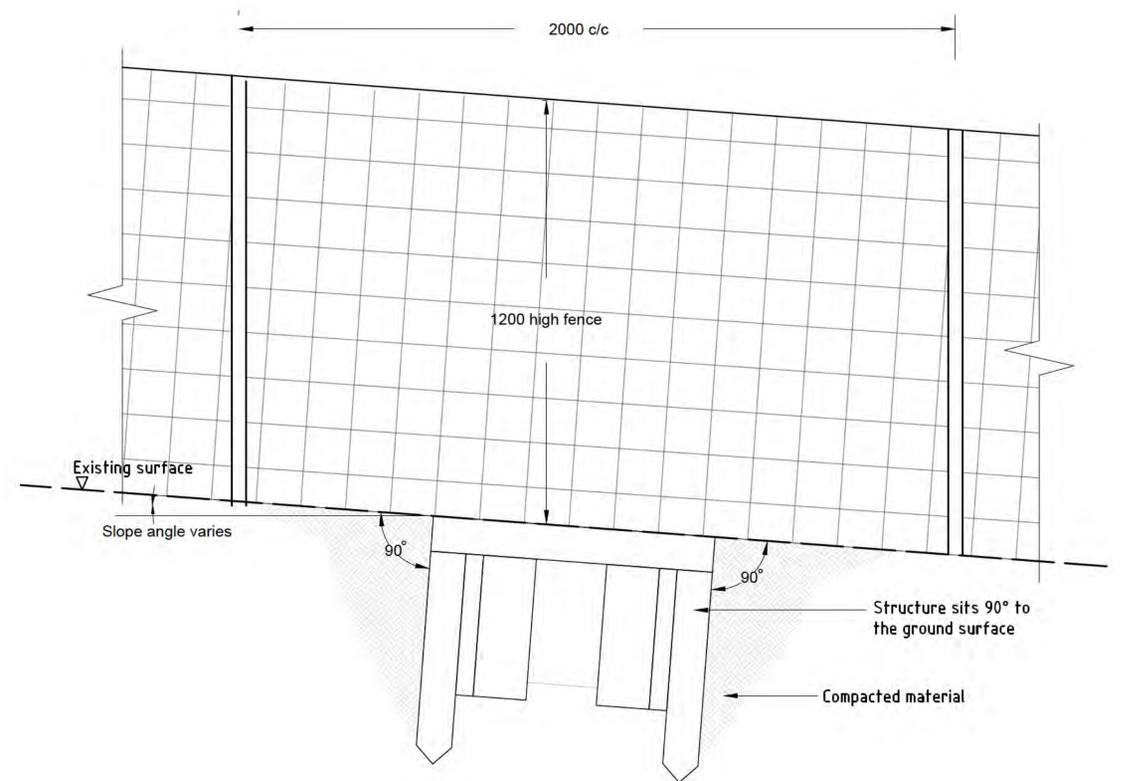
SCALE BAR
SCALE AS SHOWN
DATE 29/05/2023
DRAWN AY/PL/VH
DESIGN TBLD
CHECKED GB
DATUM AHD
DWG No. KC-UFC-05
ACAD REF:

THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au

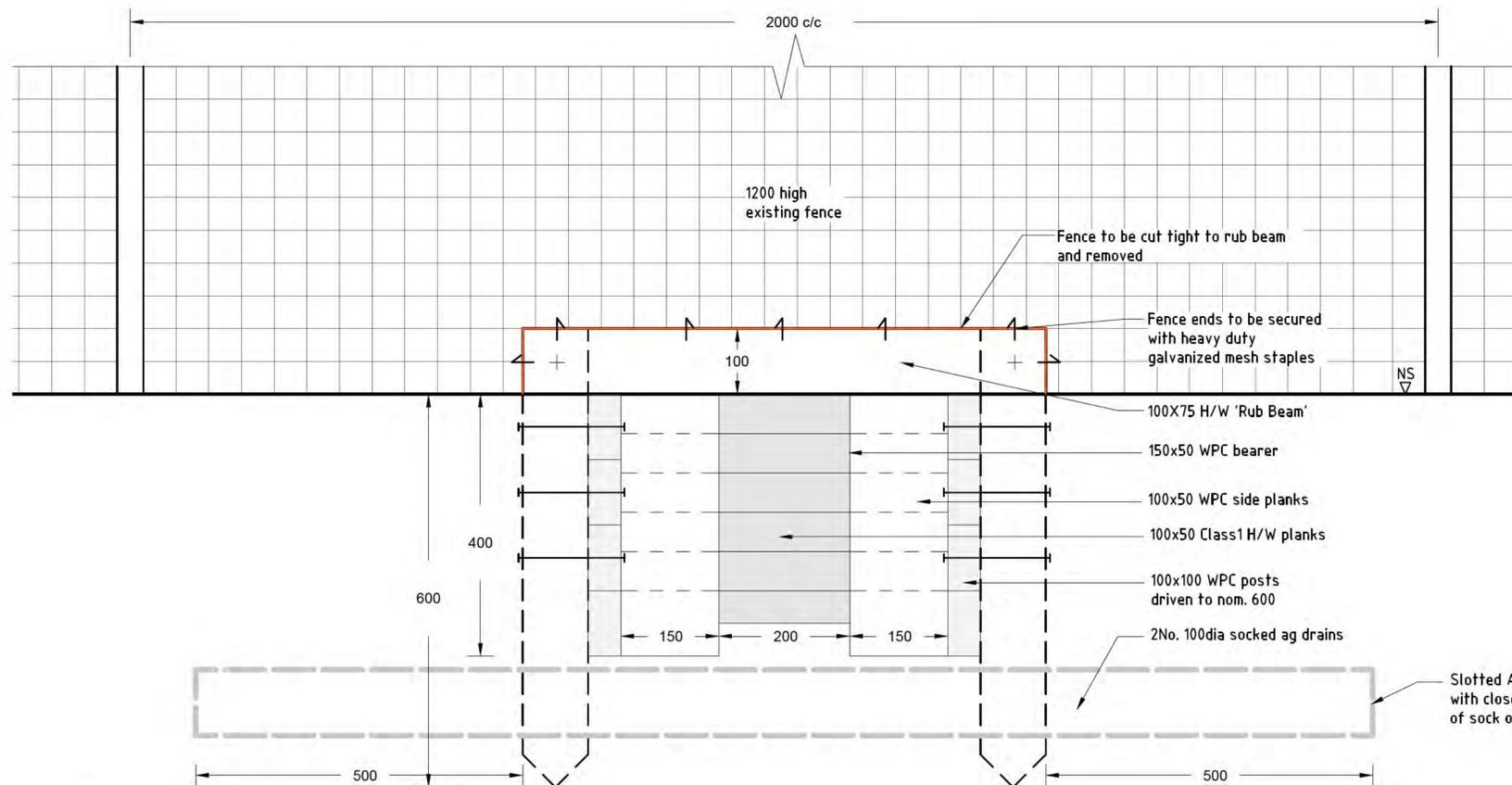
Woolacotts CONSULTING ENGINEERS



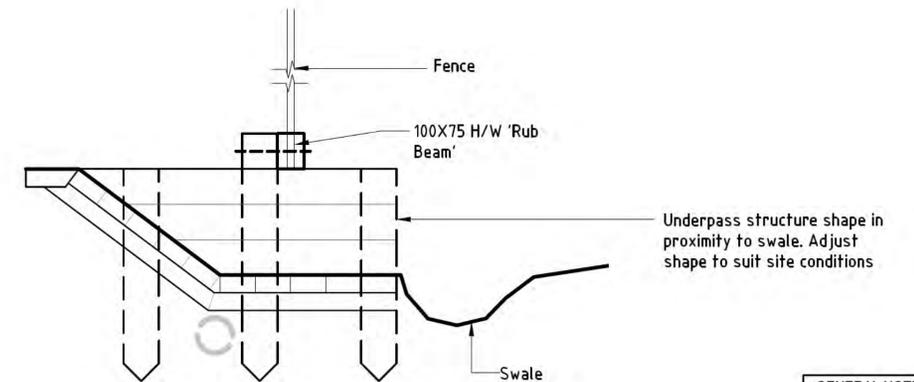
1 TYP. SIDE ELEVATION
SCALE 1:10 @ A3



3 TYPICAL ANGLED SLOPE
SCALE 1:20 @ A3



2 TYP. FRONT ELEVATION
SCALE 1:10 @ A3



4 UFC CONFIGURATION AT U2
SCALE 1:20 @ A3

- GENERAL NOTES:**
- All works to be setout on site at 4No. locations and approved by TBLD before commencement of works.
 - All excavated material to be taken offsite.
 - All timber Class 1 H/W.
 - WPC to be charcoal color.

SETOUT NOTE:
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SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
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DATE	REV	AMENDMENT
13.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 1: UNDER FENCE CROSSING PLAN AND ELEVATION

SCALE BAR
SCALE AS SHOWN
DATE 29/05/2023
DRAWN AY/PL/VH
DESIGN TBLD
CHECKED GB
DATUM AHD
DWG No. KC-UFC-06
ACAD REF:

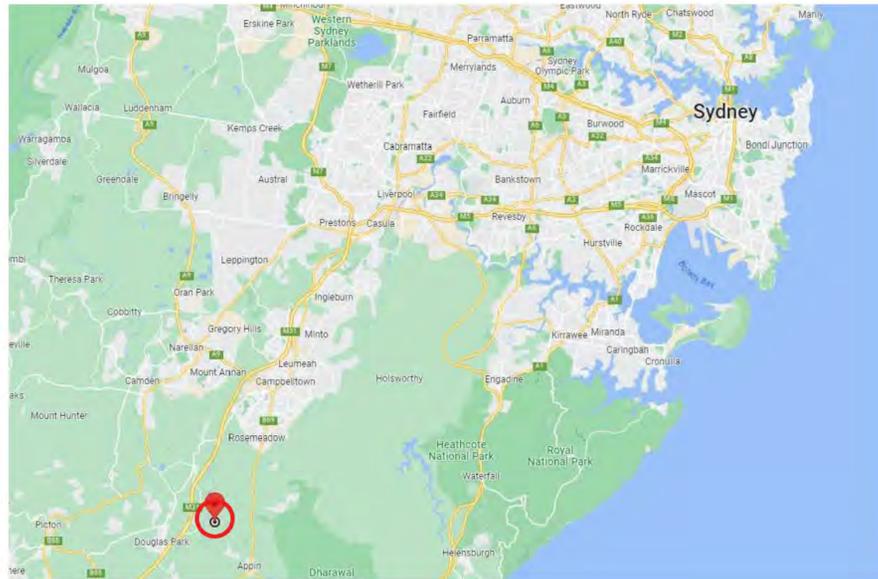
THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

GENERAL NOTES:
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UPPER CANAL KOALA CROSSING TYPE 2: OVER PIPELINE CROSSING DETAILED DOCUMENTATION

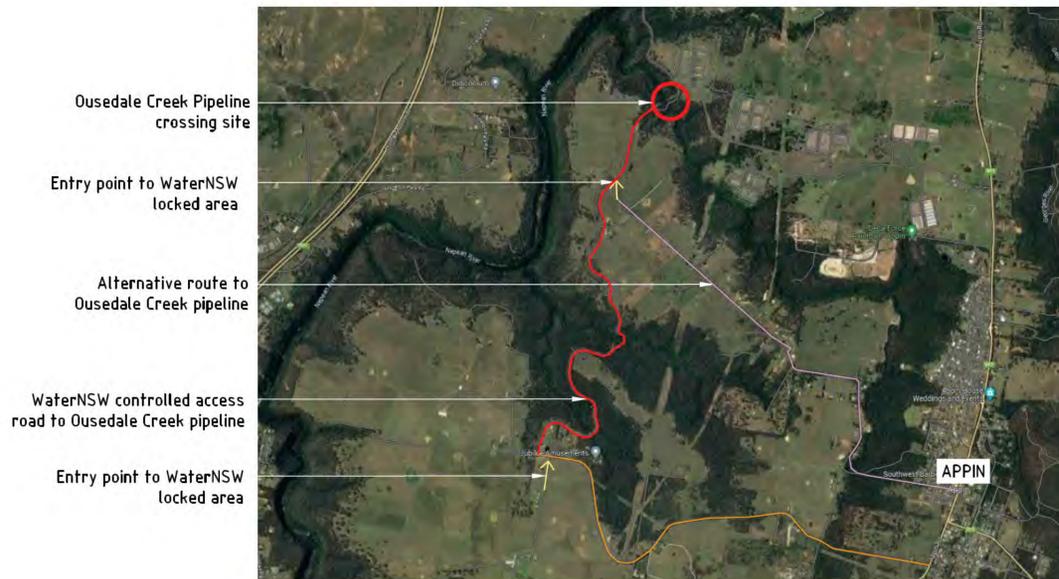
SITE LOCATION



DRAWING INDEX

DWG	TITLE
KC-OPC-01	COVER PAGE
KC-OPC-02	SPECIFIED NOTES
KC-OPC-03	LOCATION PLAN
KC-OPC-04	SETOUT PLAN
KC-OPC-05	ELEVATION
KC-OPC-06	PLAN
KC-OPC-07	SECTIONS SOUTH
KC-OPC-08	SECTIONS NORTH
KC-OPC-09	DETAILS - GAS STRUTS
KC-OPC-10	DETAILS - HINGES
KC-OPC-11	DETAILS - GUIDES
KC-OPC-12	DETAILS - RAMP

ROUTE TO SITE



NOTICE: OVER PIPELINE CROSSING DESIGN ADJUSTMENT

It has been identified that a landowner initiated enhancement can be taken advantage of to improve both longevity of this structure and potentially reduce maintenance requirements. The enhancement will only affect the crossing during time of scheduled maintenance. The enhancement does not affect the operational purpose of the structure, and does not have any affect on the crossings environment or the structures integrity. The enhancement removes the gas strut system, resulting in a crossing that cannot be opened during maintenance rather if necessary the structure will be removed from its base supports. The design footprint and impacts on the heritage curtilage are not expected to change. To promote project efficiency the documentation of the enhancement will be captured during the construction phase of the project.

ACCESS TO WATER NSW CONTROLLED AREA:

1. Contractor must make arrangement in advance with WaterNSW prior to entry WaterNSW controlled area.
2. Contractor must be accompanied by WaterNSW personnel when entering to the site.



WARNING

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SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full 3D shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

DATE	REV	AMENDMENT
17.02.23	A	50% Draft DD
21.03.23	B	Update to 50% Draft DD
14.03.23	C	3D Model and cad file
26.04.23	C	80% Draft DD issue to WOOLACOTTS & GSA
05.05.23	D	100% Draft DD issue to WOOLACOTTS & GSA
09.05.23	E	100% Draft DD for issue
29.05.23	F	Issued for construction

PROJECT TITLE DPE KOALA PROJECT		SCALE BAR
CLIENT 	DRAWING NAME TYPE 2: OVER PIPELINE CROSSING COVER PAGE	SCALE AS SHOWN
		DATE 29/05/2023
THOMPSON BERRILL LANDSCAPE DESIGN P/L PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au		DRAWN AY/PL/VM
		DESIGN TBLD
		CHECKED GB
		DATUM AHD
		DWG No. KC-OPC-01
		ACAD REF:

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

1. ACCESS & SET OUT NOTES:

- THE SUPERINTENDENT WILL DEFINE AND MAKE AVAILABLE ACCESS POINTS FOR THE CONTRACTOR TO ENABLE CONSTRUCTION MATERIALS TO BE BOUGHT TO THE SITES. THE PLANS SHOW WORK STORAGE SITES. THE CONTRACTOR IS REQUIRED TO CARRY ALL COMPONENTS AND EQUIPMENT INTO THE SITES.
- THE CONTRACTOR IS REQUIRED TO UNDERTAKE 3D SURVEY OF EACH SITE AS PER THE AREAS SHOWN.
- THE CONTRACTOR IS REQUIRED TO PREPARE AND PROVIDE DETAILED SHOP DWGS OF ALL WORKS FOR THE SUPERINTENDENT AND ENGINEERS REVIEW AND APPROVAL.
- THE CONTRACTOR IS REQUIRED TO EMPLOY THE SERVICES OF A REGISTERED SURVEYOR WITH PROVEN EXPERIENCE IN THE ACCURATE SET OUT OF LANDSCAPE CONSTRUCTION WORKS USING ELECTRONIC CAD FILES, PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS. THE SUPERINTENDENT WILL PROVIDE A DIGITAL AUTOCAD FILE COPY OF THE DRAWINGS TO THE SUCCESSFUL CONTRACTOR ONLY, FOR USE BY THE CONTRACTOR'S SURVEYOR TO ELECTRONICALLY DETERMINE AND SET OUT ALL WORKS. NO CAD FILES WILL BE DISTRIBUTED AT TENDER.
- THE CONTRACTOR MUST ALLOW SUFFICIENT TIME FOR ADJUSTMENT TO SET-OUT OF WORKS AS REQUIRED, UNTIL FINAL CONFIRMATION IS OBTAINED FROM THE SUPERINTENDENT. THE SETOUT OF WORKS MAY REQUIRE MINOR ADJUSTMENT IN ACCORDANCE WITH SITE CONDITIONS, AND THIS IS TO BE REGARDED AS NORMAL AND EXPECTED IN THE WORKS, DUE TO THE NATURE OF THE SITE CONDITIONS.
- ONCE SETOUT OF WORKS IS COMPLETED AND APPROVED, THE CONTRACTOR IS WHOLLY RESPONSIBLE FOR ACCURATELY MEASURING ALL EXISTING STRUCTURES, AND EXISTING SURFACE LEVELS AND ROCK OUTCROPS, TO INFORM PREPARATION OF THE WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATELY SETTING OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SURVEY INFORMATION SUPPLIED (REFER BELOW), PERMANENTLY MARKING NOMINATED KEY SET OUT POINTS AND CHECKING WORKS IN PROGRESS. NO MARKING OF HERITAGE STRUCTURES ALLOWED.
- NO ALLOWANCE FOR VARIATIONS WILL BE CONSIDERED FOR INADEQUATE ALLOWANCE BY THE CONTRACTOR FOR TIME, MATERIALS, LABOR TO COMPLETE ALL SET-OUT AND SITE MEASUREMENTS, SHOP DRAWINGS, AND TO MAKE ALL NECESSARY AMENDMENTS AND ADJUSTMENTS IN ORDER TO FABRICATE AND INSTALL THE WORKS IN ACCORDANCE WITH THE SCOPE OF WORKS CONTAINED IN THE DRAWINGS, AND TO THE SUPERINTENDENT'S SATISFACTION.
- THE CONTRACTOR IS TO ESTABLISH AND MARK THE HORIZONTAL ALIGNMENTS / CHAINAGE LINES, PANEL AND POSTS, INFRASTRUCTURE, SIGNIFICANT CHANGES IN GRADE AND ANY AND ALL OTHER FEATURES AS REQUIRED, IN ACCORDANCE WITH DRAWINGS, AND DETERMINE AND ESTABLISH ANY AND ALL REFERENCE POINTS AS REQUIRED TO SET-OUT THE WORKS IN SUCH A WAY THAT THEY WILL NOT BE DISTURBED BY THE CONTRACTOR'S OPERATIONS. THIS INCLUDES ESTABLISHMENT OF OFFSETS, SCALED FROM DRAWINGS, INDICATED ON THE DRAWINGS. NOTE: DO NOT DISFIGURE, DISTURB OR MARK NATURAL FEATURES I.E. ROCKS OR TREES.
- ALL TEMPORARY BENCH MARKS (TBM) IN THE SURVEY AND CONTROL POINTS ARE TO BE MAINTAINED AND PROTECTED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL SEEK APPROVAL FROM THE SUPERINTENDENT IMMEDIATELY ONCE THE LINES HAVE BEEN SET OUT AND BEFORE ANY OTHER WORK IS CARRIED OUT.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK AND PROVE ALL DESIGN DRAWINGS AND LEVELS ON SITE TO ENSURE NO DISCREPANCIES ARE FOUND, PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WORKS, AND DOES NOT IN ANY WAY LIMIT THE CONTRACTORS RESPONSIBILITY TO COMPLETE THE WORKS IN ACCORDANCE WITH THE INTENT OF THE DESIGN. SHOULD THE CONTRACTOR DISCOVER ANY MAJOR ERROR OR DISCREPANCY IN THE LINES ON THE PLAN OR THE SITE, THEY SHALL IMMEDIATELY NOTIFY THE SUPERINTENDENT AND AWAIT ADVISEMENT BEFORE PROCEEDING WITH THE AFFECTED WORKS.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE SUPERINTENDENT A MINIMUM OF 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- THE NOMINATION OF THESE INSPECTIONS DOES NOT PREVENT THE SUPERINTENDENT AND OR A NOMINATED REPRESENTATIVE FROM INSPECTING THE WORKS AT ANY TIME.
- SHOULD THE CONTRACTOR DISCOVER ANY ERROR OR DISCREPANCY IN THE SET OUT ON SITE, IT IS THEIR RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SUPERINTENDENT AND DETERMINE THE CONFIRM DISCREPANCY AND APPROPRIATE ACTION ON SITE WITH THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

2. DEFLECTION MANAGEMENT DURING CONSTRUCTION NOTES:

- DURING ERECTION PROVISION SHALL BE MADE TO LIMIT DEFLECTIONS TO DEAD LOADS ONLY. THE CONSTRUCTOR SHALL ENSURE THE STRUCTURE IS ADEQUATELY SUPPORTED WITH TEMPORARY PROPS AND FALSEWORK DURING CONSTRUCTION/ERECTION TO CONTROL DEFLECTIONS.
- NO TEMPORARY CONSTRUCTION LOADS, PACKS OF MATERIALS OR OTHER SURCHARGES SHALL BE IMPOSED UPON THE STRUCTURE DURING ERECTION.
- THE CONSTRUCTOR SHALL WARRANTEE THAT THE DEFLECTIONS OF PRINCIPAL MEMBERS UPON COMPLETION DO NOT EXCEED THE DESIGNERS STATED "DEAD LOAD DEFLECTIONS".
- ANY SUSPENDED CAST IN-SITU CONCRETE SLABS SHALL BE PROPPED DURING CONSTRUCTION UNTIL THE SLAB HAS CURED.

3. STRUCTURAL STEELWORK NOTES (WHERE APPLICABLE):

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.
- ALL MATERIAL INCLUDING FIXINGS TO BE SOURCED FROM AUSTRALIAN MANUFACTURES / SUPPLIERS HAVING BEEN MANUFACTURED AND TESTED TO REQUIREMENTS OF RELEVANT AUSTRALIAN STANDARDS.
- ALL HOT ROLLED SECTIONS ARE TO BE GRADE 300 PLUS.
- ALL STRUCTURAL HOLLOW SECTIONS ARE TO BE GRADE 350 MPA.
- WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554, INSPECTED AND CERTIFIED BY A QUALIFIED PERSON AS DESCRIBED IN AS 2214.
- THE BOLTING PROCEDURES ARE TO BE IN ACCORDANCE WITH AS 1111 AND AS 1252.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED. SUCH TEMPORARY BRACING AS IS NECESSARY TO STB. CONCRETE ENCASED STEELWORK SHALL BE COMPLETELY WRAPPED WITH FGW41 GIRDER WRAP FABRIC, UNLESS OTHERWISE SHOWN.
- THE ENDS OF ALL HOLLOW SECTION MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN.
- EXCEPT WHERE OTHERWISE SHOWN, WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS. ALL WELDS ARE TO BE STRUCTURAL PURPOSE U.N.O.
- THE CONTRACTOR IS TO ALLOW FOR ALL THE NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHING AT ROOF OR WALL INTERSECTIONS.
- UNLESS OTHERWISE SHOWN, PROVIDE SINGLE LINE OF BOLTS CLEAT CONNECTIONS, 10mm CLEAT PLATE, 6mm CONTINUOUS FILLET WELD AND M20 8.8/S BOLTS. PROVIDE 2 NO. BOLTS TO MEMBERS 200mm DEEP & LESS. A.I.S.C. STANDARDIZED STRUCTURAL CONNECTIONS.
- IN ADDITION THE FABRICATOR SHALL SUBMIT THREE SETS OF SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. APPROVAL OF THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO COMMENCEMENT OF THE STEELWORK MANUFACTURE.
- REMOVE ALL BURS, SHARP EDGES, DAGS, SLAG, DUST, RUST, DIRT, MILL SCALE AND OTHER DEBRIS ABILISE THE STRUCTURE.

4. TYPICAL STEEL CONNECTION NOTES (WHERE APPLICABLE):

- ALL PLATES AND FLATS SHALL BE GRADE 300 PLUS AND SHALL BE 16mm THK (MIN) - UNO.
- ALL WELDS SHALL BE 6CFW ALL AROUND, BOTH SIDES - UNO.
- ALL BOLTS SHALL BE M20 - UNO.
- ALL BOLTS SHALL BE GRADE 8.8S - UNO.
- PROVIDE A MINIMUM OF TWO BOLTS PER FIXING - UNO.
- PROVIDE THREE BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 300 AND 399mm - UNO. PROVIDE FOUR BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 400 AND 499mm - UNO.
- WHERE OVERSIZE HOLES HAVE BEEN USED FOR ERECTION TOLERANCE - SITE WELD MATING PLATE TOGETHER WITH 100mm LENGTH OF 6CFW (MIN) AFTER BOLTING. MAKE GOOD ALL DAMAGED PAINTWORK.
- ALL BOLTS SHALL HAVE GALVANISED PRESSURE WASHERS UNDER BOLT HEAD AND NUT.

5. REINFORCEMENT NOTES (WHERE APPLICABLE):

- ALL HOOKS AND COGS SHALL COMPLY WITH AS 3600 UNLESS OTHERWISE SHOWN
- ALL REINFORCEMENT SHALL BE HELD RIGIDLY IN POSITION WITHIN THE SPECIFIED TOLERANCES BEFORE AND DURING CONCRETE PLACING:
 - NON CORROSIVE BAR CHAIRS SHALL BE USED FOR ALL OFF FORM SURFACES
- CONDUITS ETC. SHALL BE FABRICATED AND INSTALLED SO THAT NO CUTTING, BENDING OR DISPLACEMENT OF THE REINFORCEMENT FROM IT'S PROPER POSITION WILL BE REQUIRED
- DETAILS OF REINFORCEMENT AT APPROVED PENETRATIONS SHALL BE AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER ON-SITE
- CONCRETE BELOW GROUND IN WALLS, BEAMS, COLUMNS OR PEDESTALS SHALL BE PLACED INTO PROPERLY CONSTRUCTED FORMS:
 - IF APPROVED BY THE ENGINEER, CONCRETE MAY BE PLACED AGAINST AN EARTH FACE BUT THE CONCRETE DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE INCREASED TO PROVIDE 20mm ADDITIONAL COVER TO THE REINFORCEMENT ADJACENT TO THE EARTH FACE
- SPLICES SHALL ONLY BE USED AS SHOWN ON THE DRAWINGS OR WHEN BARS LONGER THAN NORMAL STOCK LENGTH WOULD BE REQUIRED:
 - IN LAP SPLICES, THE OVERLAP LENGTH SHALL BE TO THE REQUIREMENTS OF AS 3600 OR AS OTHERWISE DIMENSIONED ON THE DRAWINGS
- WELDING OF REINFORCEMENT SHALL NOT BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER
- IN WALLS THE VERTICAL REINFORCEMENT SHALL BE PLACED INSIDE THE HORIZONTAL REINFORCEMENT, UNLESS OTHERWISE SHOWN ON DRAWINGS
- ALL REINFORCEMENT MINIMUM COVER 65mm UNLESS STATED OTHERWISE.

6. ALUMINIUM COATING NOTES:

- ALL EXPOSED STRUCTURAL ALUMINIUM SHALL NOT BE TREATED.

7. CONCRETE NOTES:

- ALL WORKMANSHIP, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH AS 3600.
- THE FINISHED SURFACE AROUND THE SLAB & FOOTINGS SHALL BE GRADED AWAY FROM THE FOUNDATIONS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- AT RE-ENTRANT CORNERS, ONE STRIP OF 3 x N16 BARS SHALL BE PLACED DIAGONALLY ACROSS POTENTIAL CRACK
- DIMENSIONS SHOWN ARE THE MINIMUM REQUIRED SET-OUT & SLAB DIMENSIONS ARE TO BE DERIVED FROM THE ARCHITECTURAL DRAWINGS
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT CODE OF THE STANDARDS ASSOCIATION OF AUSTRALIA AS 2870 & THE BUILDING REGULATIONS
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- WELDING OF REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- FOOTINGS INC. EDGE BEAMS & PADS ARE TO BE FOUNDED IN ORIGINAL UN-DISTURBED GROUND HAVING A SAFE BEARING CAPACITY OF 500kPa. BEFORE ANY CONCRETE IS PLACED, THE SAFE BEARING CAPACITY SHALL BE VERIFIED BY A QUALIFIED ENGINEER, OR A REGISTERED BUILDING PRACTITIONER. THE CONTRACTOR IS TO ALLOW THEIR TENDER PRICE FOR THOSE INSPECTIONS AND REPORTING TO BE UNDERTAKEN BY THEIR GEOTECHNICAL ENGINEER. ALL DOCUMENTATION IS TO BE SUBMITTED TO THE PRINCIPAL WITHIN 48 HOURS OF THE INSPECTION
- EXCAVATIONS BEYOND THE DIMENSIONS SPECIFIED SHALL BE FILLED WITH MINIMUM 15mPa CONCRETE
- THE CONTRACTOR IS TO UNDERTAKE ALL OF THE NECESSARY INVESTIGATIONS TO LOCATE UNDERGROUND SERVICES WITHIN THE SITE OR LIKELY TO BE INFLUENCED BY THE PROPOSED WORKS. THE CONTRACTOR SHALL INFORM THE PRINCIPAL IF ANY SERVICES ARE FOUND PRIOR TO PROCEEDING
- ALL FOUNDATIONS ARE TO BE FREE OF WATER & LOOSE MATERIAL PRIOR TO POURING ANY CONCRETE
- CONCRETE PROPERTIES SHALL BE AS FOLLOWS:
 - ELEMENT & LOCATION
 - FOOTINGS
 - SLABS ON GROUND
 - SUSPENDED SLABS
 - PRECAST PANELS
- THE CONTRACTOR TO GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTIFICATION OF HIS INTENTION TO POUR CONCRETE.
- ALL REINFORCEMENT SHALL BE SUPPORTED IN IT'S CORRECT POSITION DURING CONCRETING BE APPROVED BAR CHAIRS, SPACER OR SUPPORT BARS.
- PROVIDE 0.2mm WATER-PROOF VAPOUR BARRIER, ALL LAPS 200mm MIN. & JOISTS TO BE TAPED. ANY TERMITE TREATMENTS TO BE UNDER VAPOUR BARRIER TO AS 3666 & TO THE BUILDING SURVEYORS REQUIREMENTS
- THE CONTRACTOR IS TO ALLOW FOR ANY ADDITIONAL INVESTIGATIONS, TESTING, ANALYSIS OR ANY OTHER WORK TO BE UNDERTAKEN NECESSARY TO SATISFY THEMSELVES OF THE GROUND CONDITIONS, SUCH THAT THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL MATERIAL QUANTITIES & CONSTRUCTION TECHNIQUES NECESSARY TO ACHIEVE THE MINIMUM SAFE SOIL BEARING PRESSURE NOMINATED
- CONCRETE F'c = N40 GRADE @ 28 DAYS, 80 SLUMP. CONCRETE TO BE COMPACTED & WORKED AROUND REINFORCEMENT BY USE OF MECHANICAL VIBRATOR. CONCRETE TO BE CURED FOR 7 DAYS BY APPROVED METHOD. CONCRETE IS TO BE AVAILABLE FOR TESTING DURING POURING

- REINFORCED CONCRETE AS PER AS 3600 - 1994. TRENCH MESH SHALL HAVE ALL CROSS WIRES CUT FLUSH WITH OUTER MAIN WIRES & A MINIMUM LAP OF 500mm. REINFORCEMENT CLEAR COVER 50mm TOP OF SLAB. 50mm COVER TO BOTTOM BEAMS, REINFORCEMENT LAPS ON FABRIC TO BE ONE FULL MESH PANEL, BOTH SIDES & END LAPPED. REINFORCING STEEL TO BE FREE OF LOOSE RUST, GREASE, OIL OR SOIL TO BE IN ACCORDANCE WITH AS / NZ 4671
- PROVIDE BAR CHAIRS @ 1.0m CTRS MAX.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CSIRO SHEET BTF18, WHICH REPLACES INFORMATION SHEET 10/91
- ANY TRAFFICABLE (VEHICULAR) AREAS TO BE 40MPa CONCRETE.
- THE USE OF CHLORINE ADDITIVES AND FLY ASH IS EXPRESSLY FORBIDDEN IN ALL CONCRETE.
- UNLESS OTHERWISE SHOWN, PROVIDE N12-500N DISTRIBUTION REINFORCEMENT, LAPPED 450 AT SPLICES, 2 x N12 DIAGONAL CORNER BARS 2000 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS SLABS AND WALLS.
- ALL CONCRETE ON THIS PROJECT IS TO BE GRADED N40 MPa. U.N.O. THE OWNERS SHOULD BE ADVISED OF GENERAL FOUNDATION MAINTENANCE REQUIREMENTS AS OUTLINED ON CSIRO DOCUMENT "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE".
- THE CONTRACTOR IS REQUIRED TO PROVIDE AS CONSTRUCTED TESTS FOR ALL POURED CONCRETE FOOTINGS ON SITE, VERIFIED BY INDEPENDENT LABORATORY TESTS AND REPORTING TO MEET RELEVANT AUSTRALIAN STANDARDS.

8. ROCK ANCHOR NOTES:

- FOR ROCK ANCHOR SPECIFICATIONS, REFER TO TECHNICAL DWGS



WARNING
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SHOP DRAWINGS NOTE:
 As part of contract works the contractor must prepare and supply full 3D shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
 All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

DATE	REV	AMENDMENT
17.02.23	A	50% Draft DD
21.03.23	B	Update to 50% Draft DD
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26.04.23	C	80% Draft DD issue to WOOLACOTTS & GSA
05.05.23	D	100% Draft DD issue to WOOLACOTTS & GSA
09.05.23	E	100% Draft DD for issue
29.05.23	F	Issued for construction

PROJECT TITLE DPE KOALA PROJECT	
CLIENT	DRAWING NAME TYPE 2: OVER PIPELINE CROSSING SPECIFIED NOTES
THOMPSON BERRILL LANDSCAPE DESIGN P/L PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au	

SCALE BAR	
SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC-02
ACAD REF:	

GENERAL NOTES:
 Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

Fenced Work Areas:
Contractor to install 2m security fencing and locked gate to the perimeter of WA 01 and WA 02

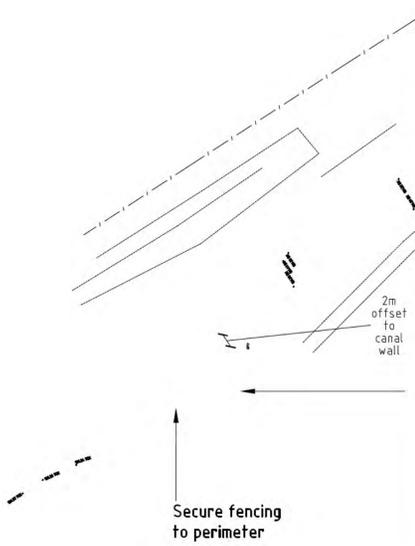


PHOTO 1
SHOWING CROSSING TYPE 2 APPROX. LOCATION



PHOTO 2
SHOWING CROSSING TYPE 2 APPROX. LOCATION

2 PIPELINE SITE PHOTOS
NTS

SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



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29.05.23	F	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING LOCATION PLAN

THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au

Woolacotts CONSULTING ENGINEERS

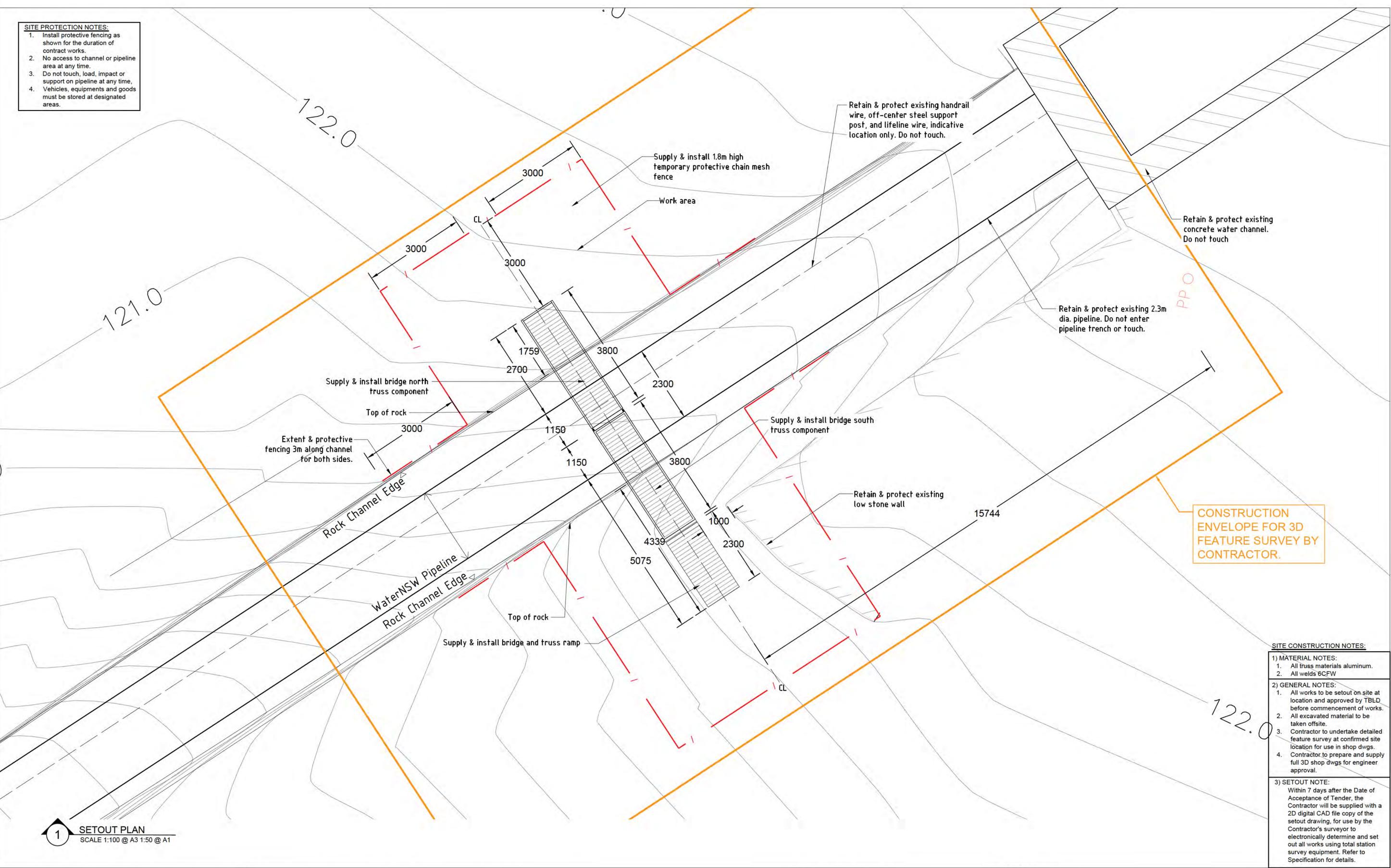
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SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC-03
ACAD REF:	

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

SITE PROTECTION NOTES:

1. Install protective fencing as shown for the duration of contract works.
2. No access to channel or pipeline area at any time.
3. Do not touch, load, impact or support on pipeline at any time.
4. Vehicles, equipments and goods must be stored at designated areas.



CONSTRUCTION ENVELOPE FOR 3D FEATURE SURVEY BY CONTRACTOR.

1 SETOUT PLAN
SCALE 1:100 @ A3 1:50 @ A1

SITE CONSTRUCTION NOTES:

1) MATERIAL NOTES:

1. All truss materials aluminum.
2. All welds 6CFW

2) GENERAL NOTES:

1. All works to be setout on site at location and approved by TBLD before commencement of works.
2. All excavated material to be taken offsite.
3. Contractor to undertake detailed feature survey at confirmed site location for use in shop dwgs.
4. Contractor to prepare and supply full 3D shop dwgs for engineer approval.

3) SETOUT NOTE:

Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.

WARNING

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GENERAL NOTES:

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SHOP DRAWINGS NOTE:

As part of contract works the contractor must prepare and supply full 3D shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:

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29.05.23	F	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING SETOUT PLAN

THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

SCALE BAR

SCALE AS SHOWN

DATE 29/05/2023

DRAWN AY/PL/VM

DESIGN TBLD

CHECKED GB

DATUM AHD

DWG No. **KC-OPC-04**

ACAD REF:

EACH TRUSS MASS (EST.)	
ITEM	KG
1. Truss	67kg
2. H/W Decking	76kg
3. Mesh	5kg
4. Floor	7kg
Total	155kg/Truss

Gas Strut Specification:

Subject to GSA approval and specification

1200mm Extended Length, General use 14/28 Diameter Gas Strut
 Extended Length: 1200mm
 Diameter: 14/28
 Stroke Length: 555mm
 Compressed Length: 645mm
 Force: 50N
 Thread: M10x1.5
 Product Code: GSA/SS-1200-645-1428

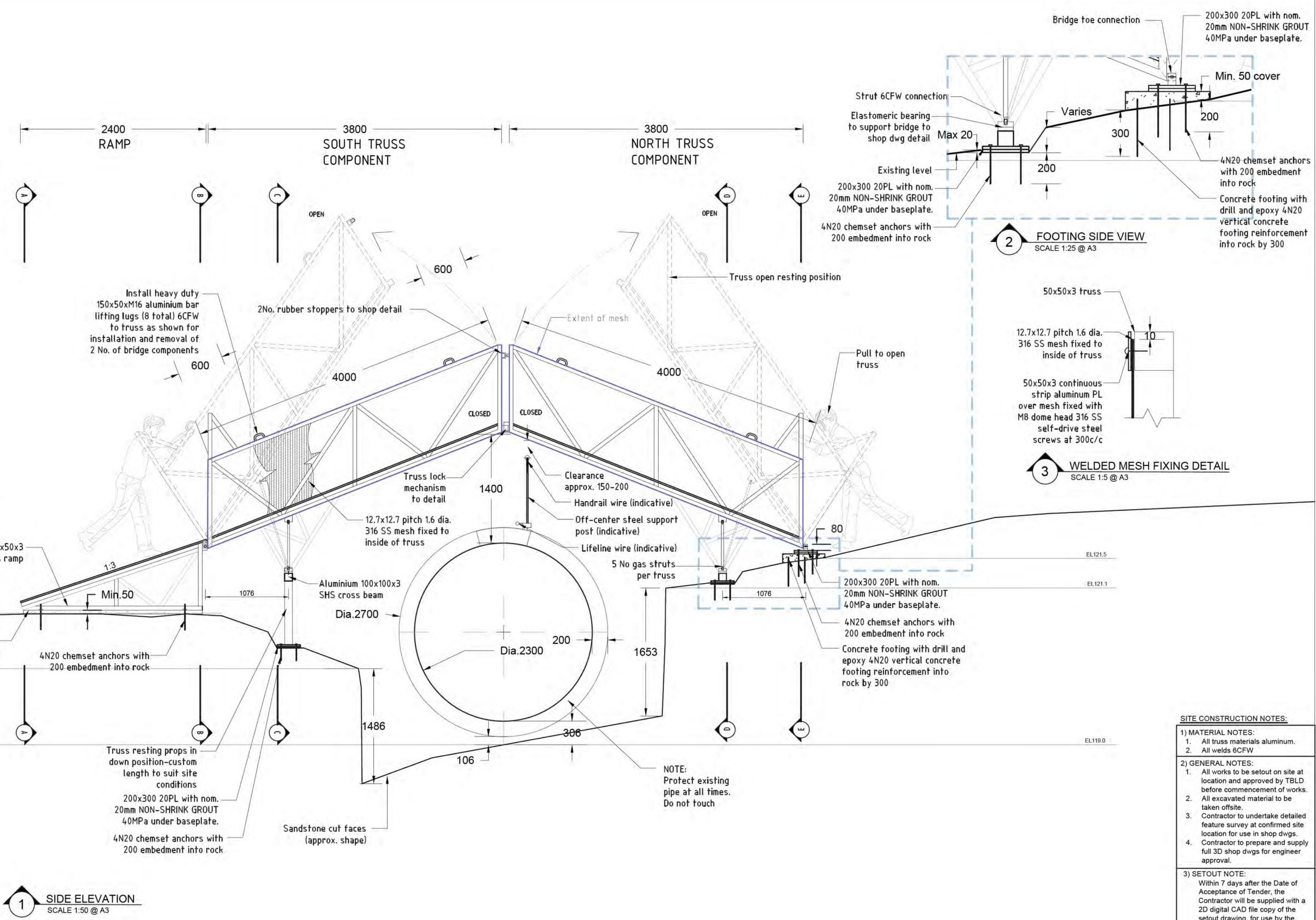
End Fitting: Clevis Pins
 Diameter: 10mm
 Length: 40mm
 Product Code: GSA/F-CLSS-1040M10
 Clevis & Pin - 10mm diameter hole, 40mm Length, 10mm internal width diameter, 20mm Depth from hole, 15mm thread length, 18mm width of thread, M10x1.5 thread, Stainless Steel (CL1040M10)

Special Note: Clevis Pins with increase the extended length of the gas strut by 38mm.

Supplier:
 Gas Strut Australia
 TEL: 1300 807 101
 WEB: <https://www.gasstrutaustralia.com.au/>

Welded Wire Specification:

Welded rolls
 Pitch: 12.7mm
 Diameter: 1.6
 Material: 316 SS
 Product code: SSWM 12.7 1.6 1226
 Supplier: Stainless steel WIRE & MESH
 WEB: https://www.sswm.com.au/product/?stainless-steel-welded-wire-mesh-rolls/?traffic_source=Direct



1 SIDE ELEVATION
 SCALE 1:50 @ A3

2 FOOTING SIDE VIEW
 SCALE 1:25 @ A3

3 WELDED MESH FIXING DETAIL
 SCALE 1:5 @ A3

SITE CONSTRUCTION NOTES:

- MATERIAL NOTES:**
 - All truss materials aluminum.
 - All welds 6CFW
- GENERAL NOTES:**
 - All works to be set out on site at location and approved by TBLD before commencement of works.
 - All excavated material to be taken offsite.
 - Contractor to undertake detailed feature survey at confirmed site location for use in shop dwgs.
 - Contractor to prepare and supply full 3D shop dwgs for engineer approval.
- SETOUT NOTE:**

Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.

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SHOP DRAWINGS NOTE:
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29.05.23	F	Issued for construction

PROJECT TITLE
 DPE KOALA PROJECT

CLIENT
 NSW GOVERNMENT

DRAWING NAME
 TYPE 2: OVER PIPELINE CROSSING SIDE ELEVATION

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC-05
ACAD REF:	

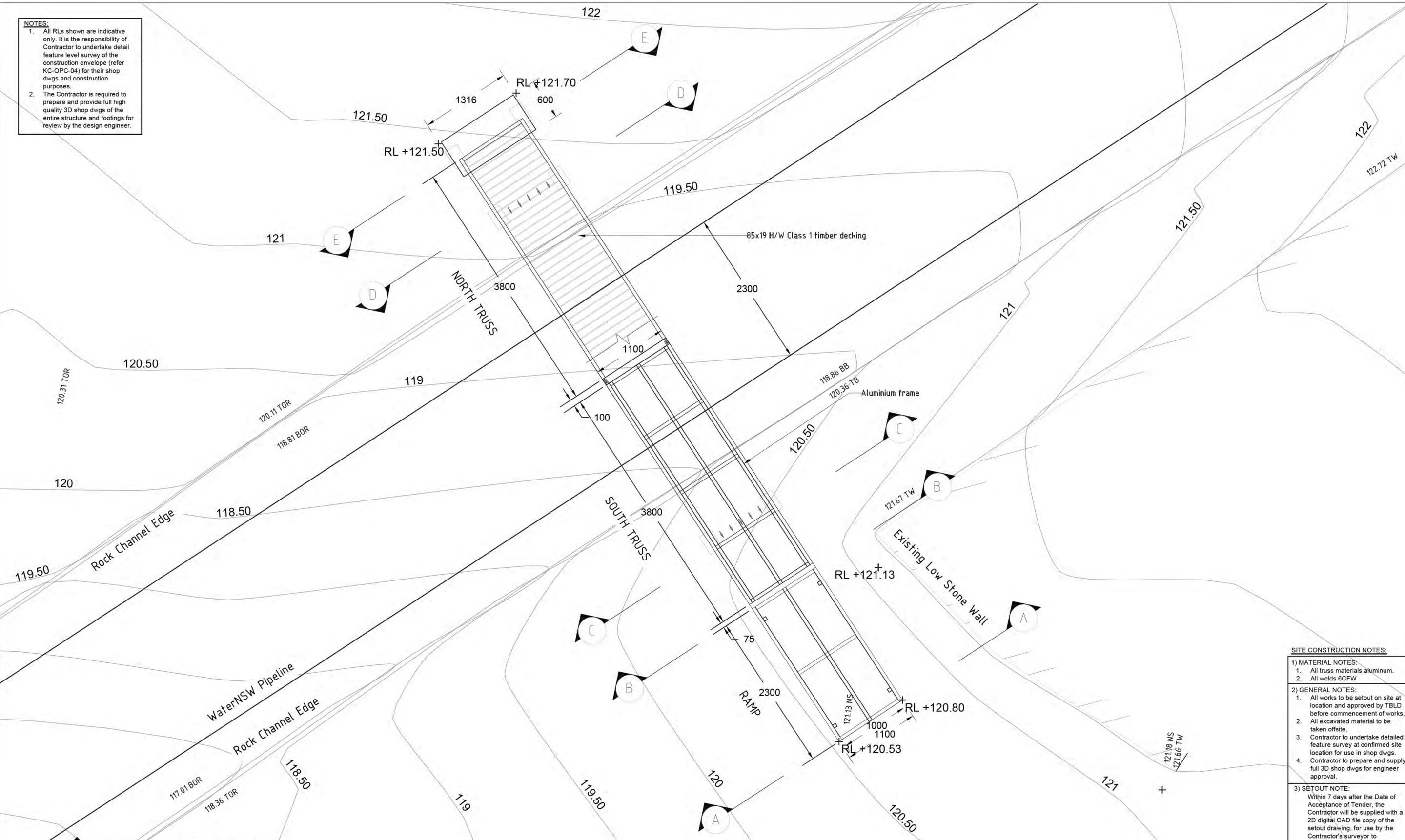
THOMPSON BERRILL LANDSCAPE DESIGN P/L
 PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

Woolacotts CONSULTING ENGINEERS

GENERAL NOTES:
 Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

NOTES:

- All RLs shown are indicative only. It is the responsibility of Contractor to undertake detail feature level survey of the construction envelope (refer KC-OPC-04) for their shop dwgs and construction purposes.
- The Contractor is required to prepare and provide full high quality 3D shop dwgs of the entire structure and footings for review by the design engineer.



1 STRUCTURAL PLAN - CLOSED POSITION
SCALE 1:500 @ A3 1:250 @ A1

SITE CONSTRUCTION NOTES:

1) MATERIAL NOTES:
 1. All truss materials aluminum.
 2. All welds 6CFW

2) GENERAL NOTES:
 1. All works to be setout on site at location and approved by TBLD before commencement of works.
 2. All excavated material to be taken offsite.
 3. Contractor to undertake detailed feature survey at confirmed site location for use in shop dwgs.
 4. Contractor to prepare and supply full 3D shop dwgs for engineer approval.

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SHOP DRAWINGS NOTE:
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PROJECT TITLE
DPE KOALA PROJECT

CLIENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING PLAN

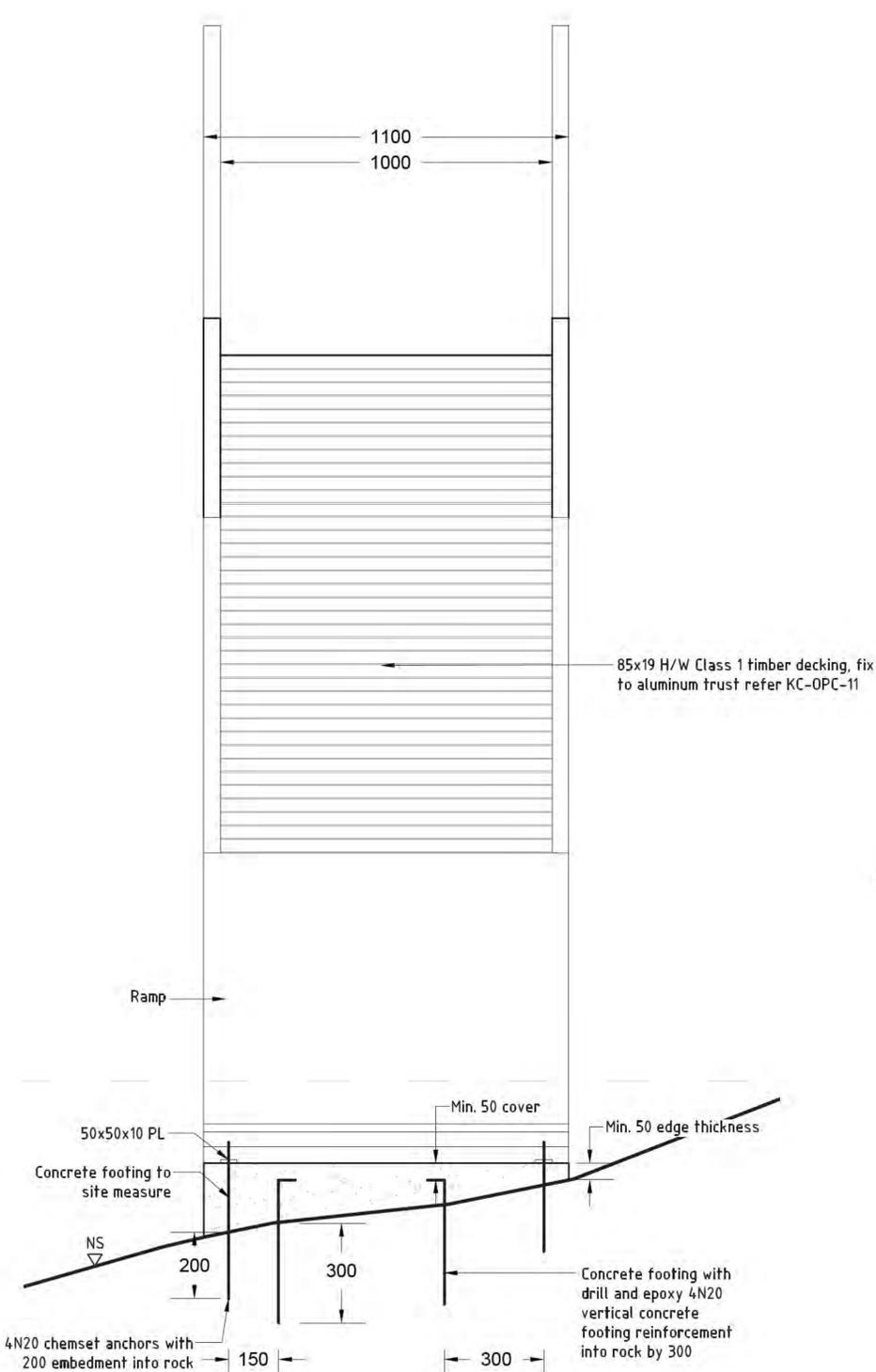
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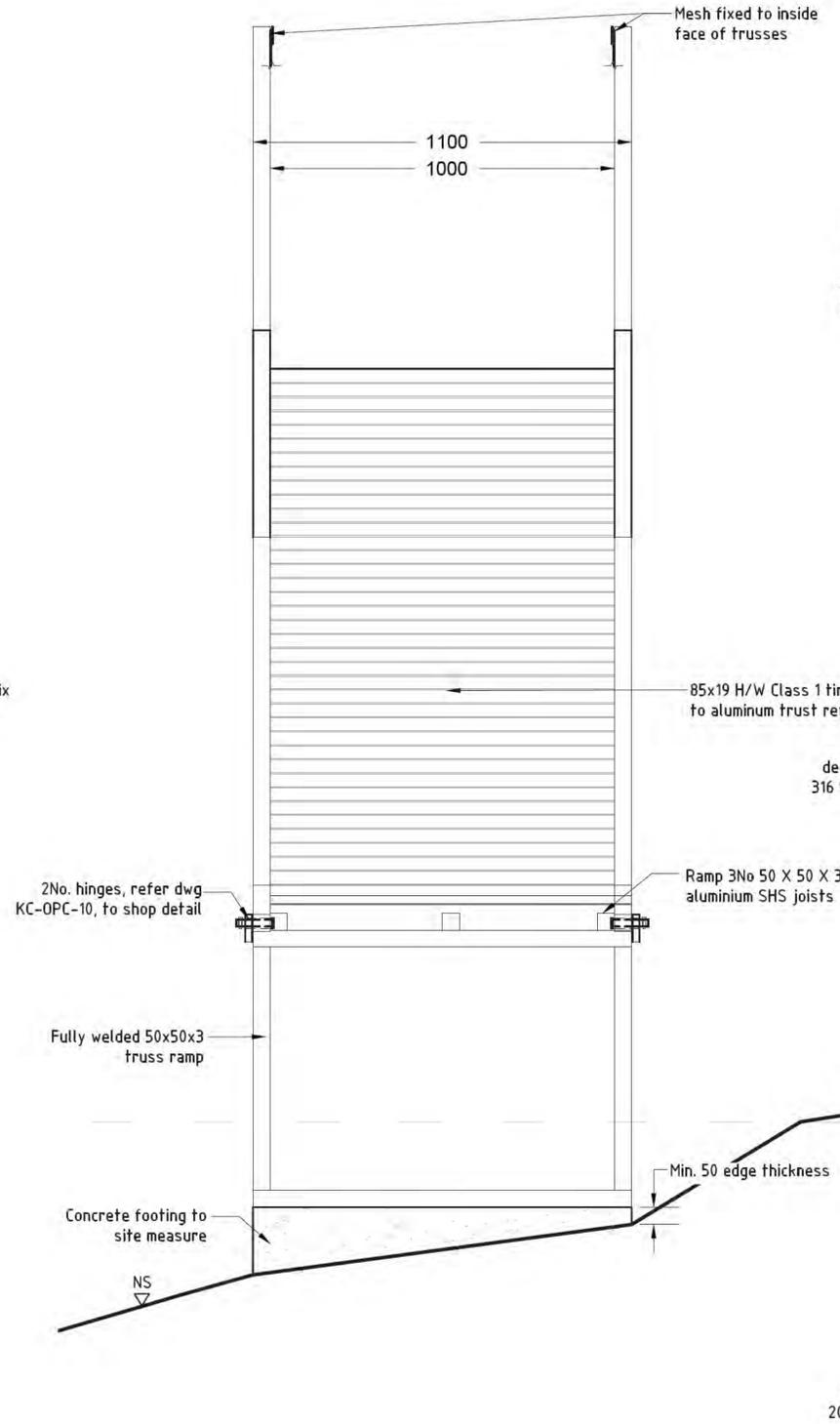
SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC- 06
ACAD REF:	

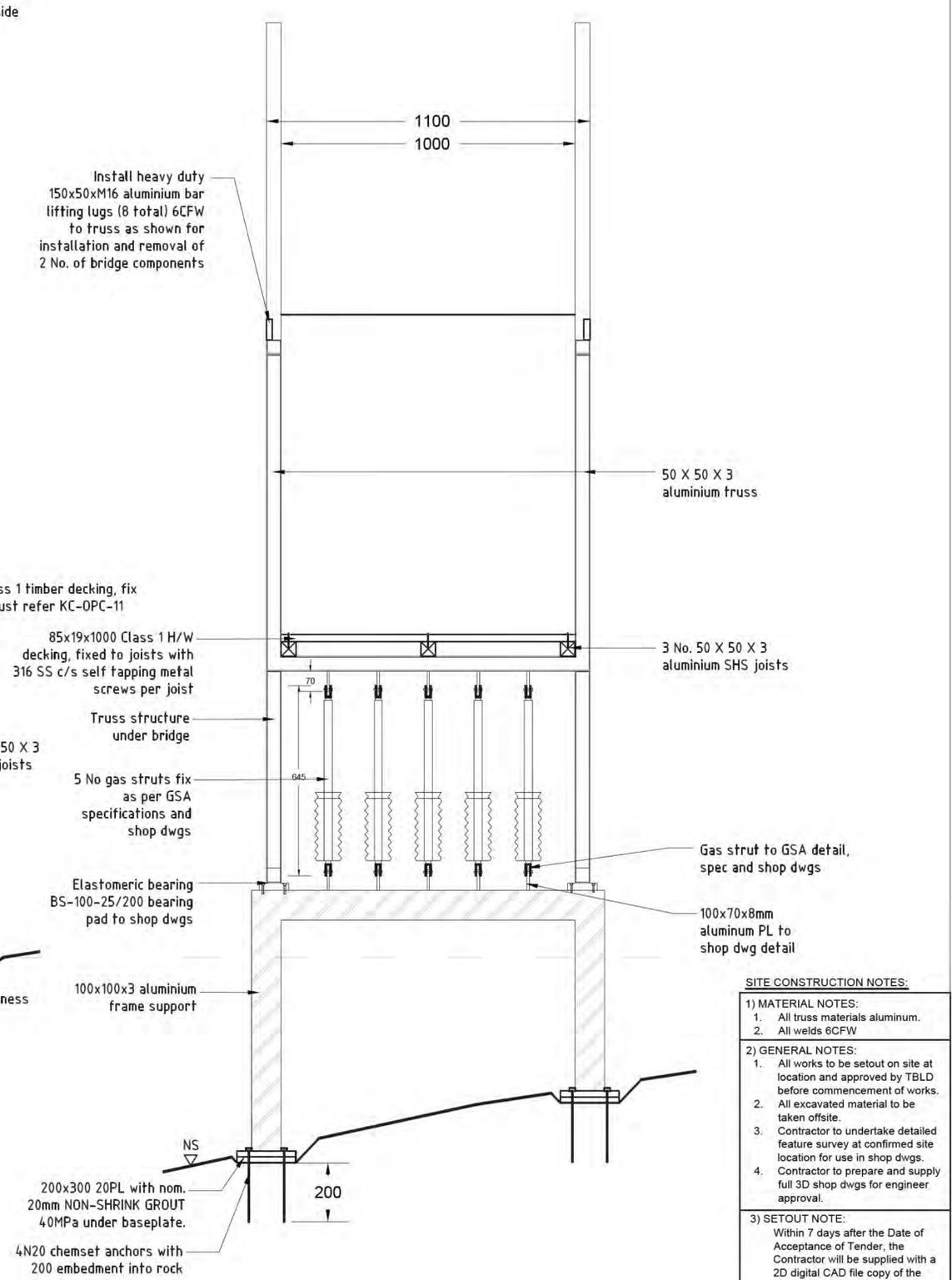
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1 SECTION AA SOUTHERN TRUSS SECTION
SCALE 1:20 @ A3



2 SECTION BB SOUTHERN TRUSS SECTION
SCALE 1:20 @ A3



3 SECTION CC SOUTHERN TRUSS SECTION
SCALE 1:20 @ A3

- SITE CONSTRUCTION NOTES:**
- MATERIAL NOTES:**
 - All truss materials aluminum.
 - All welds 6CFW
 - GENERAL NOTES:**
 - All works to be setout on site at location and approved by TBLD before commencement of works.
 - All excavated material to be taken offsite.
 - Contractor to undertake detailed feature survey at confirmed site location for use in shop dwgs.
 - Contractor to prepare and supply full 3D shop dwgs for engineer approval.
 - SETOUT NOTE:**

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SHOP DRAWINGS NOTE:
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05.05.23	D	100% Draft DD issue to WOOLACOTTS & GSA
09.05.23	E	100% Draft DD for issue
29.05.23	F	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING SOUTHERN SECTIONS

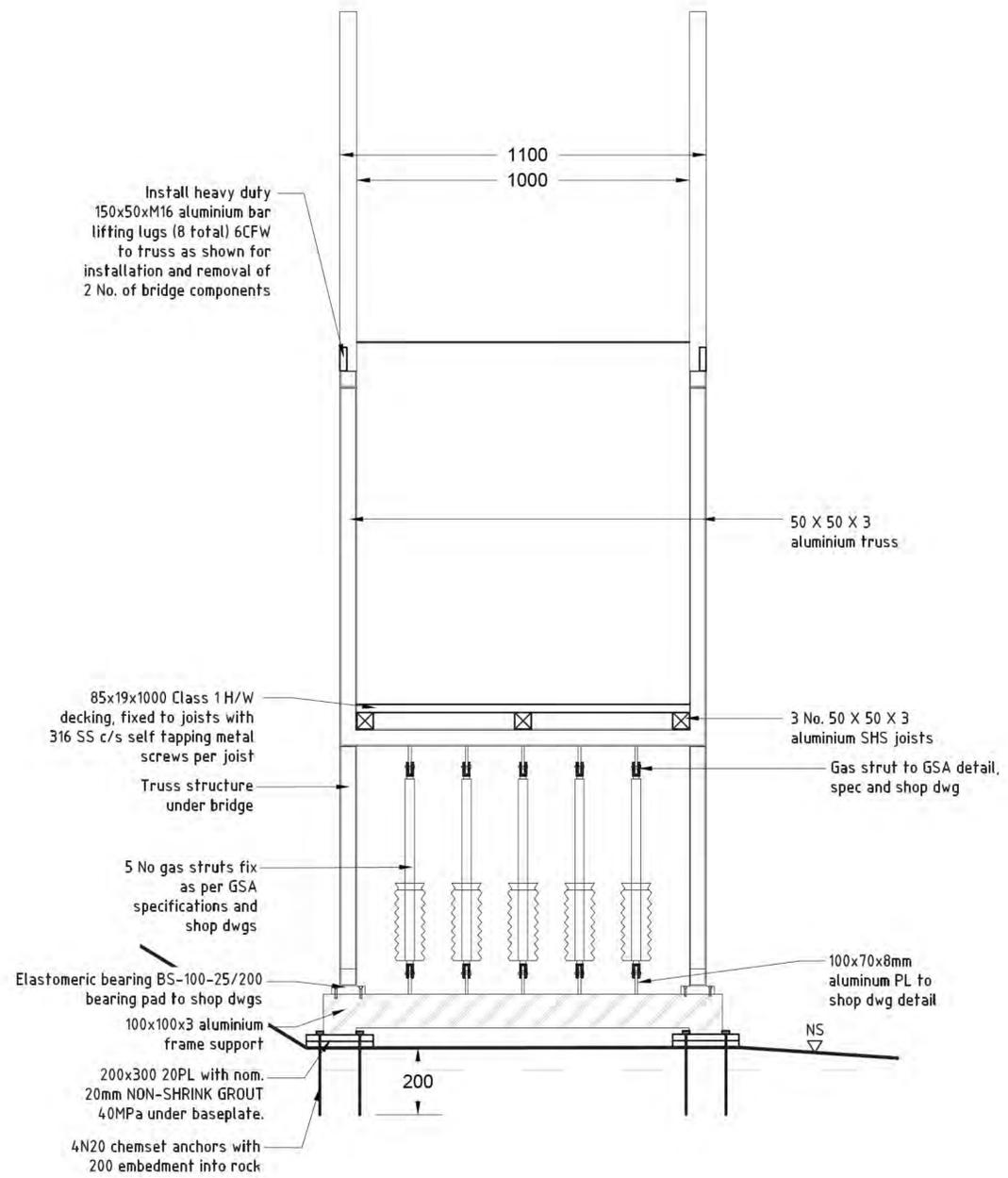
SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC- 07
ACAD REF:	

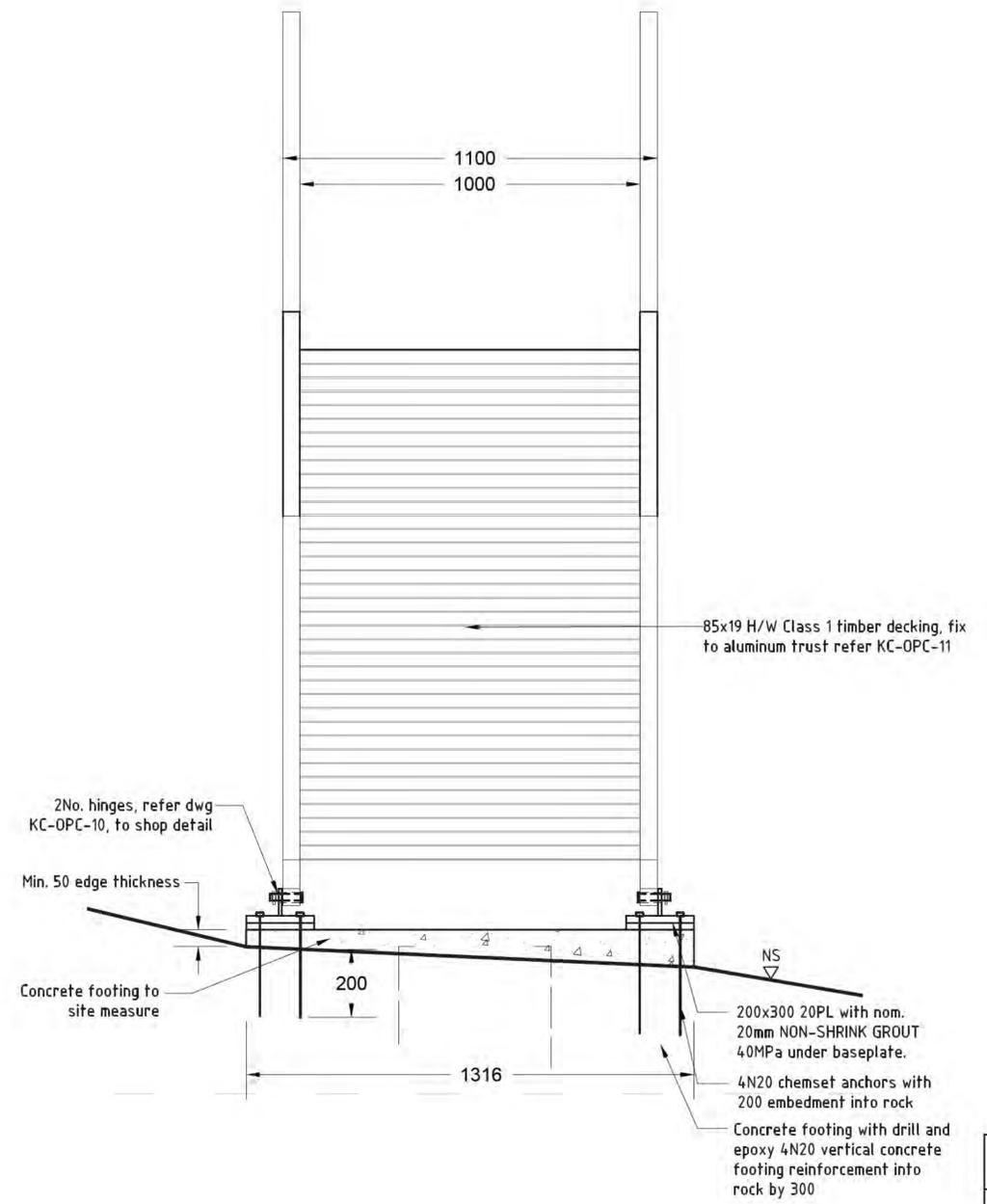
THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.



1 SECTION DD NORTHERN TRUSS SECTION
SCALE 1:20 @ A3



2 SECTION EE NORTHERN TRUSS SECTION
SCALE 1:20 @ A3

- SITE CONSTRUCTION NOTES:**
- MATERIAL NOTES:**
 - All truss materials aluminum.
 - All welds 6CFW.
 - GENERAL NOTES:**
 - All works to be setout on site at location and approved by TBLD before commencement of works.
 - All excavated material to be taken offsite.
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29.05.23	F	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING NORTHERN SECTIONS

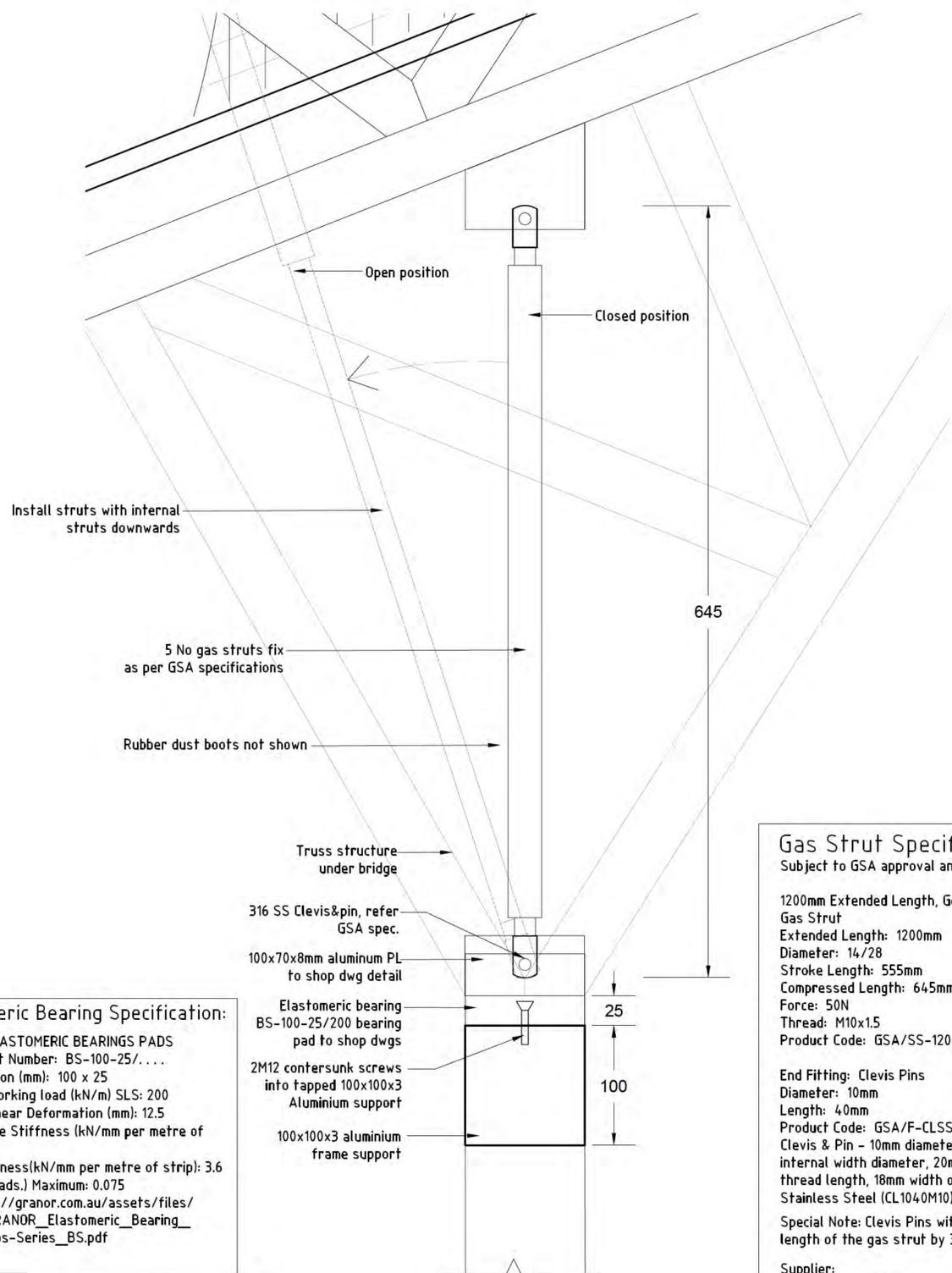
THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC- 08
ACAD REF:	

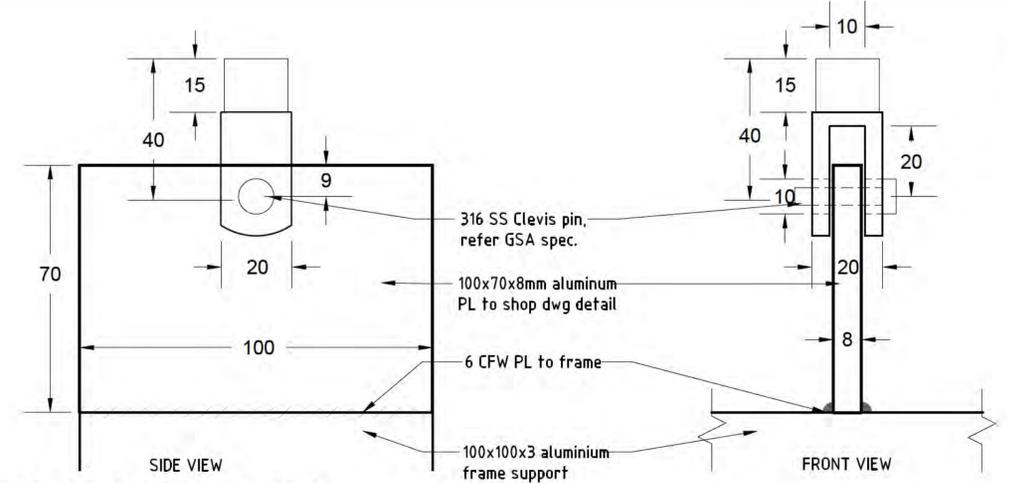
GENERAL NOTES:
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1 GAS STRUTS SIDE ELEVATION
SCALE 1:5 @ A3

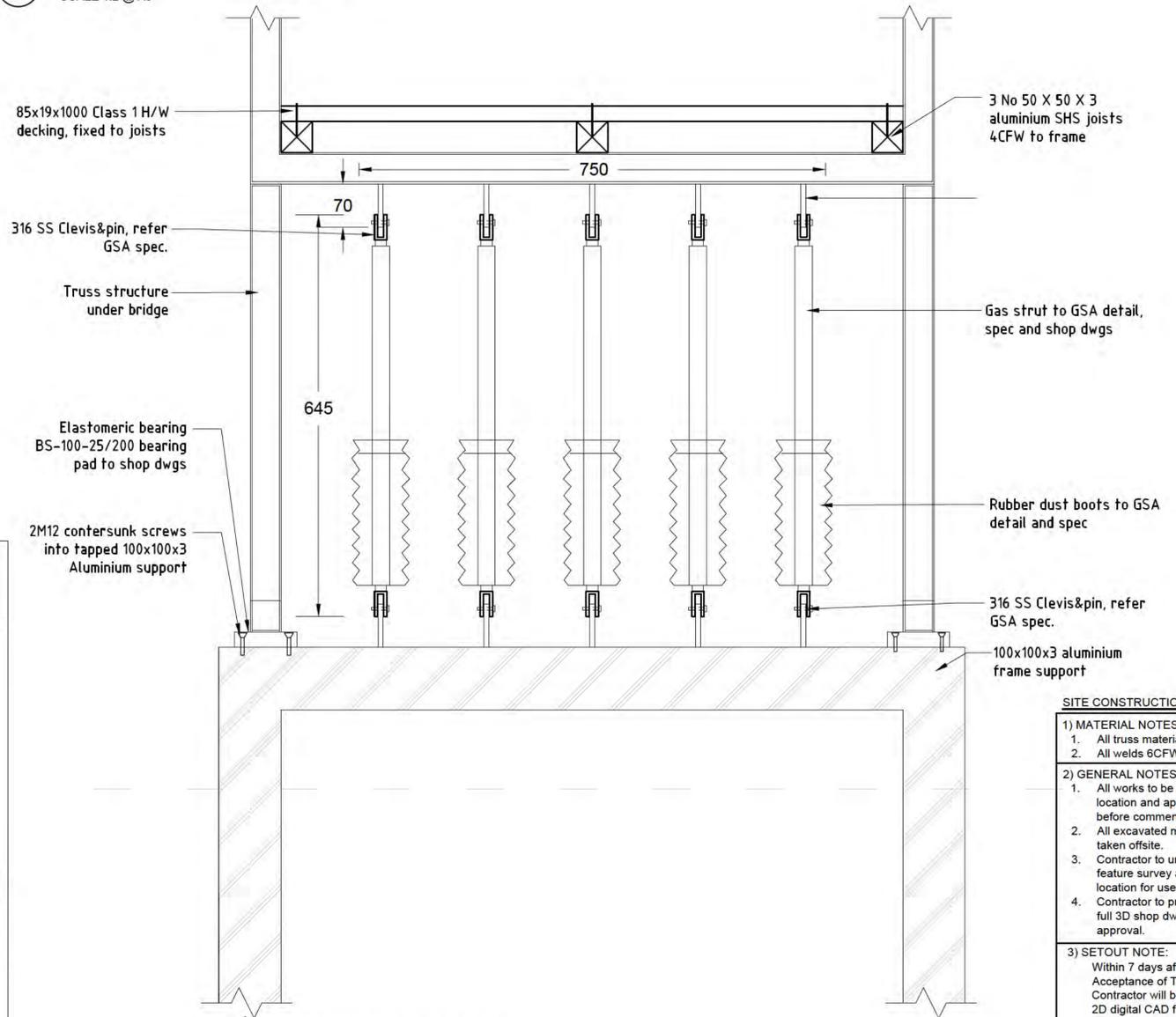
Elastomeric Bearing Specification:
 GRANOR ELASTOMERIC BEARINGS PADS
 Granor Part Number: BS-100-25/...
 Cross Section (mm): 100 x 25
 Maximum Working load (kN/m) SLS: 200
 Maximum Shear Deformation (mm): 12.5
 Compressive Stiffness (kN/mm per metre of strip): 80
 Shear Stiffness(kN/mm per metre of strip): 3.6
 Rotation (Rads.) Maximum: 0.075
 WEB: https://granor.com.au/assets/files/2018/09/GRANOR_Elastomeric_Bearing_Pads_Strips-Series_BS.pdf

Gas Strut Specification:
 Subject to GSA approval and specification
 1200mm Extended Length, General use 14/28 Diameter Gas Strut
 Extended Length: 1200mm
 Diameter: 14/28
 Stroke Length: 555mm
 Compressed Length: 645mm
 Force: 50N
 Thread: M10x1.5
 Product Code: GSA/SS-1200-645-1428
 End Fitting: Clevis Pins
 Diameter: 10mm
 Length: 40mm
 Product Code: GSA/F-CLSS-104.0M10
 Clevis & Pin - 10mm diameter hole, 40mm Length, 10mm internal width diameter, 20mm Depth from hole, 15mm thread length, 18mm width of thread, M10x1.5 thread, Stainless Steel (CL104.0M10)
 Special Note: Clevis Pins with increase the extended length of the gas strut by 38mm.
 Supplier:
 Gas Strut Australia
 TEL: 1300 807 101
 WEB: <https://www.gasstrutaustralia.com.au/>



2 GAS STRUTS CLEVIS DETAIL LOWER
SCALE 1:2 @ A3

NOTE:
Invert detail for upper clevis connection



3 GAS STRUTS FRONT ELEVATION
SCALE 1:10 @ A3

- SITE CONSTRUCTION NOTES:**
- MATERIAL NOTES:**
 - All truss materials aluminum.
 - All welds 6CFW
 - GENERAL NOTES:**
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 - All excavated material to be taken offsite.
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PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING DETAILS - GAS STRUTS

SCALE BAR

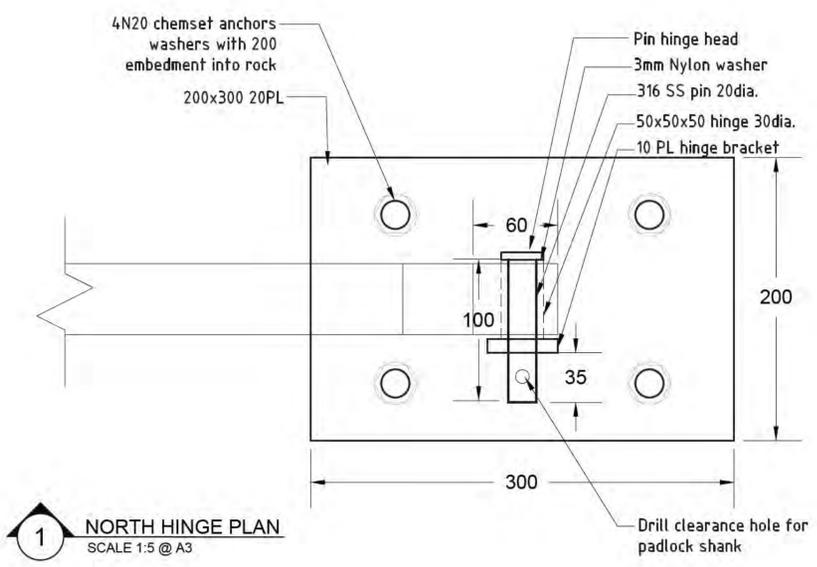
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DATE	29/05/2023
DRAWN	AY/PL/VH
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC- 09
ACAD REF:	

THOMPSON BERRILL LANDSCAPE DESIGN P/L
 PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

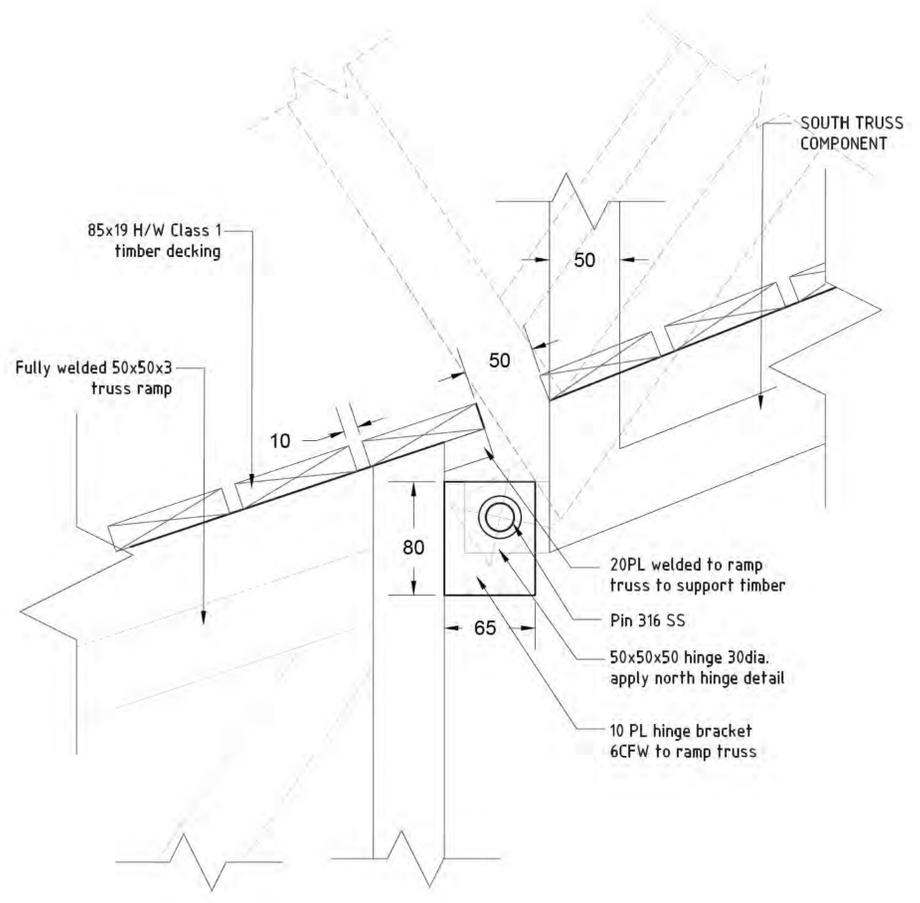
Woolacotts CONSULTING ENGINEERS

SITE CONSTRUCTION NOTES:

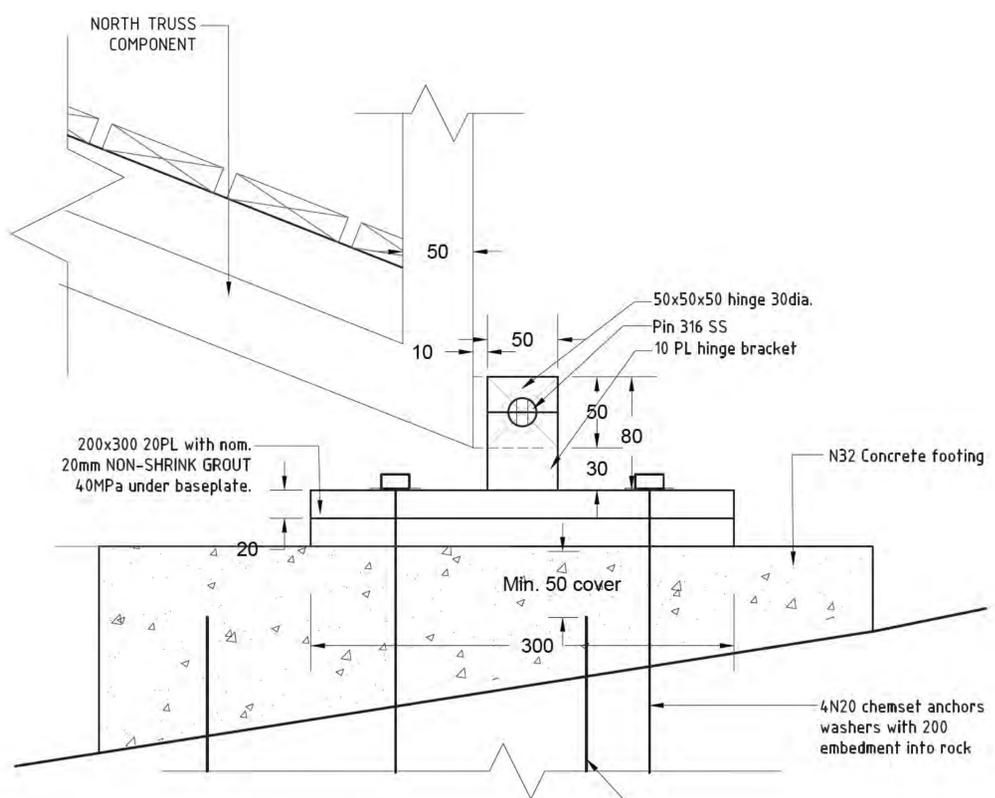
- 1) MATERIAL NOTES:**
 1. All truss materials aluminum.
 2. All welds 6CFW
- 2) GENERAL NOTES:**
 1. All works to be setout on site at location and approved by TBLD before commencement of works.
 2. All excavated material to be taken offsite.
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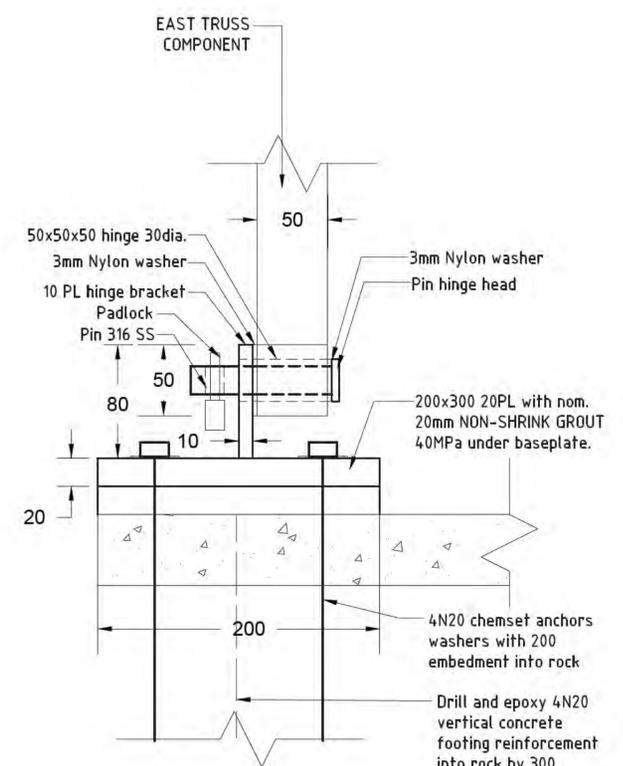
1 NORTH HINGE PLAN
 SCALE 1:5 @ A3



2 SOUTH HINGE SIDE ELEVATION
 SCALE 1:5 @ A3



3 NORTH HINGE SIDE ELEVATION
 SCALE 1:5 @ A3



4 NORTH HINGE FRONT ELEVATION
 SCALE 1:5 @ A3

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PROJECT TITLE
DPE KOALA PROJECT

CLIENT
 NSW GOVERNMENT

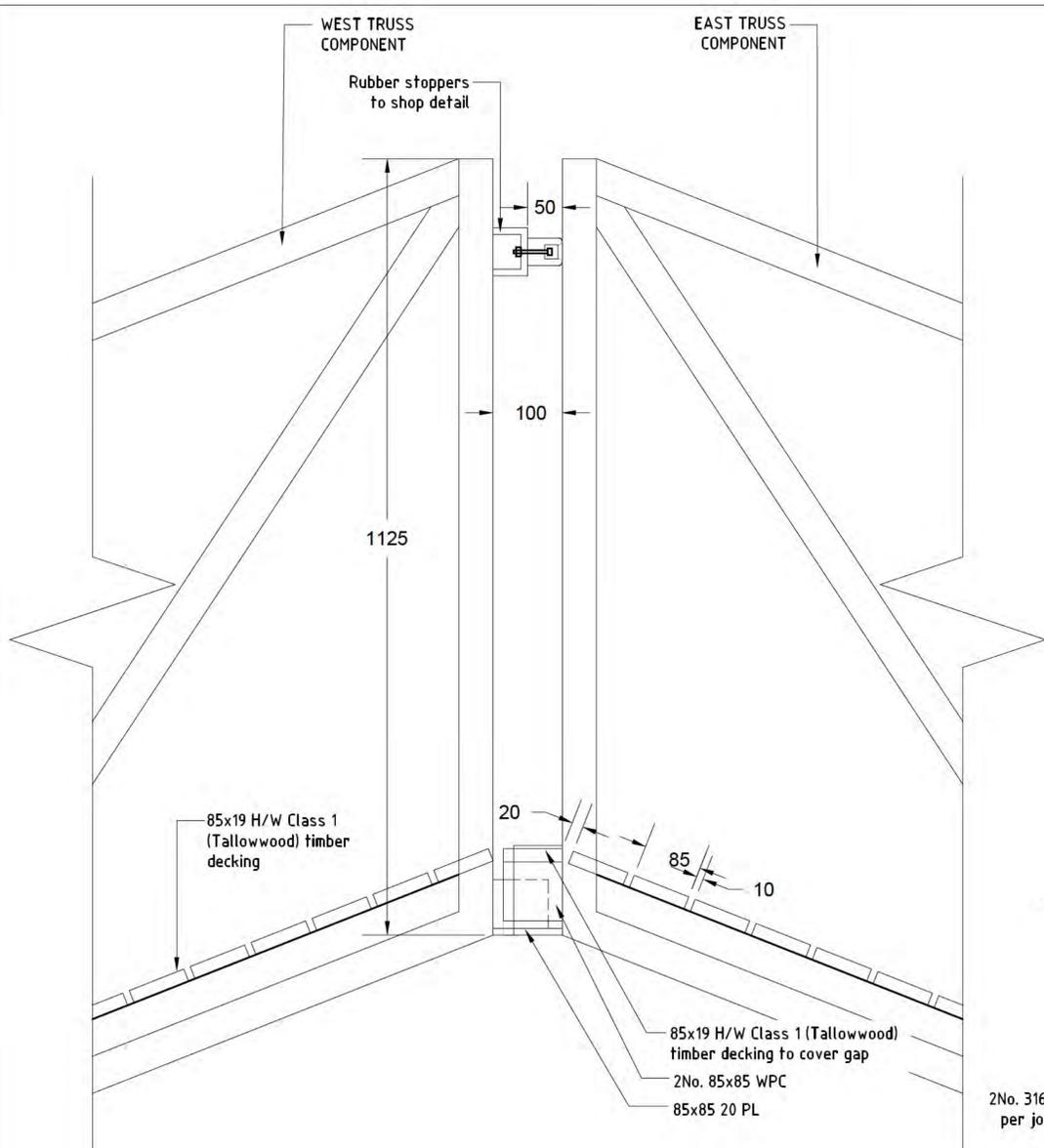
DRAWING NAME
 TYPE 2: OVER PIPELINE CROSSING
 DETAILS - HINGES

SCALE BAR
 SCALE AS SHOWN
 DATE 29/05/2023
 DRAWN AY/PL/VM
 DESIGN TBLD
 CHECKED GB
 DATUM AHD
 DWG No. **KC-OPC-10**
 ACAD REF:

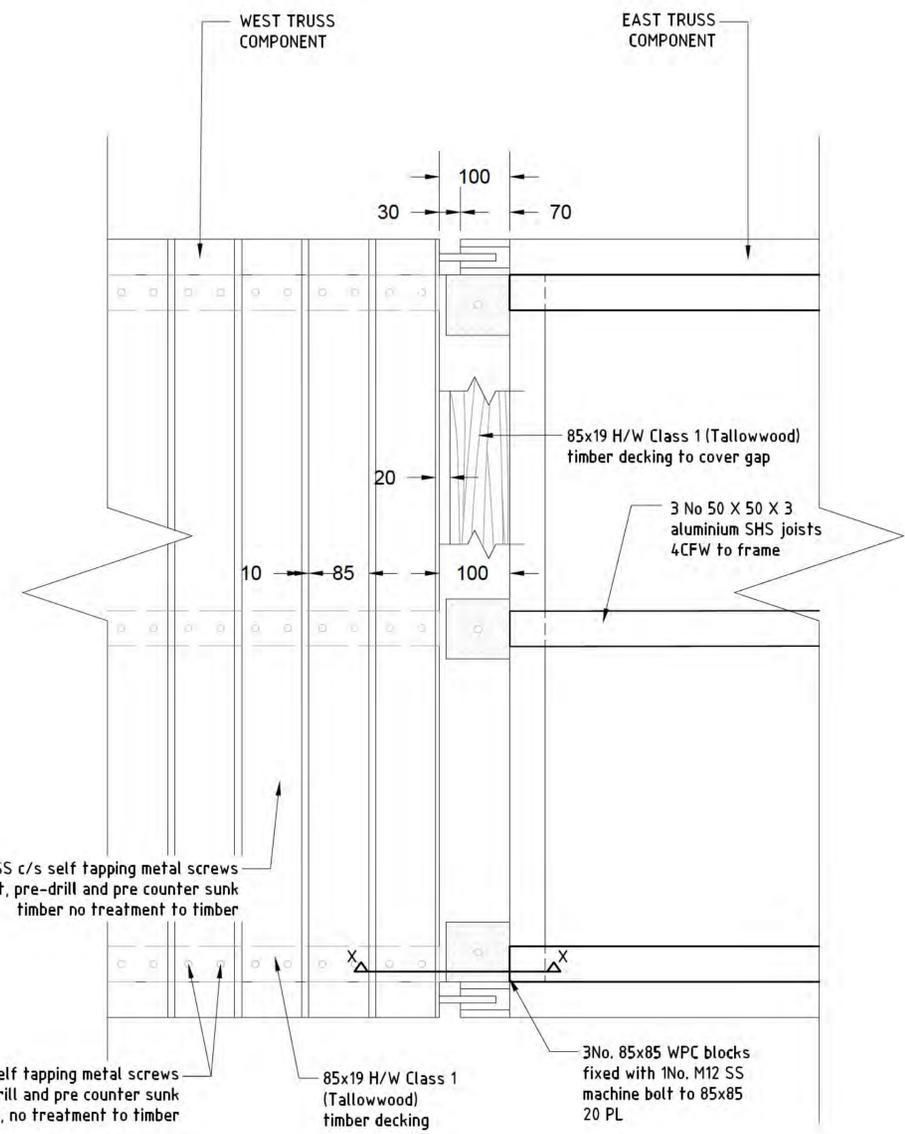
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THOMPSON BERRILL LANDSCAPE DESIGN P/L
 PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

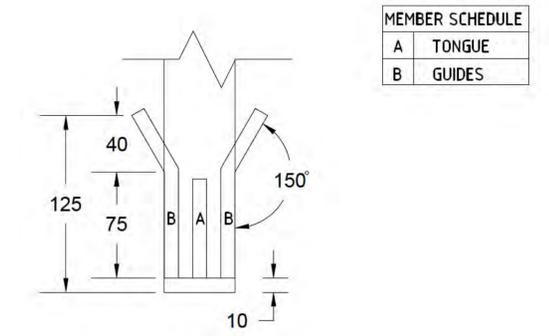
Woolacotts
 CONSULTING ENGINEERS



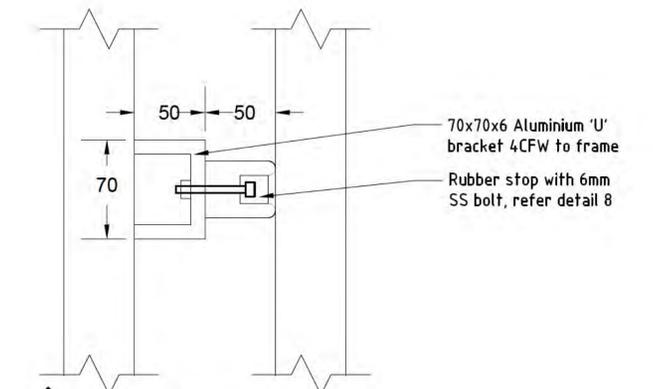
1 GUIDE STOP ELEVATION
SCALE 1:10 @ A3



2 GUIDE STOP PLAN
SCALE 1:10 @ A3



3 GUIDE STOP DETAIL - END VIEW
SCALE 1:5 @ A3



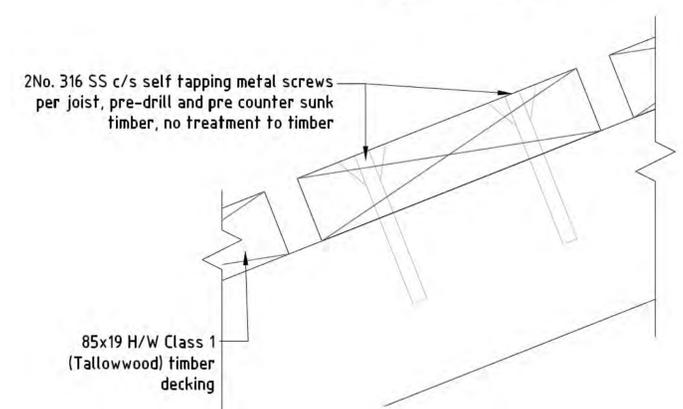
4 RUBBER STOP DETAIL
SCALE 1:5 @ A3



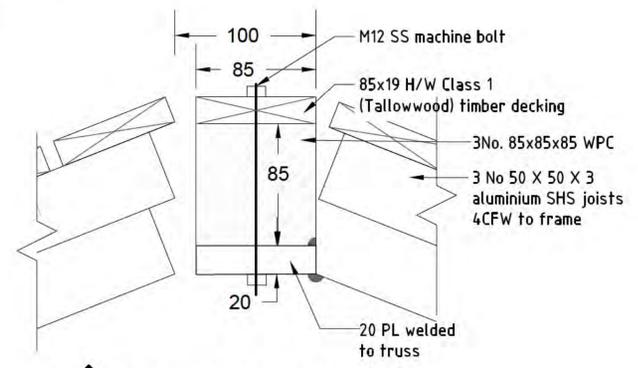
8 RUBBER STOPPER
NTS

RUBBER STOPPER SPECIFICATIONS

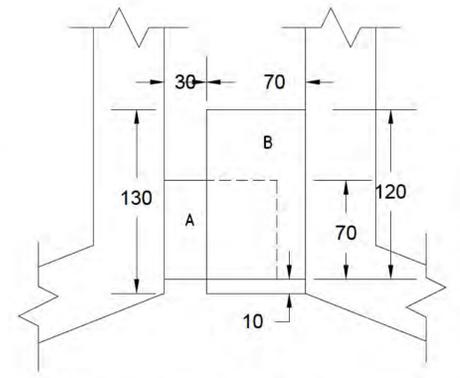
- Supplier: https://www.bunnings.com.au/doorred-50-x-40-mm-round-rubber-black-door-stop_p3981443
- Solid rubber construction
- 50H x Dia. 40
- Screw or bolt to steel frame



7 TIMBER FIXING DETAIL
SCALE 1:2 @ A3



6 COVER PL DETAIL X-X
SCALE 1:5 @ A3



5 GUIDE STOP DETAIL - SIDE VIEW
SCALE 1:5 @ A3

- SITE CONSTRUCTION NOTES:**
- MATERIAL NOTES:**
 - All truss materials aluminum.
 - All welds 6CFW
 - GENERAL NOTES:**
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PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

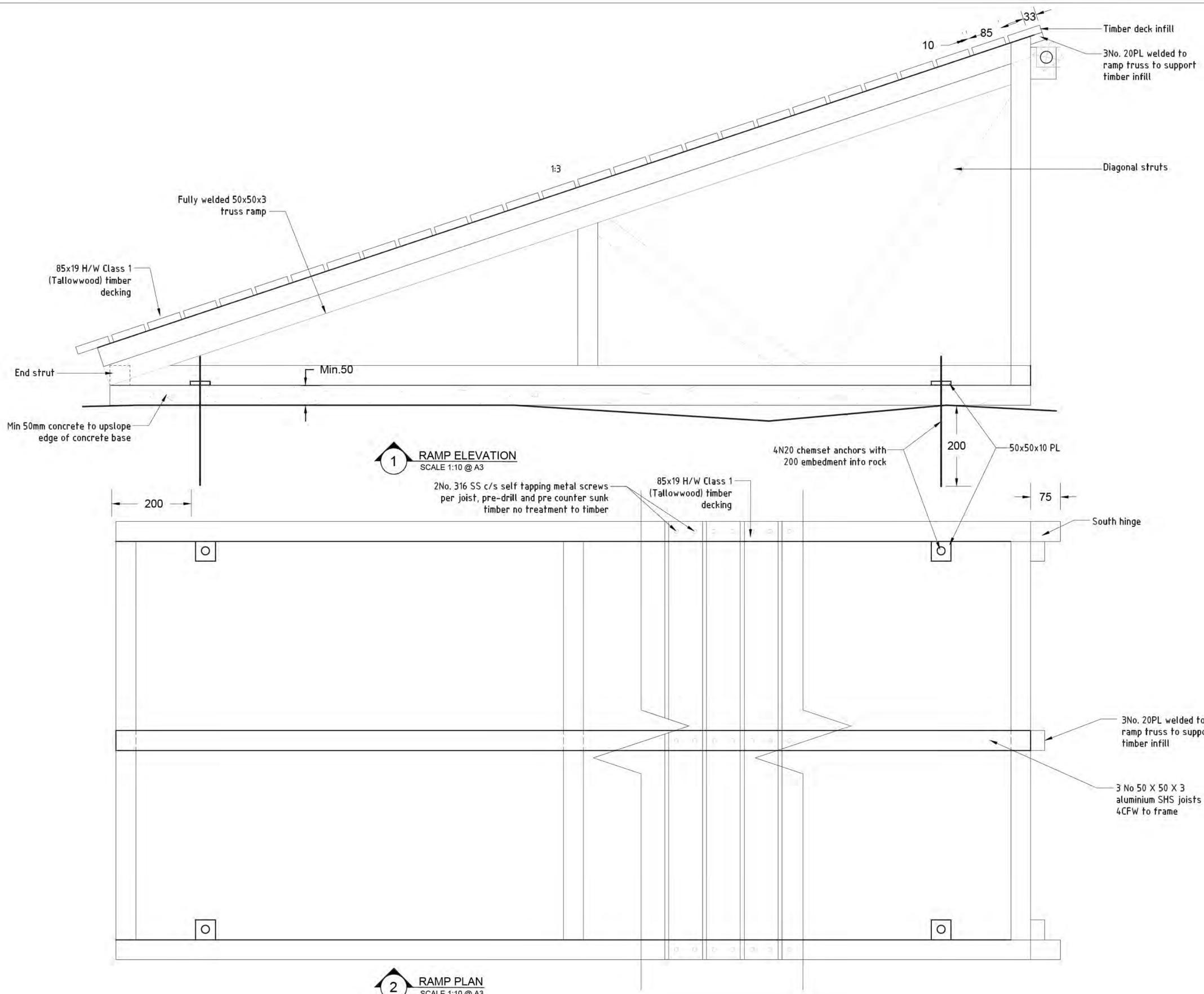
DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING DETAILS - TONGUE AND GUIDE

THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VH
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC-11
ACAD REF:	



1 RAMP ELEVATION
SCALE 1:10 @ A3

2 RAMP PLAN
SCALE 1:10 @ A3

- SITE CONSTRUCTION NOTES:**
- 1) MATERIAL NOTES:**
- All truss materials aluminum.
 - All welds 6CFW
- 2) GENERAL NOTES:**
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PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

DRAWING NAME
TYPE 2: OVER PIPELINE CROSSING
DETAILS - RAMP

THOMPSON BERRILL LANDSCAPE DESIGN P/L
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Woolacotts
CONSULTING ENGINEERS

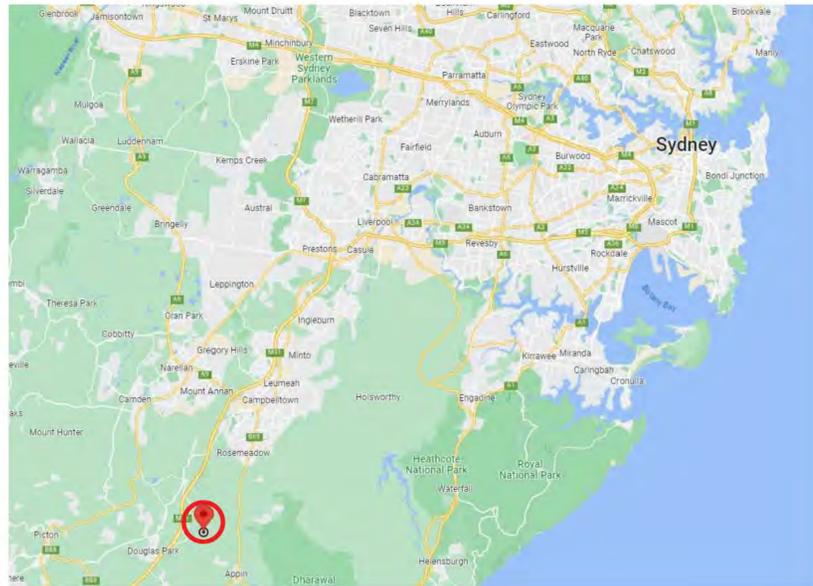
SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VH
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-OPC-12
ACAD REF:	

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UPPER CANAL KOALA CROSSING TYPE 3: LOG CLIMB CROSSING DETAILED DOCUMENTATION

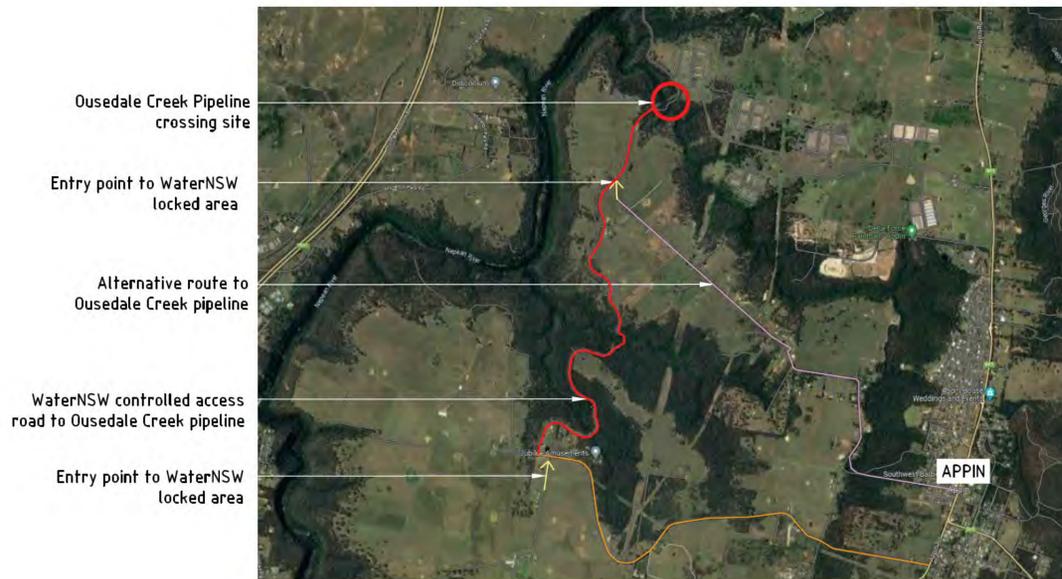
SITE LOCATION



DRAWING INDEX

DWG	TITLE
KC-LC-01	COVER PAGE
KC-LC-02	SPECIFIED NOTES
KC-LC-03	LOCATION PLAN
KC-LC-04	SETOUT PLAN
KC-LC-05	SURFACES PLAN
KC-LC-06	DETAILS

ROUTE TO SITE



ACCESS TO WATER NSW CONTROLLED AREA:

1. Contractor must make arrangement in advance with WaterNSW prior to entry WaterNSW controlled area.
2. Contractor must be accompanied by WaterNSW personnel when entering to the site.

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09.05.23	C	100% Draft DD for issue
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PROJECT TITLE DPE KOALA PROJECT		SCALE BAR	
CLIENT NSW GOVERNMENT		SCALE AS SHOWN	
DRAWING NAME TYPE 3: LOG CLIMB CROSSING COVER PAGE		DATE 29/05/2023	
		DRAWN AY/PL/VM	
		DESIGN TBLD	
		CHECKED GB	
		DATUM AHD	
		DWG No. KC-LC-01	
THOMPSON BERRILL LANDSCAPE DESIGN P/L PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au		ACAD REF:	

1. ACCESS & SET OUT NOTES:

- THE SUPERINTENDENT WILL DEFINE AND MAKE AVAILABLE ACCESS POINTS FOR THE CONTRACTOR TO ENABLE CONSTRUCTION MATERIALS TO BE BOUGHT TO THE SITES. THE PLANS SHOW WORK STORAGE SITES. THE CONTRACTOR IS REQUIRED TO CARRY ALL COMPONENTS AND EQUIPMENT INTO THE SITES.
- THE CONTRACTOR IS REQUIRED TO UNDERTAKE 3D SURVEY OF EACH SITE AS PER THE AREAS SHOWN.
- THE CONTRACTOR IS REQUIRED TO PREPARE AND PROVIDE DETAILED SHOP DWGS OF ALL WORKS FOR THE SUPERINTENDENT AND ENGINEERS REVIEW AND APPROVAL.
- THE CONTRACTOR IS REQUIRED TO EMPLOY THE SERVICES OF A REGISTERED SURVEYOR WITH PROVEN EXPERIENCE IN THE ACCURATE SET OUT OF LANDSCAPE CONSTRUCTION WORKS USING ELECTRONIC CAD FILES, PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS. THE SUPERINTENDENT WILL PROVIDE A DIGITAL AUTOCAD FILE COPY OF THE DRAWINGS TO THE SUCCESSFUL CONTRACTOR ONLY, FOR USE BY THE CONTRACTOR'S SURVEYOR TO ELECTRONICALLY DETERMINE AND SET OUT ALL WORKS. NO CAD FILES WILL BE DISTRIBUTED AT TENDER.
- THE CONTRACTOR MUST ALLOW SUFFICIENT TIME FOR ADJUSTMENT TO SET-OUT OF WORKS AS REQUIRED, UNTIL FINAL CONFIRMATION IS OBTAINED FROM THE SUPERINTENDENT. THE SETOUT OF WORKS MAY REQUIRE MINOR ADJUSTMENT IN ACCORDANCE WITH SITE CONDITIONS, AND THIS IS TO BE REGARDED AS NORMAL AND EXPECTED IN THE WORKS, DUE TO THE NATURE OF THE SITE CONDITIONS.
- ONCE SETOUT OF WORKS IS COMPLETED AND APPROVED, THE CONTRACTOR IS WHOLLY RESPONSIBLE FOR ACCURATELY MEASURING ALL EXISTING STRUCTURES, AND EXISTING SURFACE LEVELS AND ROCK OUTCROPS, TO INFORM PREPARATION OF THE WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATELY SETTING OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SURVEY INFORMATION SUPPLIED (REFER BELOW), PERMANENTLY MARKING NOMINATED KEY SET OUT POINTS AND CHECKING WORKS IN PROGRESS. NO MARKING OF HERITAGE STRUCTURES ALLOWED.
- NO ALLOWANCE FOR VARIATIONS WILL BE CONSIDERED FOR INADEQUATE ALLOWANCE BY THE CONTRACTOR FOR TIME, MATERIALS, LABOR TO COMPLETE ALL SET-OUT AND SITE MEASUREMENTS, SHOP DRAWINGS, AND TO MAKE ALL NECESSARY AMENDMENTS AND ADJUSTMENTS IN ORDER TO FABRICATE AND INSTALL THE WORKS IN ACCORDANCE WITH THE SCOPE OF WORKS CONTAINED IN THE DRAWINGS, AND TO THE SUPERINTENDENT'S SATISFACTION.
- THE CONTRACTOR IS TO ESTABLISH AND MARK THE HORIZONTAL ALIGNMENTS / CHAINAGE LINES, PANEL AND POSTS, INFRASTRUCTURE, SIGNIFICANT CHANGES IN GRADE AND ANY AND ALL OTHER FEATURES AS REQUIRED, IN ACCORDANCE WITH DRAWINGS, AND DETERMINE AND ESTABLISH ANY AND ALL REFERENCE POINTS AS REQUIRED TO SET-OUT THE WORKS IN SUCH A WAY THAT THEY WILL NOT BE DISTURBED BY THE CONTRACTOR'S OPERATIONS. THIS INCLUDES ESTABLISHMENT OF OFFSETS, SCALED FROM DRAWINGS, INDICATED ON THE DRAWINGS. NOTE: DO NOT DISFIGURE, DISTURB OR MARK NATURAL FEATURES I.E. ROCKS OR TREES.
- ALL TEMPORARY BENCH MARKS (TBM) IN THE SURVEY AND CONTROL POINTS ARE TO BE MAINTAINED AND PROTECTED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL SEEK APPROVAL FROM THE SUPERINTENDENT IMMEDIATELY ONCE THE LINES HAVE BEEN SET OUT AND BEFORE ANY OTHER WORK IS CARRIED OUT.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK AND PROVE ALL DESIGN DRAWINGS AND LEVELS ON SITE TO ENSURE NO DISCREPANCIES ARE FOUND, PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WORKS, AND DOES NOT IN ANY WAY LIMIT THE CONTRACTORS RESPONSIBILITY TO COMPLETE THE WORKS IN ACCORDANCE WITH THE INTENT OF THE DESIGN. SHOULD THE CONTRACTOR DISCOVER ANY MAJOR ERROR OR DISCREPANCY IN THE LINES ON THE PLAN OR THE SITE, THEY SHALL IMMEDIATELY NOTIFY THE SUPERINTENDENT AND AWAIT ADVISEMENT BEFORE PROCEEDING WITH THE AFFECTED WORKS.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE SUPERINTENDENT A MINIMUM OF 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- THE NOMINATION OF THESE INSPECTIONS DOES NOT PREVENT THE SUPERINTENDENT AND OR A NOMINATED REPRESENTATIVE FROM INSPECTING THE WORKS AT ANY TIME.
- SHOULD THE CONTRACTOR DISCOVER ANY ERROR OR DISCREPANCY IN THE SET OUT ON SITE, IT IS THEIR RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SUPERINTENDENT AND DETERMINE THE CONFIRM DISCREPANCY AND APPROPRIATE ACTION ON SITE WITH THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

2. DEFLECTION MANAGEMENT DURING CONSTRUCTION NOTES:

- DURING ERECTION PROVISION SHALL BE MADE TO LIMIT DEFLECTIONS TO DEAD LOADS ONLY. THE CONSTRUCTOR SHALL ENSURE THE STRUCTURE IS ADEQUATELY SUPPORTED WITH TEMPORARY PROPS AND FALSEWORK DURING CONSTRUCTION/ERECTION TO CONTROL DEFLECTIONS.
- NO TEMPORARY CONSTRUCTION LOADS, PACKS OF MATERIALS OR OTHER SURCHARGES SHALL BE IMPOSED UPON THE STRUCTURE DURING ERECTION.
- THE CONSTRUCTOR SHALL WARRANTEE THAT THE DEFLECTIONS OF PRINCIPAL MEMBERS UPON COMPLETION DO NOT EXCEED THE DESIGNERS STATED "DEAD LOAD DEFLECTIONS".
- ANY SUSPENDED CAST IN-SITU CONCRETE SLABS SHALL BE PROPPED DURING CONSTRUCTION UNTIL THE SLAB HAS CURED.

3. STRUCTURAL STEELWORK NOTES (WHERE APPLICABLE):

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.
- ALL MATERIAL INCLUDING FIXINGS TO BE SOURCED FROM AUSTRALIAN MANUFACTURES / SUPPLIERS HAVING BEEN MANUFACTURED AND TESTED TO REQUIREMENTS OF RELEVANT AUSTRALIAN STANDARDS
- ALL HOT ROLLED SECTIONS ARE TO BE GRADE 300 PLUS.
- ALL STRUCTURAL HOLLOW SECTIONS ARE TO BE GRADE 350 MPA.
- WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554, INSPECTED AND CERTIFIED BY A QUALIFIED PERSON AS DESCRIBED IN AS 2214.
- THE BOLTING PROCEDURES ARE TO BE IN ACCORDANCE WITH AS 1111 AND AS 1252.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED. SUCH TEMPORARY BRACING AS IS NECESSARY TO STB. CONCRETE ENCASED STEELWORK SHALL BE COMPLETELY WRAPPED WITH FGW41 GIRDER WRAP FABRIC, UNLESS OTHERWISE SHOWN.
- THE ENDS OF ALL HOLLOW SECTION MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN.
- EXCEPT WHERE OTHERWISE SHOWN, WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS. ALL WELDS ARE TO BE STRUCTURAL PURPOSE U.N.O.
- THE CONTRACTOR IS TO ALLOW FOR ALL THE NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHING AT ROOF OR WALL INTERSECTIONS
- UNLESS OTHERWISE SHOWN, PROVIDE SINGLE LINE OF BOLTS CLEAT CONNECTIONS, 10mm CLEAT PLATE, 6mm CONTINUOUS FILLET WELD AND M20 8.8/S BOLTS. PROVIDE 2 NO. BOLTS TO MEMBERS 200mm DEEP & LESS. A.I.S.C. STANDARDIZED STRUCTURAL CONNECTIONS
- IN ADDITION THE FABRICATOR SHALL SUBMIT THREE SETS OF SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. APPROVAL OF THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO COMMENCEMENT OF THE STEELWORK MANUFACTURE
- REMOVE ALL BURS, SHARP EDGES, DAGS, SLAG, DUST, RUST, DIRT, MILL SCALE AND OTHER DEBRIS. ABILISE THE STRUCTURE.

4. TYPICAL STEEL CONNECTION NOTES (WHERE APPLICABLE):

- ALL PLATES AND FLATS SHALL BE GRADE 300 PLUS AND SHALL BE 16mm THK (MIN) - UNO.
- ALL WELDS SHALL BE 6CFW ALL AROUND, BOTH SIDES - UNO.
- ALL BOLTS SHALL BE M20 - UNO.
- ALL BOLTS SHALL BE GRADE 8.8S - UNO.
- PROVIDE A MINIMUM OF TWO BOLTS PER FIXING - UNO.
- PROVIDE THREE BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 300 AND 399mm - UNO. PROVIDE FOUR BOLTS PER SUPPORT FOR BEAM DEPTHS BETWEEN 400 AND 499mm - UNO.
- WHERE OVERSIZE HOLES HAVE BEEN USED FOR ERECTION TOLERANCE - SITE WELD MATING PLATE TOGETHER WITH 100mm LENGTH OF 6CFW (MIN) AFTER BOLTING. MAKE GOOD ALL DAMAGED PAINTWORK.
- ALL BOLTS SHALL HAVE GALVANISED PRESSURE WASHERS UNDER BOLT HEAD AND NUT.

5. REINFORCEMENT NOTES (WHERE APPLICABLE):

- ALL HOOKS AND COGS SHALL COMPLY WITH AS 3600 UNLESS OTHERWISE SHOWN
- ALL REINFORCEMENT SHALL BE HELD RIGIDLY IN POSITION WITHIN THE SPECIFIED TOLERANCES BEFORE AND DURING CONCRETE PLACING:
 - NON CORROSIVE BAR CHAIRS SHALL BE USED FOR ALL OFF FORM SURFACES
- CONDUITS ETC. SHALL BE FABRICATED AND INSTALLED SO THAT NO CUTTING, BENDING OR DISPLACEMENT OF THE REINFORCEMENT FROM IT'S PROPER POSITION WILL BE REQUIRED
- DETAILS OF REINFORCEMENT AT APPROVED PENETRATIONS SHALL BE AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER ON-SITE
- CONCRETE BELOW GROUND IN WALLS, BEAMS, COLUMNS OR PEDESTALS SHALL BE PLACED INTO PROPERLY CONSTRUCTED FORMS:
 - IF APPROVED BY THE ENGINEER, CONCRETE MAY BE PLACED AGAINST AN EARTH FACE BUT THE CONCRETE DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE INCREASED TO PROVIDE 20mm ADDITIONAL COVER TO THE REINFORCEMENT ADJACENT TO THE EARTH FACE
- SPLICES SHALL ONLY BE USED AS SHOWN ON THE DRAWINGS OR WHEN BARS LONGER THAN NORMAL STOCK LENGTH WOULD BE REQUIRED:
 - IN LAP SPLICES, THE OVERLAP LENGTH SHALL BE TO THE REQUIREMENTS OF AS 3600 OR AS OTHERWISE DIMENSIONED ON THE DRAWINGS
- WELDING OF REINFORCEMENT SHALL NOT BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER
- IN WALLS THE VERTICAL REINFORCEMENT SHALL BE PLACED INSIDE THE HORIZONTAL REINFORCEMENT, UNLESS OTHERWISE SHOWN ON DRAWINGS
- ALL REINFORCEMENT MINIMUM COVER 65mm UNLESS STATED OTHERWISE.

6. ALUMINIUM COATING NOTES:

- ALL EXPOSED STRUCTURAL ALUMINIUM SHALL NOT BE TREATED.

7. CONCRETE NOTES:

- ALL WORKMANSHIP, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH AS 3600.
- THE FINISHED SURFACE AROUND THE SLAB & FOOTINGS SHALL BE GRADED AWAY FROM THE FOUNDATIONS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- AT RE-ENTRANT CORNERS, ONE STRIP OF 3 x N16 BARS SHALL BE PLACED DIAGONALLY ACROSS POTENTIAL CRACK
- DIMENSIONS SHOWN ARE THE MINIMUM REQUIRED. SET-OUT & SLAB DIMENSIONS ARE TO BE DERIVED FROM THE ARCHITECTURAL DRAWINGS
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT CODE OF THE STANDARDS ASSOCIATION OF AUSTRALIA AS 2870 & THE BUILDING REGULATIONS
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- WELDING OF REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.
- FOOTINGS INC. EDGE BEAMS & PADS ARE TO BE FOUNDED IN ORIGINAL UN-DISTURBED GROUND HAVING A SAFE BEARING CAPACITY OF 500kPa. BEFORE ANY CONCRETE IS PLACED, THE SAFE BEARING CAPACITY SHALL BE VERIFIED BY A QUALIFIED ENGINEER, OR A REGISTERED BUILDING PRACTITIONER. THE CONTRACTOR IS TO ALLOW THEIR TENDER PRICE FOR THOSE INSPECTIONS AND REPORTING TO BE UNDERTAKEN BY THEIR GEOTECHNICAL ENGINEER. ALL DOCUMENTATION IS TO BE SUBMITTED TO THE PRINCIPAL WITHIN 48 HOURS OF THE INSPECTION
- EXCAVATIONS BEYOND THE DIMENSIONS SPECIFIED SHALL BE FILLED WITH MINIMUM 15mPa CONCRETE
- THE CONTRACTOR IS TO UNDERTAKE ALL OF THE NECESSARY INVESTIGATIONS TO LOCATE UNDERGROUND SERVICES WITHIN THE SITE OR LIKELY TO BE INFLUENCED BY THE PROPOSED WORKS. THE CONTRACTOR SHALL INFORM THE PRINCIPAL IF ANY SERVICES ARE FOUND PRIOR TO PROCEEDING
- ALL FOUNDATIONS ARE TO BE FREE OF WATER & LOOSE MATERIAL PRIOR TO POURING ANY CONCRETE
- CONCRETE PROPERTIES SHALL BE AS FOLLOWS:
 - ELEMENT & LOCATION
 - FOOTINGS
 - SLABS ON GROUND
 - SUSPENDED SLABS
 - PRECAST PANELS
- THE CONTRACTOR TO GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTIFICATION OF HIS INTENTION TO POUR CONCRETE.
- ALL REINFORCEMENT SHALL BE SUPPORTED IN IT'S CORRECT POSITION DURING CONCRETING BE APPROVED BAR CHAIRS, SPACER OR SUPPORT BARS.
- PROVIDE 0.2mm WATER-PROOF VAPOUR BARRIER, ALL LAPS 200mm MIN. & JOISTS TO BE TAPED. ANY TERMITE TREATMENTS TO BE UNDER VAPOUR BARRIER TO AS 3666 & TO THE BUILDING SURVEYORS REQUIREMENTS
- THE CONTRACTOR IS TO ALLOW FOR ANY ADDITIONAL INVESTIGATIONS, TESTING, ANALYSIS OR ANY OTHER WORK TO BE UNDERTAKEN NECESSARY TO SATISFY THEMSELVES OF THE GROUND CONDITIONS, SUCH THAT THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL MATERIAL QUANTITIES & CONSTRUCTION TECHNIQUES NECESSARY TO ACHIEVE THE MINIMUM SAFE SOIL BEARING PRESSURE NOMINATED
- CONCRETE F'c = N40 GRADE @ 28 DAYS, 80 SLUMP. CONCRETE TO BE COMPACTED & WORKED AROUND REINFORCEMENT BY USE OF MECHANICAL VIBRATOR. CONCRETE TO BE CURED FOR 7 DAYS BY APPROVED METHOD. CONCRETE IS TO BE AVAILABLE FOR TESTING DURING POURING

- REINFORCED CONCRETE AS PER AS 3600 - 1994. TRENCH MESH SHALL HAVE ALL CROSS WIRES CUT FLUSH WITH OUTER MAIN WIRES & A MINIMUM LAP OF 500mm. REINFORCEMENT CLEAR COVER 50mm TOP OF SLAB. 50mm COVER TO BOTTOM BEAMS, REINFORCEMENT LAPS ON FABRIC TO BE ONE FULL MESH PANEL, BOTH SIDES & END LAPPED. REINFORCING STEEL TO BE FREE OF LOOSE RUST, GREASE, OIL OR SOIL TO BE IN ACCORDANCE WITH AS / NZ 4671
- PROVIDE BAR CHAIRS @ 1.0m CTRS MAX.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CSIRO SHEET BTF18, WHICH REPLACES INFORMATION SHEET 10/91
- ANY TRAFFICABLE (VEHICULAR) AREAS TO BE 40MPa CONCRETE.
- THE USE OF CHLORINE ADDITIVES AND FLY ASH IS EXPRESSLY FORBIDDEN IN ALL CONCRETE.
- UNLESS OTHERWISE SHOWN, PROVIDE N12-500N DISTRIBUTION REINFORCEMENT, LAPPED 450 AT SPLICES, 2 x N12 DIAGONAL CORNER BARS 2000 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS SLABS AND WALLS.
- ALL CONCRETE ON THIS PROJECT IS TO BE GRADED N40 MPa. U.N.O. THE OWNERS SHOULD BE ADVISED OF GENERAL FOUNDATION MAINTENANCE REQUIREMENTS AS OUTLINED ON CSIRO DOCUMENT "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE".
- THE CONTRACTOR IS REQUIRED TO PROVIDE AS CONSTRUCTED TESTS FOR ALL POURED CONCRETE FOOTINGS ON SITE, VERIFIED BY INDEPENDENT LABORATORY TESTS AND REPORTING TO MEET RELEVANT AUSTRALIAN STANDARDS.

8. ROCK ANCHOR NOTES:

- FOR ROCK ANCHOR SPECIFICATIONS, REFER TO TECHNICAL DWGS

Log Climb Crossing Construction Methodology

- The following construction method is a guide for the contractor to undertake the works.
- The method is to be considered and updated by the contractor at the time of tender and further refined on site possession and on commencement of works.
- The following site factors are to be considered by the contractor in their construction methodology.
 - SWMS for contractor works
 - Environmental Plan
 - Setout
 - Access to the site
 - Transport of material, including logs into the site
 - Contractor's electrical generator location for power supply
 - Excavation methodology for footings
 - Disposal of excavated material
 - Rock drilling
 - Protection of pipeline asset from any potential impact/damage for duration of contract
 - Footings installation
 - Bracket installation
 - Timber logs (cut into length) installation
 - Final adjustments to log climb to achieve secure, consistent and contiguous log climb structure

SETOUT NOTE:
 Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



WARNING
BEWARE OF UNDERGROUND SERVICES
 THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN. THE CONTRACTOR MUST VERIFY ALL SERVICES ON SITE PRIOR TO ANY EXCAVATION WORKS.

GENERAL NOTES:
 Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

SHOP DRAWINGS NOTE:
 As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
 All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joins or details without prior written approval of the Engineer.

DATE	REV	AMENDMENT
17.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT **DRAWING NAME**

TYPE 3: LOG CLIMB CROSSING SPECIFIED NOTES

THOMPSON BERRILL LANDSCAPE DESIGN P/L
 PO BOX 665 MANLY NSW 2095 T: 9577 6444 E: info@tbd.com.au

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-LC-02
ACAD REF:	

Fenced Work Areas:
Contractor to install 2m security fencing and locked gate to the perimeter of WA 01 and WA 02



PHOTO PERSPECTIVE 1
STARTING POINT OF THE LOG CLIMB OVER ROCK LEDGE



PHOTO PERSPECTIVE 2
VIEW FROM OUTLET MAINTENANCE DECK OF THE LOG CLIMB



PHOTO PERSPECTIVE 3
VIEW OF LOG CLIMB STRUCTURE TRAVERSING ROCK SCREE GULLY

NOTE FOR CONTRACTOR:
THE LOG CLIMB SKETCH SHOWN IN PHOTOS IS FOR REFERENCE, PROPOSES ONLY, LOCATION & SCALE INDICATIVE ONLY

2 LOG CLIMB CROSSING SITE PHOTOS
NTS

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As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

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PROJECT TITLE DPE KOALA PROJECT		SCALE BAR	
CLIENT NSW GOVERNMENT	DRAWING NAME TYPE 3: LOG CLIMB CROSSING LOCATION PLAN	SCALE	AS SHOWN
		DATE	29/05/2023
		DRAWN	AY/PL/VM
		DESIGN	TBLD
		CHECKED	GB
		DATUM	AHD
		DWG No.	KC-LC-03
THOMPSON BERRILL LANDSCAPE DESIGN P/L PO BOX 665 MANLY NSW 2095 T. 9577 6444 E. info@tbd.com.au		Woolacotts CONSULTING ENGINEERS	ACAD REF:

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.

- NOTES:**
1. Install protective fencing as shown for the duration of contract works.
 2. No access to channel or pipeline area at any time.
 3. Do not touch, load, impact or support on pipeline at any time.
 4. Vehicles, equipments and goods must be stored at designated area.

- SURFACE KEY:**
- Note: Approx. areas only - not surveyed
- Solid sandstone rock (Indicative extent only)
 - Broken sandstone rock scree pile (Indicative extent only)
 - Unknown surface around bank and rock scree (indicative extent only)



KOALA BRIDGE CROSSING
REFER CROSSING TYPE 2
SET

1 SETOUT PLAN
SCALE 1:100 @ A3 1:50 @ A1

SETOUT NOTE:
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WARNING
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GENERAL NOTES:
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SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

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09.05.23	C	100% Draft DD for issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT
NSW GOVERNMENT

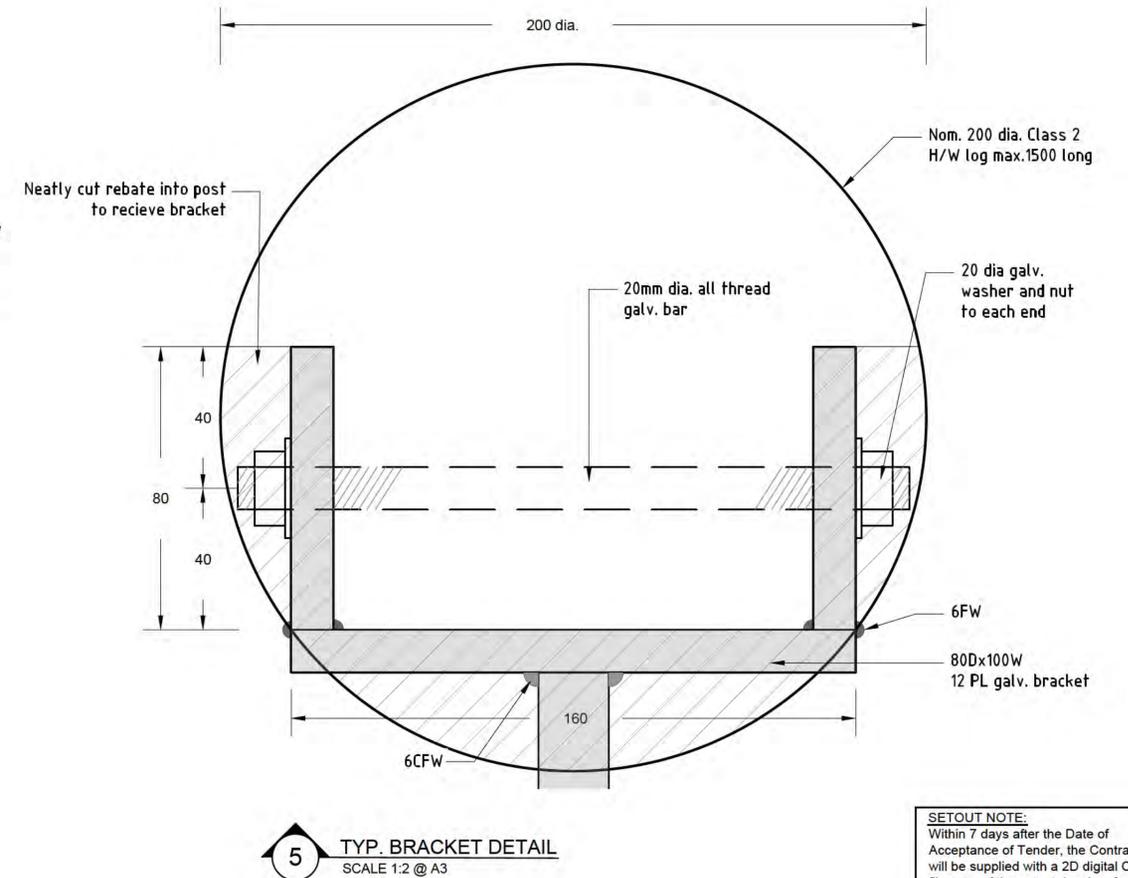
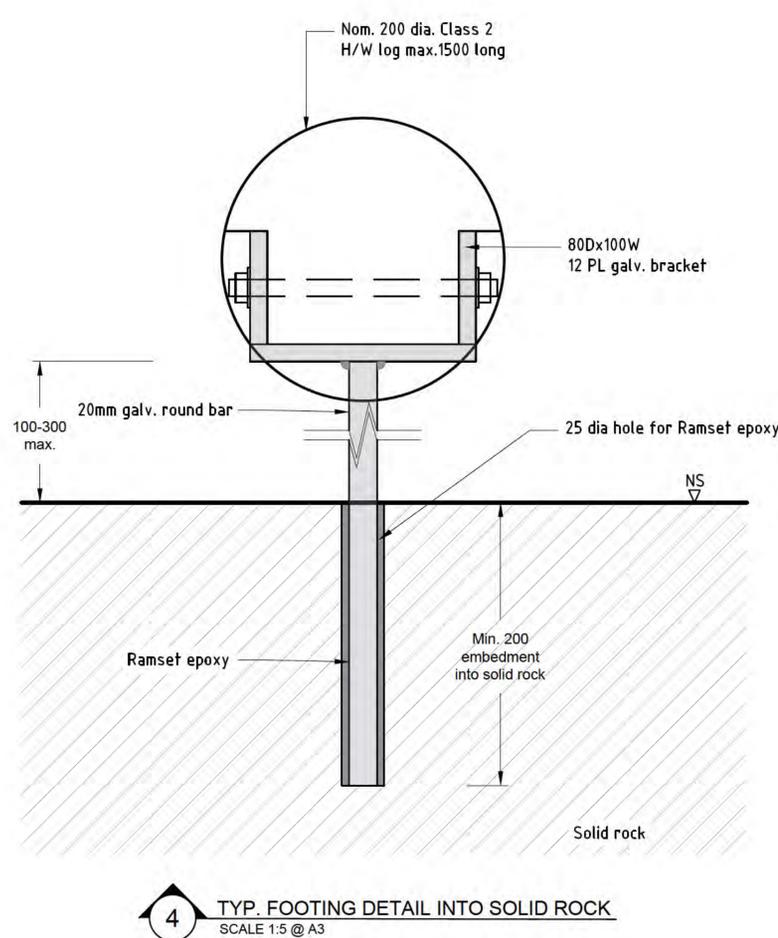
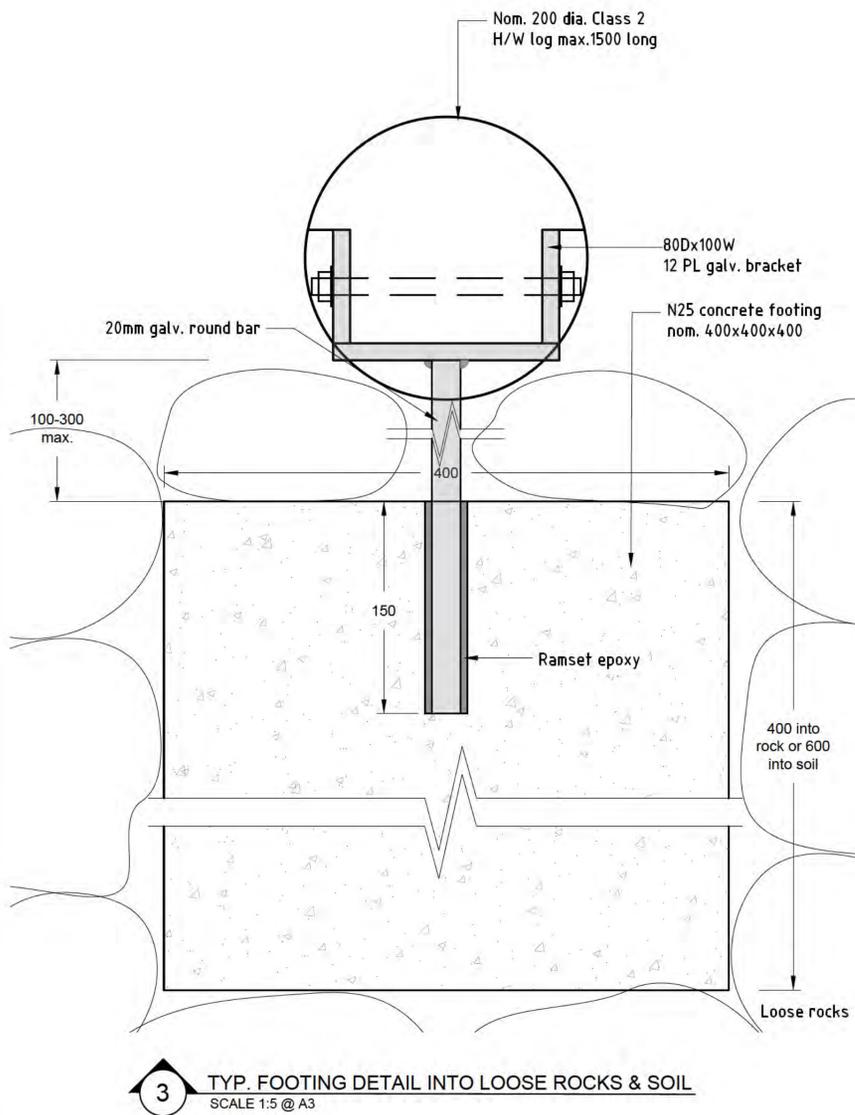
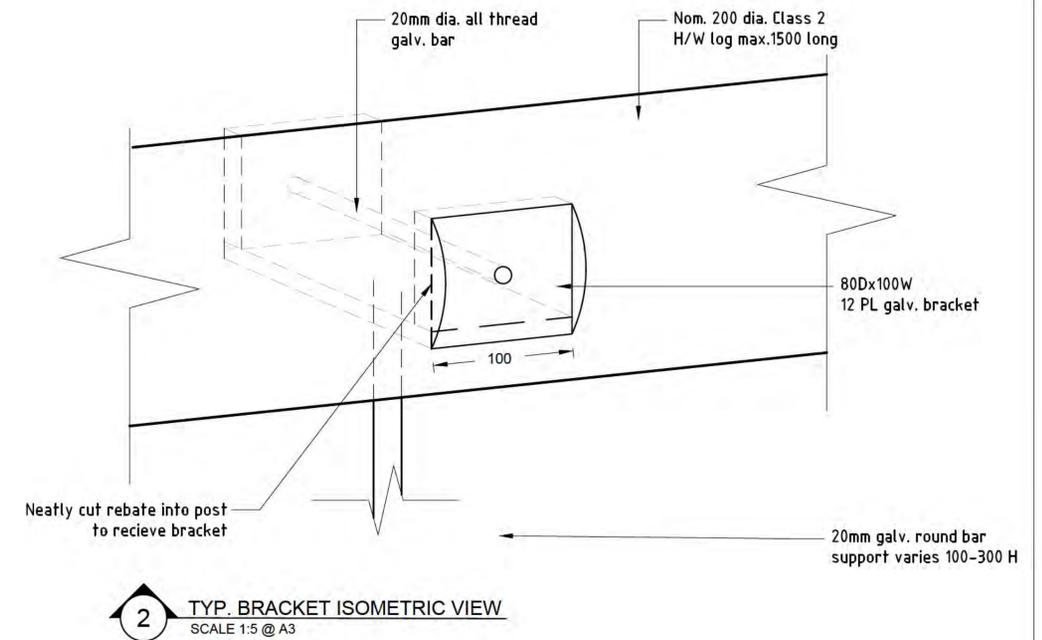
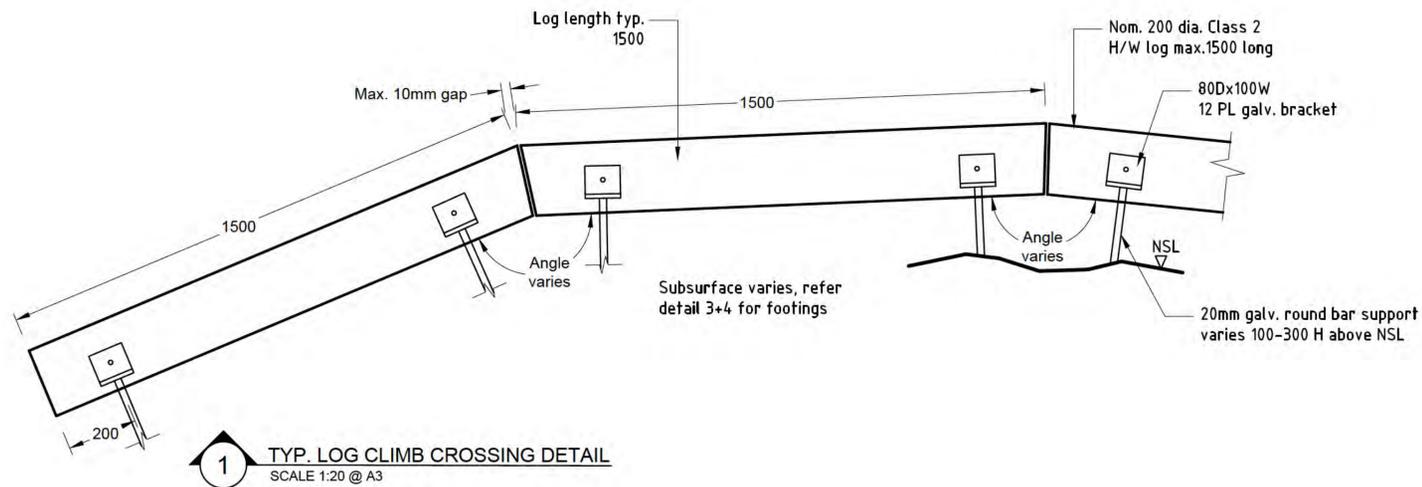
DRAWING NAME
TYPE 3: LOG CLIMB CROSSING SURFACES PLAN

SCALE BAR

SCALE	AS SHOWN
DATE	29/05/2023
DRAWN	AY/PL/VM
DESIGN	TBLD
CHECKED	GB
DATUM	AHD
DWG No.	KC-LC-05
ACAD REF:	

THOMPSON BERRILL LANDSCAPE DESIGN P/L
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Woolacotts
CONSULTING ENGINEERS



SETOUT NOTE:
Within 7 days after the Date of Acceptance of Tender, the Contractor will be supplied with a 2D digital CAD file copy of the setout drawing, for use by the Contractor's surveyor to electronically determine and set out all works using total station survey equipment. Refer to Specification for details.



WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN. THE CONTRACTOR MUST VERIFY ALL SERVICES ON SITE PRIOR TO ANY EXCAVATION WORKS.

SHOP DRAWINGS NOTE:
As part of contract works the contractor must prepare and supply full shop drawings of all steel components and submit to Superintendent to gain structural Engineering Approval, prior to fabrication

ENGINEERING CERTIFICATION:
All drawings, details and notations have undergone structural engineering computations and have received engineering compliance from Woolacotts Consulting Engineers (NPR #154683). Construction is therefore to strictly adhere to the drawings provided, with no alterations permissible to dimensions, materials, fixings, joints or details without prior written approval of the Engineer.

GENERAL NOTES:
1. All works to be setout on site at 4No. locations and approved by TBLD before commencement of works.
2. All timber min. Class 2 H/W.

DATE	REV	AMENDMENT
17.02.23	A	50% Draft DD
17.02.23	B	80% Draft DD
09.05.23	C	100% Draft DD for Issue
29.05.23	D	Issued for construction

PROJECT TITLE
DPE KOALA PROJECT

CLIENT



DRAWING NAME

TYPE 3: LOG CLIMB CROSSING SETOUT PLAN

THOMPSON BERRILL LANDSCAPE DESIGN P/L
PO BOX 665 MANLY NSW 2095 T: 9977 6444 E: info@tbd.com.au

Woolacotts
CONSULTING ENGINEERS

SCALE BAR

SCALE AS SHOWN
DATE 29/05/2023
DRAWN AY/PL/VH
DESIGN TBLD
CHECKED GB
DATUM AHD
DWG No. **KC-LC-06**

ACAD REF:

GENERAL NOTES:
Services shown hereon have been located by field survey. Further services may be present. Prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed locations of all services.