DESIGN LIMITATIONS:

1. MAJORITY REQUIREMENTS OF AS 1657 CAN BE MET BY EXISTING HATCH ARRANGEMENT.
2. NON-COMPLIANCE WITH CLAUSE 7.4.8.4. REGARDING EXTENSION OF LANDING TO TOP RUNG (DUE TO THICKNESS HAVE PROVIDED 200 mm OFFSET AT TOP RUNG). CLIENT TO PERFORM A HAZOP TO DETERMINE SUITABILITY OF DESIGN VERSUS COST OF MODIFICATION.
3. TOP RUNG ALIGNED WITH TOP OF ROOF PLATE AT CENTRELINE OF LADDER (IN ACCORDANCE WITH AS 1657) WHICH IS ALLOWABLE BY THE RAISED HATCH SURROUND. CROSS-SLOPE AT TOP OF LADDER VARIES DUE TO CURVATURE OF ROOF, BUT IS APPROXIMATELY 5 °.
4. OPEN SPACE BETWEEN LADDER STILE AND INSIDE OF TANK WALL IS LARGER THAN 25 - 50 mm (ALLOWED BY AS 1657). THE SPACE IS NOT LARGE ENOUGH FOR A STANCHION C/W CLOSURE BEND. IT IS PROPOSED TO INSTALL A VERTICAL STANCHION WITHOUT ADDITIONAL COMPONENTS TO REDUCE OPEN GAP, BUT CLIENT SHALL REVIEW THIS TO CONFIRM SUITABILITY (CONSIDERING LIMITED ACCESS REQUIREMENTS, PLATFORM USAGE ETC.).
4. REFER CONSTRUCTION METHODOLOGY NOTE FOR PROPOSED INSTALLATION SEQUENCE. PROPOSED SEQUENCE IS SUBJECT TO REVIEW AND MODIFICATIONS BY CONSTRUCTION AND FABRICATION CONTRACTORS. INSTALLATION CONTRACTOR TO PROVIDE THERE OWN METHODOLOGY TO BANANA SHIRE COUNCIL FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
5. SITE MODIFICATION OF EQUIPMENT AND HANDRAILS ON SITE WILL BE REQUIRED DUE TO THE LIMITED EXISTING DOCUMENTATION AND EXTENT OF MODIFICATIONS REQUIRED BY THE PROPOSED DESIGN. CONTRACTOR TO ALLOW FOR ALL MODIFICATION WORKS INCLUDING MATERIALS AND SITE INSPECTIONS, AND WORK IN CONJUNCTION WITH BSC SUPERINTENDENT.
6. INTERNAL AREAS OF THE CONCRETE TANK ARE CONSIDERED CONFINED SPACES, AND SHALL REQUIRE A FULL HAZOP PRIOR TO ENTRY BY ANY PERSONNEL. A SAFETY DAVIT HAS BEEN PROVIDED AS PART OF THIS DESIGN.
7. ANY WORK CONDUCTED ON THE PLATFORM PRIOR TO FULL INSTALLATION OF HANDRAILS AND LADDER WILL REQUIRE ATTACHMENT TO A SAFETY LINES AND OTHER SAFETY EQUIPMENT AS THIS WILL BE WORKING AT HEIGHTS. PERSONNEL SHALL BE FULLY TRAINED AND CERTIFIED FOR WORKING AT HEIGHTS AND ACCESS SHALL BE ASSESSED (I.E. HAZOP) PRIOR TO ENTRY INTO THE AREA.
8. WORK CARRIED OUT IN THE CONCRETE TANK WILL REPRESENT A POTENTIAL HAZARD FROM ITEMS FALLING FROM ABOVE. CONTRACTORS SHALL TAKE STEPS TO PREVENT ACCIDENTAL DROPPING OF ELEMENTS INTO THE CHAMBER, AND HAZOPS SHALL BE UNDERTAKEN TO DETERMINE THE BEST APPROACH FOR LOWERING OF EQUIPMENT SAFELY. HARDHATS AND OTHER PPE WILL BE REQUIRED.
9. LIKEWISE THE LIFTING OF ELEMENTS ONTO THE TANK ROOF WILL PRESENT A HAZARD TO ALL WORKERS ON THE OUTSIDE OF THE TANK, AND ADDITIONALLY MEMBERS OF THE PUBLIC. THE WORKSITE SHALL BE FULLY FENCED AS REQUIRED TO ALLOW FOR THE MOVEMENT OF MATERIALS SAFELY AND WITHOUT RISK TO THE PUBLIC (WHERE POSSIBLE). HAZOP SHALL CONSIDER CRANE OPERATION, POSITIONING AND ACCESS.
10. PLATFORM DESIGN ASSUMES STANDARD ENTRY TO TANK WILL BE CONDUCTED BY DIVERS WITH WATER LEVEL ABOVE THE LEVEL OF THE PLATFORM DECK. WHERE THIS IS NOT THE CASE A HAZOP SHALL BE CONDUCTED TO IDENTIFY ANY ADDITIONAL SAFETY ISSUES THAT MAY BE PRESENT AND DETERMINE SUITABLE CONTROLS / METHODS.
11. CLIENT TO PRODUCE A PROCEDURE FOR SAFETY ACCESS FOR DIVERS FOR INDIVIDUAL TANKS. ALL DESIGN CONSTRAINTS AND SAFETY ISSUES RAISED ABOVE SHALL BE INCLUDED, IN ADDITION TO ANY OTHER ISSUES IDENTIFIED BY BSC PERSONNEL AND CONTRACTORS

CONSTRUCTION METHODOLOGY:

1. BANANA SHIRE COUNCIL TO ARRANGE AND DRAIN EXISTING RESERVOIR. TIME TO BE ALLOWED FOR DRYING OF CONCRETE SURFACES PRIOR TO INSTALLING NEW ELEMENTS.
2. PROCEED WITH DEMOLITION WORKS AS INDICATED. ALL EXISTING ELEMENTS TO REMOVED AND DISPOSED OF SAFELY AND IN ACCORDANCE WITH BSC SUPERINTENDENTS INSTRUCTION. WHERE EXISTING ITEMS ARE REMOVED FROM EXISTING CONCRETE SURFACES, ENSURE ALL EXPOSED SURFACES (I.E. CUT ANCHORS ETC.) ARE FULLY SEALED WITH POTABLE WATER APPROVED SEALANT. ANY CONCRETE DAMAGE SHALL BE REMEDIED TO THE SPECIFICATION OF THE BSC SUPERINTENDENT.
3. LOWER NEW FRP AND STAINLESS STEEL MEMBERS, CLEATS, FIXINGS ETC. FOR NEW PLATFORM INTO THE EXISTING RESERVOIR CHAMBER. ELEMENTS TO BE PLACED ONTO TANK FLOOR.
4. POSITIVELY LOCATE POSITIONS FOR INSTALLATION OF NEW WALL MOUNTING BRACKETS. START WITH LAYOUT OF PLATFORM MEMBERS ON THE TANK FLOOR TO ASSIST IN ENSURING MEMBERS ALIGN WITH BRACKET POSITIONS, THEN TRACE UP THE WALL (I.E. USE OF PLUMB-BOB FROM ABOVE TO ALIGN POSITIONS).
5. ONCE WALL MOUNT POSITIONS ARE PREPARED, FULLY ASSEMBLE MAIN PLATFORM LEVEL, COMPLETE WITH HANDRAIL, GRATING AND KICK PLATE SECTIONS.
6. PREPARE TO LIFT PLATFORM ASSEMBLY. BEFORE LIFTING INTO PLACE (BUT WHILE SUSPENDED) INSTALL KNEE BRACE ELEMENTS TO PLATFORM BEAMS. ONCE FULLY ASSEMBLED, ELEVATE PLATFORM ASSEMBLY UP AND ONTO WALL BRACKETS. FIX ALL MEMBERS TO WALL BRACKETS IN ACCORDANCE WITH ENGINEERING DETAILS. WHERE APPLICABLE, FIX UPPER HANDRAIL BASE PLATES TO UNDERSIDE OF EXISTING TANK ROOF.
7. LOWER ELEMENTS FOR LADDER SUPPORT ONTO PLATFORM BELOW AND ASSEMBLE FRAME. INSTALL ONTO WALL BRACKETS AND FASTEN AS PER ENGINEERING DETAILS.
8. LOWER NEW LADDER ASSEMBLY ONTO NEW PLATFORM. LOCATE AND FIX TO NEW PLATFORM AND EXISTING STRUCTURE IN ACCORDANCE WITH ENGINEERING DETAILS.

DESIGN INCORPORATES REQUIREMENTS OF AS 2299.1-2015 WHERE APPLICABLE:

3.10 DIVE REQUIREDMENTS:

3.10.1 GENERAL

DIVING OPERATIONS SHALL BE CONDUCTED ONLY FROM A SAFE AN SUITABLE SITE OR VESSEL, WHICH AT TIMES PROVIDES:

(a) SUITABLE ACCESS & EXIT FOR THE DIVERS;
(b) MEANS TO RECOVER AN INJURED DIVER FROM THE WATER; AND
(c) MEANS OF COMMUNICATION TO EMERGENCY SUPPORTED SERVICES (SEE CLAUSE 3.6.4)

3.13.3 HARNESSES

PROVIDES REQUIREMENT SHOULD A HARNESS BE REQUIRED

3.13.6 LIFELINE

A HARNESS AND LIFELINE WOULD BE A HINDRANCE IN THESE OPERATIONS, PREVENTING SAFE MOVEMENT THROUGHOUT THE TANK. BANANA SHIRE COUNCIL SHALL HAZOP WITH COMMERCIAL DIVER.

7.3.4 DIVER DEPTHS TO 30 m (SCUBA)

THE TEAM SHALL INCLUDE 1 SUPERVISOR, 1 DIVER, 1 DIVERS ATTENDANT AND 1 STANDBY DIVER (4 IN TOTAL). ROOFTOP PLATFORM SHOULD BE DESIGNED TO ALLOW FOR 4 PEOPLE.

STAINLESS STEEL:

1. ALL STAINLESS STEEL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF:
   - 1.1. AS 4100 - SAA STEEL STRUCTURES CODES
   - 1.2. AS 1554.6 - STRUCTURAL STEEL WELDING - WELDING STAINLESS STEELS FOR STRUCTURAL PURPOSES
2. STAINLESS STEEL GRADES AS FOLLOWS:
   - 2.1. PLATE, SHEET AND STRIP SHALL BE TO ASTM A240M GRADE 316L
   - 2.2. BARS SHALL BE TO ASTM A276M GRADE 316L
3. STAINLESS STEEL FINISHING DETAILS:
   - 3.1. ALL SHARP EDGES AND BURRS TO BE REMOVED
   - 3.2. STAINLESS STEELWORK SHALL BE CLEANED, PICKLED AND PASSIVATED IN ACCORDANCE WITH ASTM A380 "STANDARD PRACTICE FOR CLEANING, DESCALING AND PASSIVATION OF STAINLESS STEEL PARTS, EQUIPMENT AND SYSTEMS".
4. WELD DETAILS:
   - 4.1. ALL WELDS SHALL BE 6 CFW UNO.
   - 4.2. BUTT WELDS SHALL BE PRE-QUALIFIED FULL PENETRATION UNO.
   - 4.3. ALL WELDING SHALL CONFORM WITH AS 1554.6, CATEGORY 1A.
   - 4.4. ALL WELDING CONSUMABLES SHALL BE TO AS/NZS 1167.2 AND/OR AS/NZS 4854.
   - 4.5. ALL WELDS SHALL BE VISUALLY INSPECTED.
   - 4.6. ALL WELDS SHALL BE FREE FROM DEFECTS SUCH AS CRACKS, EXCESSIVE UNDERCUTS AND GROSS POROSITY.

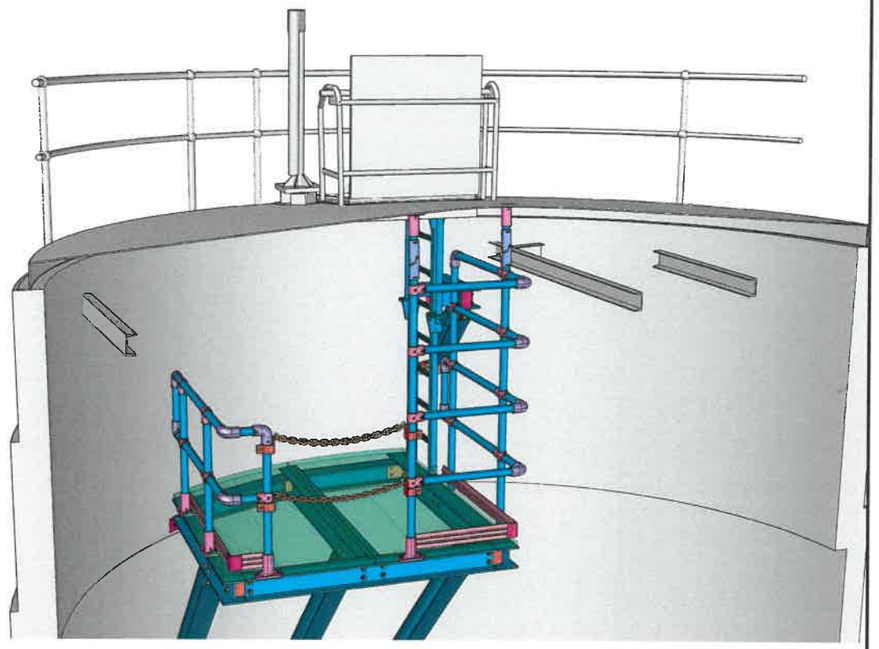
FIBRE REINFORCED PLASTIC (FRP) / COMPOSITE FIBRE:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. ENSURE COMPLIANCE WITH MANUFACTURER QUALITY ASSURANCE STANDARDS.
2. UNLESS NOTED OTHERWISE OR APPROVED COMPOSITE MATERIALS FOR USE IN THIS PROJECT SHALL BE MANUFACTURED BY TREADWELL. SUBSTITUTIONS IN MATERIALS SHALL NOT BE UNDERTAKEN WITHOUT PRIOR APPROVED OF BSC SUPERINTENDENT AND STRUCTURAL ENGINEER.
3. ALL MEMBERS SHALL BE IN SOUND CONDITION FREE FROM PITTING, DE-LAMINATIONS AND OTHER DEFECTS WHICH ARE LIKELY TO IMPAIR THE STRUCTURAL CAPACITY OF THE MEMBERS.
4. APPLY A WATERPROOFING COMPOUND TO SEAL ANY END CUT FIBRES AS A RESULT OF DRILLING, CUTTING OR DAMAGE TO THE COMPOSITE FIBRE PROFILES. COMPOUND SHALL BE APPROVED FOR POTABLE WATER AND SHALL BE APPROVED BY THE MANUFACTURER.
5. CONTRACTORS SHALL REFER TO MANUFACTURER FOR ALL INSTALLATION AND ASSEMBLY INSTRUCTIONS AND SPECIFICATIONS PRIOR TO BEGINNING WORK, AND SHALL ENSURE THAT ALL INSTRUCTIONS ARE UNDERSTOOD.

SUBJECT SITE

LOCALITY PLAN

SCALE - NTS



Approved :
Chris Witham
Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

ISSUED FOR CONSTRUCTION

No.	Date	Revision	By	Appr
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0	20/06/23	ISSUED FOR CONSTRUCTION	JW	AB

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QUALITY DESIGN. CONCEPT TO COMPLETION
A.S. BUENEN Pty. Ltd. Trading as:
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STEELWORK & CONCRETE PANEL SHOP DETAILING
RESIDENTIAL & COMMERCIAL BUILDING DESIGN - QBCC 1191231
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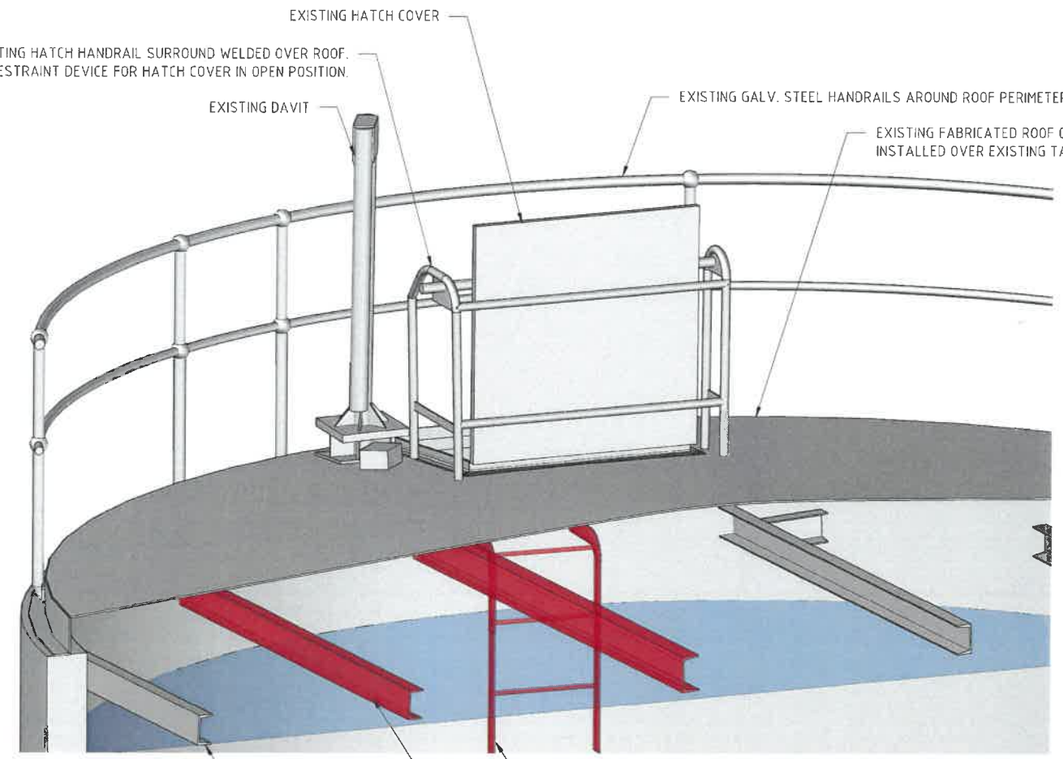
		Date
Designed by	A.BUENEN	-
Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
DESIGN NOTES

Scale
AS SHOWN (AT A3)

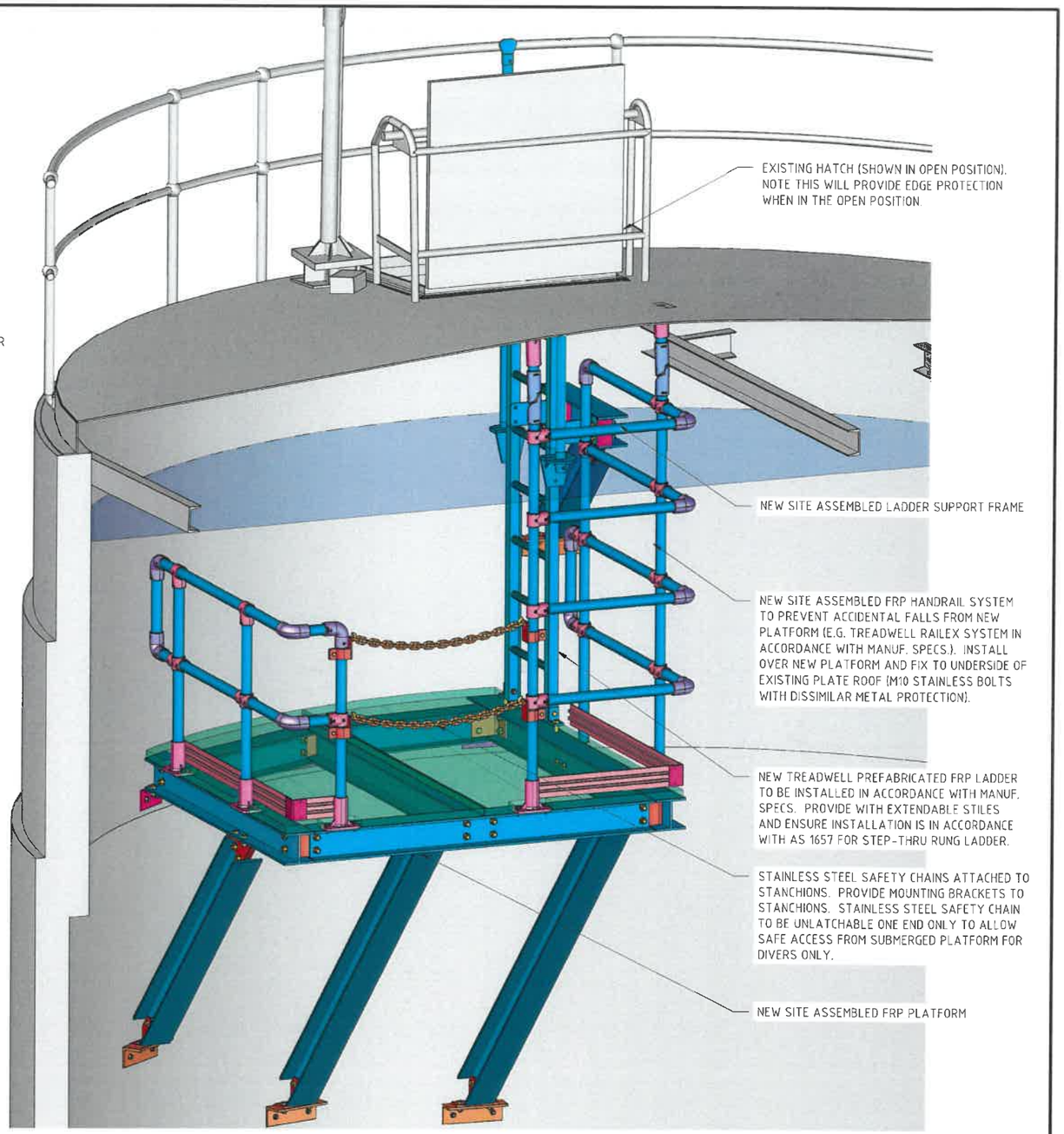
Job No.
GD2188

Drawing No. GD2188-400 Rev. 0



DEMOLITION PLAN (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY



GENERAL ARRANGEMENT (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

Approved :
C.L. Witham
Chris Witham Member No : 697629
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Allied Group Australasia Pty Ltd
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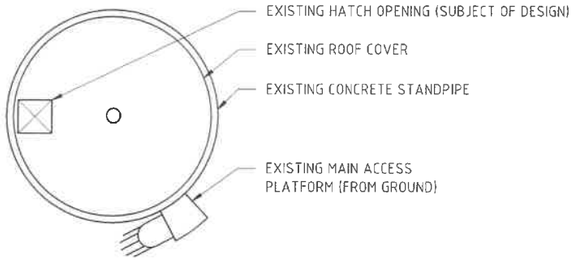
Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

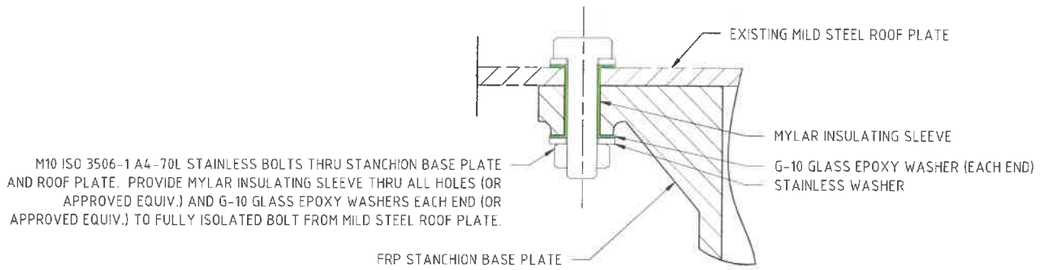
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
GENERAL ARRANGEMENT 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-401 Rev.: 0



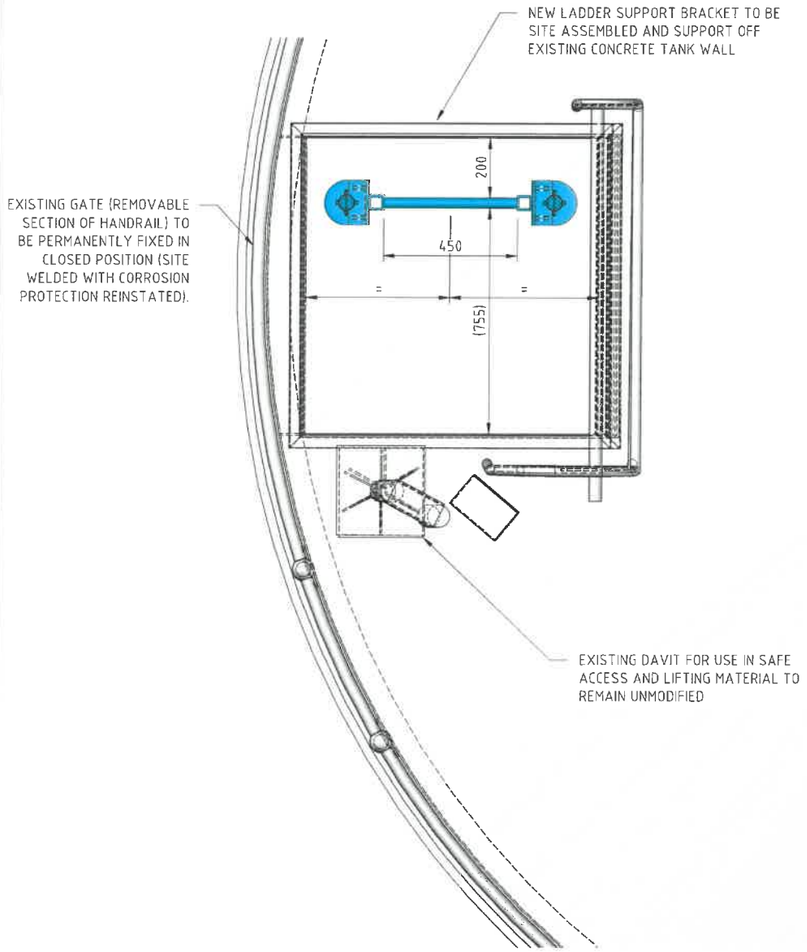
ROOF ARRANGEMENT PLAN

SCALE - NTS



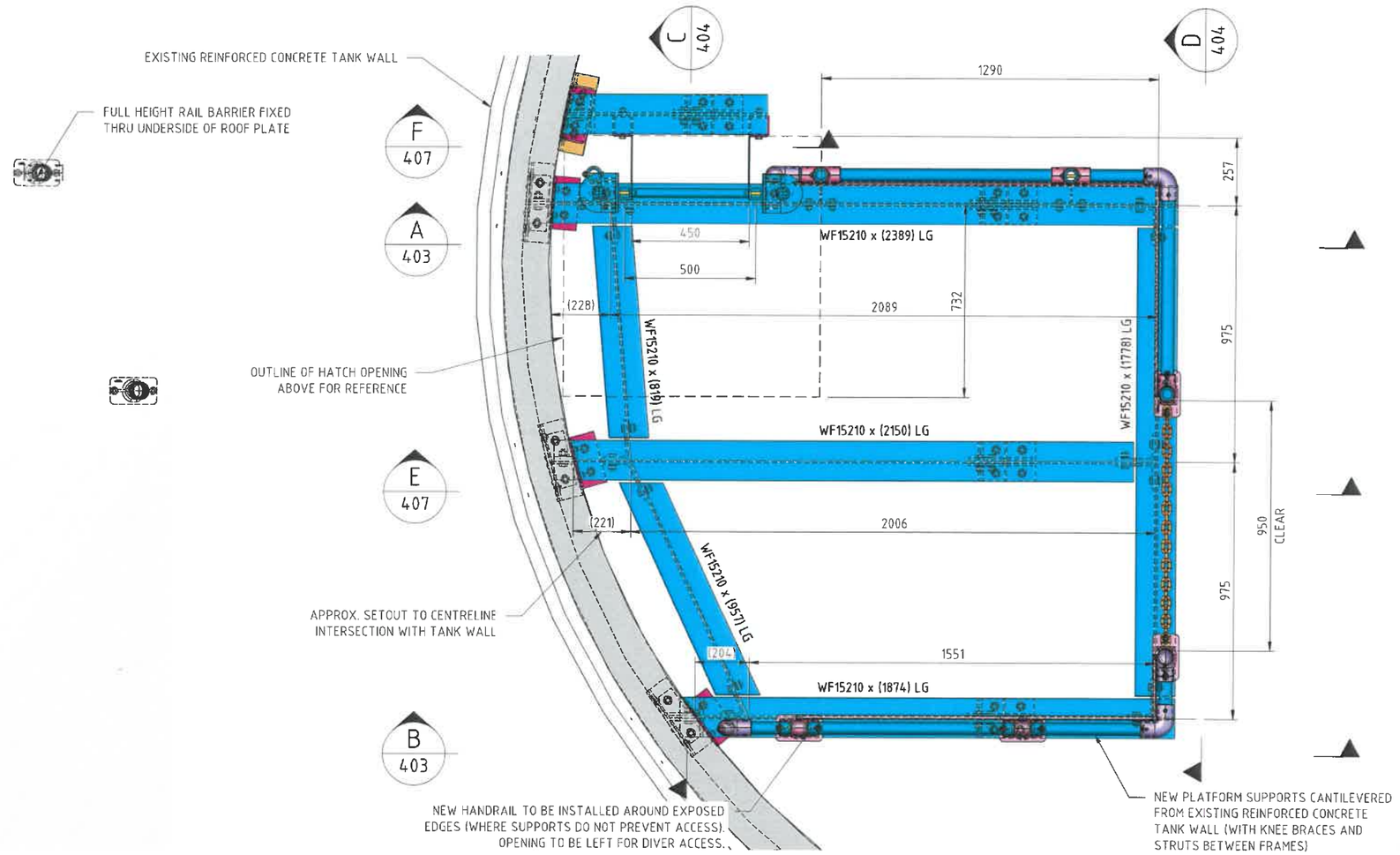
DISSIMILAR METAL PROTECTION DETAIL

SCALE - 1:2



GENERAL ARRANGEMENT (PLAN AT ROOF LEVEL)

SCALE - 1:20



GENERAL ARRANGEMENT (PLAN AT PLATFORM LEVEL)

SCALE - 1:20
GRATING NOT SHOWN FOR CLARITY

Approved :

Chris Witham Member No : 697629
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Allied Group Australasia Pty Ltd
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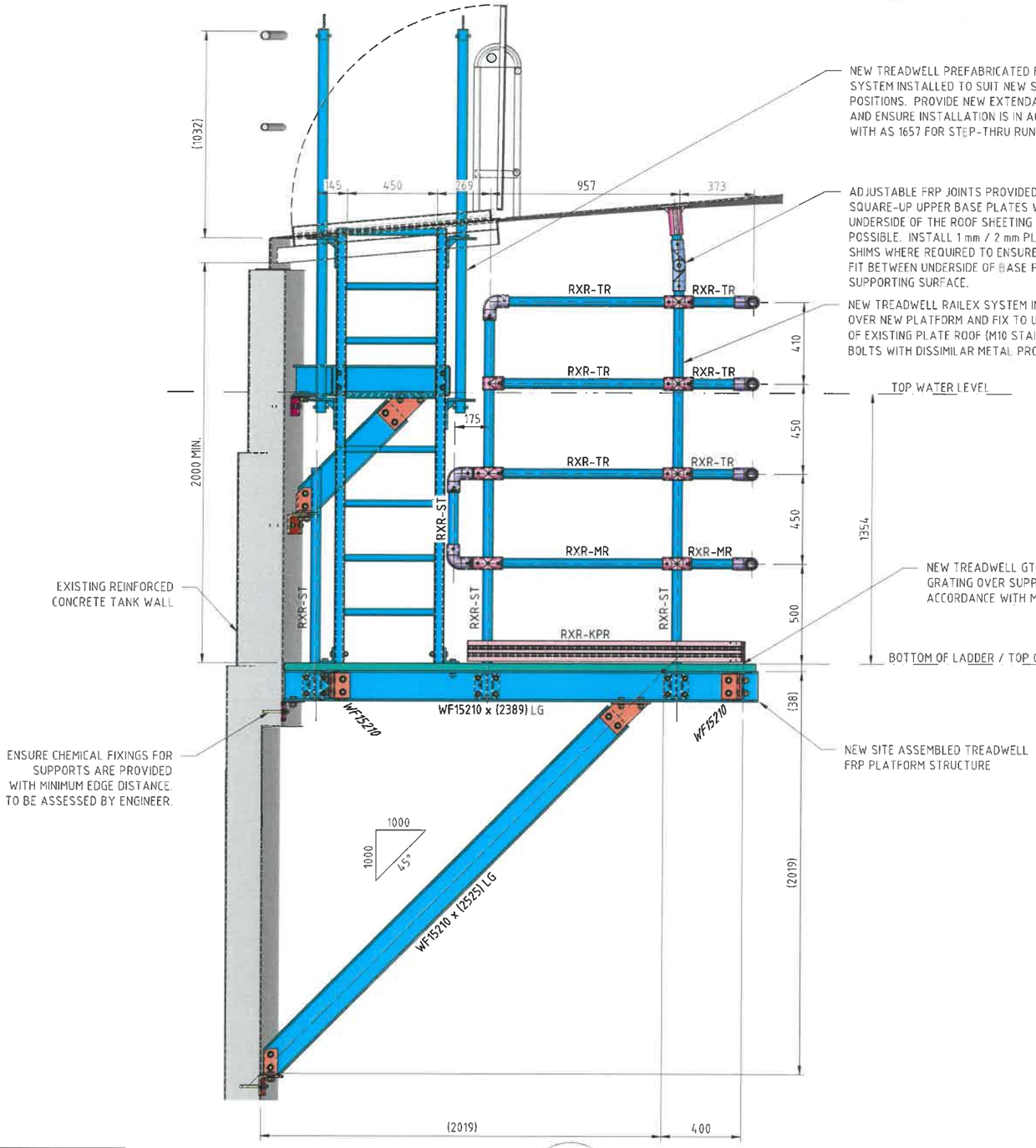
Designed by	A.BUENEN	Date -
Drawn by	J.WALKER	Date 05.04.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
GENERAL ARRANGEMENT 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-402 Rev.: 0



SECTION A
SCALE - 1:25

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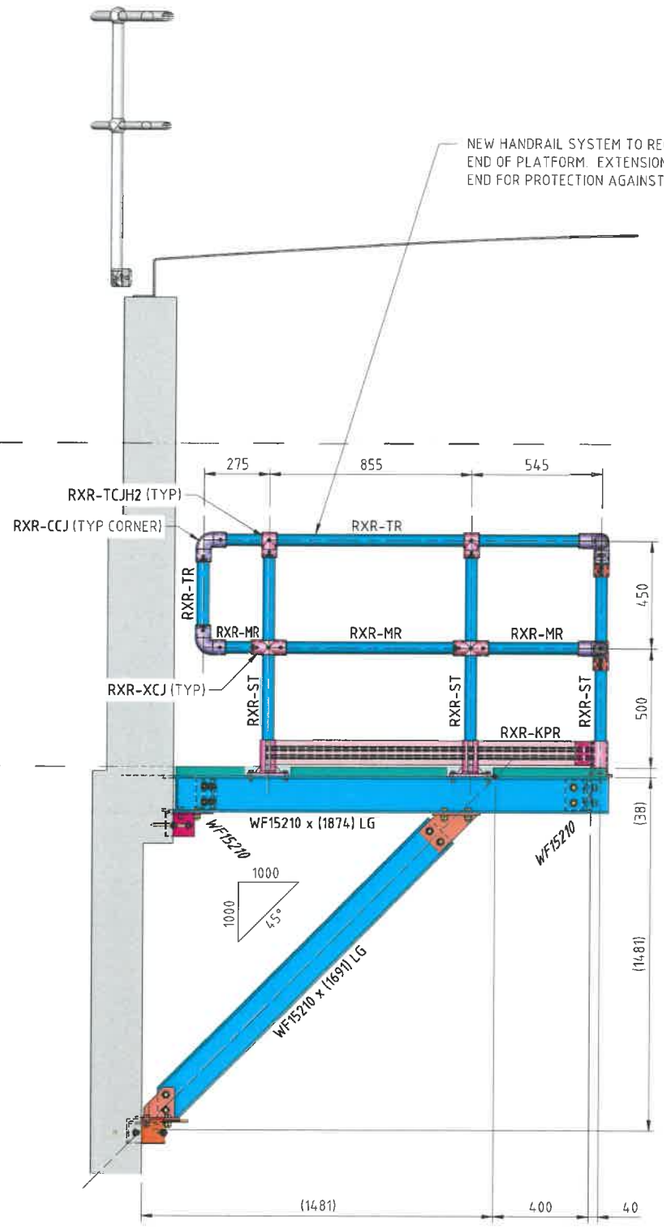

SECTION B
SCALE - 1:25

402

Approved :
Chris Witham Member No : 697629
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Allied Group Australasia Pty Ltd
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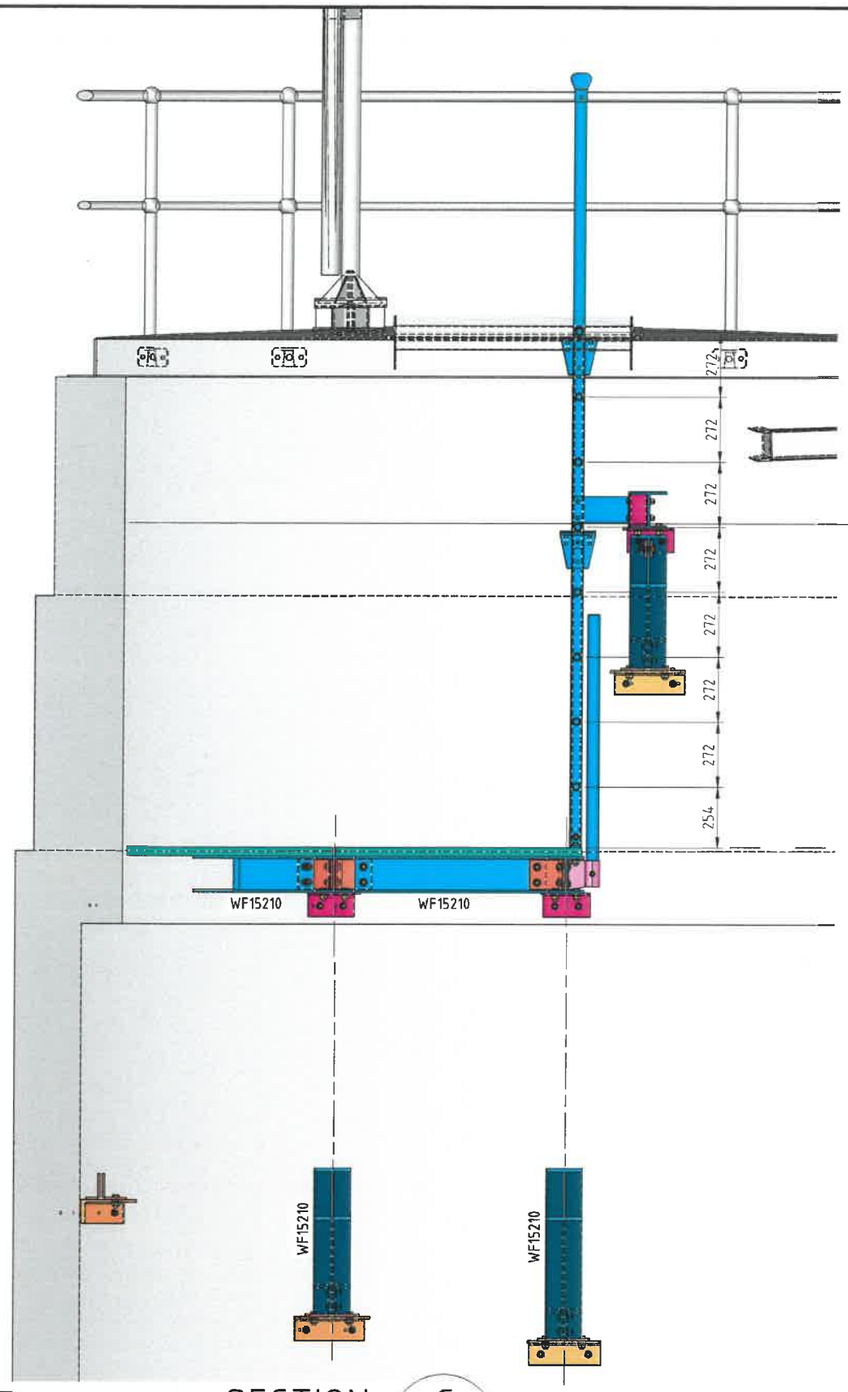
Designed by	A.BUENEN	Date	-
Drawn by	J.WALKER	Date	05.04.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
ELEVATIONS 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-403 Rev: 0



SECTION C
SCALE - 1:25

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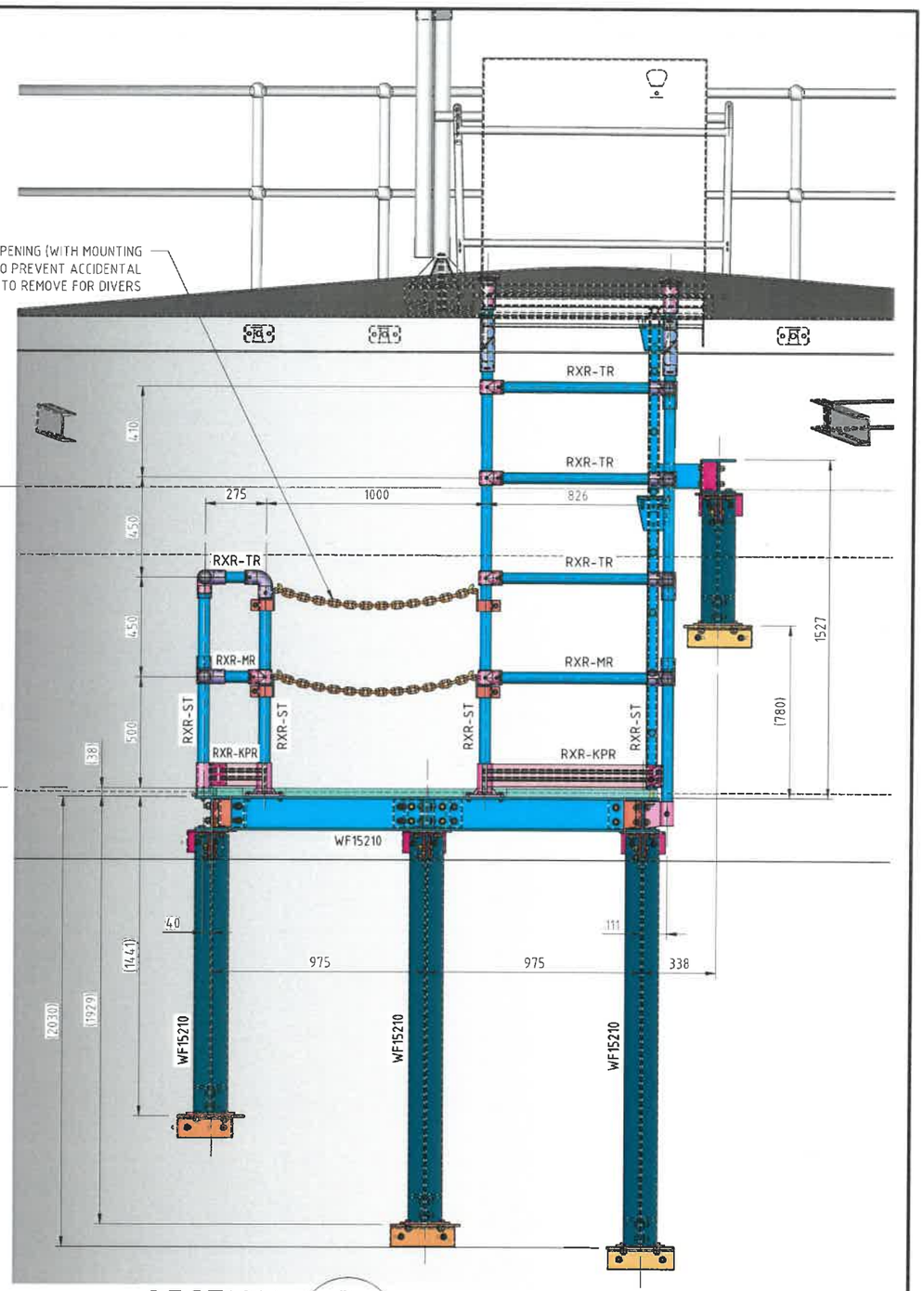

SECTION D
SCALE - 1:25

402

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Approved :
Chris Witham Member No : 607629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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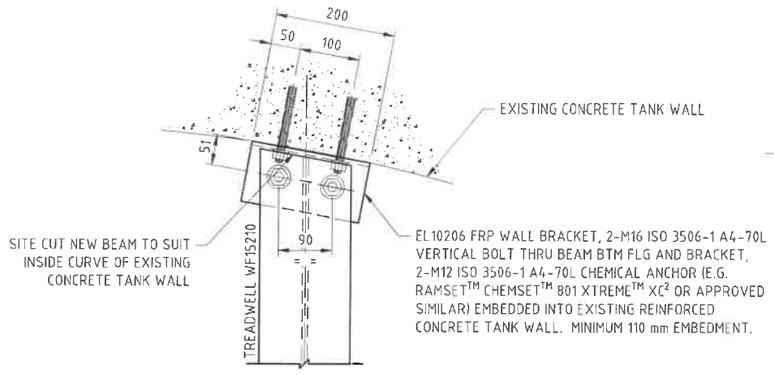
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
ELEVATIONS 2

Scale
AS SHOWN (AT A3)

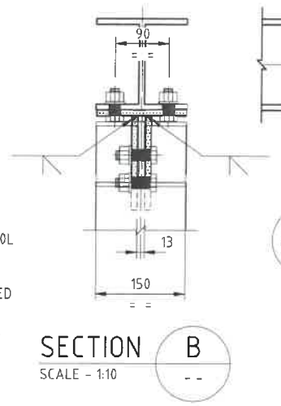
Job No.
GD2188

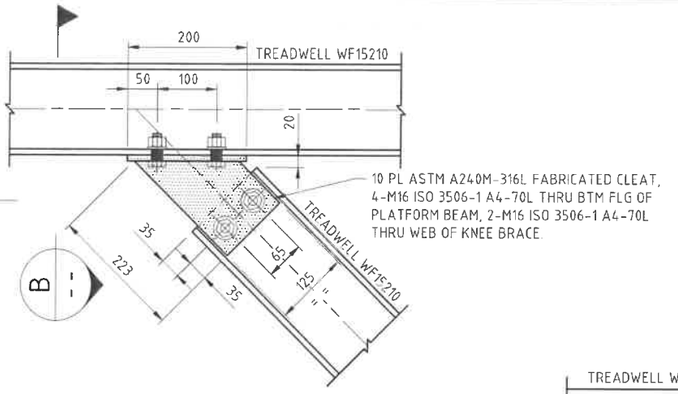
Drawing No. GD2188-404 Rev. 0



TYPICAL BEAM TO WALL CONNECTION DETAIL

SCALE - 1:10





TYPICAL KNEE BRACE TO BEAM CONNECTION DETAIL

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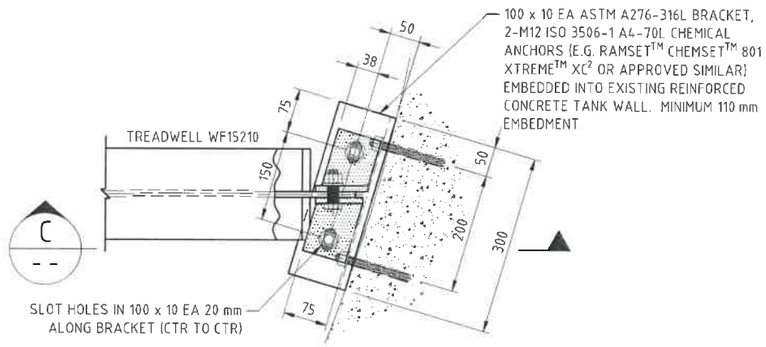
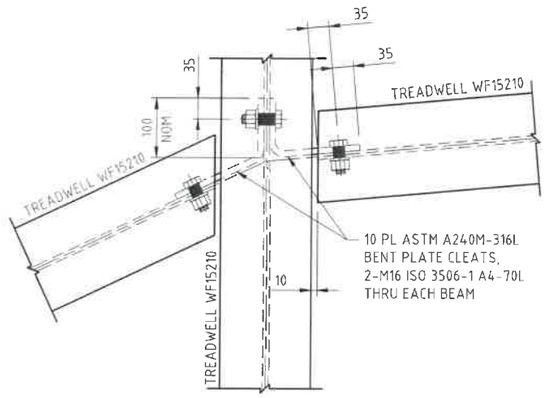


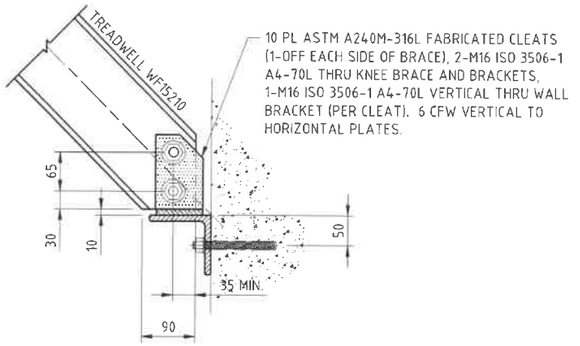
PLAN



TYPICAL INTERNAL BEAM CONNECTION DETAIL

SCALE - 1:10

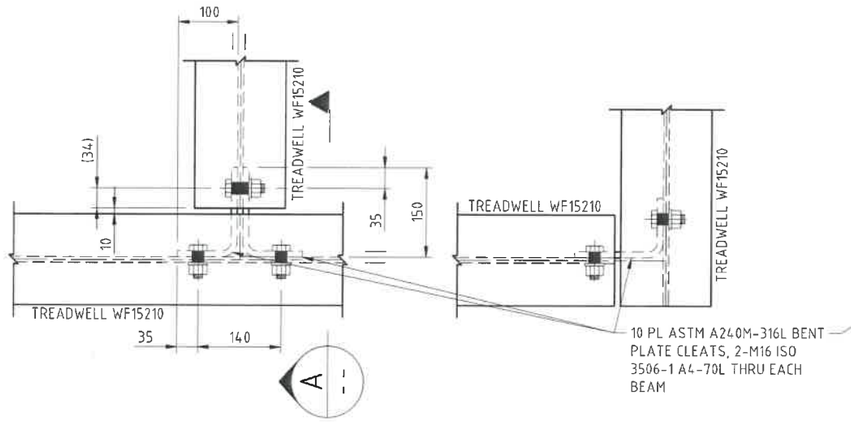
CHEMICAL ANCHOR NOTE
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT.

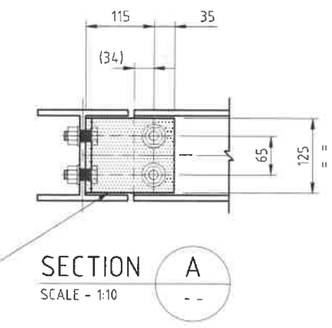


SECTION C
SCALE - 1:10

TYPICAL KNEE BRACE TO WALL CONNECTION DETAIL

SCALE - 1:10





TYPICAL EDGE BEAM CONNECTION DETAILS

SCALE - 1:10

Approved :
Chris Witham Member No : 697629
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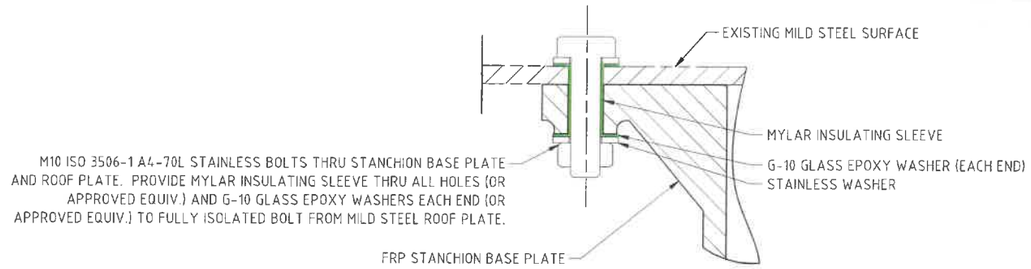
Designed by	A.BUENEN	Date	-
Drawn by	J.WALKER	Date	05.04.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

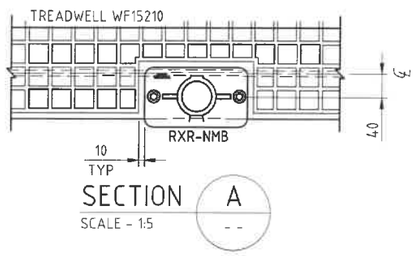
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
TYPICAL DETAILS 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-405 Rev: 0



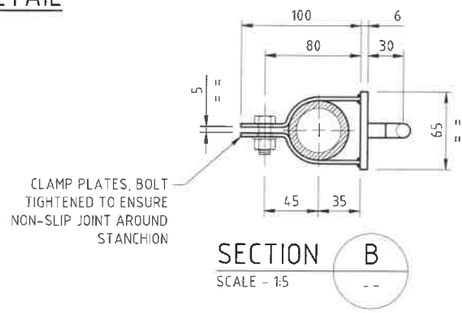
DISSIMILAR METAL PROTECTION DETAIL

SCALE - 1:2



SECTION A

SCALE - 1:5



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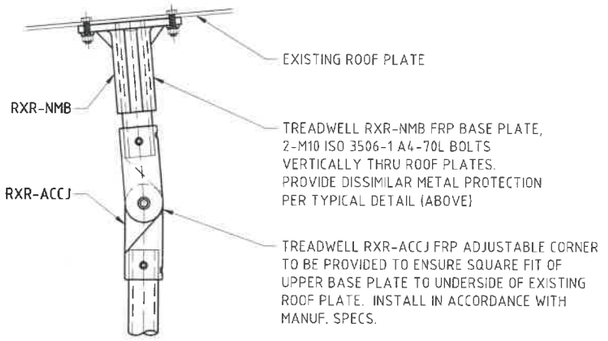
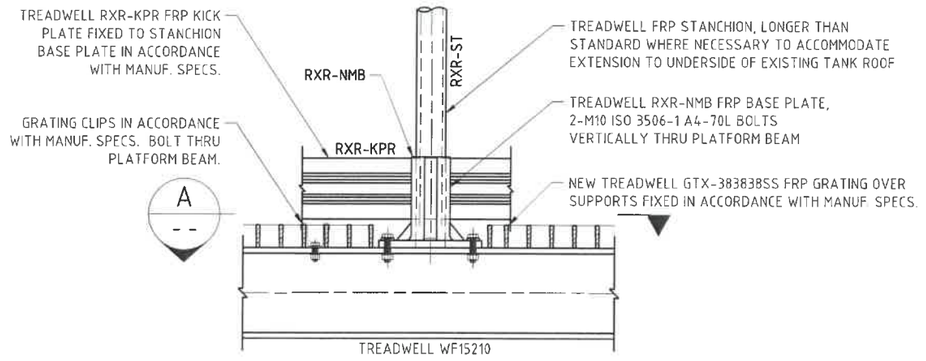
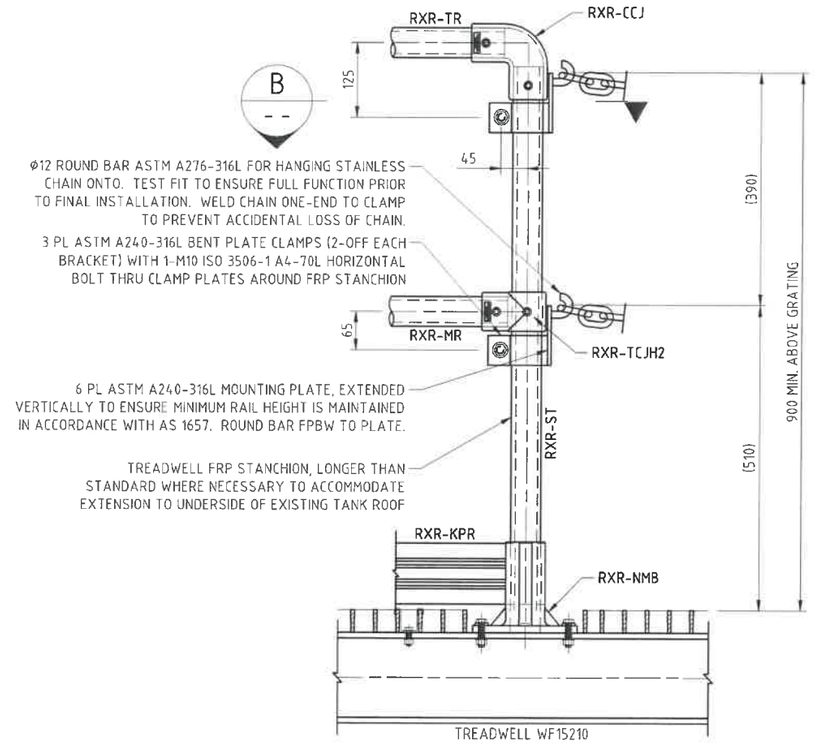




TYPICAL STANCHION CONNECTION DETAIL

SCALE - 1:10

NOTE: ALTERNATIVE TO USE OF RXR-NMB BASE FIXING A RXR-SMB-SS316 SIDE OFFSET MOUNT MAY BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS.



STANCHION CHAIN MOUNTING DETAIL

SCALE - 1:10

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Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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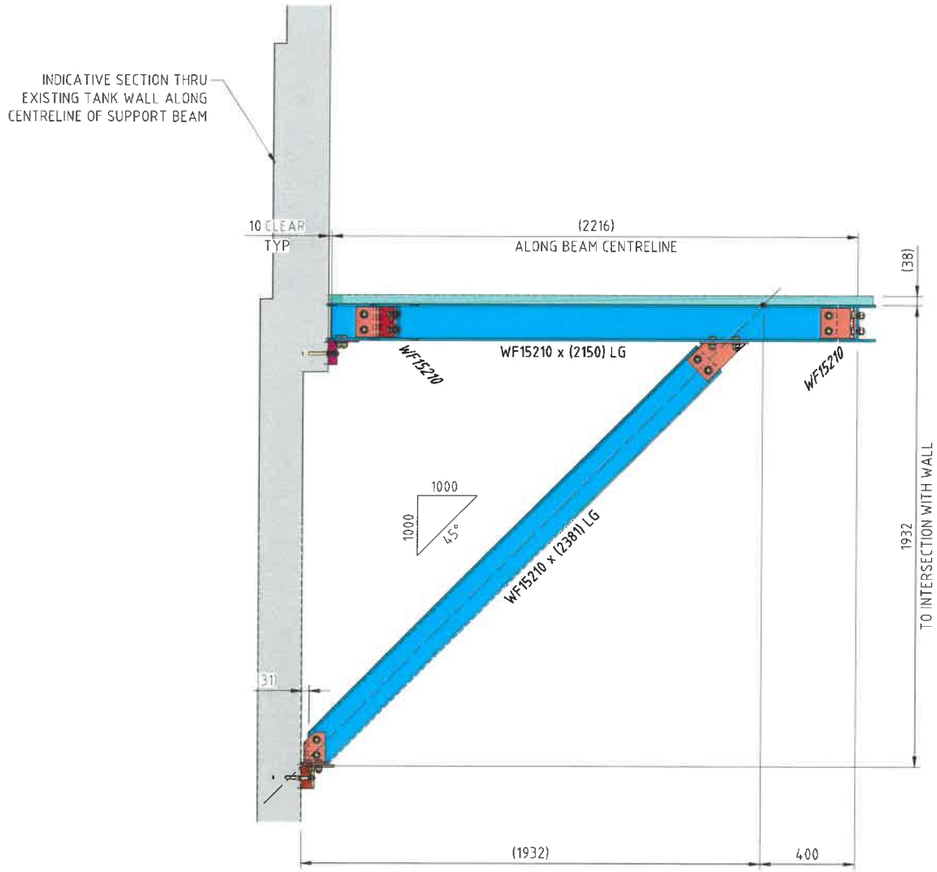
Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
TYPICAL DETAILS 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-406 Rev.: 0



SECTION E
SCALE - 1:25
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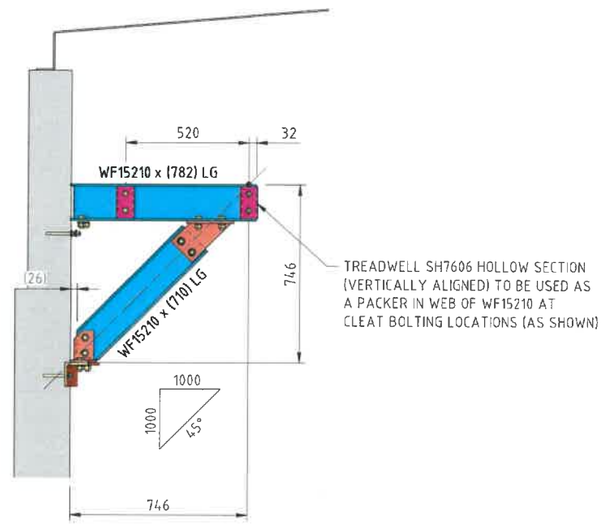

SECTION F
SCALE - 1:25
402

Approved :
Chris Witham Member No : 597629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BARALABA WATER STANDPIPE
SETOUT SECTIONS

Scale
AS SHOWN (AT A3)

Job No.
GD2188

Drawing No. GD2188-407 Rev. 0

DESIGN LIMITATIONS:

1. MAJORITY REQUIREMENTS OF AS 1657 CAN BE MET BY EXISTING HATCH ARRANGEMENT.
2. MINOR MODIFICATION PROPOSED WILL PROVIDE 200 mm CLEARANCE BEHIND RUNGS AS REQUIRED BY CLAUSE 7.4.5.
3. NON-COMPLIANCE WITH CLAUSE 7.4.8.4. REGARDING EXTENSION OF LANDING TO TOP RUNG (IS WITHIN 50 - 100 mm AS REQUIRED, BUT EXCEEDS MAXIMUM 50 mm THICK). CLIENT TO PERFORM A HAZOP TO DETERMINE SUITABILITY OF DESIGN VERSUS COST OF FURTHER MODIFICATION.
4. TOP RUNG WILL NOT BE EXACTLY LINED UP WITH TOP OF SURROUND FRAME DUE TO ANGLE, AND REQUIREMENT FOR HATCH TO CLOSE. ADDITIONALLY, HEIGHT WILL BE INCREASED BY INSTALLATION OF NEW ALUMINIUM DECKING. CLIENT TO PREPARE SAFE WORK METHOD FOR ACCESS TO ENSURE ALL PERSONNEL ENTERING TANK ARE AWARE OF WHERE THE TOP STEP IS.
5. INTERNAL AREAS OF THE CONCRETE TANK ARE CONSIDERED CONFINED SPACES, AND SHALL REQUIRE A FULL HAZOP PRIOR TO ENTRY BY ANY PERSONNEL. A SAFETY DAVIT HAS BEEN PROVIDED AS PART OF THIS DESIGN.
6. ANY WORK CONDUCTED ON THE PLATFORM PRIOR TO FULL INSTALLATION OF HANDRAILS AND LADDER WILL REQUIRE ATTACHMENT TO A SAFETY LINE AND OTHER SAFETY EQUIPMENT AS THIS WILL BE WORKING AT HEIGHTS. PERSONNEL SHALL BE FULLY TRAINED AND CERTIFIED FOR WORKING AT HEIGHTS AND ACCESS SHALL BE ASSESSED (I.E. HAZOP) PRIOR TO ENTRY INTO THE AREA.
7. WORK CARRIED OUT IN THE CONCRETE TANK WILL REPRESENT A POTENTIAL HAZARD FROM ITEMS FALLING FROM ABOVE. CONTRACTORS SHALL TAKE STEPS TO PREVENT ACCIDENTAL DROPPING OF ELEMENTS INTO THE CHAMBER, AND HAZOPS SHALL BE UNDERTAKEN TO DETERMINE THE BEST APPROACH FOR LOWERING OF EQUIPMENT SAFELY. HARDHATS AND OTHER PPE WILL BE REQUIRED.
8. LIKEWISE THE LIFTING OF ELEMENTS ONTO THE TANK ROOF WILL PRESENT A HAZARD TO ALL WORKERS ON THE OUTSIDE OF THE TANK, AND ADDITIONALLY MEMBERS OF THE PUBLIC. THE WORKSITE SHALL BE FULLY FENCED AS REQUIRED TO ALLOW FOR THE MOVEMENT OF MATERIALS SAFELY AND WITHOUT RISK TO THE PUBLIC (WHERE POSSIBLE). HAZOP SHALL CONSIDER CRANE OPERATION, POSITIONING AND ACCESS.
9. PLATFORM DESIGN ASSUMES STANDARD ENTRY TO TANK WILL BE CONDUCTED BY DIVERS WITH WATER LEVEL ABOVE THE LEVEL OF THE PLATFORM DECK. WHERE THIS IS NOT THE CASE A HAZOP SHALL BE CONDUCTED TO IDENTIFY ANY ADDITIONAL SAFETY ISSUES THAT MAY BE PRESENT AND DETERMINE SUITABLE CONTROLS / METHODS.
10. CLIENT TO PRODUCE A PROCEDURE FOR SAFETY ACCESS FOR DIVERS FOR INDIVIDUAL TANKS. ALL DESIGN CONSTRAINTS AND SAFETY ISSUES RAISED ABOVE SHALL BE INCLUDED, IN ADDITION TO ANY OTHER ISSUES IDENTIFIED BY BSC PERSONNEL AND CONTRACTORS.

CONSTRUCTION METHODOLOGY:

1. BANANA SHIRE COUNCIL TO ARRANGE AND DRAIN EXISTING RESERVOIR. TIME TO BE ALLOWED FOR DRYING OF CONCRETE SURFACES PRIOR TO INSTALLING NEW ELEMENTS.
2. PRIOR TO INSTALLING ANY NEW EQUIPMENT PROCEED WITH DEMOLITION WORKS AS INDICATED / REQUIRED. ALL EXISTING ELEMENTS TO REMOVED AND DISPOSED OF SAFELY AND IN ACCORDANCE WITH BSC SUPERINTENDENTS INSTRUCTION. WHERE EXISTING ITEMS ARE REMOVED FROM EXISTING CONCRETE SURFACES, ENSURE ALL EXPOSED SURFACES (I.E. CUT ANCHORS ETC.) ARE FULLY SEALED WITH POTABLE WATER APPROVED SEALANT. ANY CONCRETE DAMAGE SHALL BE REMEDIED TO THE SPECIFICATION OF THE BSC SUPERINTENDENT
3. SITE ASSEMBLE NEW ALUMINIUM ACCESS PLATFORM OVER EXISTING ROOF. ENSURE DISSIMILAR SEPARATION IS INSTALLED IN ACCORDANCE WITH MANUF. SPECS. MODIFY NEW EXPANDED MESH SURFACE AS REQUIRED TO SUIT EXISTING ELEMENTS ON SITE AND INSTALLATION OF NEW DAVITS.
4. LOWER NEW FRP AND STAINLESS STEEL MEMBERS, CLEATS, FIXINGS ETC. FOR NEW PLATFORM INTO THE EXISTING RESERVOIR CHAMBER. ELEMENTS TO BE PLACED ONTO TANK FLOOR.
5. POSITIVELY LOCATE POSITIONS FOR INSTALLATION OF NEW WALL MOUNTING BRACKETS. START WITH LAYOUT OF PLATFORM MEMBERS ON THE TANK FLOOR TO ASSIST IN ENSURING MEMBERS ALIGN WITH BRACKET POSITIONS, THEN TRACE UP THE WALL (I.E. USE OF PLUMB-BOB FROM ABOVE TO ALIGN POSITIONS).
6. ONCE WALL MOUNT POSITIONS ARE PREPARED, FULLY ASSEMBLE MAIN PLATFORM LEVEL, COMPLETE WITH HANDRAIL, GRATING AND KICK PLATE SECTIONS.
7. PREPARE TO LIFT PLATFORM ASSEMBLY. BEFORE LIFTING INTO PLACE (BUT WHILE SUSPENDED) INSTALL KNEE BRACE ELEMENTS TO PLATFORM BEAMS. ONCE FULLY ASSEMBLED, ELEVATE PLATFORM ASSEMBLY UP AND ONTO WALL BRACKETS. FIX ALL MEMBERS TO WALL BRACKETS IN ACCORDANCE WITH ENGINEERING DETAILS. WHERE APPLICABLE, FIX UPPER HANDRAIL BASE PLATES TO UNDERSIDE OF EXISTING TANK ROOF.
8. LOWER ELEMENTS FOR LADDER SUPPORT ONTO PLATFORM BELOW AND ASSEMBLE FRAME. INSTALL ONTO WALL BRACKETS AND FASTEN AS PER ENGINEERING DETAILS.
9. LOWER NEW LADDER ASSEMBLY ONTO NEW PLATFORM. LOCATE AND FIX TO NEW PLATFORM AND EXISTING STRUCTURE IN ACCORDANCE WITH ENGINEERING DETAILS.
10. LOWER NEW WALL MOUNTING BRACKETS FOR PERSONNEL ACCESS DAVIT AND EQUIPMENT LIFTING DAVIT. LOCATE NEW DAVIT MOUNTING POINTS AND INSTALL AGAINST EXISTING CONCRETE WALLS. CHEMICAL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER SPECIFICATIONS AND REQUIREMENTS TO ACHIEVE MINIMUM EMBEDMENT SPECIFIED IN DRAWINGS. INSTALL NEW DAVIT BASES AND ARMS IN ACCORDANCE WITH MANUF. SPECS. TEST ALL NEW DAVITS TO ENSURE FULL COMPLIANCE AND FUNCTION PRIOR TO FINALISING THE INSTALLATION.

DESIGN INCORPORATES REQUIREMENTS OF AS 2299.1-2015 WHERE APPLICABLE:

3.10 DIVE REQUIREDMENTS:

3.10.1 GENERAL

DIVING OPERATIONS SHALL BE CONDUCTED ONLY FROM A SAFE AN SUITABLE SITE OR VESSEL, WHICH AT TIMES PROVIDES:

(a) SUITABLE ACCESS & EXIT FOR THE DIVERS;
(b) MEANS TO RECOVER AN INJURED DIVER FROM THE WATER; AND
(c) MEANS OF COMMUNICATION TO EMERGENCY SUPPORTED SERVICES (SEE CLAUSE 3.6.4)

3.13.3 HARNESSES

PROVIDES REQUIREMENT SHOULD A HARNESS BE REQUIRED

3.13.6 LIFELINE

A HARNESS AND LIFELINE WOULD BE A HINDRANCE IN THESE OPERATIONS, PREVENTING SAFE MOVEMENT THROUGHOUT THE TANK. BANANA SHIRE COUNCIL SHALL HAZOP WITH COMMERCIAL DIVER.

7.3.4 DIVER DEPTHS TO 30 m (SCUBA)

THE TEAM SHALL INCLUDE 1 SUPERVISOR, 1 DIVER, 1 DIVERS ATTENDANT AND 1 STANDBY DIVER (4 IN TOTAL). ROOFTOP PLATFORM SHOULD BE DESIGNED TO ALLOW FOR 4 PEOPLE.

STAINLESS STEEL:

1. ALL STAINLESS STEEL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF:
   - 1.1. AS 4100 - SAA STEEL STRUCTURES CODES
   - 1.2. AS 1554.6 - STRUCTURAL STEEL WELDING - WELDING STAINLESS STEELS FOR STRUCTURAL PURPOSES
2. STAINLESS STEEL GRADES AS FOLLOWS:
   - 2.1. PLATE, SHEET AND STRIP SHALL BE TO ASTM A240M GRADE 316L
   - 2.2. BARS SHALL BE TO ASTM A276M GRADE 316L
3. STAINLESS STEEL FINISHING DETAILS:
   - 3.1. ALL SHARP EDGES AND BURRS TO BE REMOVED
   - 3.2. STAINLESS STEELWORK SHALL BE CLEANED, PICKLED AND PASSIVATED IN ACCORDANCE WITH ASTM A380 "STANDARD PRACTICE FOR CLEANING, DESCALING AND PASSIVATION OF STAINLESS STEEL PARTS, EQUIPMENT AND SYSTEMS".
4. WELD DETAILS:
   - 4.1. ALL WELDS SHALL BE 6 CFW UNO.
   - 4.2. BUTT WELDS SHALL BE PRE-QUALIFIED FULL PENETRATION UNO.
   - 4.3. ALL WELDING SHALL CONFORM WITH AS 1554.6, CATEGORY 1A.
   - 4.4. ALL WELDING CONSUMABLES SHALL BE TO AS/NZS 1167.2 AND/OR AS/NZS 4854.
   - 4.5. ALL WELDS SHALL BE VISUALLY INSPECTED.
   - 4.6. ALL WELDS SHALL BE FREE FROM DEFECTS SUCH AS CRACKS, EXCESSIVE UNDERCUTS AND GROSS POROSITY.

FIBRE REINFORCED PLASTIC (FRP) / COMPOSITE FIBRE:

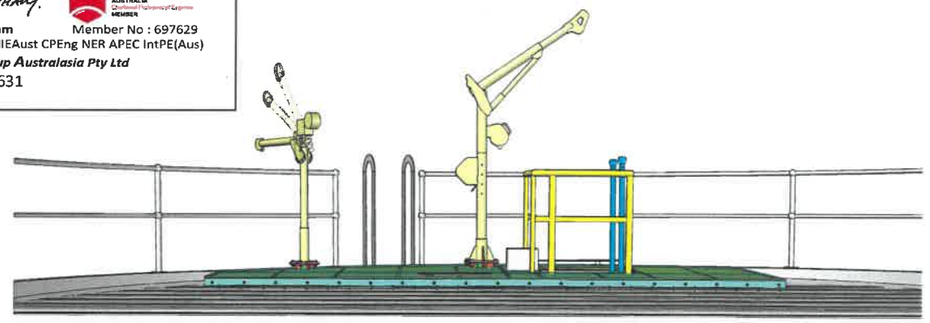
1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. ENSURE COMPLIANCE WITH MANUFACTURER QUALITY ASSURANCE STANDARDS.
2. UNLESS NOTED OTHERWISE OR APPROVED COMPOSITE MATERIALS FOR USE IN THIS PROJECT SHALL BE MANUFACTURED BY TREADWELL. SUBSTITUTIONS IN MATERIALS SHALL NOT BE UNDERTAKEN WITHOUT PRIOR APPROVED OF BSC SUPERINTENDENT AND STRUCTURAL ENGINEER.
3. ALL MEMBERS SHALL BE IN SOUND CONDITION FREE FROM PITTING, DE-LAMINATIONS AND OTHER DEFECTS WHICH ARE LIKELY TO IMPAIR THE STRUCTURAL CAPACITY OF THE MEMBERS.
4. APPLY A WATERPROOFING COMPOUND TO SEAL ANY END CUT FIBRES AS A RESULT OF DRILLING, CUTTING OR DAMAGE TO THE COMPOSITE FIBRE PROFILES. COMPOUND SHALL BE APPROVED FOR POTABLE WATER AND SHALL BE APPROVED BY THE MANUFACTURER.
5. CONTRACTORS SHALL REFER TO MANUFACTURER FOR ALL INSTALLATION AND ASSEMBLY INSTRUCTIONS AND SPECIFICATIONS PRIOR TO BEGINNING WORK, AND SHALL ENSURE THAT ALL INSTRUCTIONS ARE UNDERSTOOD.

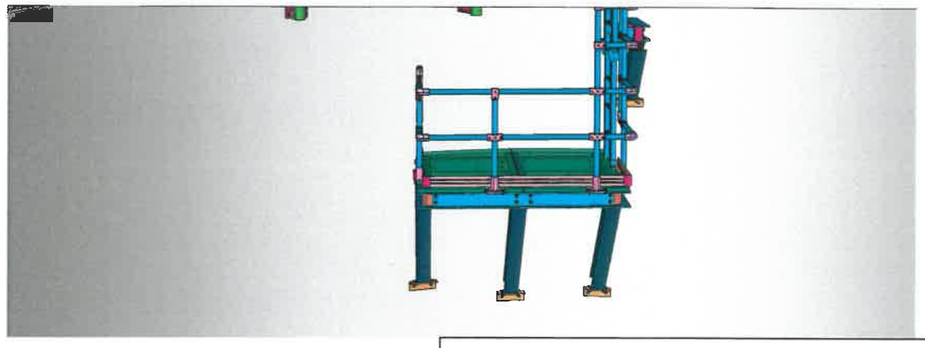
LOCALITY PLAN

SCALE - NTS

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631





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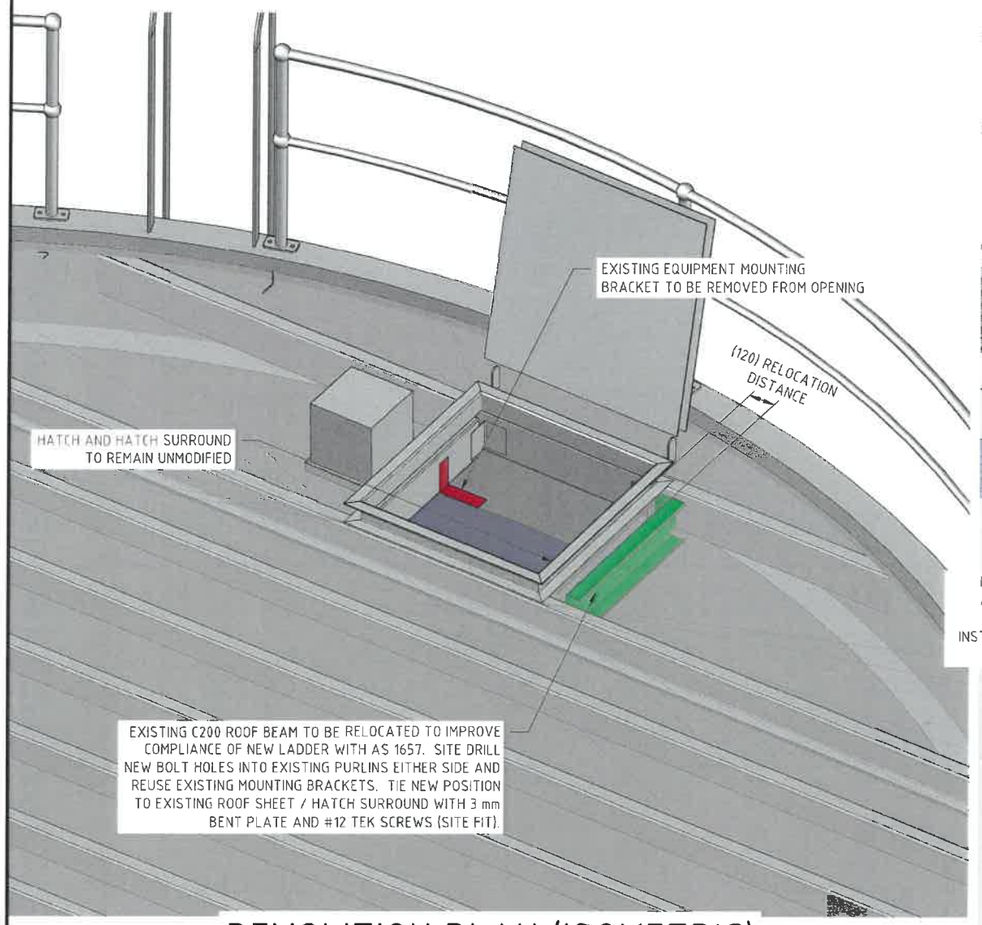
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
DESIGN NOTES

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-100 Rev: 0



DEMOLITION PLAN (ISOMETRIC)

SCALE - NTS

EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

Approved :

C.L. Witham

ENGINEERS AUSTRALIA MEMBER

Chris Witham Member No : 697629

BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)

Allied Group Australasia Pty Ltd

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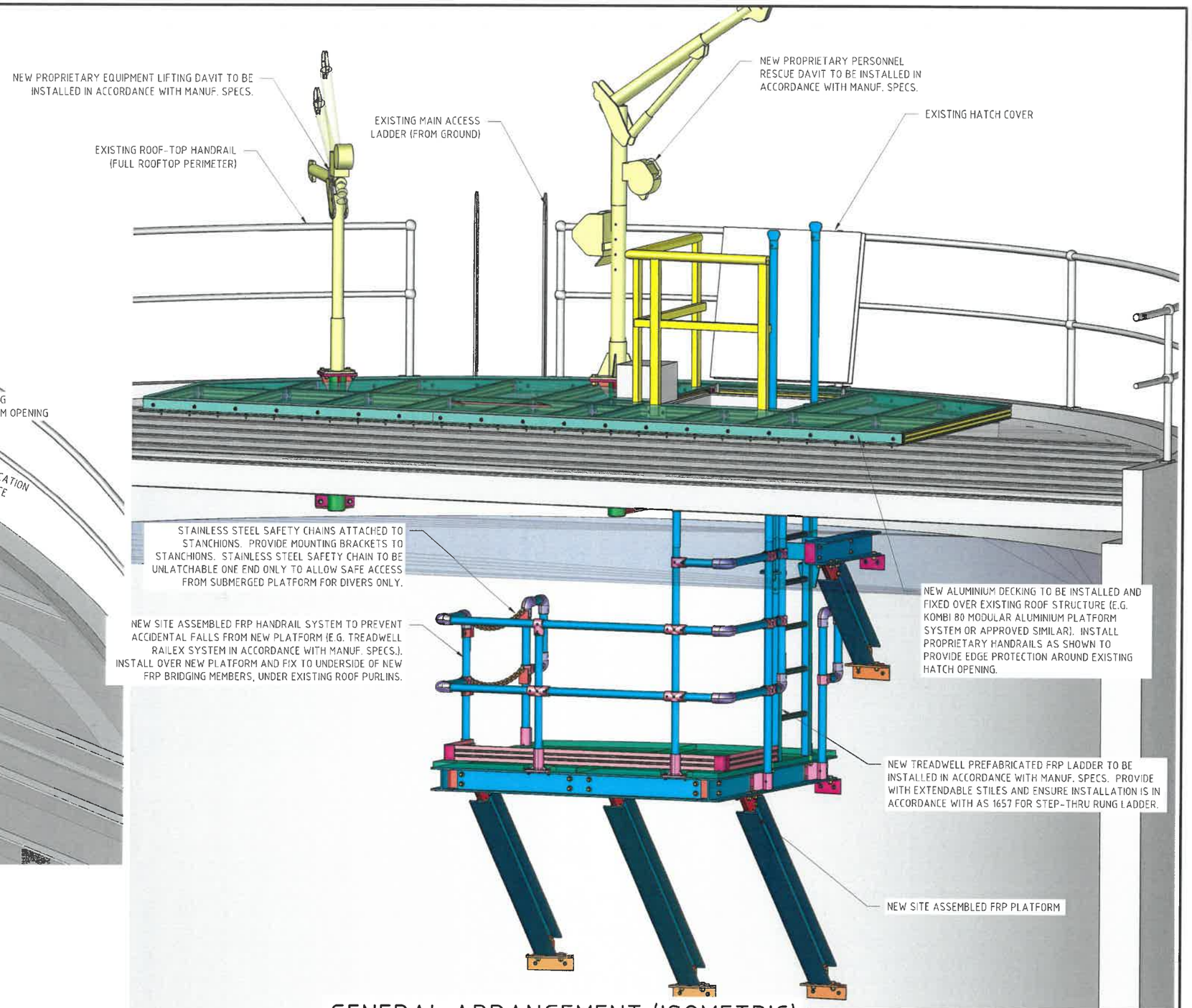

GENERAL ARRANGEMENT (ISOMETRIC)

SCALE - NTS

EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

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Title

BANANA SHIRE COUNCIL

RESERVOIR ACCESS UPGRADE

BILOELA EARLSFIELD ST STANDPIPE

GENERAL ARRANGEMENT 1

Scale: AS SHOWN (AT A3)

Job No.: GD2188

Drawing No.: GD2188-101 Rev.: 0

NEW BEAVER TECHNOLOGY SERVICES FIRST MATE (OR APPROVED SIMILAR) EQUIPMENT LIFTING DAVIT ARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS. BASE FIXED OVER NEW STAINLESS STEEL MOUNTING BRACKET WITH 4-M12 ISO 3506-1 A4-70L BOLTS. PROVIDE SIGNAGE BESIDE NEW DAVIT "MATERIAL/EQUIPMENT USE ONLY. DAVIT NOT FOR PERSONAL SAFETY USE".

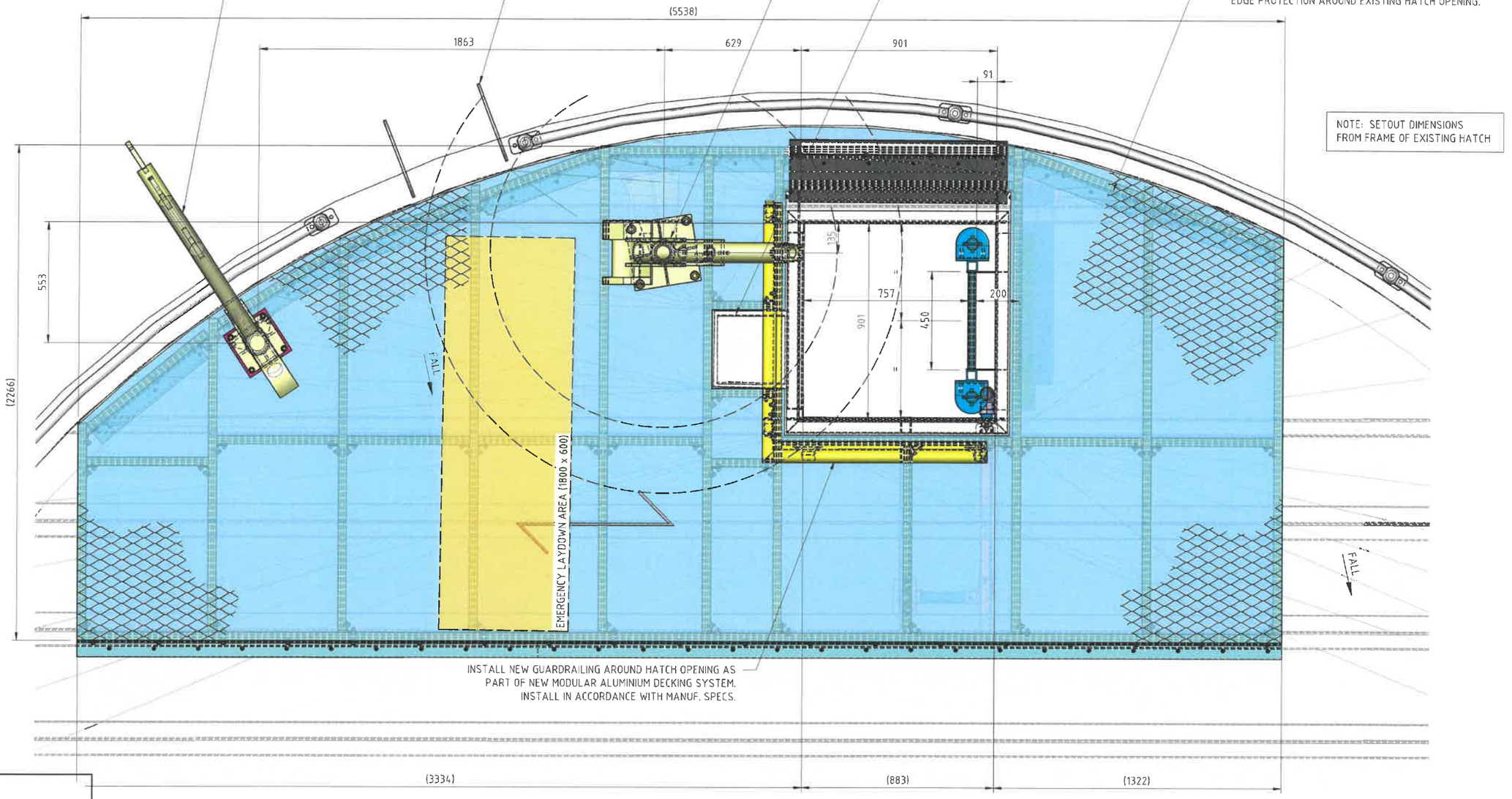
EXISTING MAIN ACCESS LADDER (FROM GROUND)

NEW 3M™ DBI-SALA HIGH CAPACITY DAVIT ARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS. DAVIT ARM AND ATTACHMENTS TO BE REMOVED AND STORED WHEN NOT IN USE, ONLY BASE PLATE AND BASE PLATE CAP TO REMAIN BETWEEN USES.
BASE FIXED OVER NEW STAINLESS STEEL MOUNTING BRACKET WITH 4-M20 ISO 3506-1 A4-70L BOLTS.

EXISTING EQUIPMENT BOX TO REMAIN IN PLACE. INSTALL NEW ALUMINIUM DECKING AROUND.

NEW ALUMINIUM DECKING TO BE INSTALLED AND FIXED OVER EXISTING ROOF STRUCTURE (E.G. KOMBI 80 MODULAR ALUMINIUM PLATFORM SYSTEM OR APPROVED SIMILAR). INSTALL PROPRIETARY HANDRAILS AS SHOWN TO PROVIDE EDGE PROTECTION AROUND EXISTING HATCH OPENING.

NOTE: SETOUT DIMENSIONS FROM FRAME OF EXISTING HATCH



Approved :

P.L. Witham

ENGINEERS AUSTRALIA MEMBER

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BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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GENERAL ARRANGEMENT (PLAN AT ROOF LEVEL)

SCALE - 1:20

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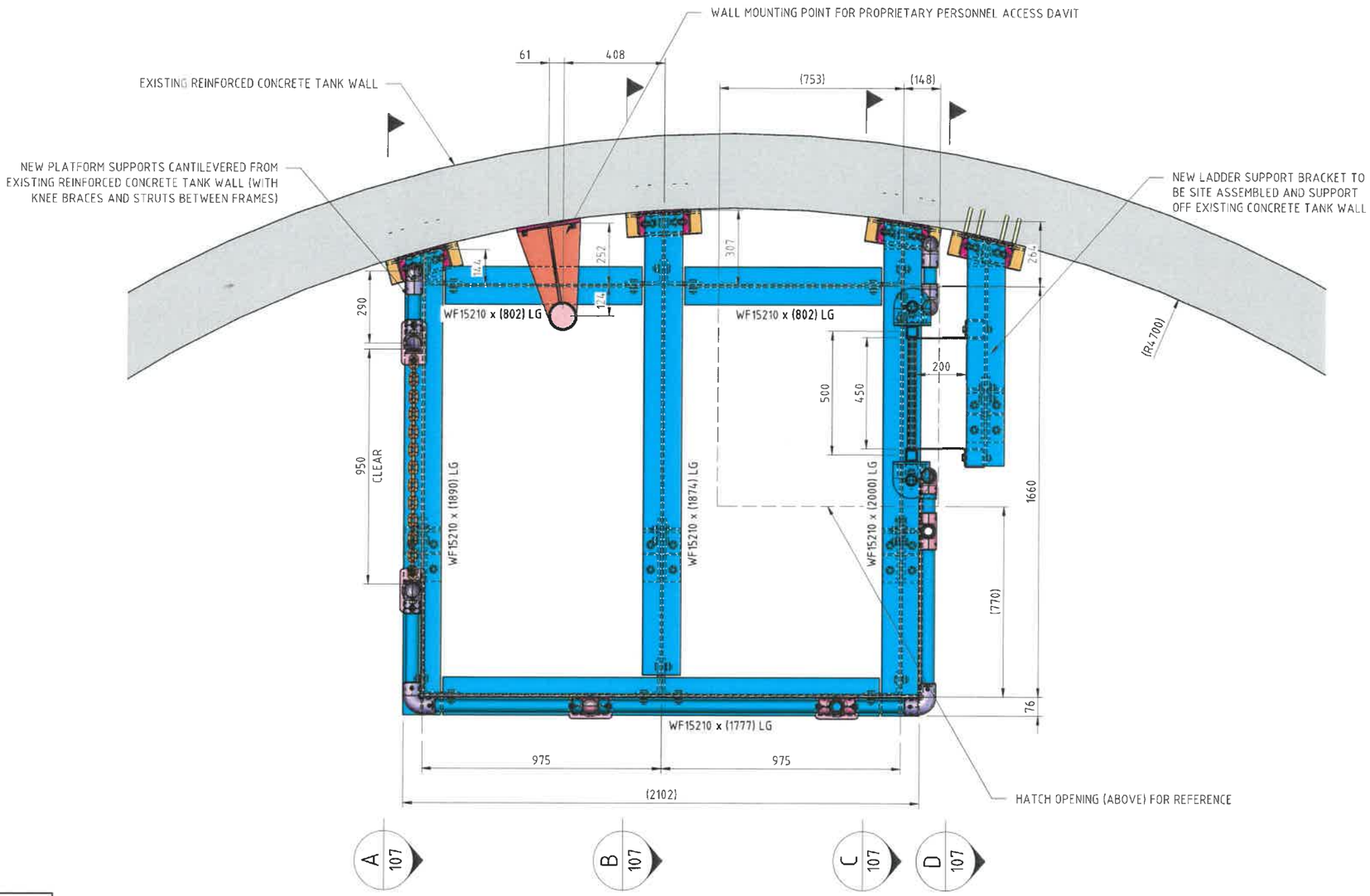
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
GENERAL ARRANGEMENT 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-102 Rev.: 0



GENERAL ARRANGEMENT (PLAN AT PLATFORM LEVEL)

SCALE - 1:20

GRATING NOT SHOWN FOR CLARITY

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Approved :

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BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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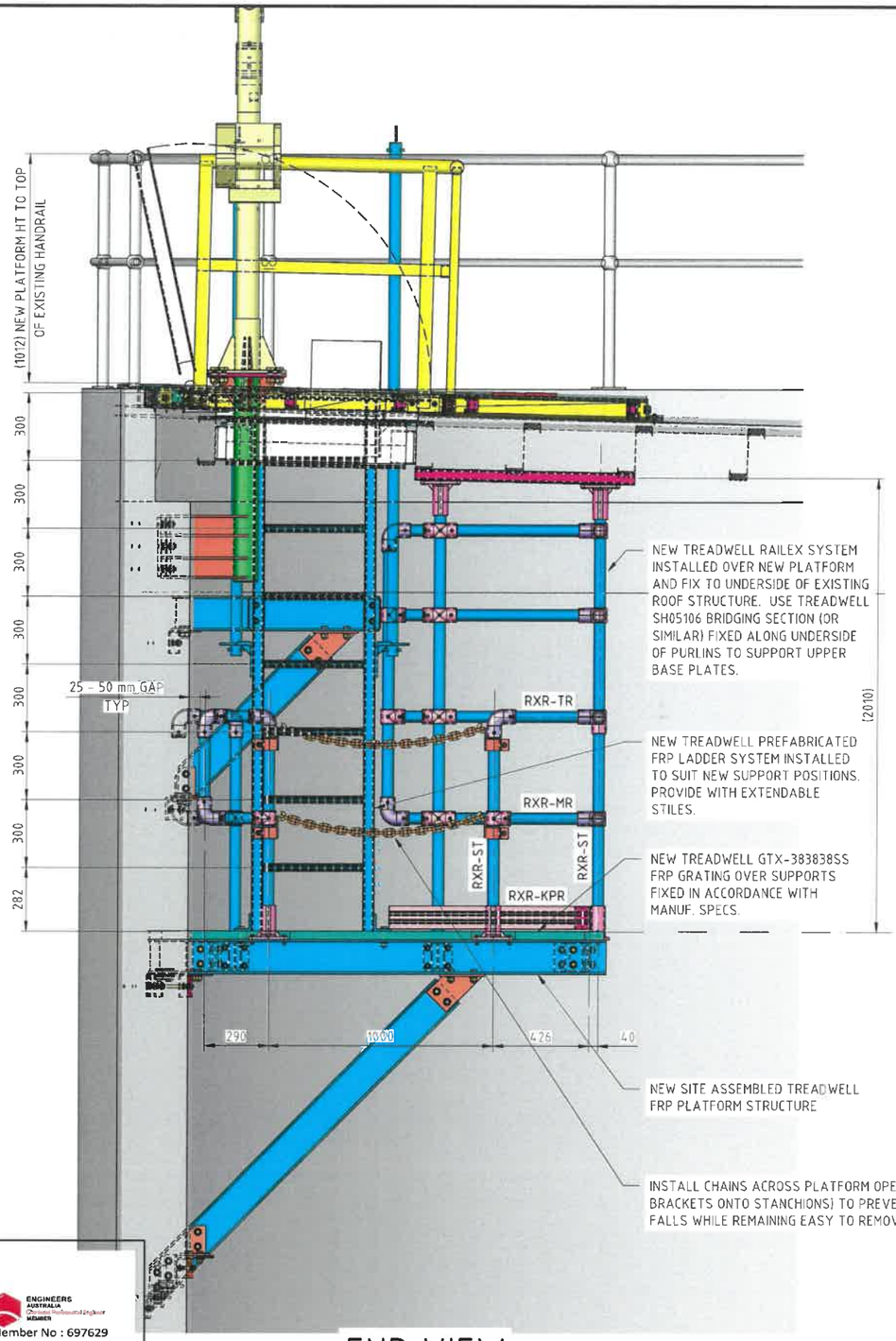
1/48 GOONDOON STREET GLADSTONE QUEENSLAND
PH: 07 49726 066 ABN 96 081 040 600
EMAIL: design@gladstonedrafting.com.au
WEB: www.gladstonedrafting.com.au

Designed by	A.BUENEN	Date -
Drawn by	J.WALKER	Date 05.04.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

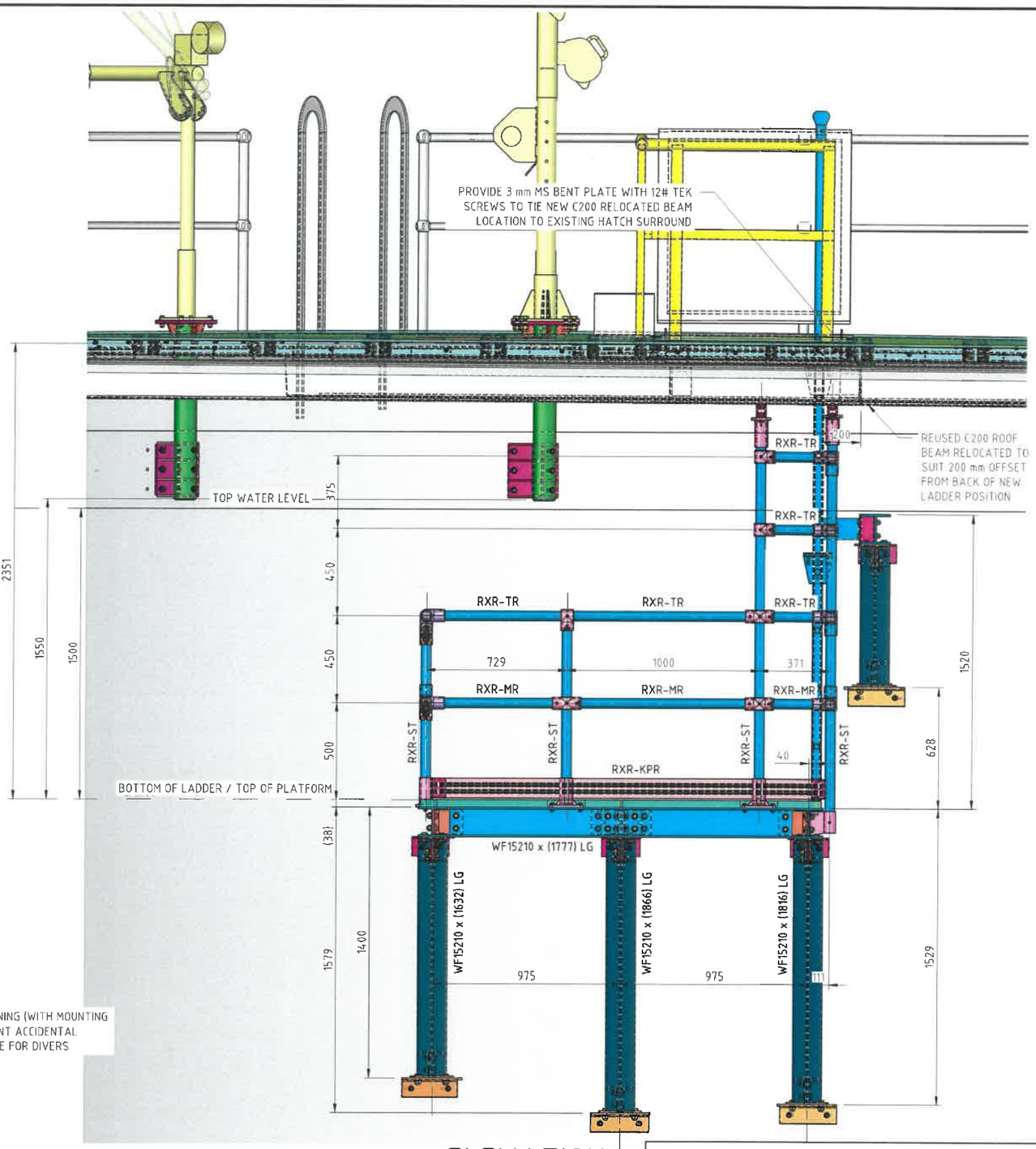
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
GENERAL ARRANGEMENT 3

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-103 Rev.: 0



END VIEW

SCALE - 1:25



ELEVATION

SCALE - 1:25

ISSUED FOR CONSTRUCTION

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

No.	Date	Revision	By	Appr
-				
0	20/06/23	ISSUED FOR CONSTRUCTION	JW	AB

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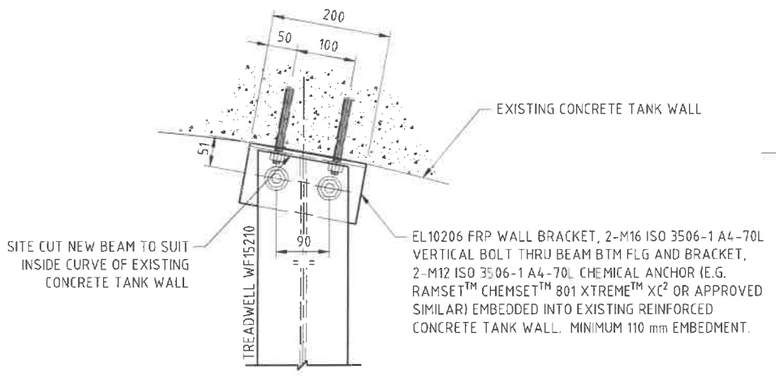
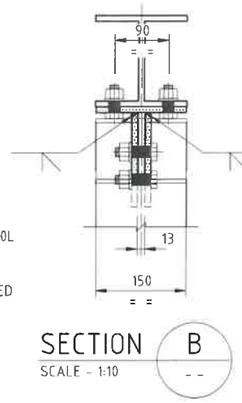
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
ELEVATIONS

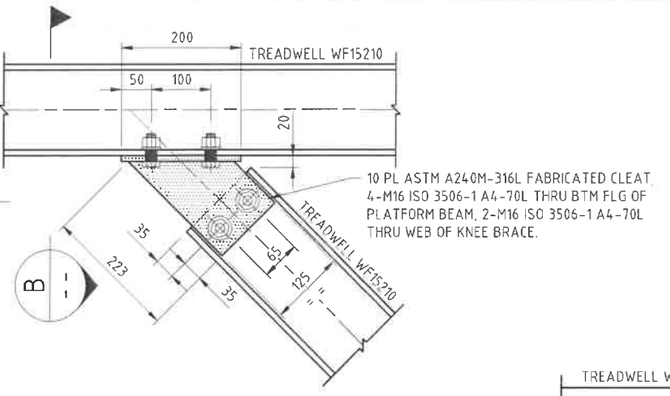
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-104 Rev.: 0



TYPICAL BEAM TO WALL CONNECTION DETAIL

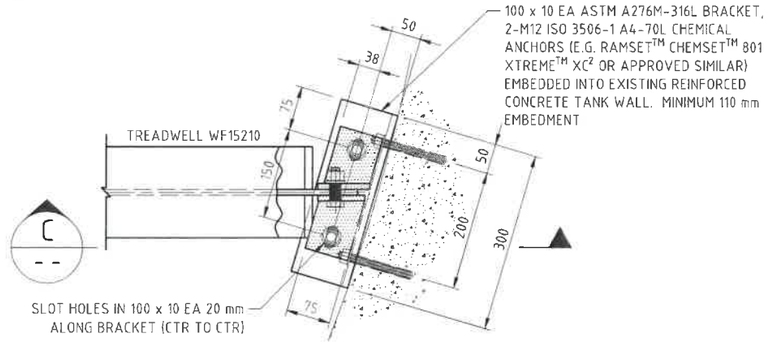
SCALE - 1:10



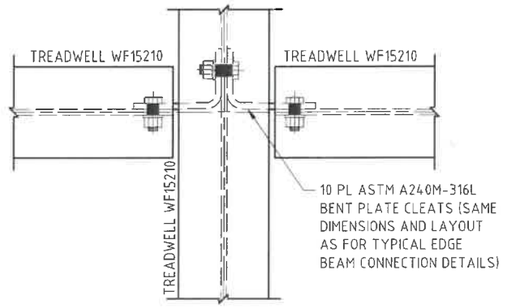


TYPICAL KNEE BRACE TO BEAM CONNECTION DETAIL

SCALE - 1:10



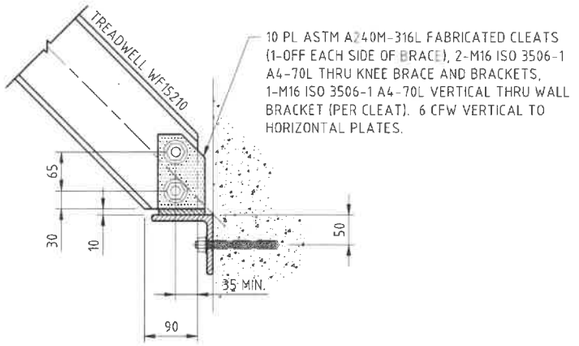
PLAN



TYPICAL INTERNAL BEAM CONNECTION DETAIL

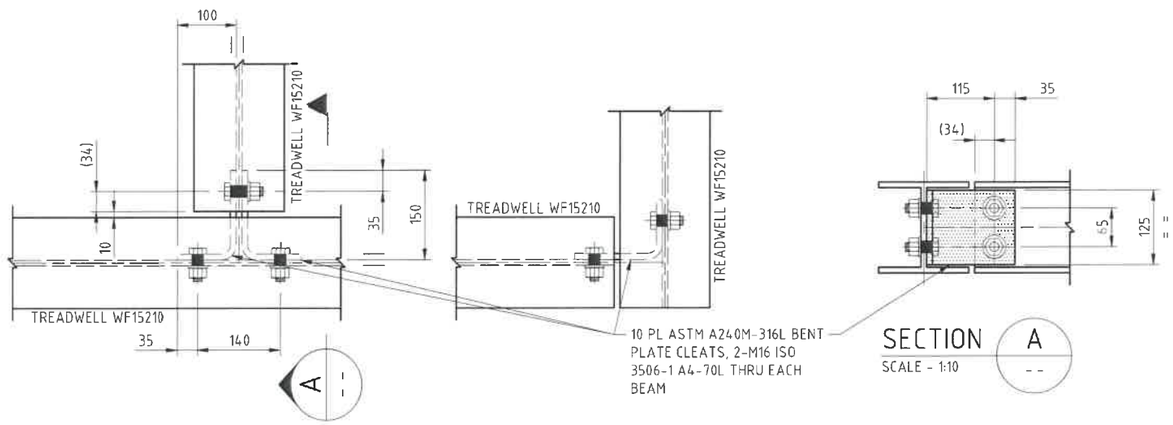
SCALE - 1:10

CHEMICAL ANCHOR NOTE
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT.



TYPICAL KNEE BRACE TO WALL CONNECTION DETAIL

SCALE - 1:10



TYPICAL EDGE BEAM CONNECTION DETAILS

SCALE - 1:10

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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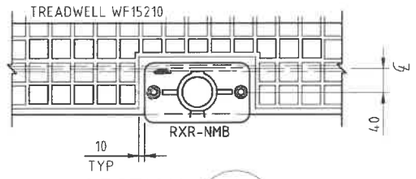
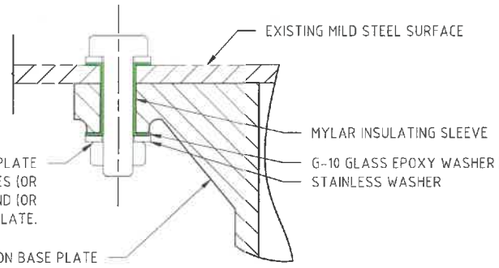
Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
TYPICAL DETAILS 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-105 Rev.: 0



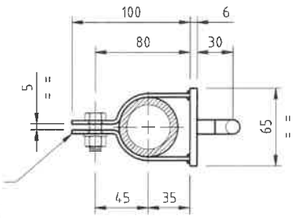
SECTION A
SCALE - 1:5



M10 ISO 3506-1 A4-70L STAINLESS BOLTS THRU STANCHION BASE PLATE AND ROOF PLATE. PROVIDE MYLAR INSULATING SLEEVE THRU ALL HOLES (OR APPROVED EQUIV.) AND G-10 GLASS EPOXY WASHERS EACH END (OR APPROVED EQUIV.) TO FULLY ISOLATED BOLT FROM MILD STEEL ROOF PLATE.

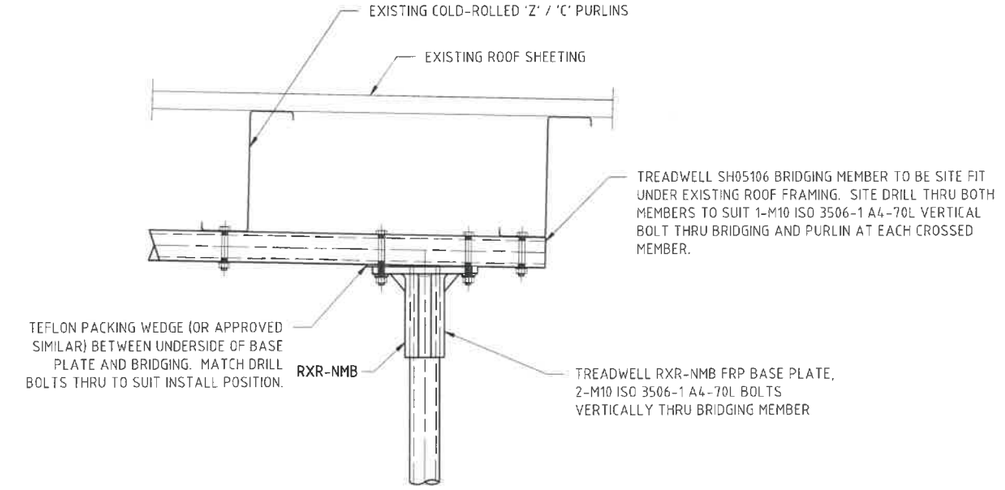
DISSIMILAR METAL PROTECTION DETAIL

SCALE - 1:2



CLAMP PLATES, BOLT TIGHTENED TO ENSURE NON-SLIP JOINT AROUND STANCHION

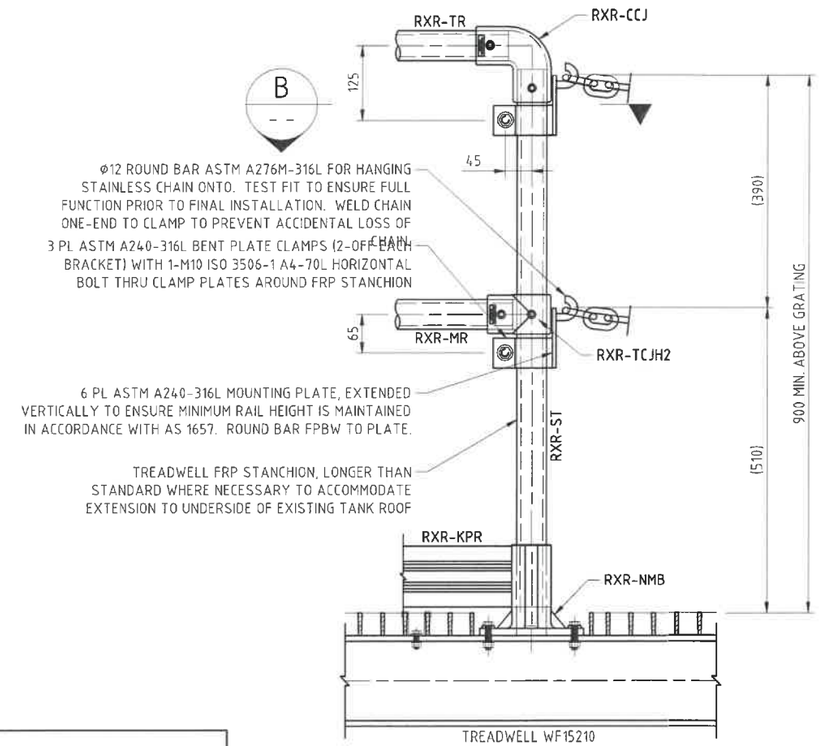
SECTION B
SCALE - 1:5



TYPICAL STANCHION CONNECTION DETAIL

SCALE - 1:10

NOTE: ALTERNATIVE TO USE OF RXR-NMB BASE FIXING A RXR-SMB-SS316 SIDE OFFSET MOUNT MAY BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS.



STANCHION CHAIN MOUNTING DETAIL

SCALE - 1:10

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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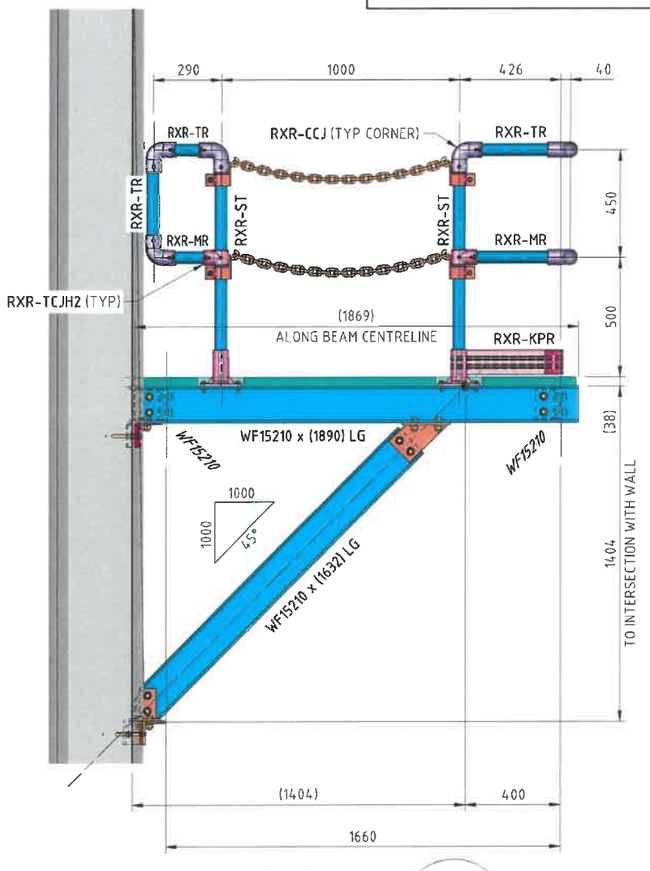
Drawn by	J.WALKER	Date	05.04.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
TYPICAL DETAILS 2

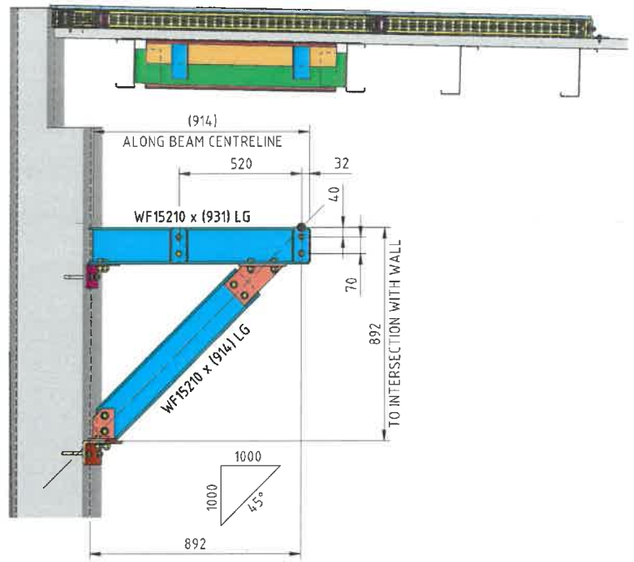
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-106 Rev.: 0

Approved :

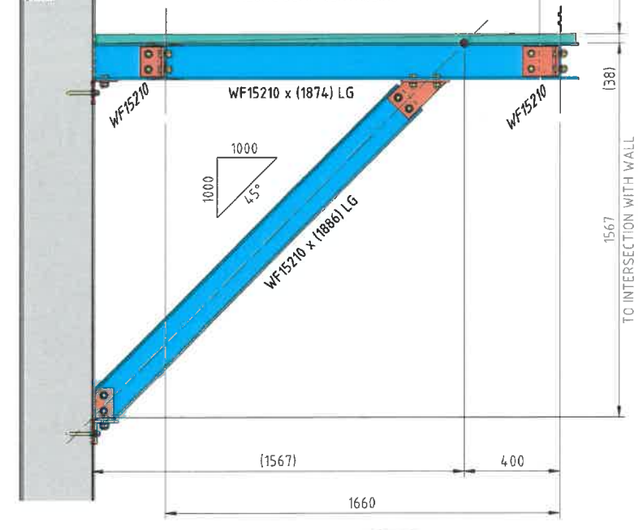
Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631



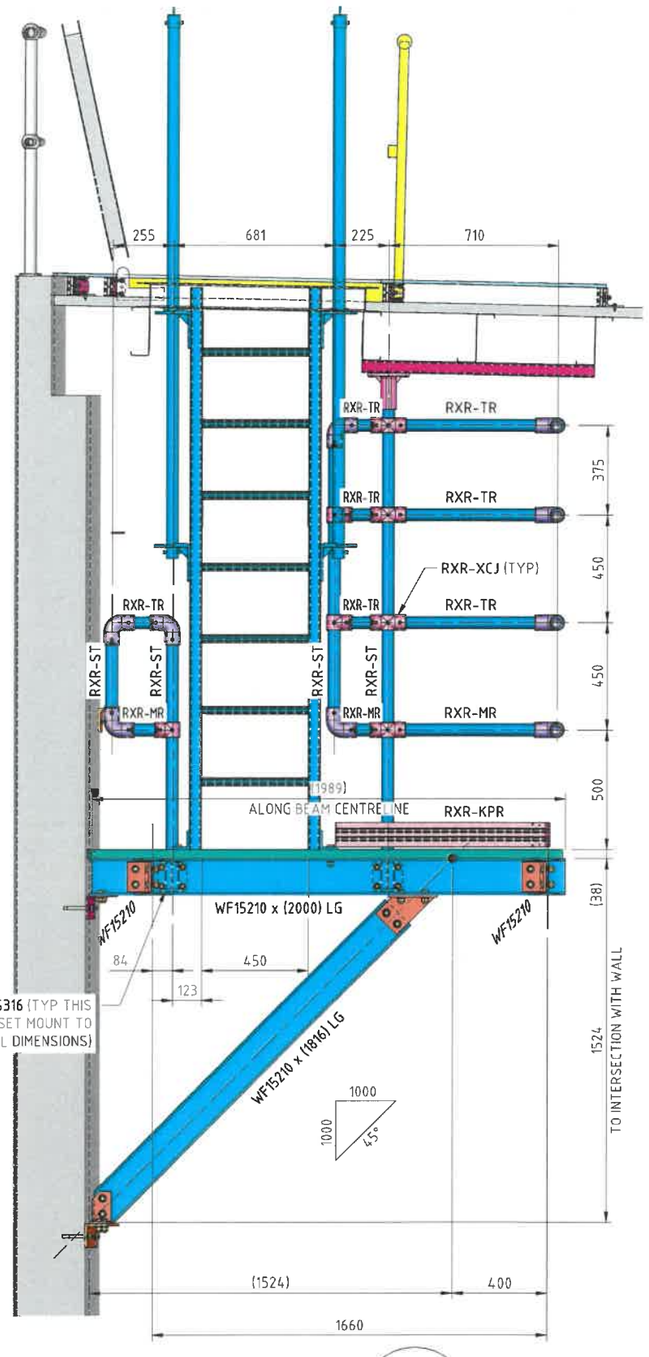
SECTION A
SCALE - 1:25
103



SECTION D
SCALE - 1:25
103



SECTION B
SCALE - 1:25
103



SECTION C
SCALE - 1:25
103

ISSUED FOR CONSTRUCTION

No.	Date	Revision	By	Appr
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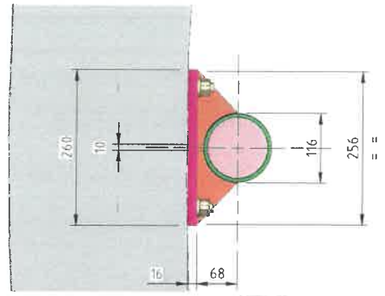
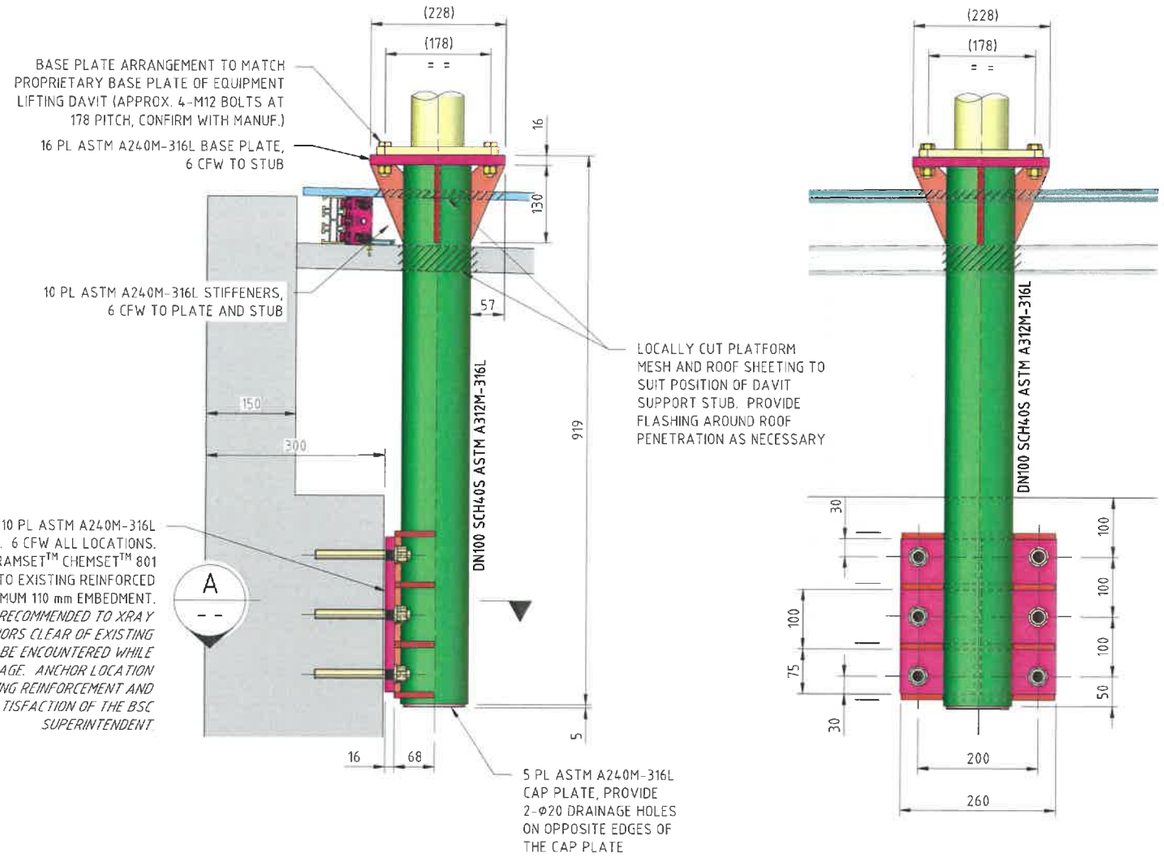
Drawn by	J.WALKER	05.04.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
SETOUT SECTIONS

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-107 Rev.: 0



SECTION A
SCALE - 1:10



ELEVATION

END VIEW

EQUIPMENT LIFTING DAVIT MOUNTING BRACKET DETAIL

SCALE - 1:10

ISSUED FOR CONSTRUCTION

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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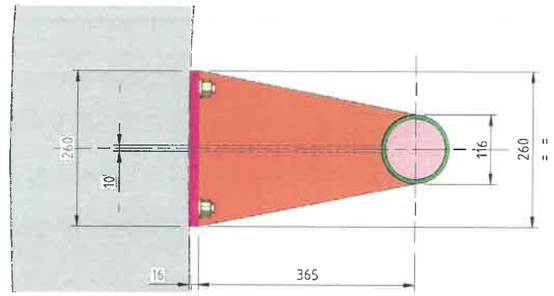
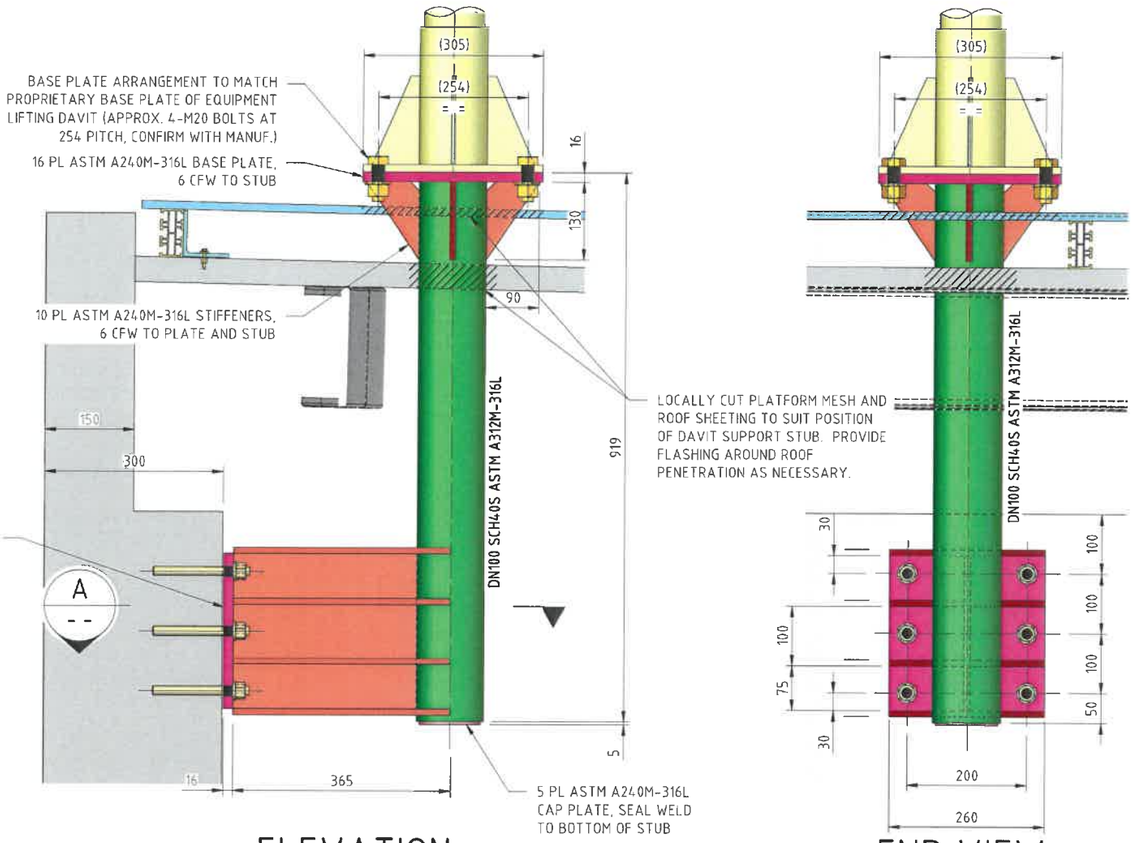
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
EQUIPMENT LIFTING DAVIT BRACKET DETAIL

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-108 Rev.: 0



SECTION A
SCALE - 1:10



ELEVATION

END VIEW

PERSONNEL ACCESS DAVIT MOUNTING BRACKET DETAIL

SCALE - 1:10

ISSUED FOR CONSTRUCTION

Approved :

P.L. Witham

ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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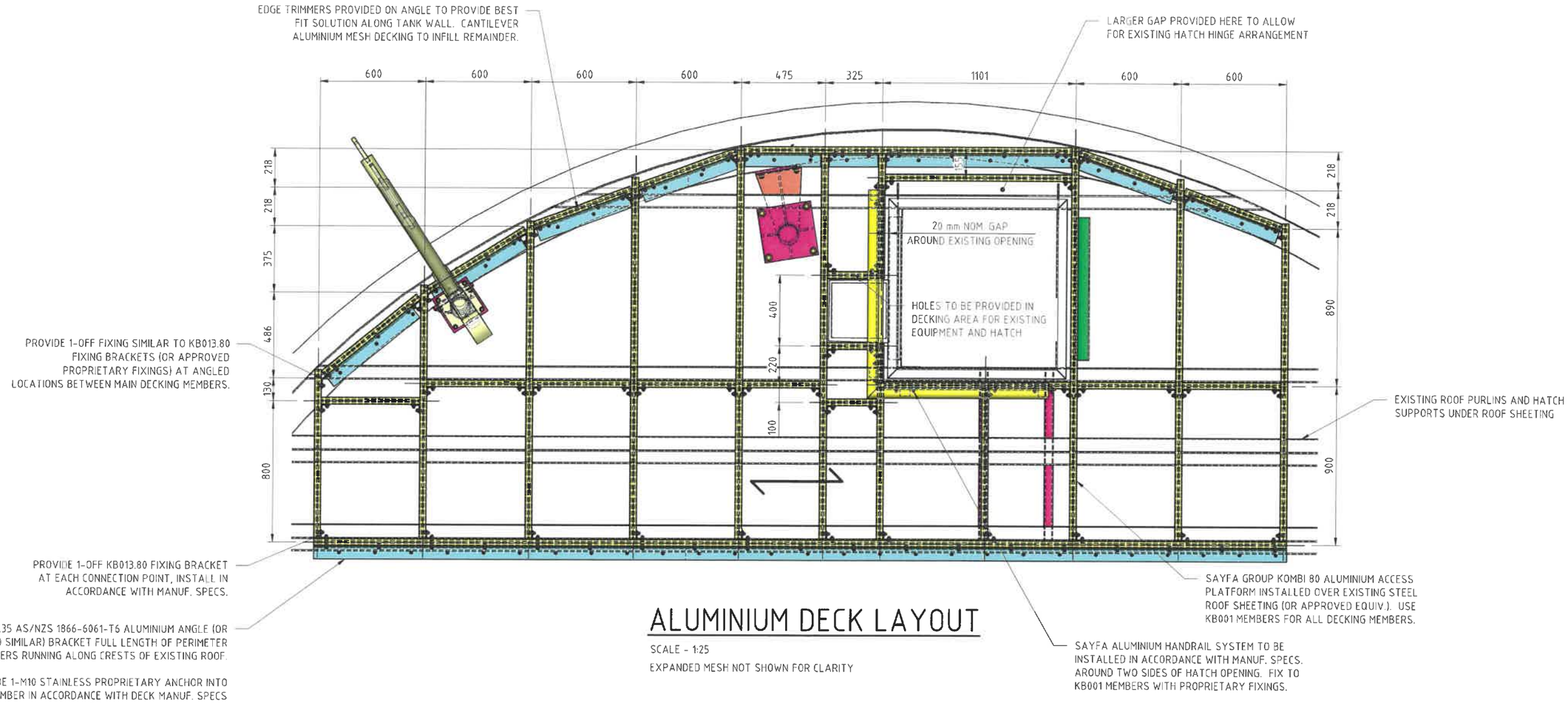
BILOELA EARLSFIELD ST STANDPIPE
PERSONNEL ACCESS DAVIT BRACKET DETAIL

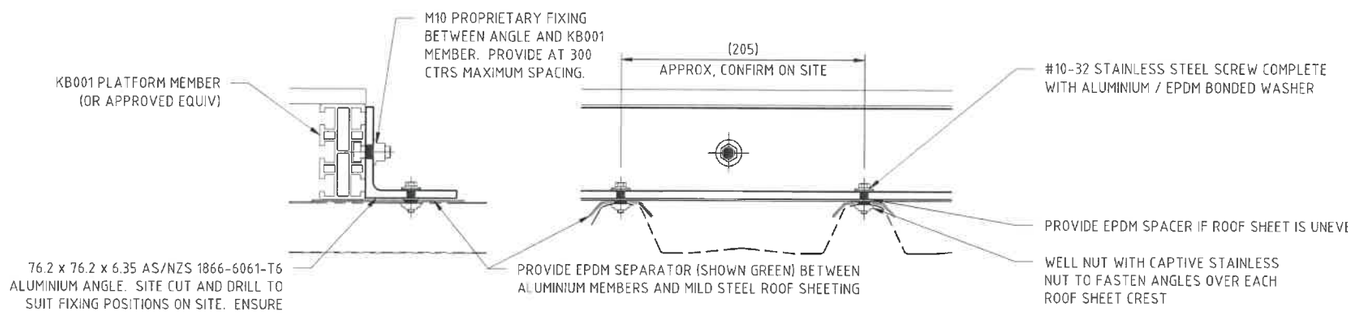
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-109 Rev.: 0



ALUMINIUM DECK LAYOUT

SCALE - 1:25

EXPANDED MESH NOT SHOWN FOR CLARITY



DECK FIXING ANGLE TYPICAL DETAIL

SCALE - 1:5

ALUMINIUM DECKING NOTES:

1. DIMENSIONS ARE PROVIDED TO CENTRELINE OF DECKING MEMBERS UNO. DECKING MEMBERS BASED ON SUPPLIED INFORMATION FROM PROPRIETARY SYSTEM MANUFACTURER, ALL DIMENSIONS SHALL BE CONFIRMED WITH MANUF.
2. ALL PROPRIETARY DECKING ITEMS CALLED UP (MAIN SECTION, CONNECTIONS ETC,) ARE SUBJECT TO REVIEW AND APPROVAL/REVISION BY PROPRIETARY SYSTEM MANUFACTURER.
3. ALL CONNECTIONS SHALL BE REVIEWED BY AND APPROVED BY SYSTEM MANUFACTURER. WHERE ISSUES EXIST SYSTEM MANUFACTURER SHALL PROVIDE SUITABLE GUIDANCE AND DETAILS.
4. DISSIMILAR METAL PROTECTION SHALL BE PROVIDED BETWEEN ALUMINIUM ELEMENTS AND ALL OTHER SURFACES IN ACCORDANCE WITH MANUF. SPECS. AND, WHERE NOT SPECIFIED BY MANUF. SPECS, INDUSTRY BEST PRACTICES TO ENSURE NO CONTACT BETWEEN DISSIMILAR METALS (E.G. PROVISION OF EPDM WASHERS).

Approved :

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Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA EARLSFIELD ST STANDPIPE
ALUMINIUM DECK LAYOUT

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-110
Rev.: 0

DESIGN LIMITATIONS:

1. MAJORITY REQUIREMENTS OF AS 1657 CAN BE MET BY EXISTING HATCH ARRANGEMENT.
2. NON-COMPLIANCE WITH CLAUSE 7.4.8.4. REGARDING EXTENSION OF LANDING TO TOP RUNG (DUE TO THICKNESS HAVE PROVIDED 200 mm OFFSET AT TOP RUNG). CLIENT TO PERFORM A HAZOP TO DETERMINE SUITABILITY OF DESIGN VERSUS COST OF MODIFICATION.
3. FIRST (TOP) RUNG POSITIONED ONE RUNG DISTANCE FROM TOP SETOUT POINT TO ALLOW FOR HATCH TO CLOSE. CLIENT TO PERFORM A HAZOP TO DETERMINE WHETHER THIS IS ACCEPTABLE FOR USE. ALUMINIUM DECKING. CLIENT TO PREPARE SAFE WORK METHOD FOR ACCESS TO ENSURE ALL PERSONNEL ENTERING TANK ARE AWARE OF WHERE THE TOP STEP IS.
5. INTERNAL AREAS OF THE CONCRETE TANK ARE CONSIDERED CONFINED SPACES, AND SHALL REQUIRE A FULL HAZOP PRIOR TO ENTRY BY ANY PERSONNEL. A SAFETY DAVIT HAS BEEN PROVIDED AS PART OF THIS DESIGN.
6. WORK CARRIED OUT IN THE CONCRETE TANK WILL REPRESENT A POTENTIAL HAZARD FROM ITEMS FALLING FROM ABOVE. CONTRACTORS SHALL TAKE STEPS TO PREVENT ACCIDENTAL DROPPING OF ELEMENTS INTO THE CHAMBER, AND HAZOPS SHALL BE UNDERTAKEN TO DETERMINE THE BEST APPROACH FOR LOWERING OF EQUIPMENT SAFELY. HARDHATS AND OTHER PPE WILL BE REQUIRED.
7. LIKEWISE THE LIFTING OF ELEMENTS ONTO THE TANK ROOF WILL PRESENT A HAZARD TO ALL WORKERS ON THE OUTSIDE OF THE TANK, AND ADDITIONALLY MEMBERS OF THE PUBLIC. THE WORKSITE SHALL BE FULLY FENCED AS REQUIRED TO ALLOW FOR THE MOVEMENT OF MATERIALS SAFELY AND WITHOUT RISK TO THE PUBLIC (WHERE POSSIBLE). HAZOP SHALL CONSIDER CRANE OPERATION, POSITIONING AND ACCESS.
8. CLIENT TO PRODUCE A PROCEDURE FOR SAFETY ACCESS FOR DIVERS FOR INDIVIDUAL TANKS. ISSUES RAISED ABOVE TO BE INCLUDED.

CONSTRUCTION METHODOLOGY:

1. BANANA SHIRE COUNCIL TO ARRANGE AND DRAIN EXISTING RESERVOIR. TIME TO BE ALLOWED FOR DRYING OF CONCRETE SURFACES PRIOR TO INSTALLING NEW ELEMENTS.
2. PRIOR TO INSTALLING ANY NEW EQUIPMENT PROCEED WITH DEMOLITION WORKS AS INDICATED / REQUIRED. ALL EXISTING ELEMENTS TO REMOVED AND DISPOSED OF SAFELY AND IN ACCORDANCE WITH BSC SUPERINTENDENTS INSTRUCTION. WHERE EXISTING ITEMS ARE REMOVED FROM EXISTING CONCRETE SURFACES, ENSURE ALL EXPOSED SURFACES (I.E. CUT ANCHORS ETC.) ARE FULLY SEALED WITH POTABLE WATER APPROVED SEALANT. ANY CONCRETE DAMAGE SHALL BE REMEDIED TO THE SPECIFICATION OF THE BSC SUPERINTENDENT.
3. FABRICATE AND INSTALL NEW UPPER HANDRAIL SECTION AND SAFETY DAVIT BASE PLATE. PRIOR TO CHEMICALLY ANCHORING IN PLACE, POSITIVELY LOCATE BOTH ELEMENTS AND ENSURE ALL SETOUT DIMENSIONS WILL RESULT IN FULL FUNCTIONING DAVIT. ONCE CONFIRMED SITE DRILL AND INSTALL NEW CHEMICAL ANCHORS AND FASTEN NEW ITEMS IN PLACE IN ACCORDANCE WITH ENGINEERING AND MANUFACTURERS SPECIFICATIONS. PROVIDE DAVIT MOUNTING PLATE OVER CONCRETE SURFACE WITH GROUT LEVELLING PAD AS REQUIRED TO ENSURE A LEVEL INSTALLATION AND OPERATION OF THE DAVIT
4. POSITIVELY LOCATE POSITIONS FOR INSTALLATION OF NEW WALL MOUNTING BRACKETS. START WITH LAYOUT OF PLATFORM MEMBERS ON THE TANK FLOOR TO ASSIST IN ENSURING MEMBERS ALIGN WITH BRACKET POSITIONS, THEN TRACE UP THE WALL (I.E. USE OF PLUMB-BOB FROM ABOVE TO ALIGN POSITIONS).
5. ONCE WALL MOUNT POSITIONS ARE PREPARED, FULLY ASSEMBLE NEW LADDER AND LOWER INTO POSITION OVER NEW SUPPORT BRACKETS. WITH LADDER IN POSITION INSTALL ALL STRUCTURAL ELEMENTS BETWEEN WALL AND LADDER TO SECURE INTO PLACE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION. CHEMICALLY ANCHOR LADDER TO BASE OF REINFORCED CONCRETE TANK IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
6. LOWER ELEMENTS FOR LADDER SUPPORT ONTO PLATFORM BELOW AND ASSEMBLE FRAME. INSTALL ONTO WALL BRACKETS AND FASTEN AS PER ENGINEERING DETAILS.
7. LOWER NEW LADDER ASSEMBLY ONTO NEW PLATFORM. LOCATE AND FIX TO NEW PLATFORM AND EXISTING STRUCTURE IN ACCORDANCE WITH ENGINEERING DETAILS.

STAINLESS STEEL:

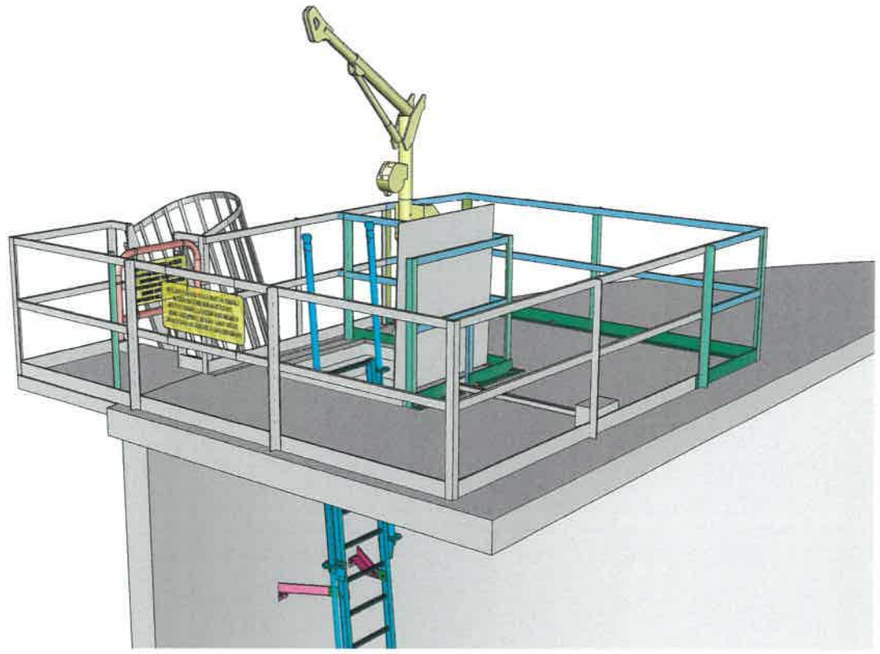
1. ALL STAINLESS STEEL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF:
   - 1.1. AS 4100 - SAA STEEL STRUCTURES CODES
   - 1.2. AS 1554.6 - STRUCTURAL STEEL WELDING - WELDING STAINLESS STEELS FOR STRUCTURAL PURPOSES
2. STAINLESS STEEL GRADES AS FOLLOWS:
   - 2.1. PLATE, SHEET AND STRIP SHALL BE TO ASTM A240M GRADE 316L
   - 2.2. BARS SHALL BE TO ASTM A276M GRADE 316L
3. STAINLESS STEEL FINISHING DETAILS:
   - 3.1. ALL SHARP EDGES AND BURRS TO BE REMOVED
   - 3.2. STAINLESS STEELWORK SHALL BE CLEANED, PICKLED AND PASSIVATED IN ACCORDANCE WITH ASTM A380 "STANDARD PRACTICE FOR CLEANING, DESCALING AND PASSIVATION OF STAINLESS STEEL PARTS, EQUIPMENT AND SYSTEMS".
4. WELD DETAILS:
   - 4.1. ALL WELDS SHALL BE 6 CFW UNO.
   - 4.2. BUTT WELDS SHALL BE PRE-QUALIFIED FULL PENETRATION UNO.
   - 4.3. ALL WELDING SHALL CONFORM WITH AS 1554.6, CATEGORY 1A.
   - 4.4. ALL WELDING CONSUMABLES SHALL BE TO AS/NZS 1167.2 AND/OR AS/NZS 4854.
   - 4.5. ALL WELDS SHALL BE VISUALLY INSPECTED.
   - 4.6. ALL WELDS SHALL BE FREE FROM DEFECTS SUCH AS CRACKS, EXCESSIVE UNDERCUTS AND GROSS POROSITY.

FIBRE REINFORCED PLASTIC (FRP) / COMPOSITE FIBRE:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. ENSURE COMPLIANCE WITH MANUFACTURER QUALITY ASSURANCE STANDARDS.
2. UNLESS NOTED OTHERWISE OR APPROVED COMPOSITE MATERIALS FOR USE IN THIS PROJECT SHALL BE MANUFACTURED BY TREADWELL. SUBSTITUTIONS IN MATERIALS SHALL NOT BE UNDERTAKEN WITHOUT PRIOR APPROVED OF BSC SUPERINTENDENT AND STRUCTURAL ENGINEER.
3. ALL MEMBERS SHALL BE IN SOUND CONDITION FREE FROM PITTING, DE-LAMINATIONS AND OTHER DEFECTS WHICH ARE LIKELY TO IMPAIR THE STRUCTURAL CAPACITY OF THE MEMBERS.
4. APPLY A WATERPROOFING COMPOUND TO SEAL ANY END CUT FIBRES AS A RESULT OF DRILLING, CUTTING OR DAMAGE TO THE COMPOSITE FIBRE PROFILES. COMPOUND SHALL BE APPROVED FOR POTABLE WATER AND SHALL BE APPROVED BY THE MANUFACTURER.
5. CONTRACTORS SHALL REFER TO MANUFACTURER FOR ALL INSTALLATION AND ASSEMBLY INSTRUCTIONS AND SPECIFICATIONS PRIOR TO BEGINNING WORK, AND SHALL ENSURE THAT ALL INSTRUCTIONS ARE UNDERSTOOD.

LOCALITY PLAN

SCALE - NTS



Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

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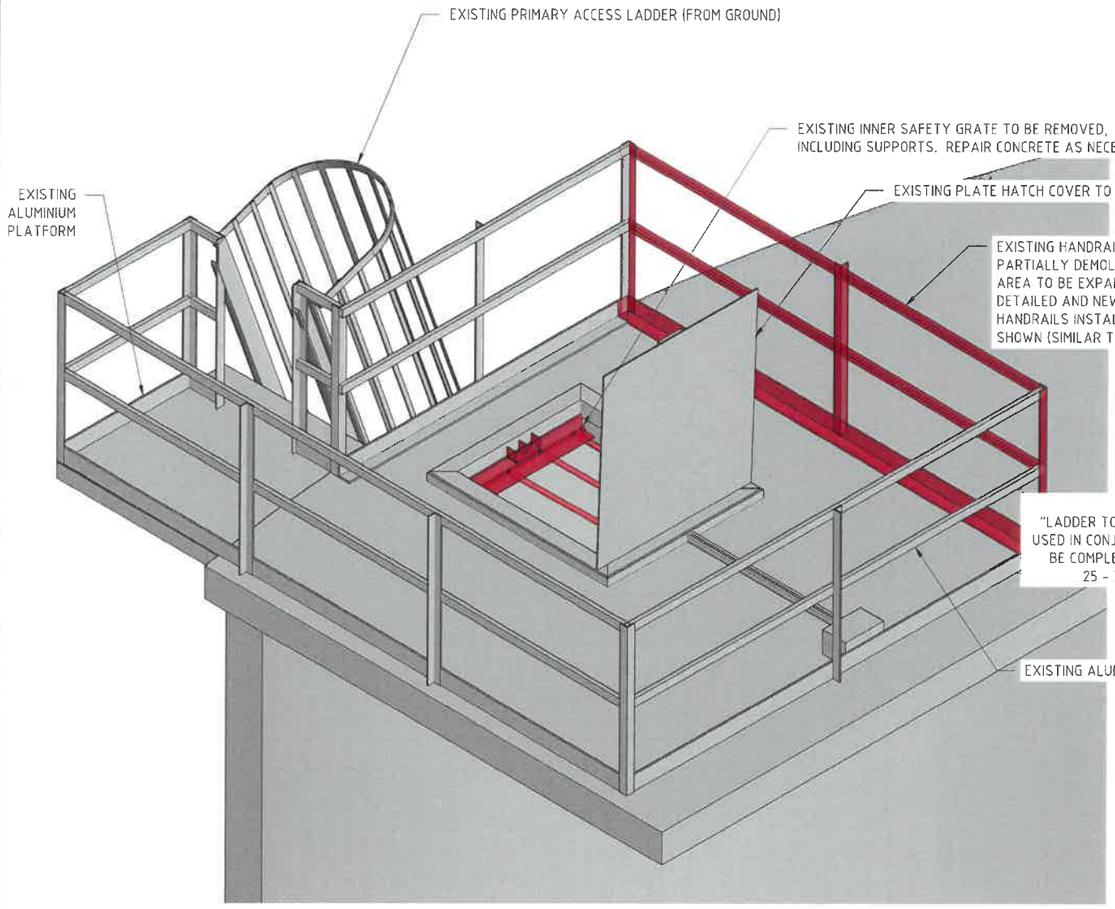
Designed by A.BUENEN	Date -	
Drawn by J.WALKER	Date 20.03.23	
Checked by A.BUENEN	Date 28.06.23	
Engineer RPEQ 11631 C.WITHAM	Date 11.07.23	

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
DESIGN NOTES

Scale
AS SHOWN (AT A3)

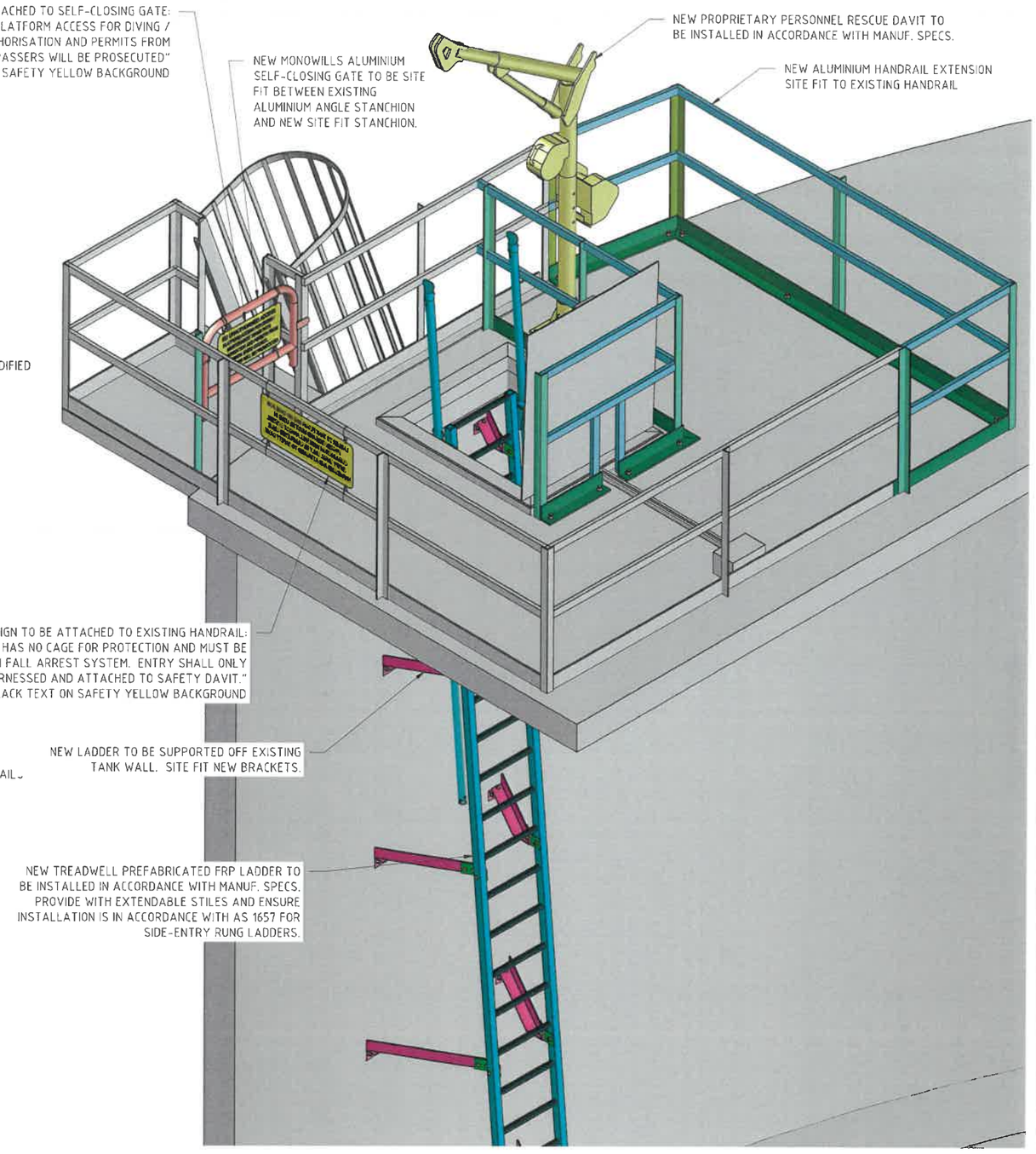
Job No.
GD2188

Drawing No. GD2188-200 Rev. 0



DEMOLITION PLAN (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY



GENERAL ARRANGEMENT (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

Approved :

Chris Witham Member No : 697629
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Drawn by	J.WALKER	Date 20.03.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
GENERAL ARRANGEMENT 1

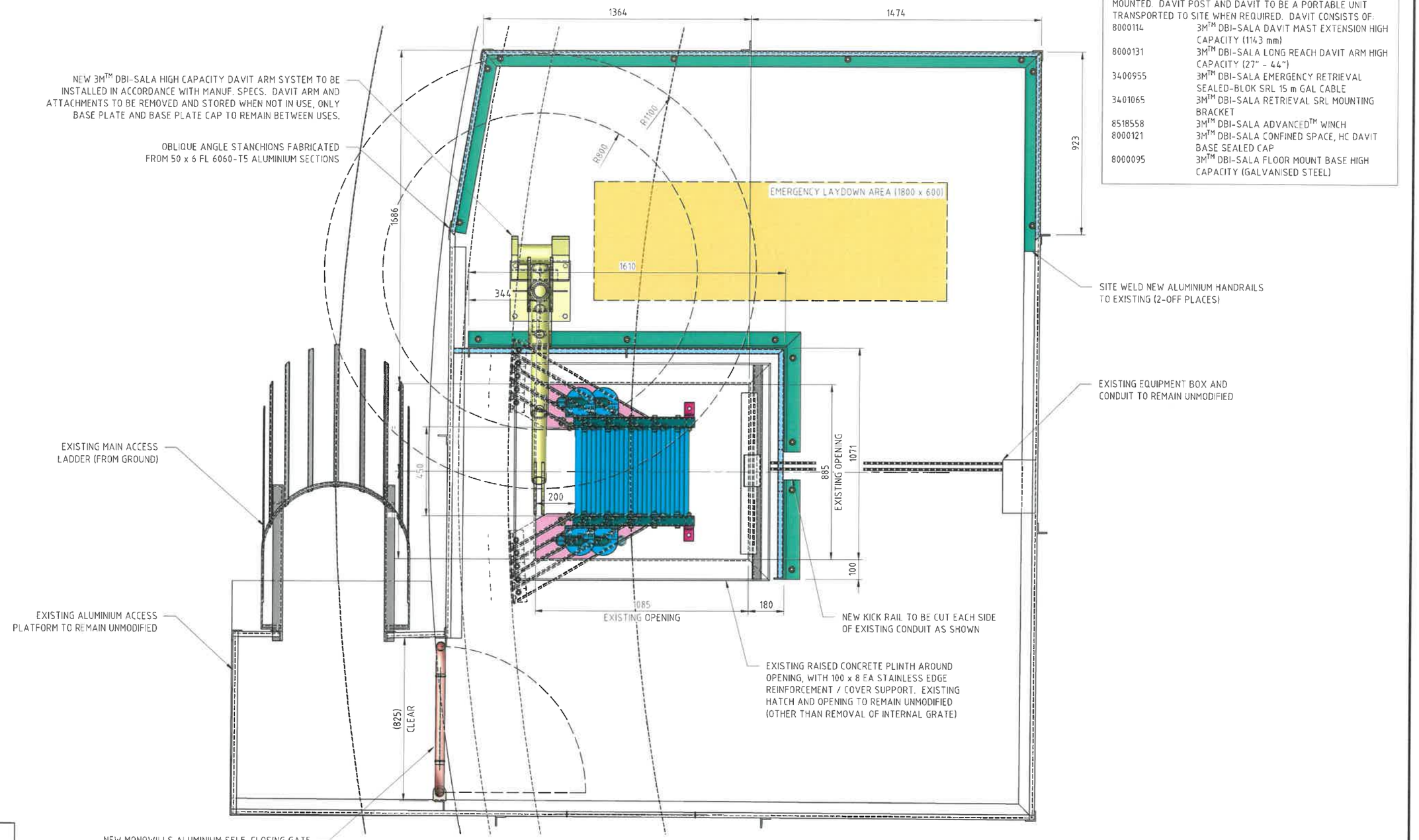
Scale
AS SHOWN (AT A3)

Job No.
GD2188

Drawing No. GD2188-201 Rev. 0

NOTE: PLATFORM AND DAVIT BASE TO BE PERMANENTLY MOUNTED. DAVIT POST AND DAVIT TO BE A PORTABLE UNIT TRANSPORTED TO SITE WHEN REQUIRED. DAVIT CONSISTS OF:

8000114	3M™ DBI-SALA DAVIT MAST EXTENSION HIGH CAPACITY (1143 mm)
8000131	3M™ DBI-SALA LONG REACH DAVIT ARM HIGH CAPACITY (27" - 44")
3400955	3M™ DBI-SALA EMERGENCY RETRIEVAL SEALED-BLOK SRL 15 m GAL CABLE
3401065	3M™ DBI-SALA RETRIEVAL SRL MOUNTING BRACKET
8518558	3M™ DBI-SALA ADVANCED™ WINCH
8000121	3M™ DBI-SALA CONFINED SPACE, HC DAVIT BASE SEALED CAP
8000095	3M™ DBI-SALA FLOOR MOUNT BASE HIGH CAPACITY (GALVANISED STEEL)



GENERAL ARRANGEMENT (PLAN AT ROOF LEVEL)

SCALE - 1:20

ISSUED FOR CONSTRUCTION

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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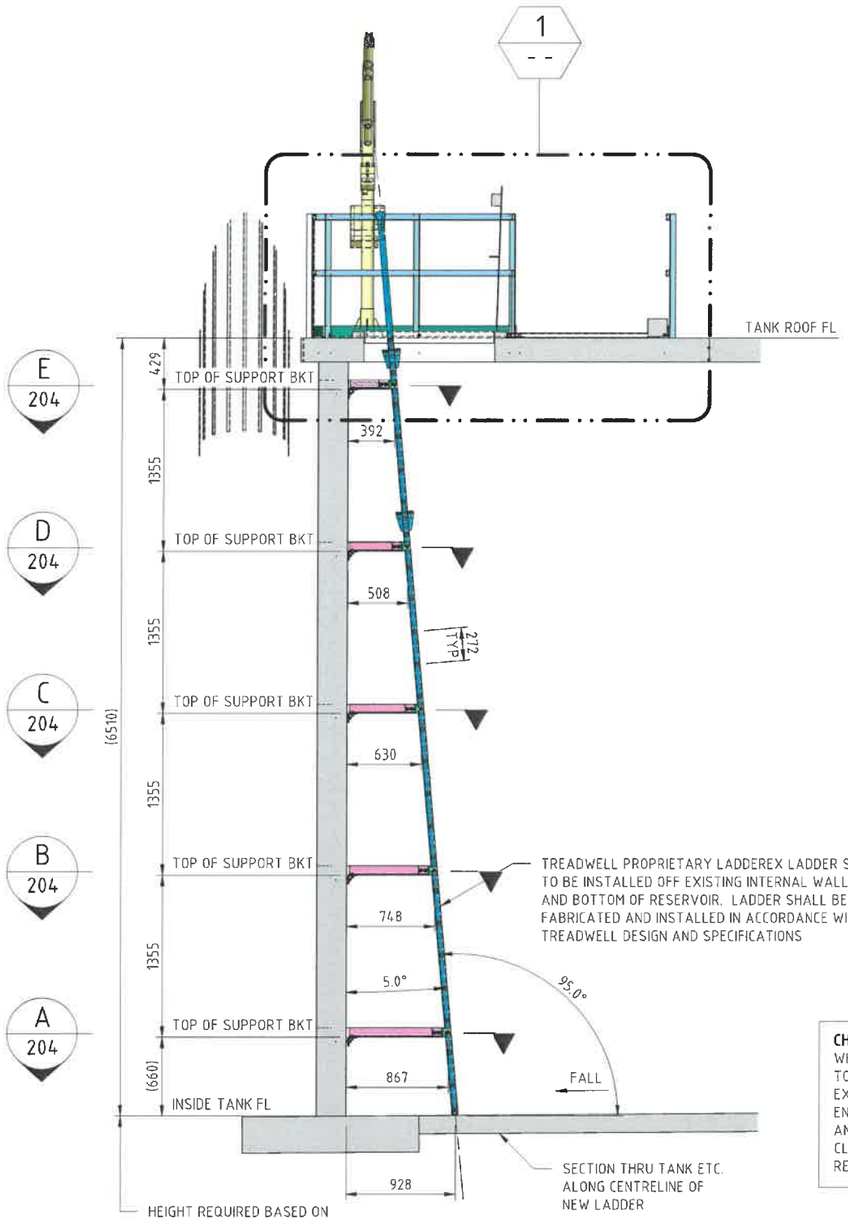
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

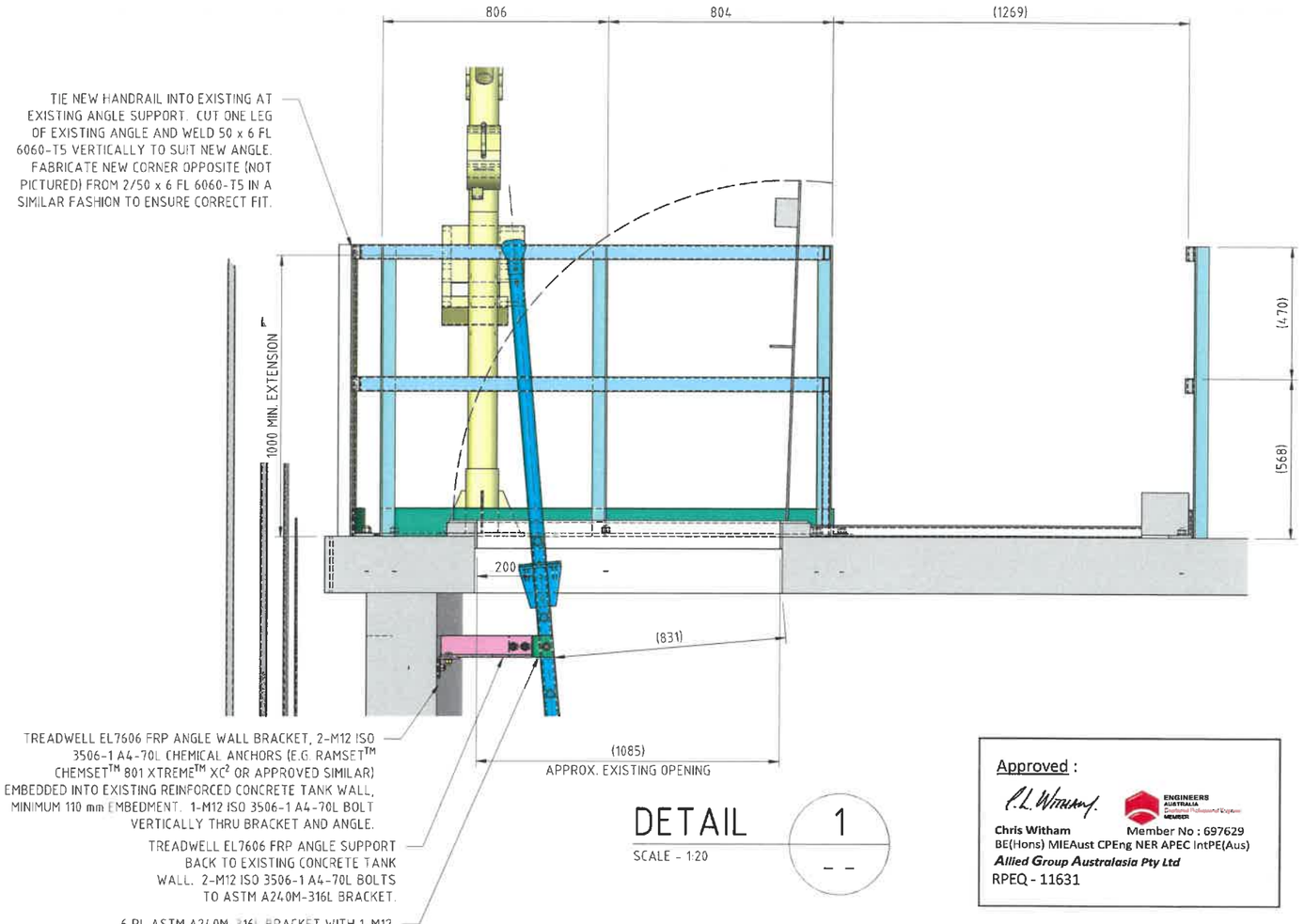
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
GENERAL ARRANGEMENT 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-202 Rev.: 0



ELEVATION

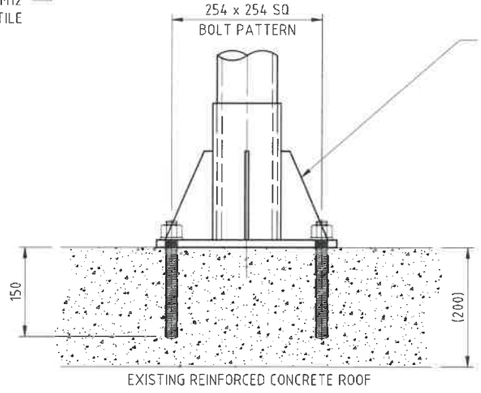
SCALE - 1:50



DETAIL 1

SCALE - 1:20

CHEMICAL ANCHOR NOTE
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT



PROPRIETARY DAVIT BASE PLATE (PART No. 8000095, 3M™ DBI-SALA FLOOR MOUNT BASE HIGH CAPACITY (GALVANISED STEEL)) FIXED OVER EXISTING CONCRETE ROOF WITH 4-M20 8.8/S HDG CHEMICAL ANCHORS (E.G. RAMSET™ CHEMSET™ 801 XTREM™ XC² OR APPROVED SIMILAR) WITH 150 mm EMBEDMENT.
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT.

TYPICAL DAVIT BASE CONNECTION DETAIL

SCALE - 1:10

Approved :

Chris Witham — Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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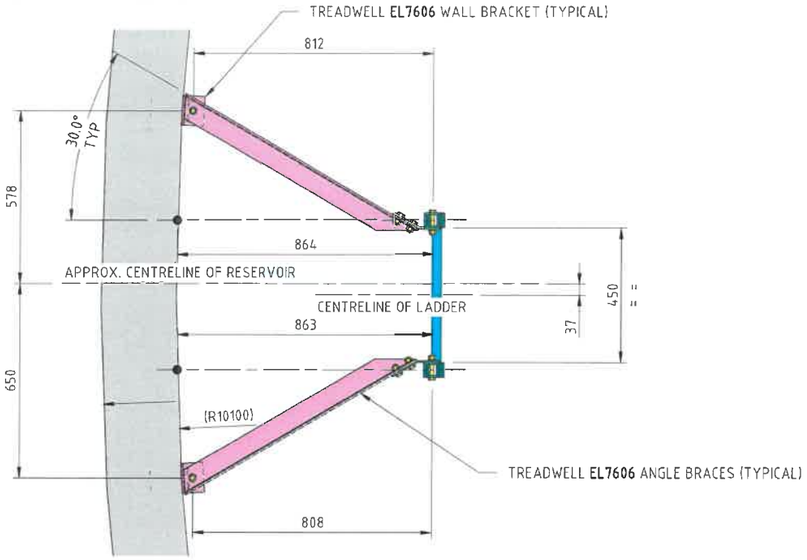
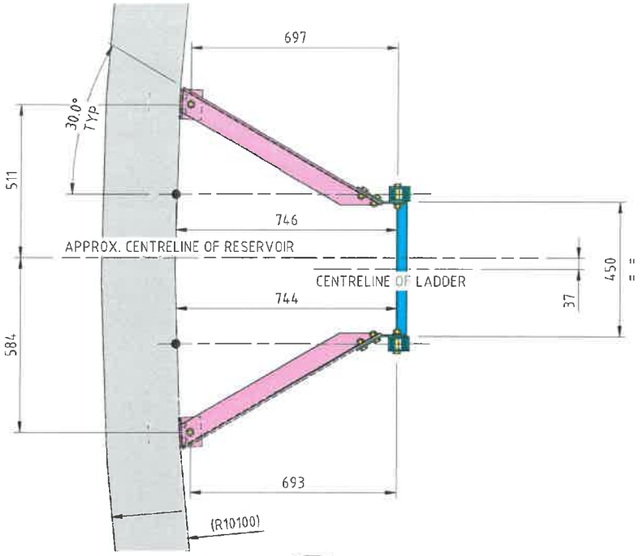
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
DETAILS

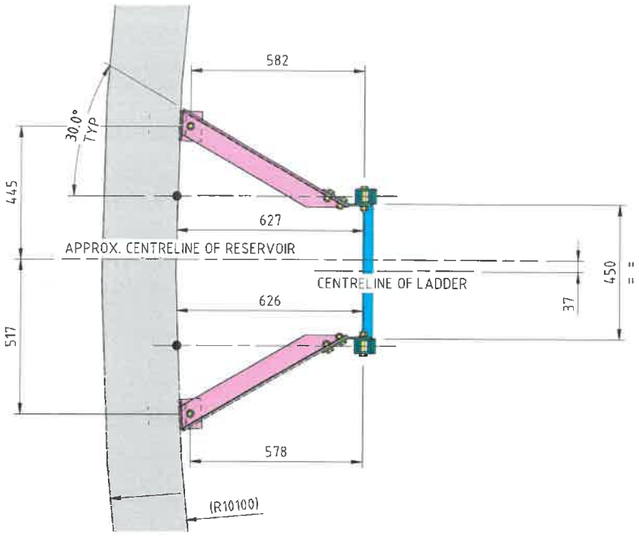
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-203 Rev.: 0



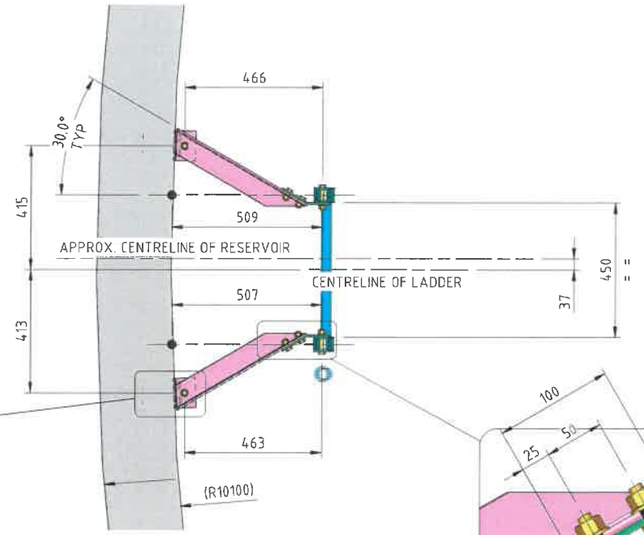
SECTION A
SCALE - 1:20
203

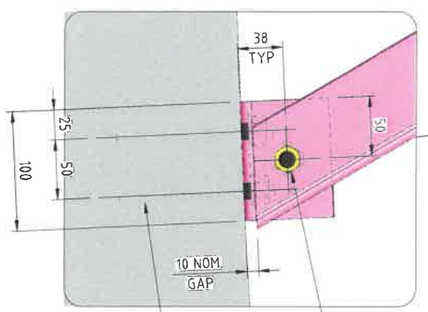


SECTION B
SCALE - 1:20
203



SECTION C
SCALE - 1:20
203

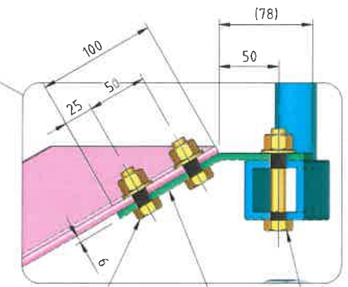




SECTION D
SCALE - 1:20
203

1-M12 ISO 3506-1 A4-70L BOLT VERTICALLY THRU ANGLE BRACE AND WALL BRACKET

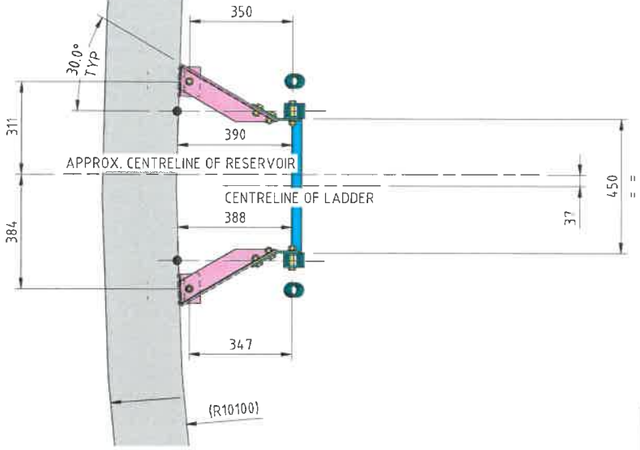
2-M12 ISO 3506-1 A4-70L CHEMICAL ANCHORS (E.G. RAMSETTM CHEMSETTM 801 XTREMETM XC2 OR APPROVED SIMILAR) EMBEDDED INTO EXISTING REINFORCED CONCRETE TANK WALL. MINIMUM 110 mm EMBEDMENT



2-M12 ISO 3506-1 A4-70L BOLTS THRU ANGLE BRACE AND SUPPORT CLEAT

1-M12 ISO 3506-1 A4-70L BOLT THRU STILE AND SUPPORT CLEAT

76 W x 6 PL ASTM A240M-316L SUPPORT CLEAT BENT TO SUIT BRACE ANGLE. ENSURE STILE END OF CLEAT IS CUT FLUSH WITH FACE OF THE STILE (AS SHOWN)



SECTION E
SCALE - 1:20
203

Approved :

Chris Witham Member No : 697629
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Drawn by	J.WALKER	Date 20.03.23
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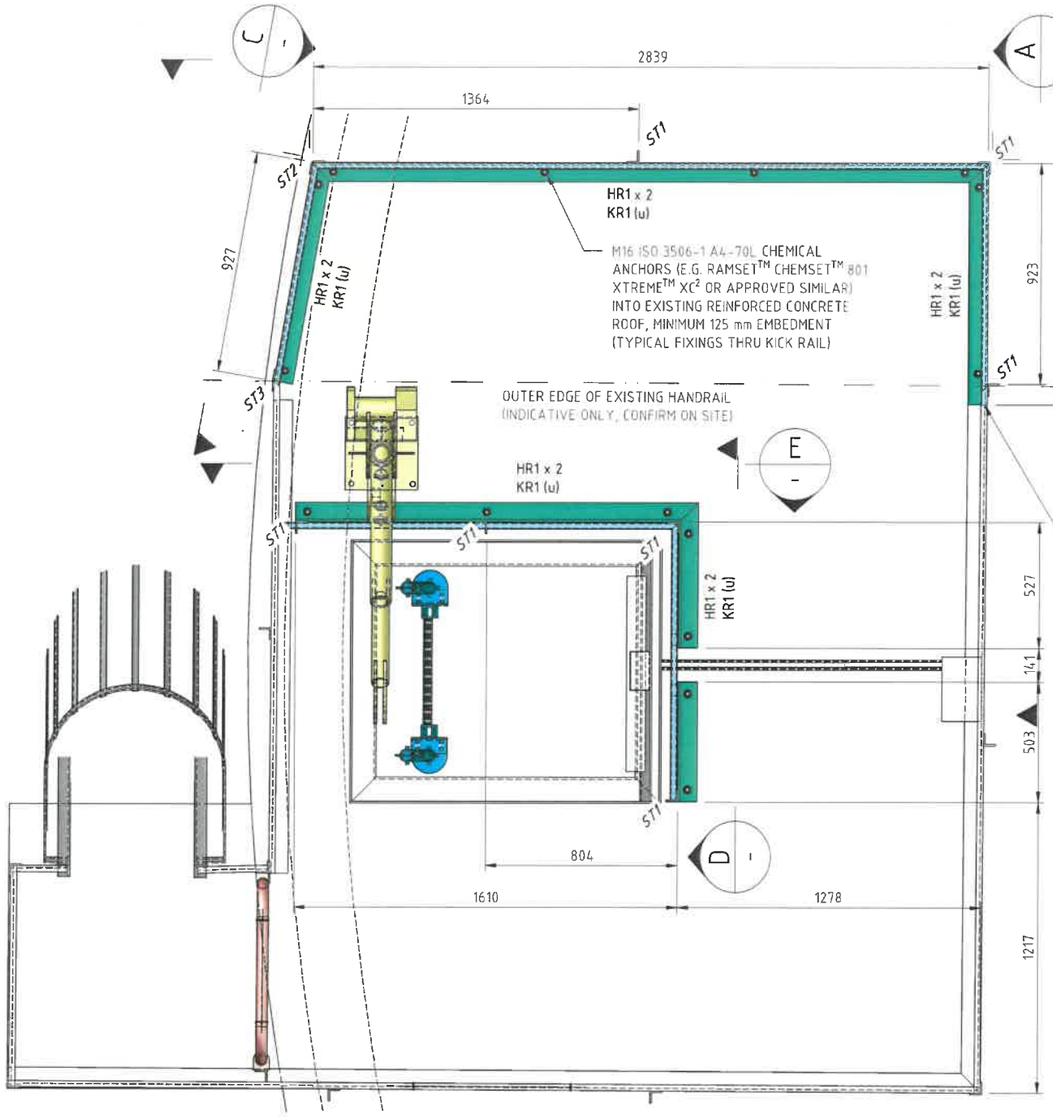
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

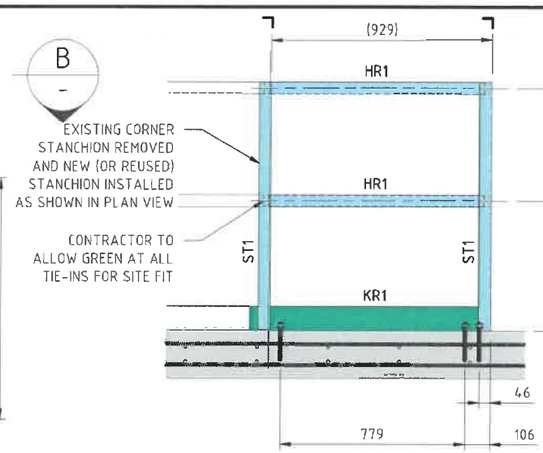
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
SETOUT SECTIONS

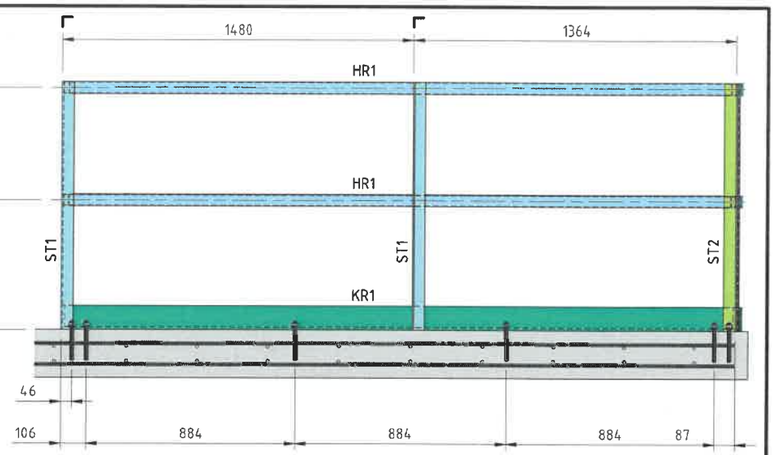
Scale
AS SHOWN (AT A3)

Job No.
GD2188

Drawing No. GD2188-204 Rev. 0







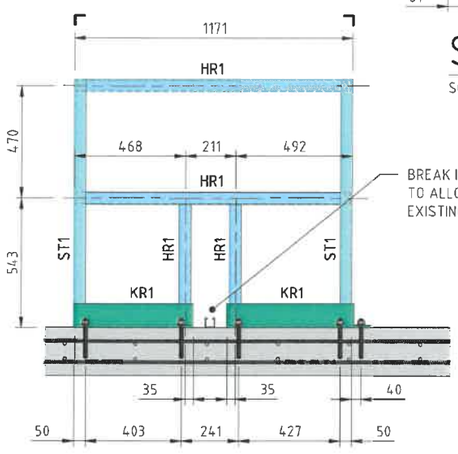
SECTION A
SCALE - 1:25

SECTION B
SCALE - 1:25

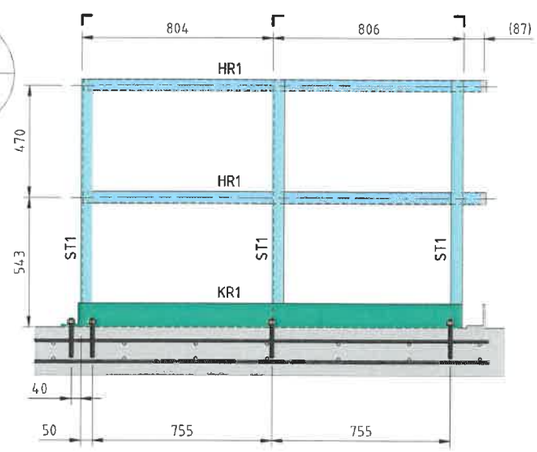
FABRICATOR TO PROVIDE GREEN TO ALLOW FOR SITE WELDED CONNECTION TO EXISTING HANDRAIL ASSEMBLIES (TYPICAL ALL TIE-IN LOCATIONS)

EXISTING ROOF REINFORCEMENT (SHOWN INDICATIVE ALL VIEWS TYPICAL). *WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT*

SECTION C
SCALE - 1:25



SECTION D
SCALE - 1:25



SECTION E
SCALE - 1:25

PROPOSED ROOF HANDRAIL PLAN
SCALE - 1:25

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

ISSUED FOR CONSTRUCTION

HANDRAIL RAIL ASSEMBLIES TO BE FABRICATED (FULLY WELDED) FROM ALUMINIUM SECTIONS. SIZES AND GRADES SUBJECT TO AVAILABILITY FROM MANUF. SPECS. SECTIONS AND GRADES SPECIFIED SHALL BE SOURCED (OR EQUIVALENT OR GREATER).

HR1	HANDRAIL 50 x 25 x 2.5 HOLLOW SECTION AS/NZS 1866-6060-T5
KR1	KICK RAIL 100 x 80 x 10 ANGLE AS/NZS 1866-6082-T5
ST1	STANCHION 50 x 50 x 6 ANGLE AS/NZS 1866-6060-T5
ST2	STANCHION FABRICATED FROM 2 LENGTHS OF 50 x 6 FLAT BAR AS/NZS 1866-6060-T5 TO SUIT ANGLE (OTHER THAN 90° BEND)
ST3	EXISTING STANCHION TO BE CUT AND PARTIALLY REMOVED, AND NEW LENGTH OF 50 x 6 FL AS/NZS 1866-6060-T5 TO BE WELDED TO SUIT ANGLE OF NEW HANDRAIL EXTENSION (SIMILAR TO FINAL FORM OF ST2). IF EXISTING HANDRAIL IS UNSUITABLE, CUT STANCHION AWAY FULLY AND FIT NEW ST2 HANDRAIL IN PLACE.

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RESIDENTIAL & COMMERCIAL BUILDING DESIGN - QBCC 1191231
1/48 GOONDOON STREET GLADSTONE QUEENSLAND
PH: 07 49726 066 ABN 96 081 040 600
EMAIL: design@gladstonedrafting.com.au
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Designed by	A.BUENEN	Date	-
Drawn by	J.WALKER	Date	20.03.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS 1.5 ML RESERVOIR
PROPOSED ROOF HANDRAIL PLAN

Scale	AS SHOWN (AT A3)
Job No.	GD2188
Drawing No.	GD2188-205
Rev.	0

DESIGN LIMITATIONS:

1. MAJORITY REQUIREMENTS OF AS 1657 CAN BE MET BY EXISTING HATCH ARRANGEMENT.
2. NON-COMPLIANCE WITH CLAUSE 7.4.8.4. REGARDING EXTENSION OF LANDING TO TOP RUNG (DUE TO THICKNESS HAVE PROVIDED 200 mm OFFSET AT TOP RUNG). CLIENT TO PERFORM A HAZOP TO DETERMINE SUITABILITY OF DESIGN VERSUS COST OF MODIFICATION.
3. TOP RUNG ALIGNED WITH TOP OF ROOF PLATE AT CENTRELINE OF LADDER (IN ACCORDANCE WITH AS 1657) WHICH IS ALLOWABLE BY THE RAISED HATCH SURROUND. CROSS-SLOPE AT TOP OF LADDER VARIES DUE TO CURVATURE OF ROOF, BUT IS APPROXIMATELY 5 °.
4. OPEN SPACE BETWEEN LADDER STILE AND INSIDE OF TANK WALL IS LARGER THAN 25 – 50 mm (ALLOWED BY AS 1657). THE SPACE IS NOT LARGE ENOUGH FOR A STANCHION C/W CLOSURE BEND. IT IS PROPOSED TO INSTALL A VERTICAL STANCHION WITHOUT ADDITIONAL COMPONENTS TO REDUCE OPEN GAP, BUT CLIENT SHALL REVIEW THIS TO CONFIRM SUITABILITY (CONSIDERING LIMITED ACCESS REQUIREMENTS, PLATFORM USAGE ETC.).
4. REFER CONSTRUCTION METHODOLOGY NOTE FOR PROPOSED INSTALLATION SEQUENCE. PROPOSED SEQUENCE IS SUBJECT TO REVIEW AND MODIFICATIONS BY CONSTRUCTION AND FABRICATION CONTRACTORS. INSTALLATION CONTRACTOR TO PROVIDE THERE OWN METHODOLOGY TO BANANA SHIRE COUNCIL FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
5. SITE MODIFICATION OF EQUIPMENT AND HANDRAILS ON SITE WILL BE REQUIRED DUE TO THE LIMITED EXISTING DOCUMENTATION AND EXTENT OF MODIFICATIONS REQUIRED BY THE PROPOSED DESIGN. CONTRACTOR TO ALLOW FOR ALL MODIFICATION WORKS INCLUDING MATERIALS AND SITE INSPECTIONS, AND WORK IN CONJUNCTION WITH BSC SUPERINTENDENT.
6. INTERNAL AREAS OF THE CONCRETE TANK ARE CONSIDERED CONFINED SPACES, AND SHALL REQUIRE A FULL HAZOP PRIOR TO ENTRY BY ANY PERSONNEL. A SAFETY DAVIT HAS BEEN PROVIDED AS PART OF THIS DESIGN.
7. ANY WORK CONDUCTED ON THE PLATFORM PRIOR TO FULL INSTALLATION OF HANDRAILS AND LADDER WILL REQUIRE ATTACHMENT TO A SAFETY LINES AND OTHER SAFETY EQUIPMENT AS THIS WILL BE WORKING AT HEIGHTS. PERSONNEL SHALL BE FULLY TRAINED AND CERTIFIED FOR WORKING AT HEIGHTS AND ACCESS SHALL BE ASSESSED (I.E. HAZOP) PRIOR TO ENTRY INTO THE AREA.
8. WORK CARRIED OUT IN THE CONCRETE TANK WILL REPRESENT A POTENTIAL HAZARD FROM ITEMS FALLING FROM ABOVE. CONTRACTORS SHALL TAKE STEPS TO PREVENT ACCIDENTAL DROPPING OF ELEMENTS INTO THE CHAMBER, AND HAZOPS SHALL BE UNDERTAKEN TO DETERMINE THE BEST APPROACH FOR LOWERING OF EQUIPMENT SAFELY. HARDHATS AND OTHER PPE WILL BE REQUIRED.
9. LIKEWISE THE LIFTING OF ELEMENTS ONTO THE TANK ROOF WILL PRESENT A HAZARD TO ALL WORKERS ON THE OUTSIDE OF THE TANK, AND ADDITIONALLY MEMBERS OF THE PUBLIC. THE WORKSITE SHALL BE FULLY FENCED AS REQUIRED TO ALLOW FOR THE MOVEMENT OF MATERIALS SAFELY AND WITHOUT RISK TO THE PUBLIC (WHERE POSSIBLE). HAZOP SHALL CONSIDER CRANE OPERATION, POSITIONING AND ACCESS.
10. PLATFORM DESIGN ASSUMES STANDARD ENTRY TO TANK WILL BE CONDUCTED BY DIVERS WITH WATER LEVEL ABOVE THE LEVEL OF THE PLATFORM DECK. WHERE THIS IS NOT THE CASE A HAZOP SHALL BE CONDUCTED TO IDENTIFY ANY ADDITIONAL SAFETY ISSUES THAT MAY BE PRESENT AND DETERMINE SUITABLE CONTROLS / METHODS.
11. CLIENT TO PRODUCE A PROCEDURE FOR SAFETY ACCESS FOR DIVERS FOR INDIVIDUAL TANKS. ALL DESIGN CONSTRAINTS AND SAFETY ISSUES RAISED ABOVE SHALL BE INCLUDED, IN ADDITION TO ANY OTHER ISSUES IDENTIFIED BY BSC PERSONNEL AND CONTRACTORS

CONSTRUCTION METHODOLOGY:

1. BANANA SHIRE COUNCIL TO ARRANGE AND DRAIN EXISTING RESERVOIR. TIME TO BE ALLOWED FOR DRYING OF CONCRETE SURFACES PRIOR TO INSTALLING NEW ELEMENTS.
2. PROCEED WITH DEMOLITION WORKS AS INDICATED. ALL EXISTING ELEMENTS TO REMOVED AND DISPOSED OF SAFELY AND IN ACCORDANCE WITH BSC SUPERINTENDENTS INSTRUCTION. WHERE EXISTING ITEMS ARE REMOVED FROM EXISTING CONCRETE SURFACES, ENSURE ALL EXPOSED SURFACES (I.E. CUT ANCHORS ETC.) ARE FULLY SEALED WITH POTABLE WATER APPROVED SEALANT. ANY CONCRETE DAMAGE SHALL BE REMEDIED TO THE SPECIFICATION OF THE BSC SUPERINTENDENT.
3. LOWER NEW FRP AND STAINLESS STEEL MEMBERS, CLEATS, FIXINGS ETC. FOR NEW PLATFORM INTO THE EXISTING RESERVOIR CHAMBER. ELEMENTS TO BE PLACED ONTO TANK FLOOR.
4. POSITIVELY LOCATE POSITIONS FOR INSTALLATION OF NEW WALL MOUNTING BRACKETS. START WITH LAYOUT OF PLATFORM MEMBERS ON THE TANK FLOOR TO ASSIST IN ENSURING MEMBERS ALIGN WITH BRACKET POSITIONS, THEN TRACE UP THE WALL (I.E. USE OF PLUMB-BOB FROM ABOVE TO ALIGN POSITIONS).
5. ONCE WALL MOUNT POSITIONS ARE PREPARED, FULLY ASSEMBLE MAIN PLATFORM LEVEL, COMPLETE WITH HANDRAIL, GRATING AND KICK PLATE SECTIONS.
6. PREPARE TO LIFT PLATFORM ASSEMBLY. BEFORE LIFTING INTO PLACE (BUT WHILE SUSPENDED) INSTALL KNEE BRACE ELEMENTS TO PLATFORM BEAMS. ONCE FULLY ASSEMBLED, ELEVATE PLATFORM ASSEMBLY UP AND ONTO WALL BRACKETS. FIX ALL MEMBERS TO WALL BRACKETS IN ACCORDANCE WITH ENGINEERING DETAILS. WHERE APPLICABLE, FIX UPPER HANDRAIL BASE PLATES TO UNDERSIDE OF EXISTING TANK ROOF.
7. LOWER ELEMENTS FOR LADDER SUPPORT ONTO PLATFORM BELOW AND ASSEMBLE FRAME. INSTALL ONTO WALL BRACKETS AND FASTEN AS PER ENGINEERING DETAILS.
8. LOWER NEW LADDER ASSEMBLY ONTO NEW PLATFORM. LOCATE AND FIX TO NEW PLATFORM AND EXISTING STRUCTURE IN ACCORDANCE WITH ENGINEERING DETAILS.

DESIGN INCORPORATES REQUIREMENTS OF AS 2299.1-2015 WHERE APPLICABLE:

3.10 DIVE REQUIREDMENTS:
3.10.1 GENERAL
DIVING OPERATIONS SHALL BE CONDUCTED ONLY FROM A SAFE AN SUITABLE SITE OR VESSEL, WHICH AT TIMES PROVIDES:
(a) SUITABLE ACCESS & EXIT FOR THE DIVERS;
(b) MEANS TO RECOVER AN INJURED DIVER FROM THE WATER; AND
(c) MEANS OF COMMUNICATION TO EMERGENCY SUPPORTED SERVICES (SEE CLAUSE 3.6.4)
3.13.3 HARNESSES
PROVIDES REQUIREMENT SHOULD A HARNESS BE REQUIRED
3.13.6 LIFELINE
A HARNESS AND LIFELINE WOULD BE A HINDRANCE IN THESE OPERATIONS, PREVENTING SAFE MOVEMENT THROUGHOUT THE TANK. BANANA SHIRE COUNCIL SHALL HAZOP WITH COMMERCIAL DIVER.
7.3.4 DIVER DEPTHS TO 30 m (SCUBA)
THE TEAM SHALL INCLUDE 1 SUPERVISOR, 1 DIVER, 1 DIVERS ATTENDANT AND 1 STANDBY DIVER (4 IN TOTAL). ROOFTOP PLATFORM SHOULD BE DESIGNED TO ALLOW FOR 4 PEOPLE.

STAINLESS STEEL:

1. ALL STAINLESS STEEL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF:
1.1. AS 4100 - SAA STEEL STRUCTURES CODES
1.2. AS 1554.6 – STRUCTURAL STEEL WELDING – WELDING STAINLESS STEELS FOR STRUCTURAL PURPOSES
2. STAINLESS STEEL GRADES AS FOLLOWS:
2.1. PLATE, SHEET AND STRIP SHALL BE TO ASTM A240M GRADE 316L
2.2. BARS SHALL BE TO ASTM A276M GRADE 316L
3. STAINLESS STEEL FINISHING DETAILS:
3.1. ALL SHARP EDGES AND BURRS TO BE REMOVED
3.2. STAINLESS STEELWORK SHALL BE CLEANED, PICKLED AND PASSIVATED IN ACCORDANCE WITH ASTM A380 "STANDARD PRACTICE FOR CLEANING, DESCALING AND PASSIVATION OF STAINLESS STEEL PARTS, EQUIPMENT AND SYSTEMS".
4. WELD DETAILS:
4.1. ALL WELDS SHALL BE 6 CFW UNO.
4.2. BUTT WELDS SHALL BE PRE-QUALIFIED FULL PENETRATION UNO.
4.3. ALL WELDING SHALL CONFORM WITH AS 1554.6, CATEGORY 1A.
4.4. ALL WELDING CONSUMABLES SHALL BE TO AS/NZS 1167.2 AND/OR AS/NZS 4854.
4.5. ALL WELDS SHALL BE VISUALLY INSPECTED.
4.6. ALL WELDS SHALL BE FREE FROM DEFECTS SUCH AS CRACKS, EXCESSIVE UNDERCUTS AND GROSS POROSITY.

FIBRE REINFORCED PLASTIC (FRP) / COMPOSITE FIBRE:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS ENSURE COMPLIANCE WITH MANUFACTURER QUALITY ASSURANCE STANDARDS.
2. UNLESS NOTED OTHERWISE OR APPROVED COMPOSITE MATERIALS FOR USE IN THIS PROJECT SHALL BE MANUFACTURED BY TREADWELL. SUBSTITUTIONS IN MATERIALS SHALL NOT BE UNDERTAKEN WITHOUT PRIOR APPROVED OF BSC SUPERINTENDENT AND STRUCTURAL ENGINEER.
3. ALL MEMBERS SHALL BE IN SOUND CONDITION FREE FROM PITTING, DE-LAMINATIONS AND OTHER DEFECTS WHICH ARE LIKELY TO IMPAIR THE STRUCTURAL CAPACITY OF THE MEMBERS.
4. APPLY A WATERPROOFING COMPOUND TO SEAL ANY END CUT FIBRES AS A RESULT OF DRILLING, CUTTING OR DAMAGE TO THE COMPOSITE FIBRE PROFILES. COMPOUND SHALL BE APPROVED FOR POTABLE WATER AND SHALL BE APPROVED BY THE MANUFACTURER.
5. CONTRACTORS SHALL REFER TO MANUFACTURER FOR ALL INSTALLATION AND ASSEMBLY INSTRUCTIONS AND SPECIFICATIONS PRIOR TO BEGINNING WORK, AND SHALL ENSURE THAT ALL INSTRUCTIONS ARE UNDERSTOOD.

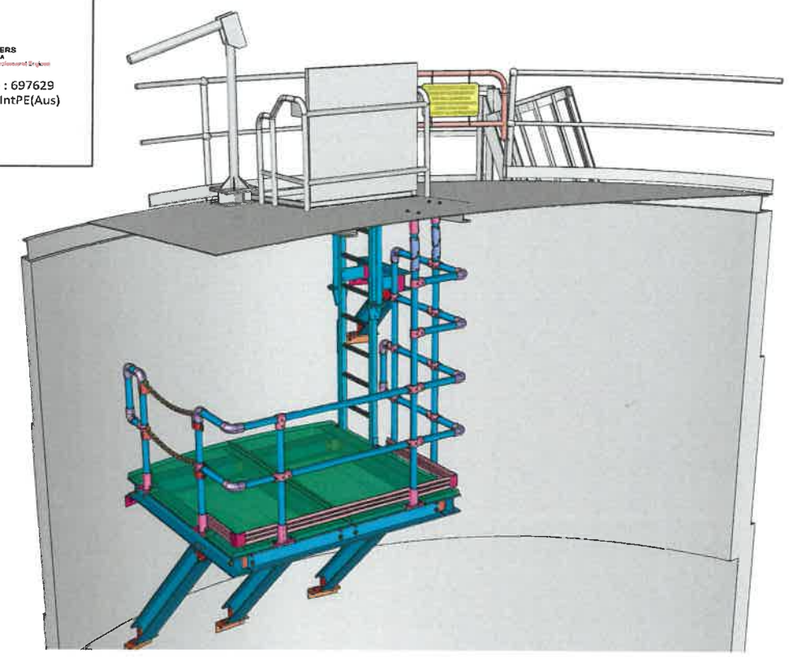
LOCALITY PLAN

SCALE - NTS

Approved :

ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631



ISSUED FOR CONSTRUCTION

No.	Date	Revision	By	Appr
0	20/06/23	ISSUED FOR CONSTRUCTION	JW	AB

GladstoneDrafting
QUALITY DESIGN. CONCEPT TO COMPLETION
A.S. BUENEN Pty. Ltd. Trading as:
INDUSTRIAL – MECHANICAL– CIVIL – STRUCTURAL DESIGN
STEELWORK & CONCRETE PANEL SHOP DETAILING
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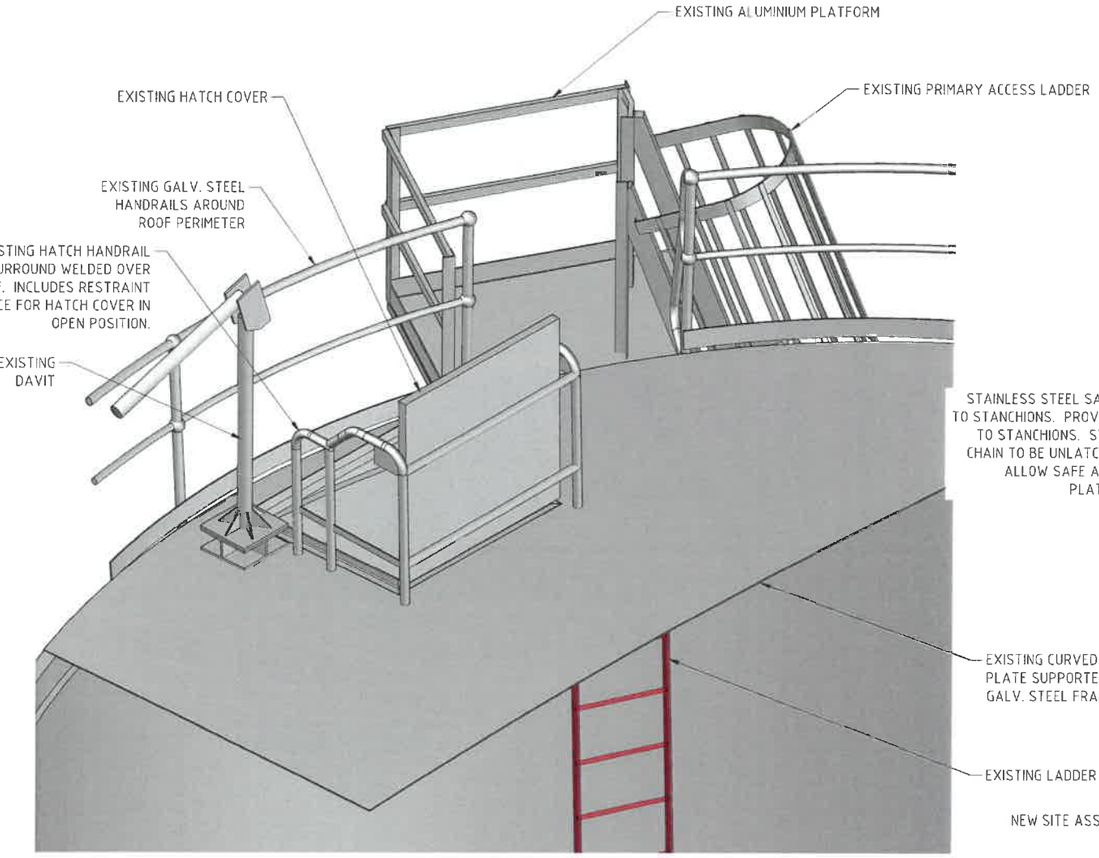
Drawn by	J.WALKER	20.03.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
DESIGN NOTES

Scale
AS SHOWN (AT A3)

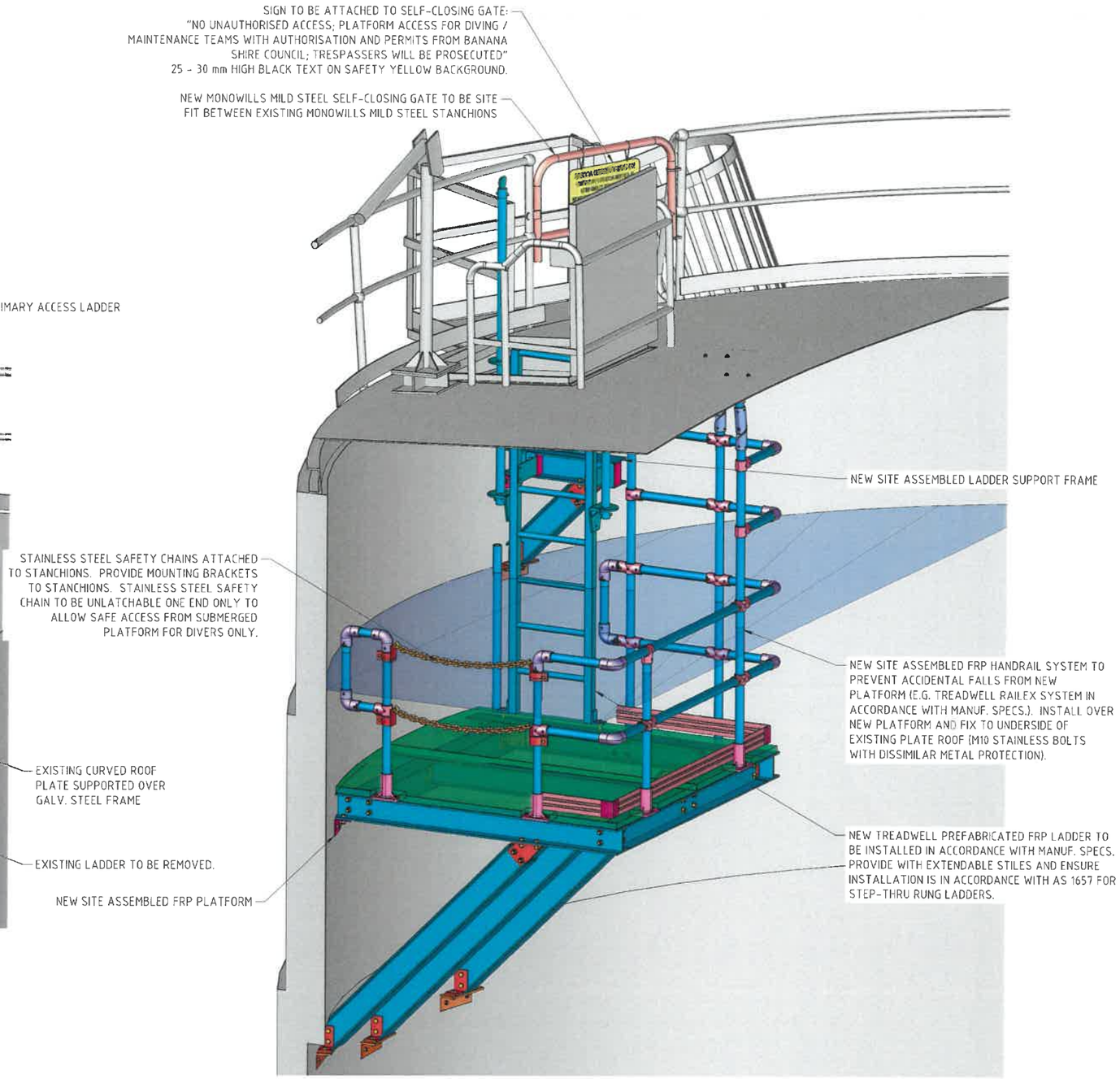
Job No.
GD2188

Drawing No. GD2188-300 Rev. 0



DEMOLITION PLAN (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY



GENERAL ARRANGEMENT (ISOMETRIC)

SCALE - NTS
EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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Drawn by	J.WALKER	Date 20.03.23
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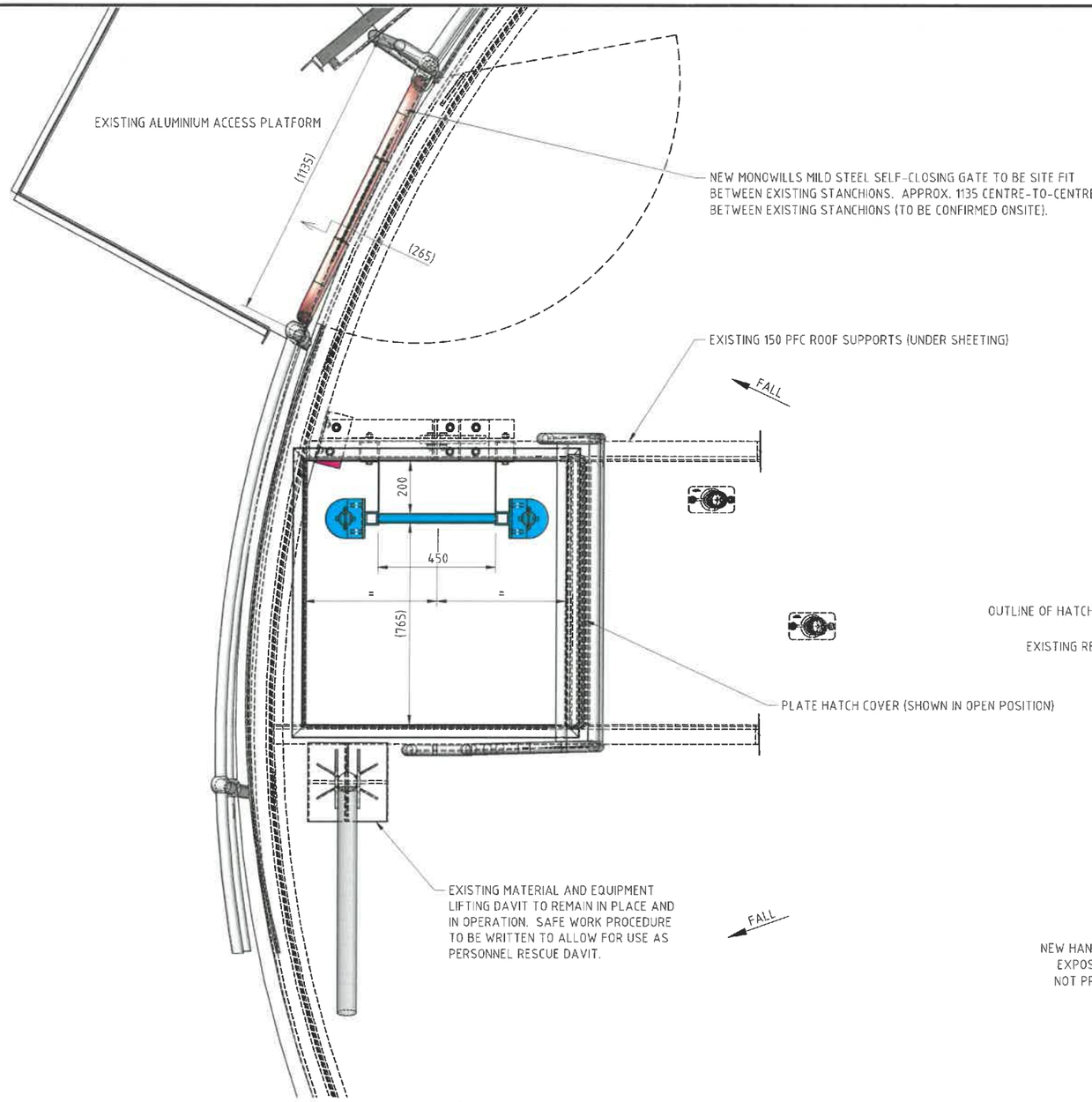
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
GENERAL ARRANGEMENT 1

Scale
AS SHOWN (AT A3)

Job No.
GD2188

Drawing No. GD2188-301 Rev. 0



GENERAL ARRANGEMENT (PLAN AT ROOF LEVEL)

SCALE - 1:20

Approved :

C.L. Witham

ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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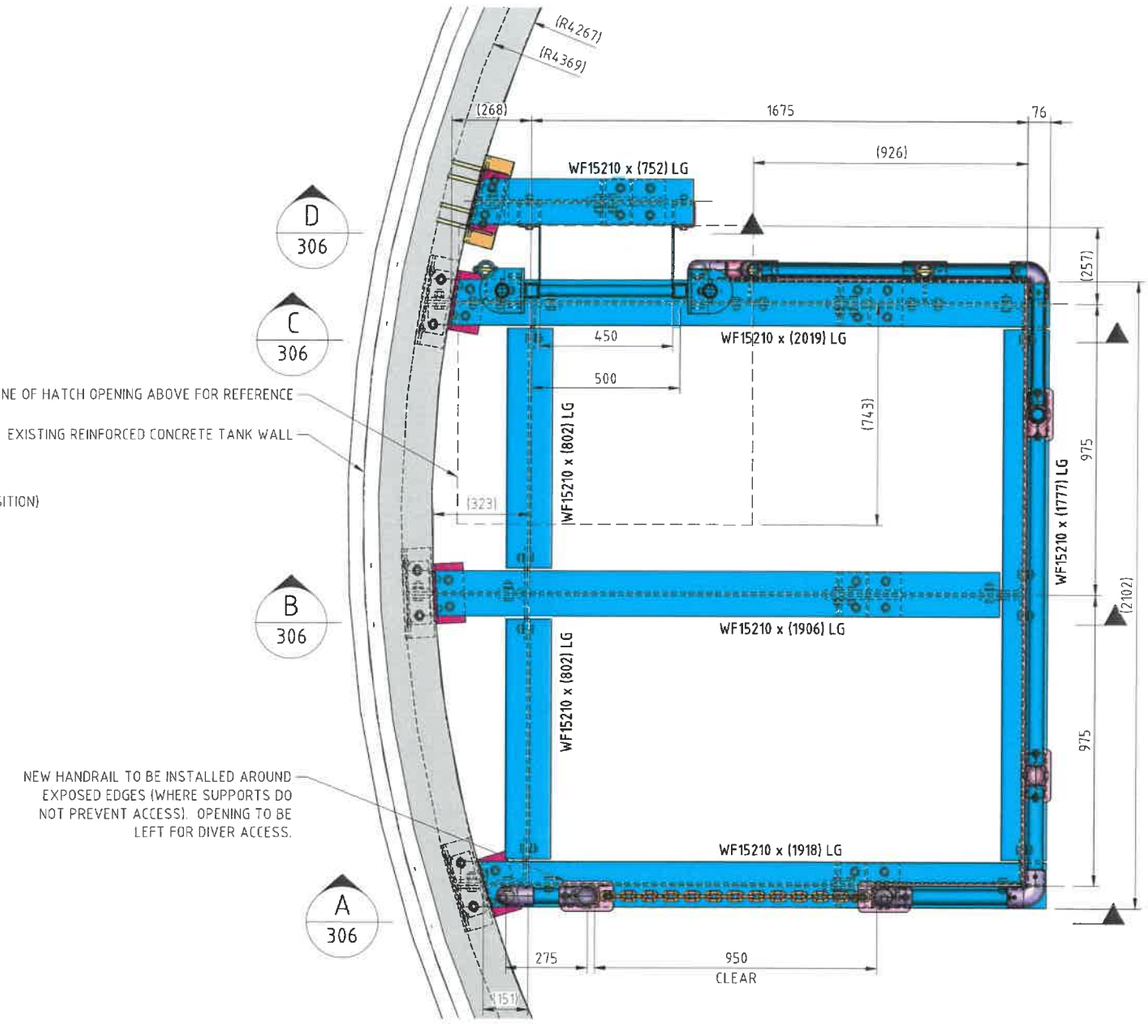

GENERAL ARRANGEMENT (PLAN AT PLATFORM LEVEL)

SCALE - 1:20
GRATING NOT SHOWN FOR CLARITY

ISSUED FOR CONSTRUCTION

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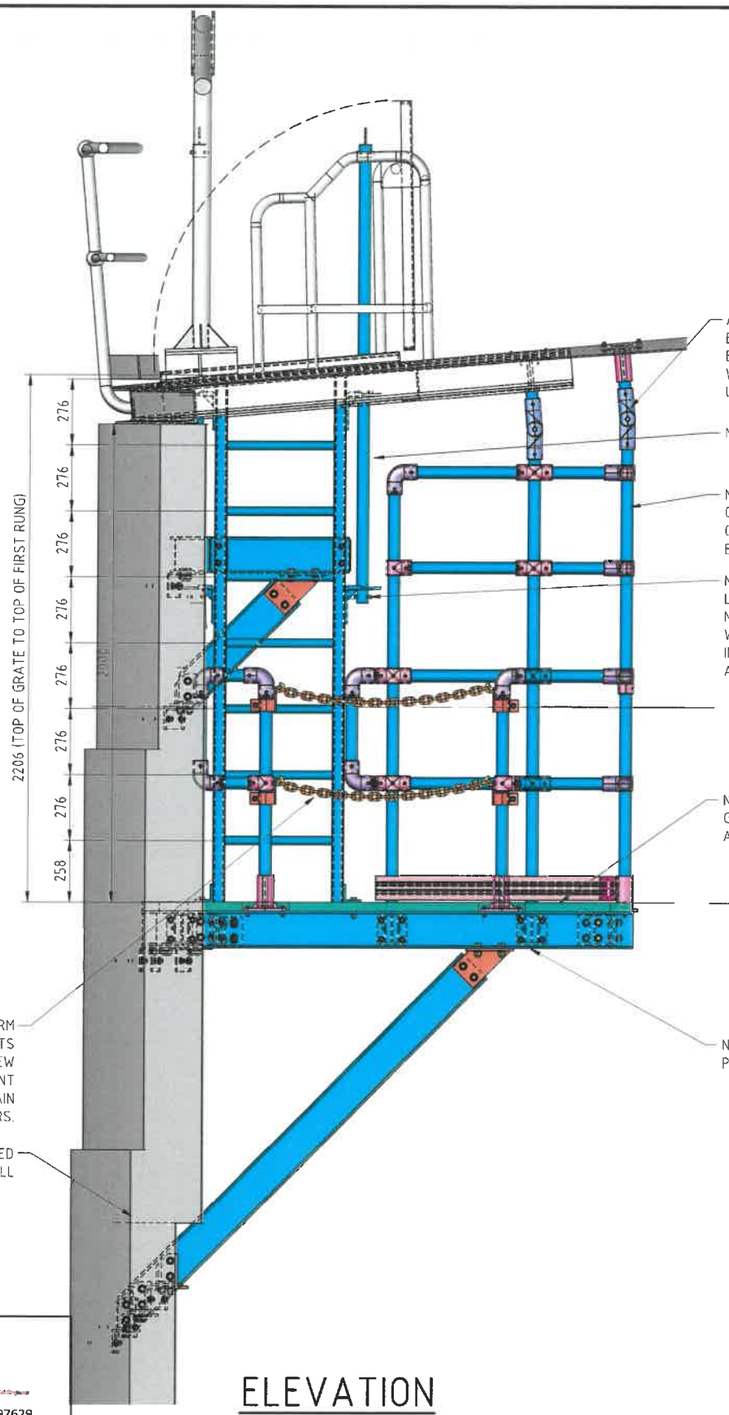
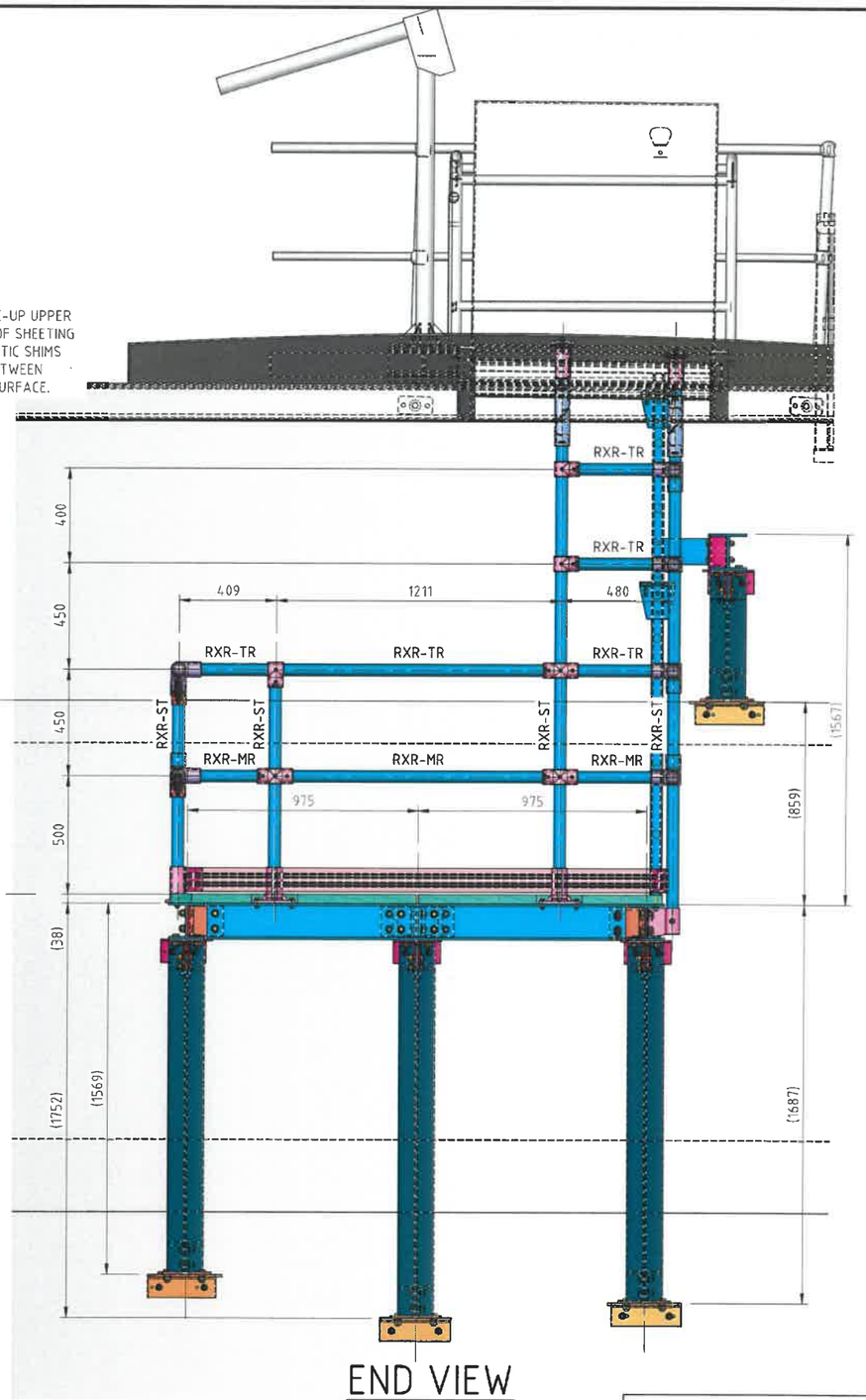
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
GENERAL ARRANGEMENT 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-302 Rev.: 0



ELEVATION
SCALE - 1:25



END VIEW
SCALE - 1:25

Approved :

C.L. Witham

ENGINEERS AUSTRALIA

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC intPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

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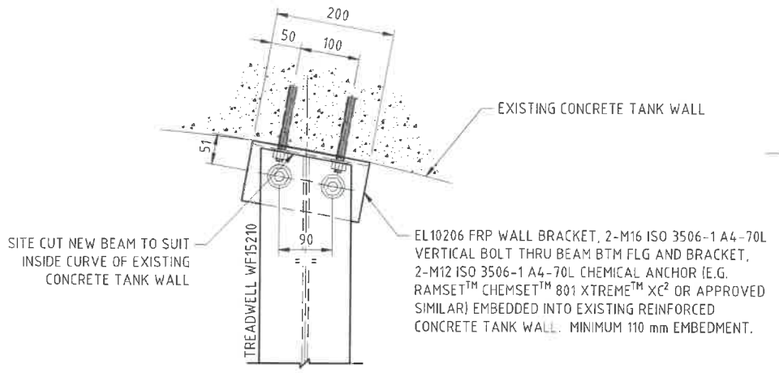
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
ELEVATIONS

Scale
AS SHOWN (AT A3)

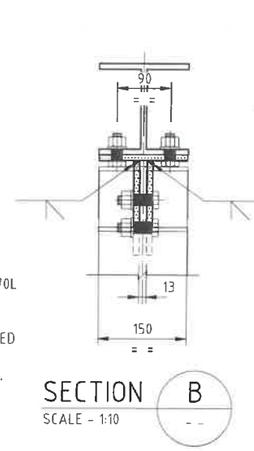
Job No.
GD2188

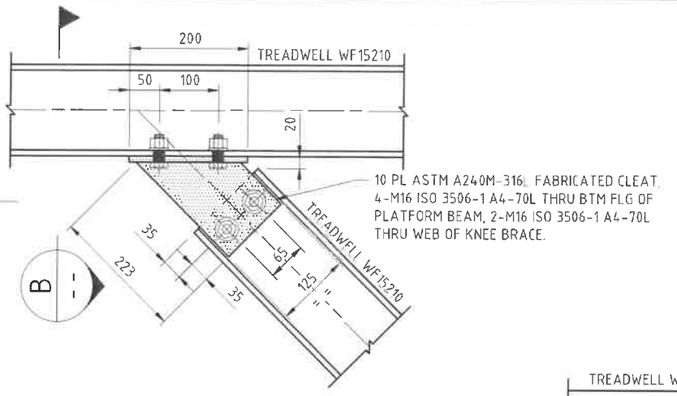
Drawing No. GD2188-303 Rev. 0



TYPICAL BEAM TO WALL CONNECTION DETAIL

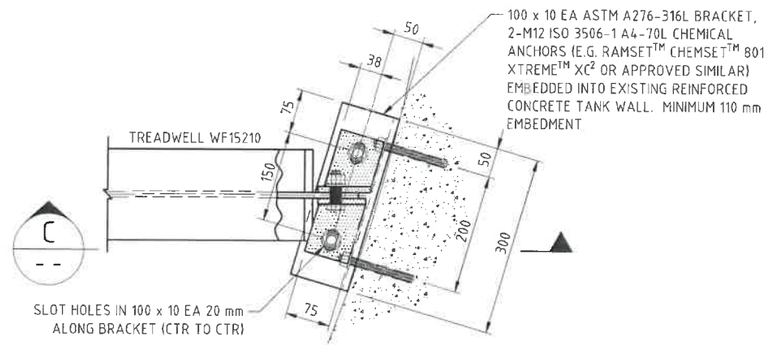
SCALE - 1:10



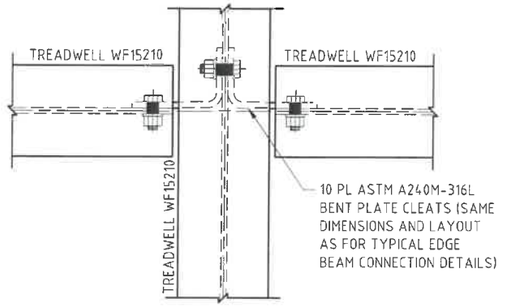


TYPICAL KNEE BRACE TO BEAM CONNECTION DETAIL

SCALE - 1:10



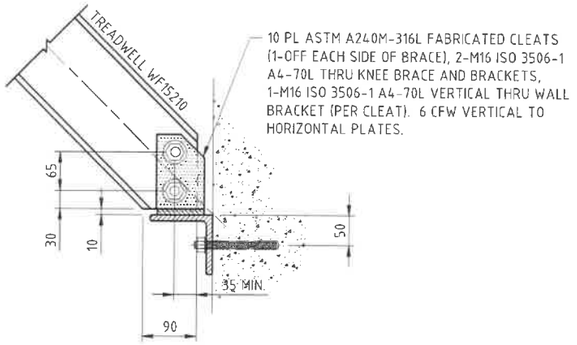
PLAN



TYPICAL INTERNAL BEAM CONNECTION DETAIL

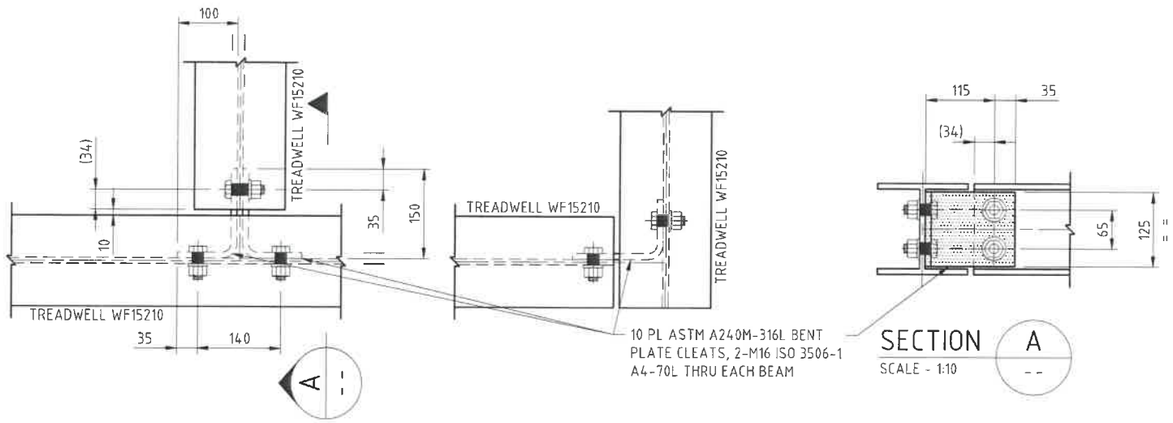
SCALE - 1:10

CHEMICAL ANCHOR NOTE
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT



TYPICAL KNEE BRACE TO WALL CONNECTION DETAIL

SCALE - 1:10



TYPICAL EDGE BEAM CONNECTION DETAILS

SCALE - 1:10

Approved :

Chris Witham — Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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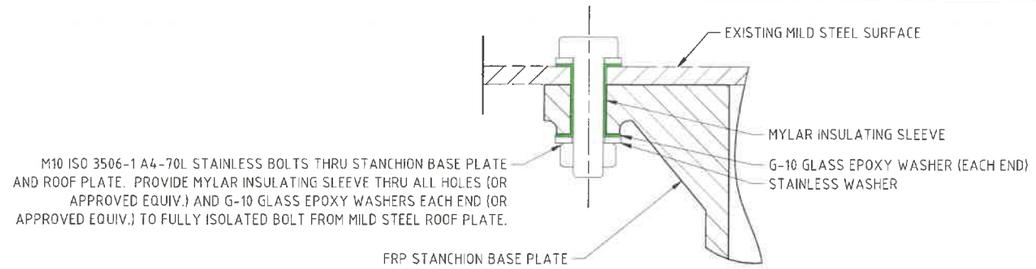
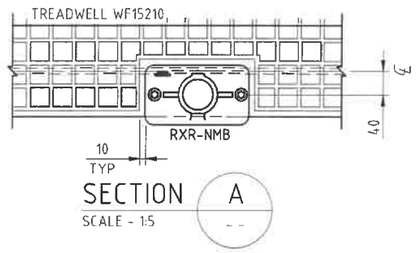
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
TYPICAL DETAILS 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-304 Rev.: 0



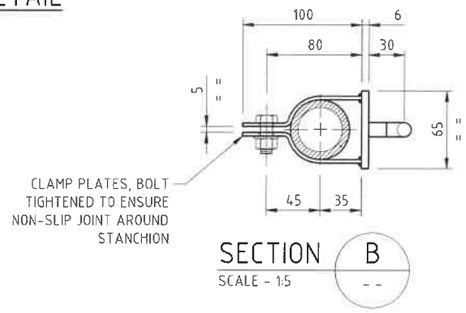
DISSIMILAR METAL PROTECTION DETAIL

SCALE - 1:2



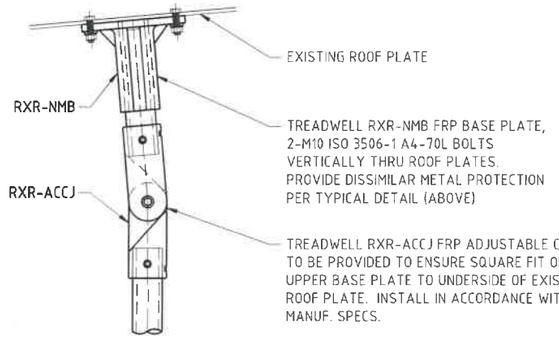
SECTION A

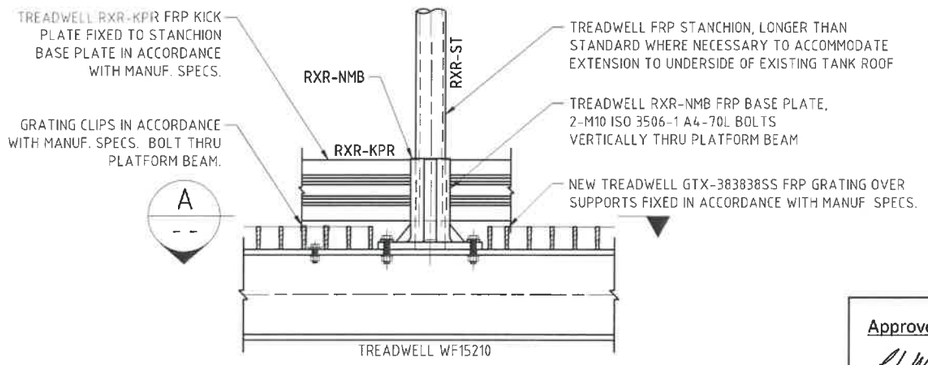
SCALE - 1:5



SECTION B

SCALE - 1:5

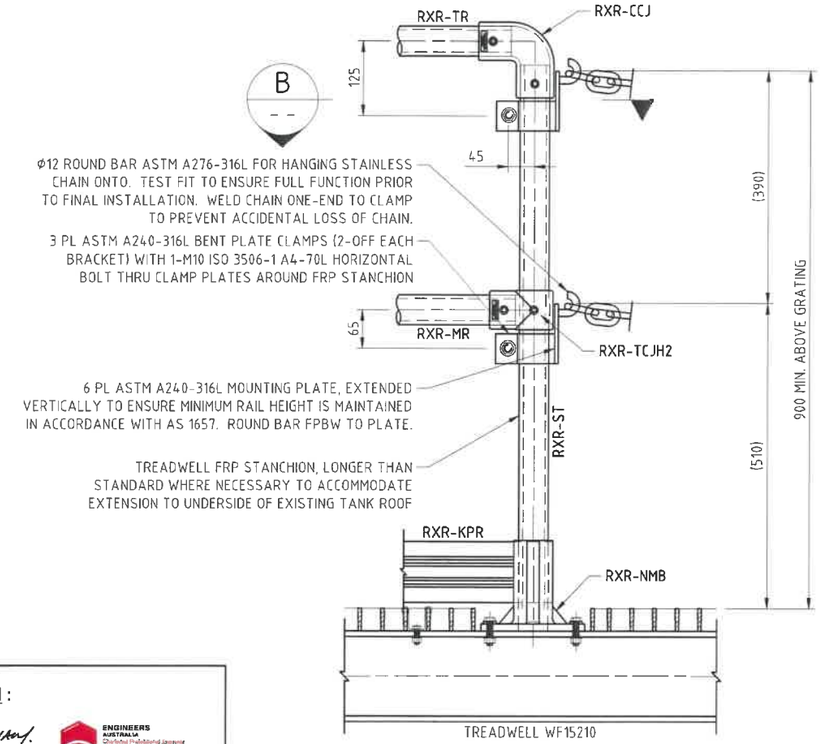




TYPICAL STANCHION CONNECTION DETAIL

SCALE - 1:10

NOTE: ALTERNATIVE TO USE OF RXR-NMB BASE FIXING A RXR-SMB-SS316 SIDE OFFSET MOUNT MAY BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS.



STANCHION CHAIN MOUNTING DETAIL

SCALE - 1:10

Approved :

Chris Witham — Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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No.	Date	Revision	By	Appr
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0	20/06/23	ISSUE FOR CONSTRUCTION	JW	AB

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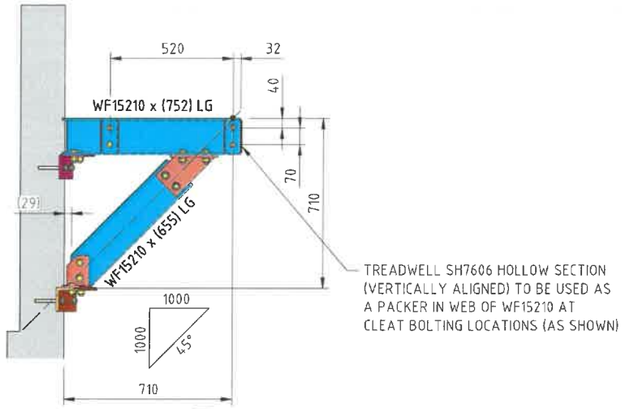
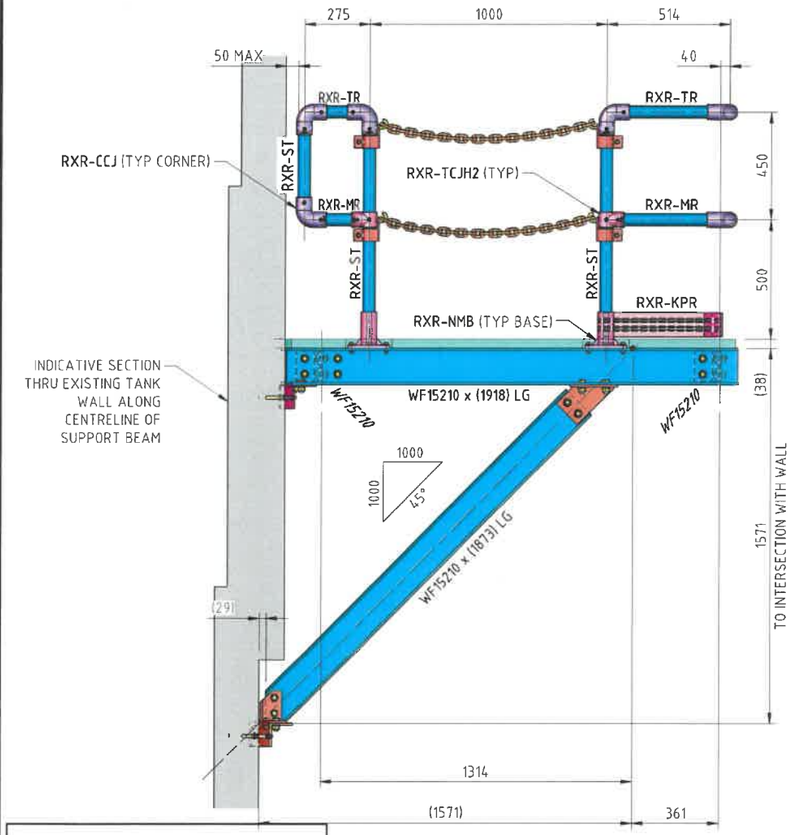
		Date
Designed by	A.BUENEN	-
Drawn by	J.WALKER	20.03.23
Checked by	A.BUENEN	28.06.23
Engineer RPEQ 11631	C.WITHAM	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
TYPICAL DETAILS 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-305 Rev: 0



SECTION D
SCALE - 1:25
302



SECTION A
SCALE - 1:25
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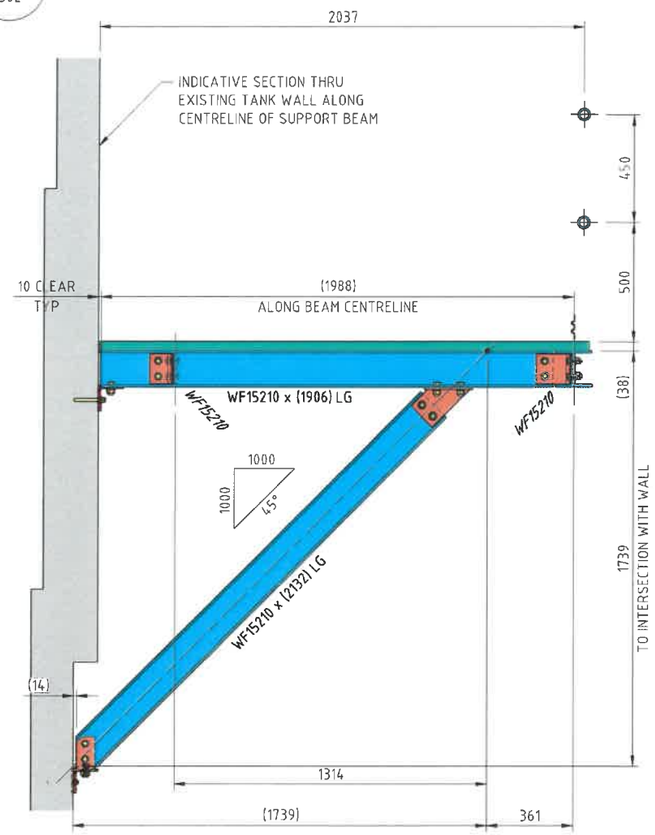
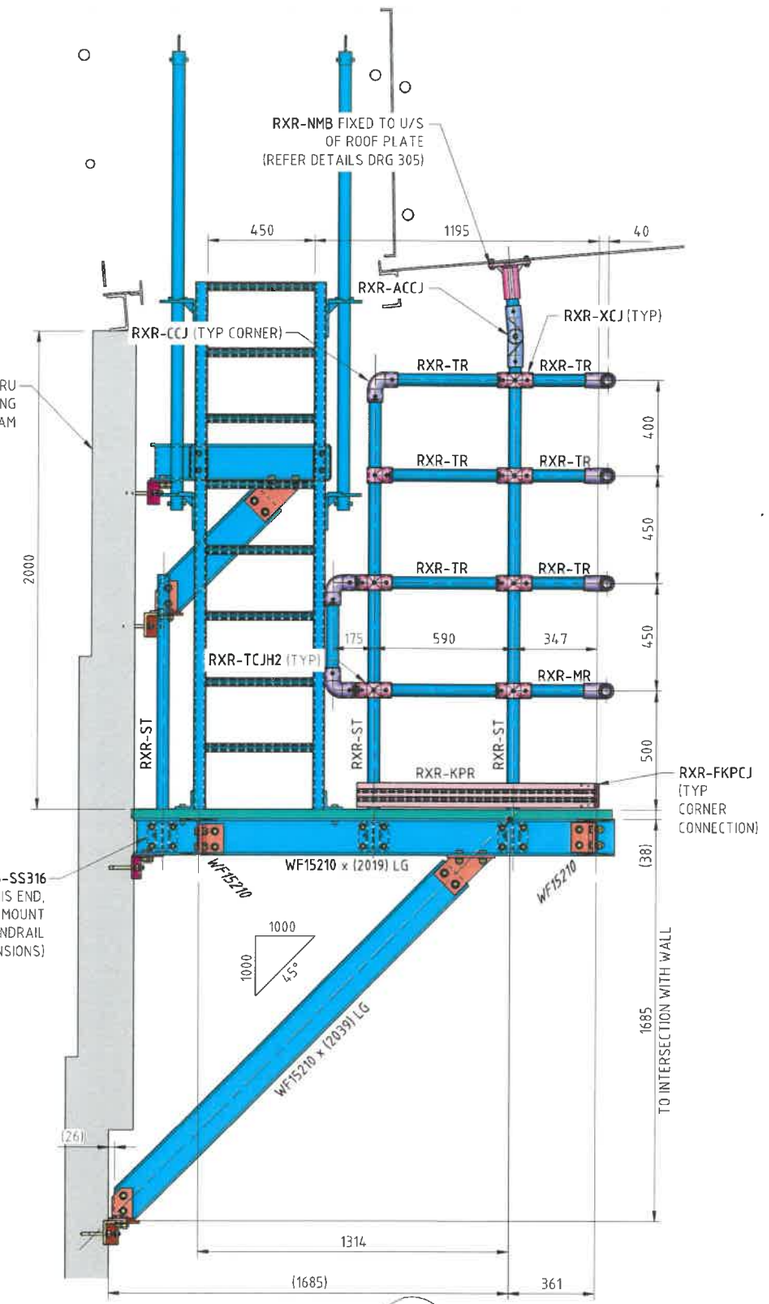


SECTION B
SCALE - 1:25
302



SECTION C
SCALE - 1:25
302

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

SECTIONS FOR STRUCTURAL SETOUT

SCALE - 1:25

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Designed by	A.BUENEN	Date	-
Drawn by	J.WALKER	Date	20.03.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
BILOELA TPS LOW ZONE STANDPIPE
SETOUT SECTIONS

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-306 Rev.: 0

DESIGN LIMITATIONS:

1. MAJORITY REQUIREMENTS OF AS 1657 CAN BE MET BY EXISTING HATCH ARRANGEMENT.
2. NON-COMPLIANCE WITH CLAUSE 7.4.8.4. REGARDING EXTENSION OF LANDING TO TOP RUNG (DUE TO THICKNESS HAVE PROVIDED 200 mm OFFSET AT TOP RUNG). CLIENT TO PERFORM A HAZOP TO DETERMINE SUITABILITY OF DESIGN VERSUS COST OF MODIFICATION.
3. TOP RUNG WILL NOT BE EXACTLY LINED UP WITH TOP OF SURROUND FRAME DUE TO REQUIREMENT FOR HATCH TO CLOSE. CLIENT TO PERFORM A HAZOP TO DETERMINE WHETHER THIS IS ACCEPTABLE FOR USE.
4. REFER CONSTRUCTION METHODOLOGY NOTE FOR PROPOSED INSTALLATION SEQUENCE. PROPOSED SEQUENCE IS SUBJECT TO REVIEW AND MODIFICATIONS BY CONSTRUCTION AND FABRICATION CONTRACTORS. INSTALLATION CONTRACTOR TO PROVIDE THERE OWN METHODOLOGY TO BANANA SHIRE COUNCIL FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
5. SITE MODIFICATION OF EQUIPMENT AND HANDRAILS ON SITE WILL BE REQUIRED DUE TO THE LIMITED EXISTING DOCUMENTATION AND EXTENT OF MODIFICATIONS REQUIRED BY THE PROPOSED DESIGN. CONTRACTOR TO ALLOW FOR ALL MODIFICATION WORKS INCLUDING MATERIALS AND SITE INSPECTIONS, AND WORK IN CONJUNCTION WITH BSC SUPERINTENDENT.
6. INTERNAL AREAS OF THE CONCRETE TANK ARE CONSIDERED CONFINED SPACES, AND SHALL REQUIRE A FULL HAZOP PRIOR TO ENTRY BY ANY PERSONNEL. A SAFETY DAVIT HAS BEEN PROVIDED AS PART OF THIS DESIGN.
7. ANY WORK CONDUCTED ON THE PLATFORM PRIOR TO FULL INSTALLATION OF HANDRAILS AND LADDER WILL REQUIRE ATTACHMENT TO A SAFETY LINES AND OTHER SAFETY EQUIPMENT AS THIS WILL BE WORKING AT HEIGHTS. PERSONNEL SHALL BE FULLY TRAINED AND CERTIFIED FOR WORKING AT HEIGHTS AND ACCESS SHALL BE ASSESSED (I.E. HAZOP) PRIOR TO ENTRY INTO THE AREA.
8. WORK CARRIED OUT IN THE CONCRETE TANK WILL REPRESENT A POTENTIAL HAZARD FROM ITEMS FALLING FROM ABOVE. CONTRACTORS SHALL TAKE STEPS TO PREVENT ACCIDENTAL DROPPING OF ELEMENTS INTO THE CHAMBER, AND HAZOPS SHALL BE UNDERTAKEN TO DETERMINE THE BEST APPROACH FOR LOWERING OF EQUIPMENT SAFELY. HARDHATS AND OTHER PPE WILL BE REQUIRED.
9. LIKEWISE THE LIFTING OF ELEMENTS ONTO THE TANK ROOF WILL PRESENT A HAZARD TO ALL WORKERS ON THE OUTSIDE OF THE TANK, AND ADDITIONALLY MEMBERS OF THE PUBLIC. THE WORKSITE SHALL BE FULLY FENCED AS REQUIRED TO ALLOW FOR THE MOVEMENT OF MATERIALS SAFELY AND WITHOUT RISK TO THE PUBLIC (WHERE POSSIBLE). HAZOP SHALL CONSIDER CRANE OPERATION, POSITIONING AND ACCESS.
10. PLATFORM DESIGN ASSUMES STANDARD ENTRY TO TANK WILL BE CONDUCTED BY DIVERS WITH WATER LEVEL ABOVE THE LEVEL OF THE PLATFORM DECK. WHERE THIS IS NOT THE CASE A HAZOP SHALL BE CONDUCTED TO IDENTIFY ANY ADDITIONAL SAFETY ISSUES THAT MAY BE PRESENT AND DETERMINE SUITABLE CONTROLS / METHODS.
11. CLIENT TO PRODUCE A PROCEDURE FOR SAFETY ACCESS FOR DIVERS FOR INDIVIDUAL TANKS. ALL DESIGN CONSTRAINTS AND SAFETY ISSUES RAISED ABOVE SHALL BE INCLUDED, IN ADDITION TO ANY OTHER ISSUES IDENTIFIED BY BSC PERSONNEL AND CONTRACTORS

CONSTRUCTION METHODOLOGY:

1. BANANA SHIRE COUNCIL TO ARRANGE AND DRAIN EXISTING RESERVOIR. TIME TO BE ALLOWED FOR DRYING OF CONCRETE SURFACES PRIOR TO INSTALLING NEW ELEMENTS.
2. FABRICATE AND INSTALL NEW UPPER HANDRAIL SECTION AND SAFETY DAVIT BASE PLATE. PRIOR TO CHEMICALLY ANCHORING IN PLACE, POSITIVELY LOCATE BOTH ELEMENTS AND ENSURE ALL SETOUT DIMENSIONS WILL RESULT IN FULL FUNCTIONING DAVIT. ONCE CONFIRMED SITE DRILL AND INSTALL NEW CHEMICAL ANCHORS AND FASTEN NEW ITEMS IN PLACE IN ACCORDANCE WITH ENGINEERING AND MANUFACTURERS SPECIFICATIONS. PROVIDE DAVIT MOUNTING PLATE OVER CONCRETE SURFACE WITH GROUT LEVELLING PAD AS REQUIRED TO ENSURE A LEVEL INSTALLATION AND OPERATION OF THE DAVIT.
3. WITH THE DAVIT INSTALLED, PROCEED WITH DEMOLITION WORKS AS INDICATED. ALL EXISTING ELEMENTS TO REMOVED AND DISPOSED OF SAFELY AND IN ACCORDANCE WITH BSC SUPERINTENDENTS INSTRUCTION. WHERE EXISTING ITEMS ARE REMOVED FROM EXISTING CONCRETE SURFACES, ENSURE ALL EXPOSED SURFACES (I.E. CUT ANCHORS ETC.) ARE FULLY SEALED WITH POTABLE WATER APPROVED SEALANT. ANY CONCRETE DAMAGE SHALL BE REMEDIED TO THE SPECIFICATION OF THE BSC SUPERINTENDENT.
4. LOWER NEW FRP AND STAINLESS STEEL MEMBERS, CLEATS, FIXINGS ETC. FOR NEW PLATFORM INTO THE EXISTING RESERVOIR CHAMBER. ELEMENTS TO BE PLACED ONTO TANK FLOOR.
5. POSITIVELY LOCATE POSITIONS FOR INSTALLATION OF NEW WALL MOUNTING BRACKETS. START WITH LAYOUT OF PLATFORM MEMBERS ON THE TANK FLOOR TO ASSIST IN ENSURING MEMBERS ALIGN WITH BRACKET POSITIONS, THEN TRACE UP THE WALL (I.E. USE OF PLUMB-BOB FROM ABOVE TO ALIGN POSITIONS).
6. ONCE WALL MOUNT POSITIONS ARE PREPARED, FULLY ASSEMBLE MAIN PLATFORM LEVEL, COMPLETE WITH HANDRAIL, GRATING AND KICK PLATE SECTIONS.
7. PREPARE TO LIFT PLATFORM ASSEMBLY. BEFORE LIFTING INTO PLACE (BUT WHILE SUSPENDED) INSTALL KNEE BRACE ELEMENTS TO PLATFORM BEAMS. ONCE FULLY ASSEMBLED, ELEVATE PLATFORM ASSEMBLY UP AND ONTO WALL BRACKETS. FIX ALL MEMBERS TO WALL BRACKETS IN ACCORDANCE WITH ENGINEERING DETAILS. WHERE APPLICABLE, FIX UPPER HANDRAIL BASE PLATES TO UNDERSIDE OF EXISTING TANK ROOF.
8. LOWER ELEMENTS FOR LADDER SUPPORT ONTO PLATFORM BELOW AND ASSEMBLE FRAME. INSTALL ONTO WALL BRACKETS AND FASTEN AS PER ENGINEERING DETAILS.
9. LOWER NEW LADDER ASSEMBLY ONTO NEW PLATFORM. LOCATE AND FIX TO NEW PLATFORM AND EXISTING STRUCTURE IN ACCORDANCE WITH ENGINEERING DETAILS.

DESIGN INCORPORATES REQUIREMENTS OF AS 2299.1-2015 WHERE APPLICABLE:

3.10 DIVE REQUIREDMENTS:

3.10.1 GENERAL

DIVING OPERATIONS SHALL BE CONDUCTED ONLY FROM A SAFE AN SUITABLE SITE OR VESSEL, WHICH AT TIMES PROVIDES:

(a) SUITABLE ACCESS & EXIT FOR THE DIVERS;
(b) MEANS TO RECOVER AN INJURED DIVER FROM THE WATER; AND
(c) MEANS OF COMMUNICATION TO EMERGENCY SUPPORTED SERVICES (SEE CLAUSE 3.6.4)

3.13.3 HARNESSES

PROVIDES REQUIREMENT SHOULD A HARNESS BE REQUIRED

3.13.6 LIFELINE

A HARNESS AND LIFELINE WOULD BE A HINDRANCE IN THESE OPERATIONS, PREVENTING SAFE MOVEMENT THROUGHOUT THE TANK. BANANA SHIRE COUNCIL SHALL HAZOP WITH COMMERCIAL DIVER.

7.3.4 DIVER DEPTHS TO 30 m (SCUBA)

THE TEAM SHALL INCLUDE 1 SUPERVISOR, 1 DIVER, 1 DIVERS ATTENDANT AND 1 STANDBY DIVER (4 IN TOTAL). ROOFTOP PLATFORM SHOULD BE DESIGNED TO ALLOW FOR 4 PEOPLE.

STAINLESS STEEL:

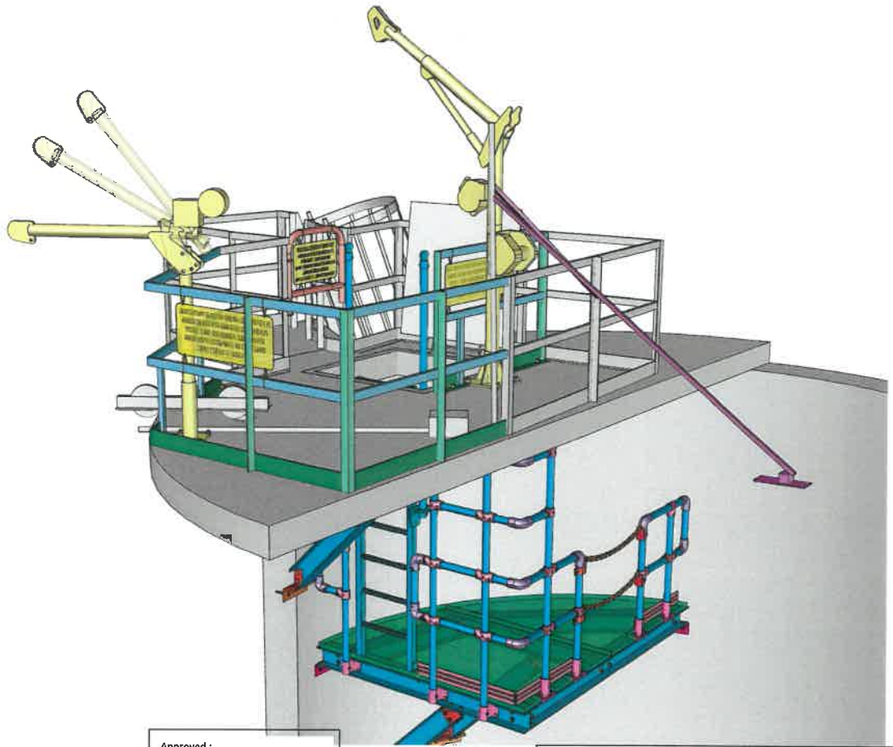
1. ALL STAINLESS STEEL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF:
   - 1.1. AS 4100 - SAA STEEL STRUCTURES CODES
   - 1.2. AS 1554.6 - STRUCTURAL STEEL WELDING - WELDING STAINLESS STEELS FOR STRUCTURAL PURPOSES
2. STAINLESS STEEL GRADES AS FOLLOWS:
   - 2.1. PLATE, SHEET AND STRIP SHALL BE TO ASTM A240M GRADE 316L
   - 2.2. BARS SHALL BE TO ASTM A276M GRADE 316L
3. STAINLESS STEEL FINISHING DETAILS:
   - 3.1. ALL SHARP EDGES AND BURRS TO BE REMOVED
   - 3.2. STAINLESS STEELWORK SHALL BE CLEANED, PICKLED AND PASSIVATED IN ACCORDANCE WITH ASTM A380 "STANDARD PRACTICE FOR CLEANING, DESCALING AND PASSIVATION OF STAINLESS STEEL PARTS, EQUIPMENT AND SYSTEMS".
4. WELD DETAILS:
   - 4.1. ALL WELDS SHALL BE 6 CFW UNO.
   - 4.2. BUTT WELDS SHALL BE PRE-QUALIFIED FULL PENETRATION UNO.
   - 4.3. ALL WELDING SHALL CONFORM WITH AS 1554.6, CATEGORY 1A.
   - 4.4. ALL WELDING CONSUMABLES SHALL BE TO AS/NZS 1167.2 AND/OR AS/NZS 4854.
   - 4.5. ALL WELDS SHALL BE VISUALLY INSPECTED.
   - 4.6. ALL WELDS SHALL BE FREE FROM DEFECTS SUCH AS CRACKS, EXCESSIVE UNDERCUTS AND GROSS POROSITY.

FIBRE REINFORCED PLASTIC (FRP) / COMPOSITE FIBRE:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. ENSURE COMPLIANCE WITH MANUFACTURER QUALITY ASSURANCE STANDARDS.
2. UNLESS NOTED OTHERWISE OR APPROVED COMPOSITE MATERIALS FOR USE IN THIS PROJECT SHALL BE MANUFACTURED BY TREADWELL. SUBSTITUTIONS IN MATERIALS SHALL NOT BE UNDERTAKEN WITHOUT PRIOR APPROVED OF BSC SUPERINTENDENT AND STRUCTURAL ENGINEER.
3. ALL MEMBERS SHALL BE IN SOUND CONDITION FREE FROM PITTING, DE-LAMINATIONS AND OTHER DEFECTS WHICH ARE LIKELY TO IMPAIR THE STRUCTURAL CAPACITY OF THE MEMBERS.
4. APPLY A WATERPROOFING COMPOUND TO SEAL ANY END CUT FIBRES AS A RESULT OF DRILLING, CUTTING OR DAMAGE TO THE COMPOSITE FIBRE PROFILES. COMPOUND SHALL BE APPROVED FOR POTABLE WATER AND SHALL BE APPROVED BY THE MANUFACTURER.
5. CONTRACTORS SHALL REFER TO MANUFACTURER FOR ALL INSTALLATION AND ASSEMBLY INSTRUCTIONS AND SPECIFICATIONS PRIOR TO BEGINNING WORK, AND SHALL ENSURE THAT ALL INSTRUCTIONS ARE UNDERSTOOD.

LOCALITY PLAN

SCALE - NTS



Approved :
Chris Witham
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Ahlen Group Australasia Pty Ltd
RPEQ - 11631

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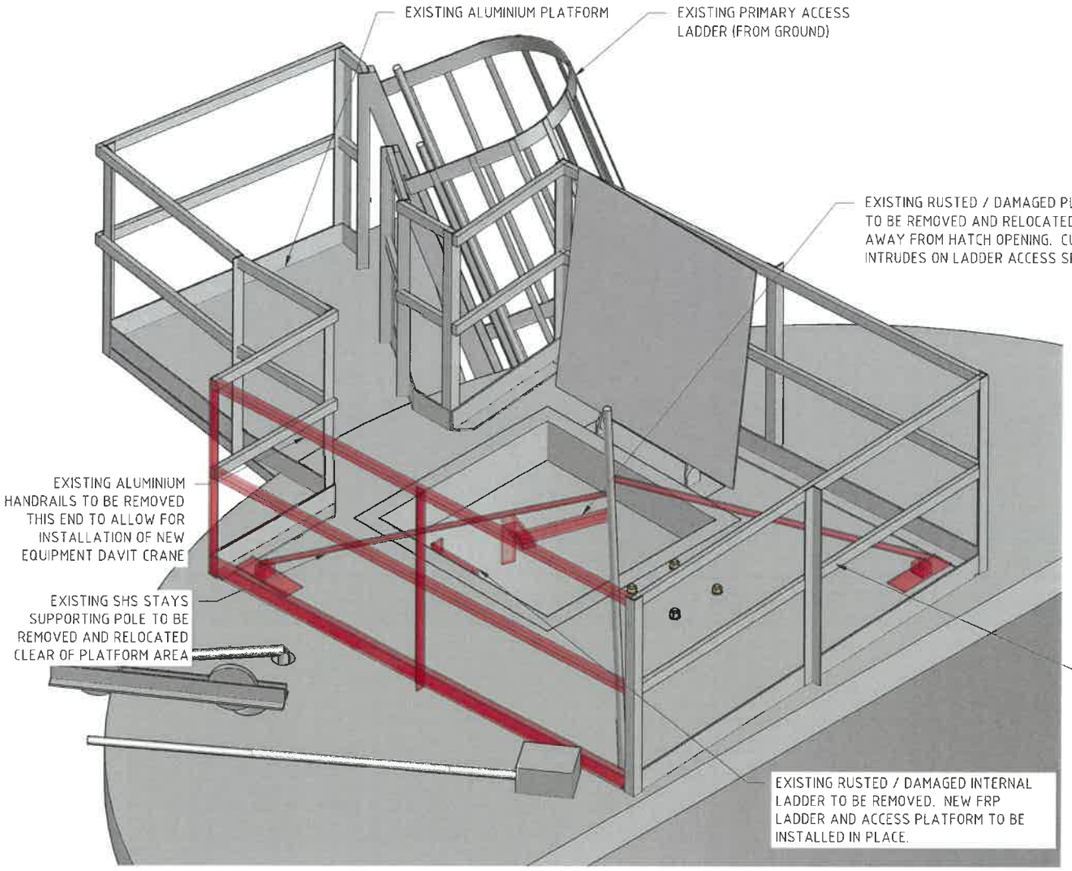
Designed by	A.BUENEN	Date -
Drawn by	J.WALKER	Date 20.03.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
DESIGN NOTES

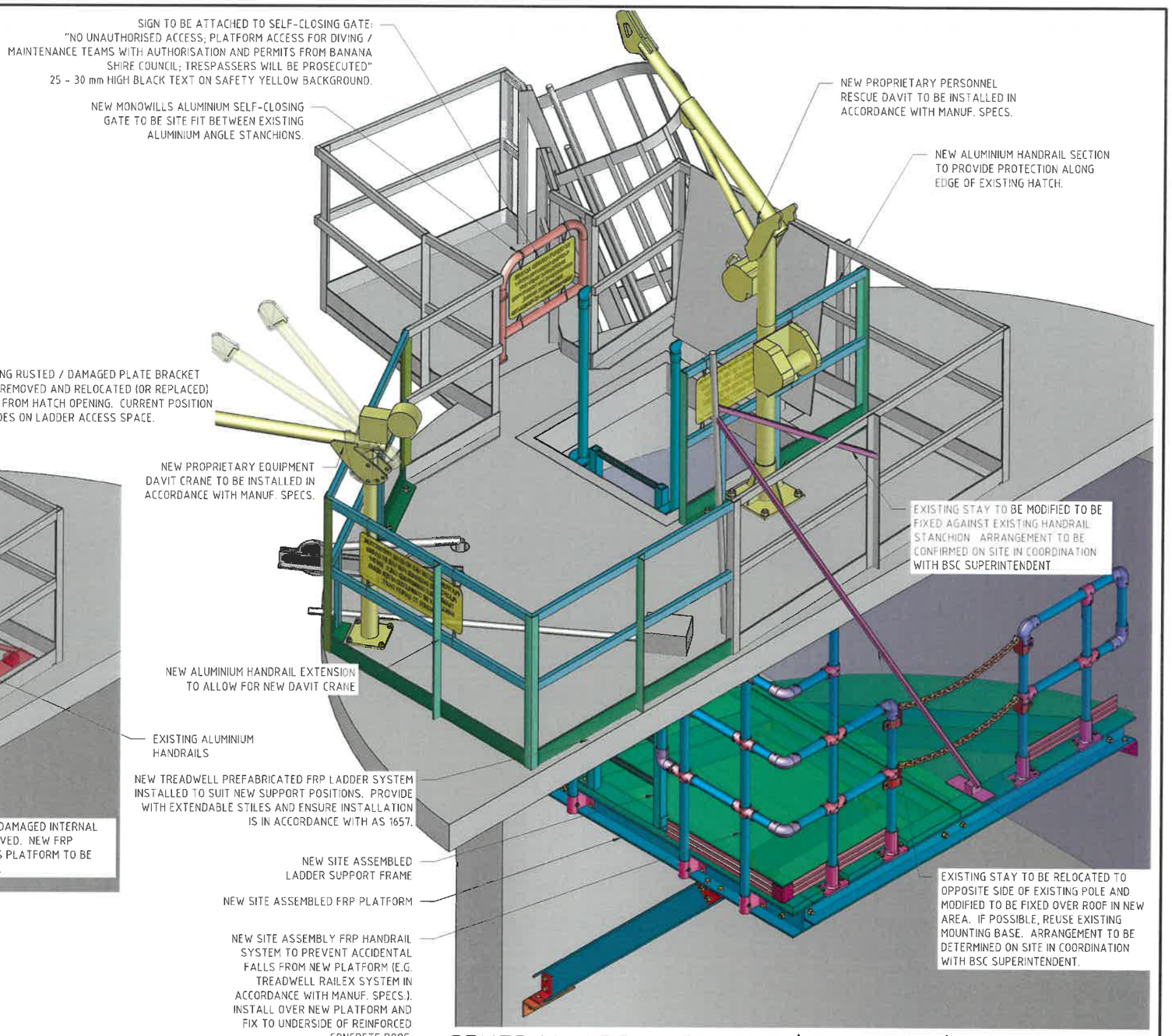
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-000 Rev: 0



DEMOLITION PLAN (ISOMETRIC)

SCALE - NTS

EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY



GENERAL ARRANGEMENT (ISOMETRIC)

SCALE - NTS

EXISTING TANK SHOWN PARTIALLY ONLY FOR CLARITY

Approved :

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
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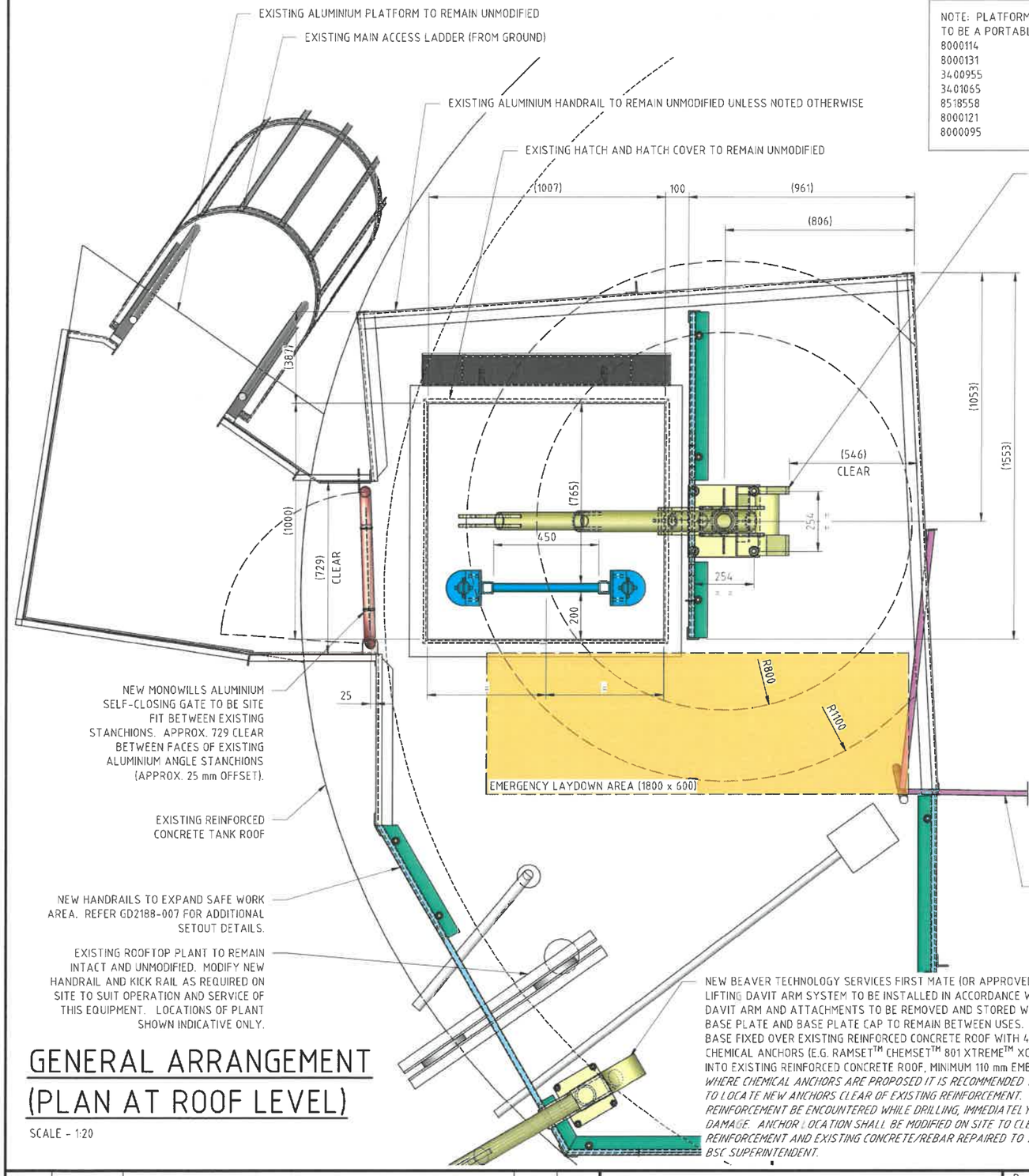
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
GENERAL ARRANGEMENT 1

Scale
AS SHOWN (AT A3)

Job No.
GD2188

Drawing No. GD2188-001 Rev. 0

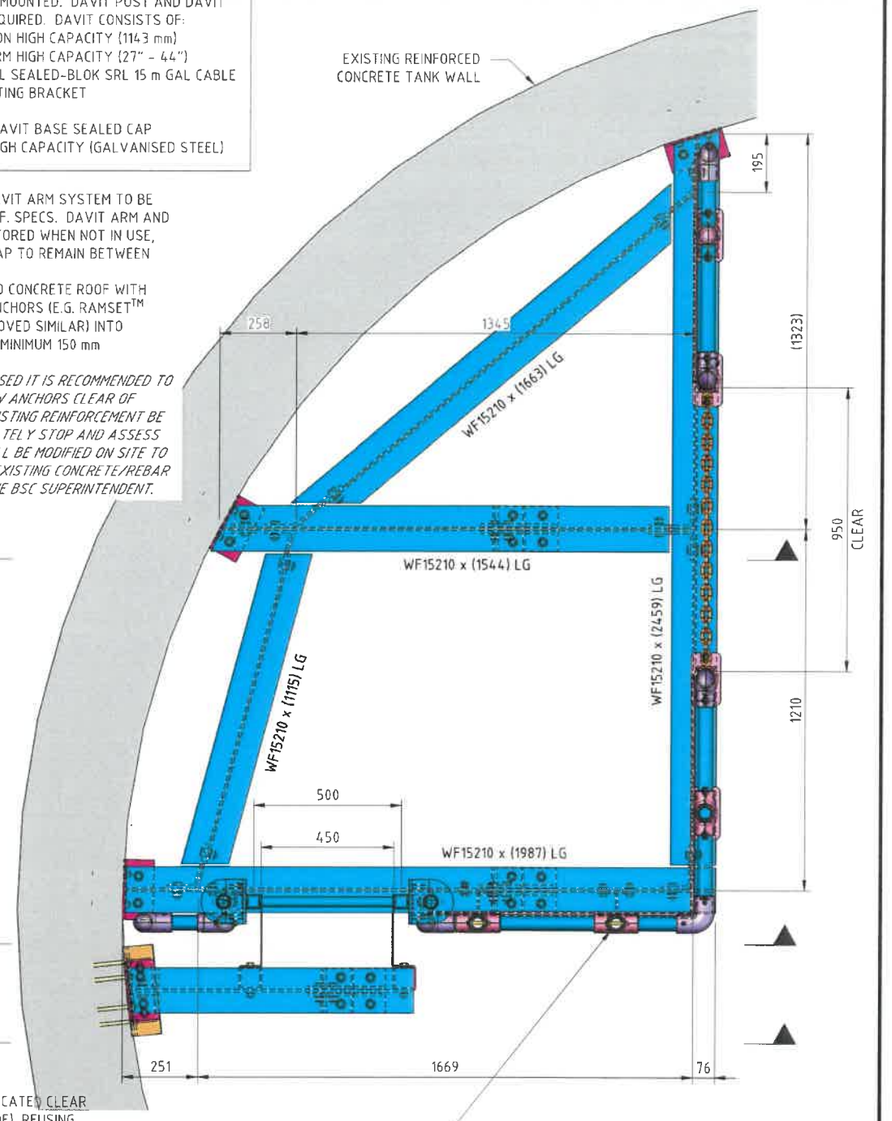


NOTE: PLATFORM AND DAVIT BASE TO BE PERMANENTLY MOUNTED. DAVIT POST AND DAVIT TO BE A PORTABLE UNIT TRANSPORTED TO SITE WHEN REQUIRED. DAVIT CONSISTS OF:

8000114	3M™ DBI-SALA DAVIT MAST EXTENSION HIGH CAPACITY (1143 mm)
8000131	3M™ DBI-SALA LONG REACH DAVIT ARM HIGH CAPACITY (27" - 44")
3400955	3M™ DBI-SALA EMERGENCY RETRIEVAL SEALED-BLOK SRL 15 m GAL CABLE
3401065	3M™ DBI-SALA RETRIEVAL SRL MOUNTING BRACKET
8518558	3M™ DBI-SALA ADVANCED™ WINCH
8000121	3M™ DBI-SALA CONFINED SPACE, HC DAVIT BASE SEALED CAP
8000095	3M™ DBI-SALA FLOOR MOUNT BASE HIGH CAPACITY (GALVANISED STEEL)

NEW 3M™ DBI-SALA HIGH CAPACITY DAVIT ARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS. DAVIT ARM AND ATTACHMENTS TO BE REMOVED AND STORED WHEN NOT IN USE, ONLY BASE PLATE AND BASE PLATE CAP TO REMAIN BETWEEN USES.
BASE FIXED OVER EXISTING REINFORCED CONCRETE ROOF WITH 4-M20 ISO 3506-1 A4-70L CHEMICAL ANCHORS (E.G. RAMSET™ CHEMSET™ 801 XTREME™ XC² OR APPROVED SIMILAR) INTO EXISTING REINFORCED CONCRETE ROOF, MINIMUM 150 mm EMBEDMENT.
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT.

C 006



EXISTING STAY FOR POLE TO BE RELOCATED CLEAR OF PLATFORM (IDEALLY TO OTHER SIDE), REUSING WHAT COMPONENTS CAN BE REUSED. RELOCATION DETAILS TO BE DETERMINED ONSITE. LOCATION AND SIZE OF STAYS SHOWN INDICATIVE ONLY.

HANDRAIL TO BE INSTALLED AROUND EXPOSED EDGES (WHERE SUPPORTS DO NOT PREVENT ACCESS). OPENING TO BE LEFT FOR DIVER ACCESS.

NEW BEAVER TECHNOLOGY SERVICES FIRST MATE (OR APPROVED SIMILAR) EQUIPMENT LIFTING DAVIT ARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS. DAVIT ARM AND ATTACHMENTS TO BE REMOVED AND STORED WHEN NOT IN USE, ONLY BASE PLATE AND BASE PLATE CAP TO REMAIN BETWEEN USES.
BASE FIXED OVER EXISTING REINFORCED CONCRETE ROOF WITH 4-M12 ISO 3506-1 A4-70L CHEMICAL ANCHORS (E.G. RAMSET™ CHEMSET™ 801 XTREME™ XC² OR APPROVED SIMILAR) INTO EXISTING REINFORCED CONCRETE ROOF, MINIMUM 110 mm EMBEDMENT.
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT.

GENERAL ARRANGEMENT (PLAN AT ROOF LEVEL)

SCALE - 1:20

GENERAL ARRANGEMENT (PLAN AT BTM OF LADDER)

SCALE - 1:20

GRATING NOT SHOWN FOR CLARITY

Approved:
Chris Witham — Member No: 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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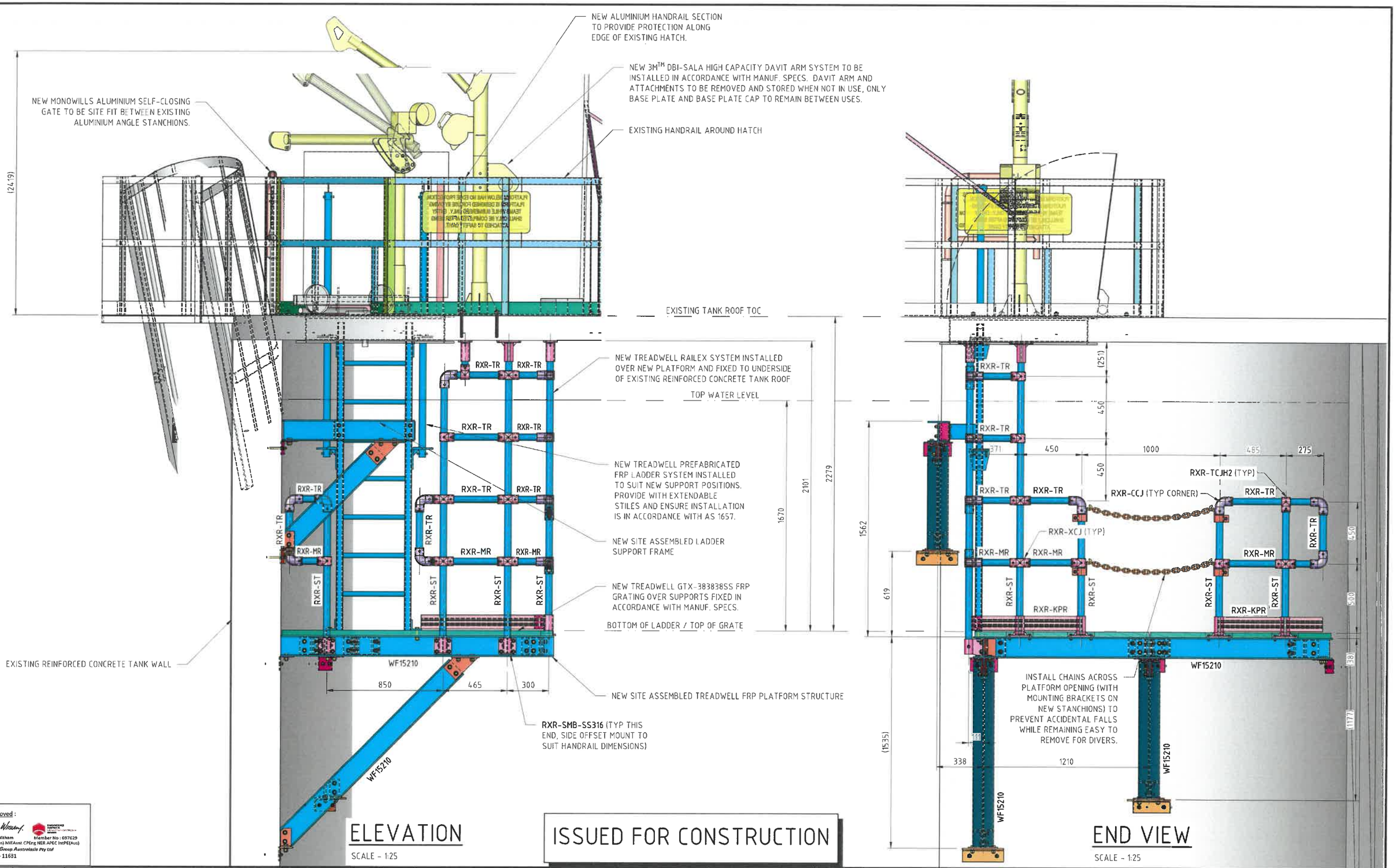
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
GENERAL ARRANGEMENT 2

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-002 Rev.: 0



ISSUED FOR CONSTRUCTION

Approved :
Chris Witham
BE(Hons) MIEAust. CPEng NER APEC IntPE(Aus)
Member No : 697629
Allied Group Australasia Pty Ltd
RPEQ - 11631

No.	Date	Revision	By	Appr
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0	20/06/23	ISSUED FOR CONSTRUCTION	JW	AB

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QUALITY DESIGN, CONCEPT TO COMPLETION
A.S. BUENEN Pty. Ltd. Trading as:
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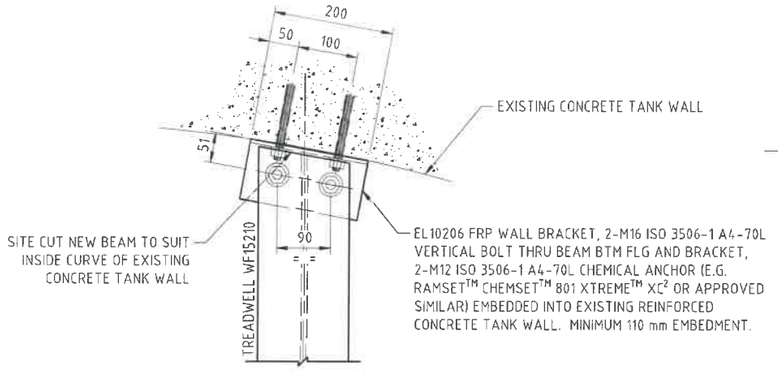
Designed by	A.BUENEN	Date -
Drawn by	J.WALKER	Date 20.03.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

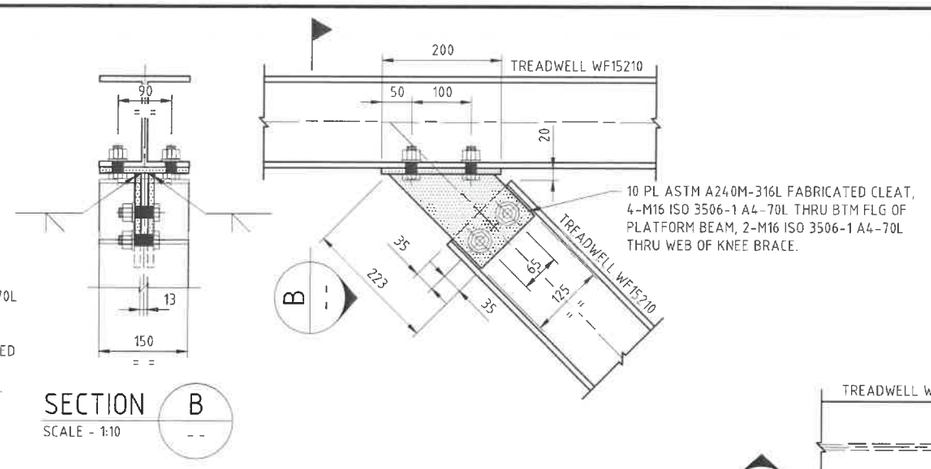
Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
ELEVATIONS

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-003 Rev.: 0



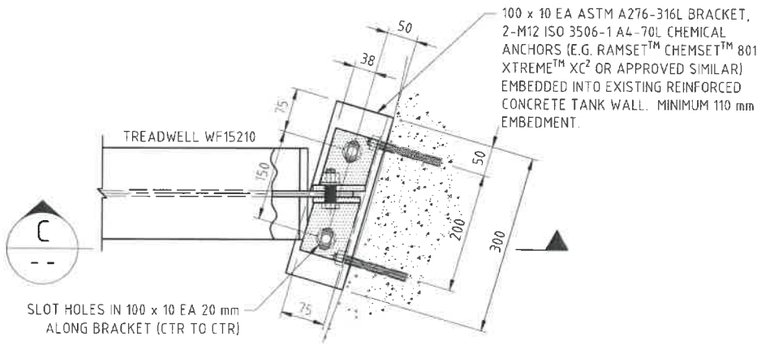
TYPICAL BEAM TO WALL CONNECTION DETAIL

SCALE - 1:10

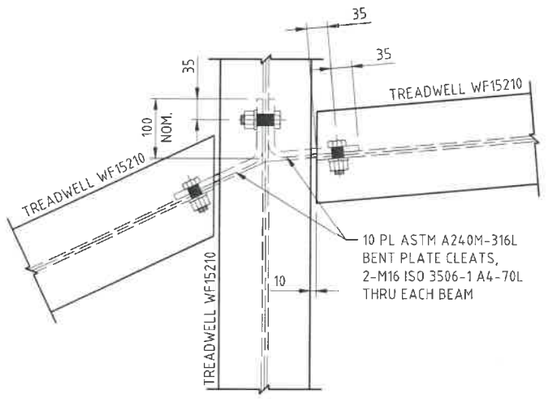


TYPICAL KNEE BRACE TO BEAM CONNECTION DETAIL

SCALE - 1:10



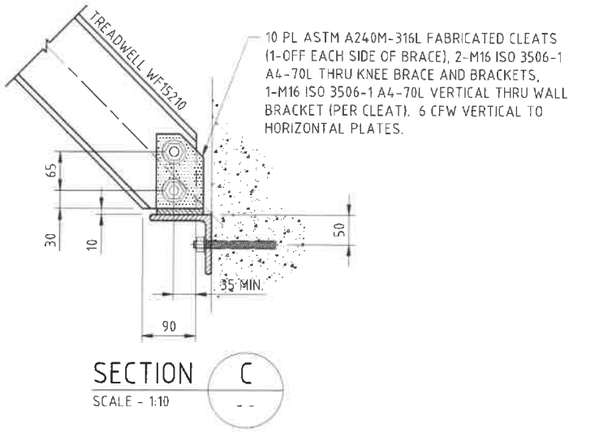
PLAN



TYPICAL INTERNAL BEAM CONNECTION DETAIL

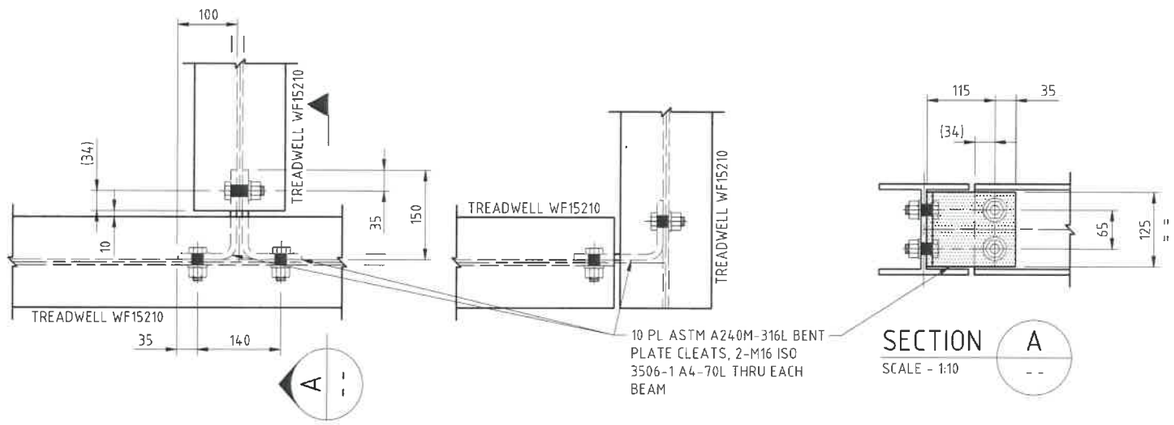
SCALE - 1:10

CHEMICAL ANCHOR NOTE
WHERE CHEMICAL ANCHORS ARE PROPOSED IT IS RECOMMENDED TO XRAY EXISTING WALLS TO LOCATE NEW ANCHORS CLEAR OF EXISTING REINFORCEMENT. SHOULD EXISTING REINFORCEMENT BE ENCOUNTERED WHILE DRILLING, IMMEDIATELY STOP AND ASSESS ANY DAMAGE. ANCHOR LOCATION SHALL BE MODIFIED ON SITE TO CLEAR EXISTING REINFORCEMENT AND EXISTING CONCRETE/REBAR REPAIRED TO THE SATISFACTION OF THE BSC SUPERINTENDENT



TYPICAL KNEE BRACE TO WALL CONNECTION DETAIL

SCALE - 1:10



TYPICAL EDGE BEAM CONNECTION DETAILS

SCALE - 1:10

Approved :
Chris Witham
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Member No : 697629
Allied Group Australasia Pty Ltd
RPEQ - 11631

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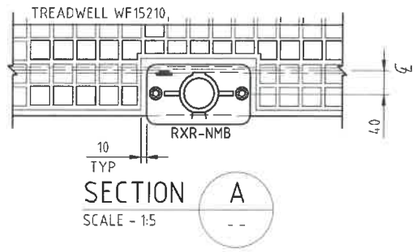
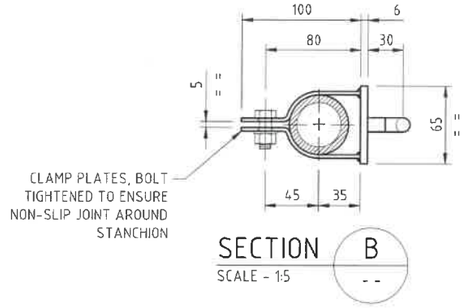
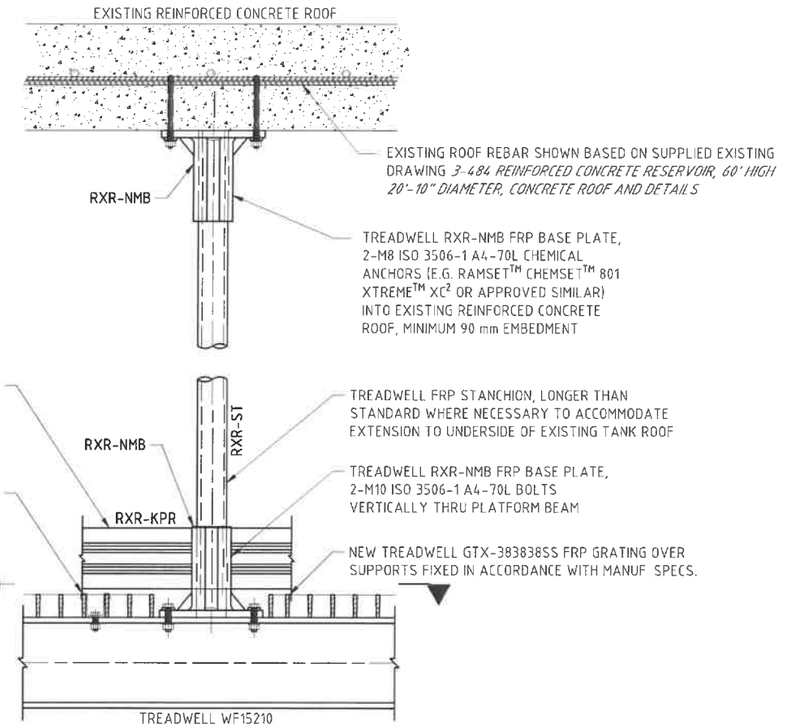
Designed by	A.BUENEN	Date	-
Drawn by	J.WALKER	Date	20.03.23
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
TYPICAL DETAILS 1

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-004
Rev.: 0



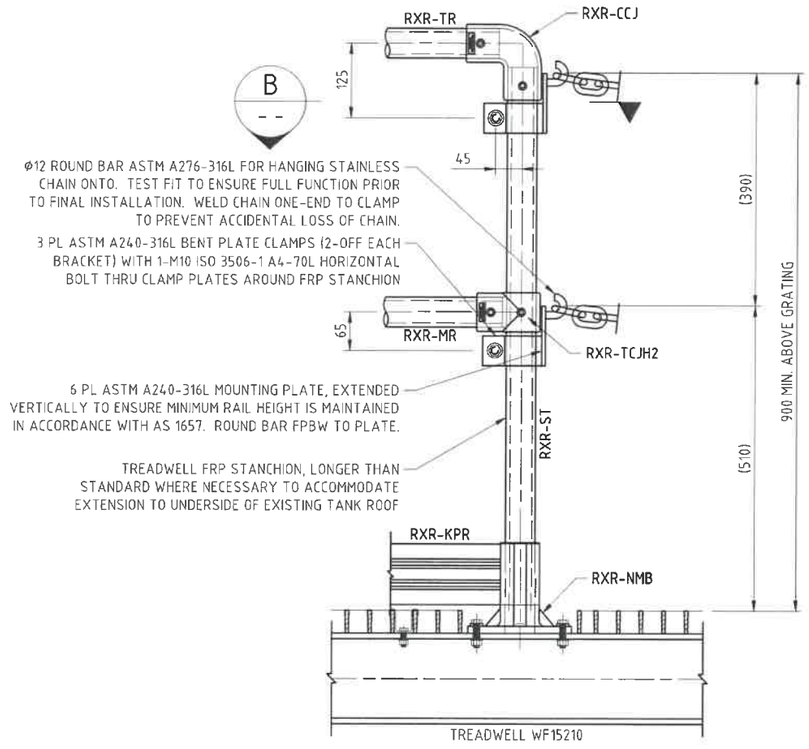




TYPICAL STANCHION CONNECTION DETAIL

SCALE - 1:10

NOTE: ALTERNATIVE TO USE OF RXR-NMB BASE FIXING A RXR-SMB-SS316 SIDE OFFSET MOUNT MAY BE INSTALLED IN ACCORDANCE WITH MANUF. SPECS.



STANCHION CHAIN MOUNTING DETAIL

SCALE - 1:10

Approved:

Chris Witham Member No : 697629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

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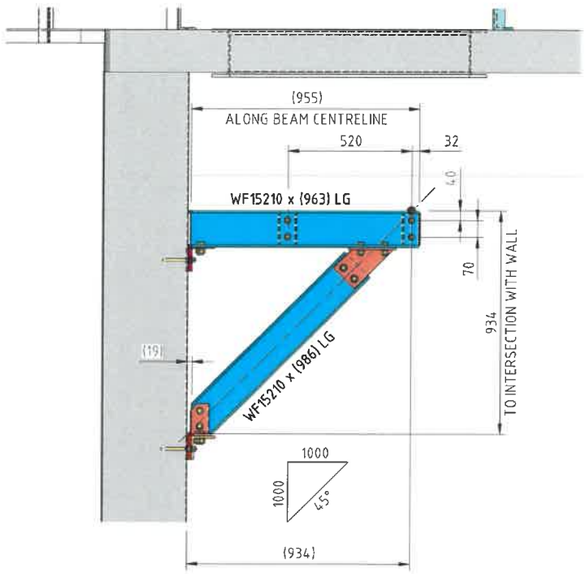
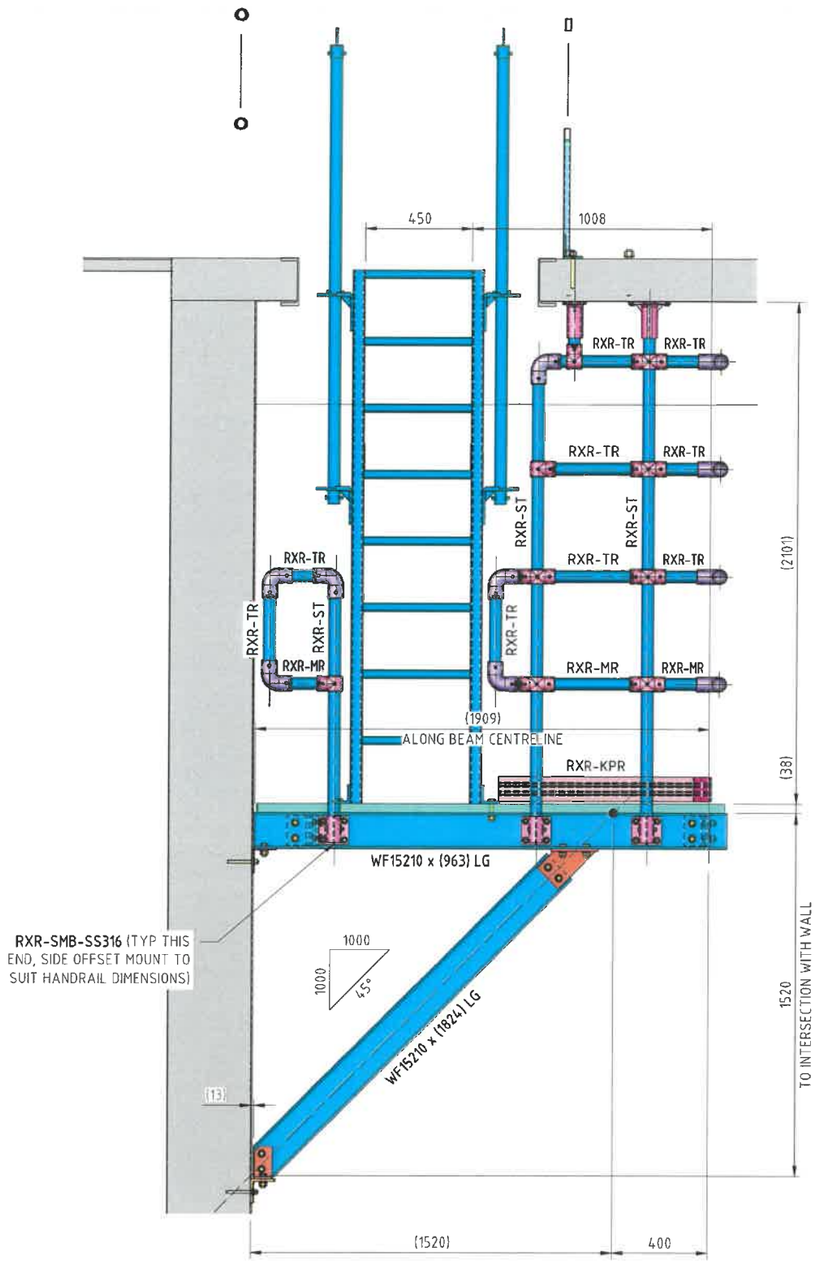
Drawn by	J.WALKER	Date 20.03.23
Checked by	A.BUENEN	Date 28.06.23
Engineer RPEQ 11631	C.WITHAM	Date 11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
TYPICAL DETAILS 2

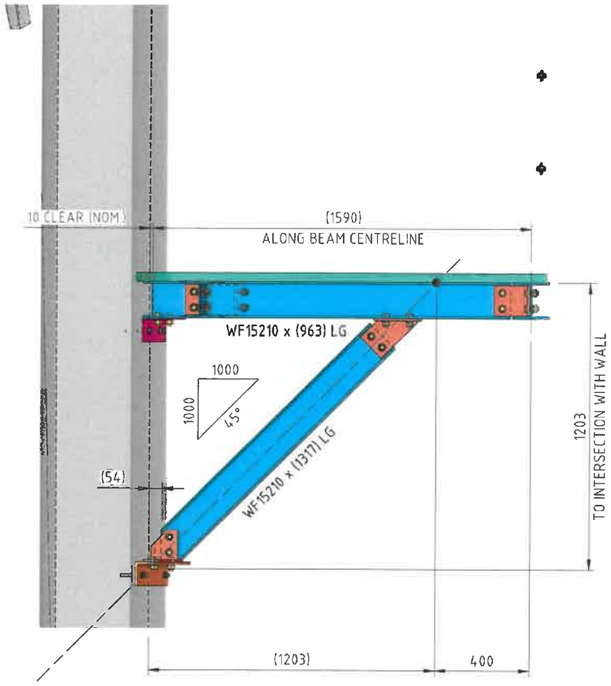
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-005 Rev.: 0



SECTION A
SCALE - 1:25
002



SECTION B
SCALE - 1:25
002



SECTION C
SCALE - 1:25
002

Approved :
Chris Witham Member No : 697639
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
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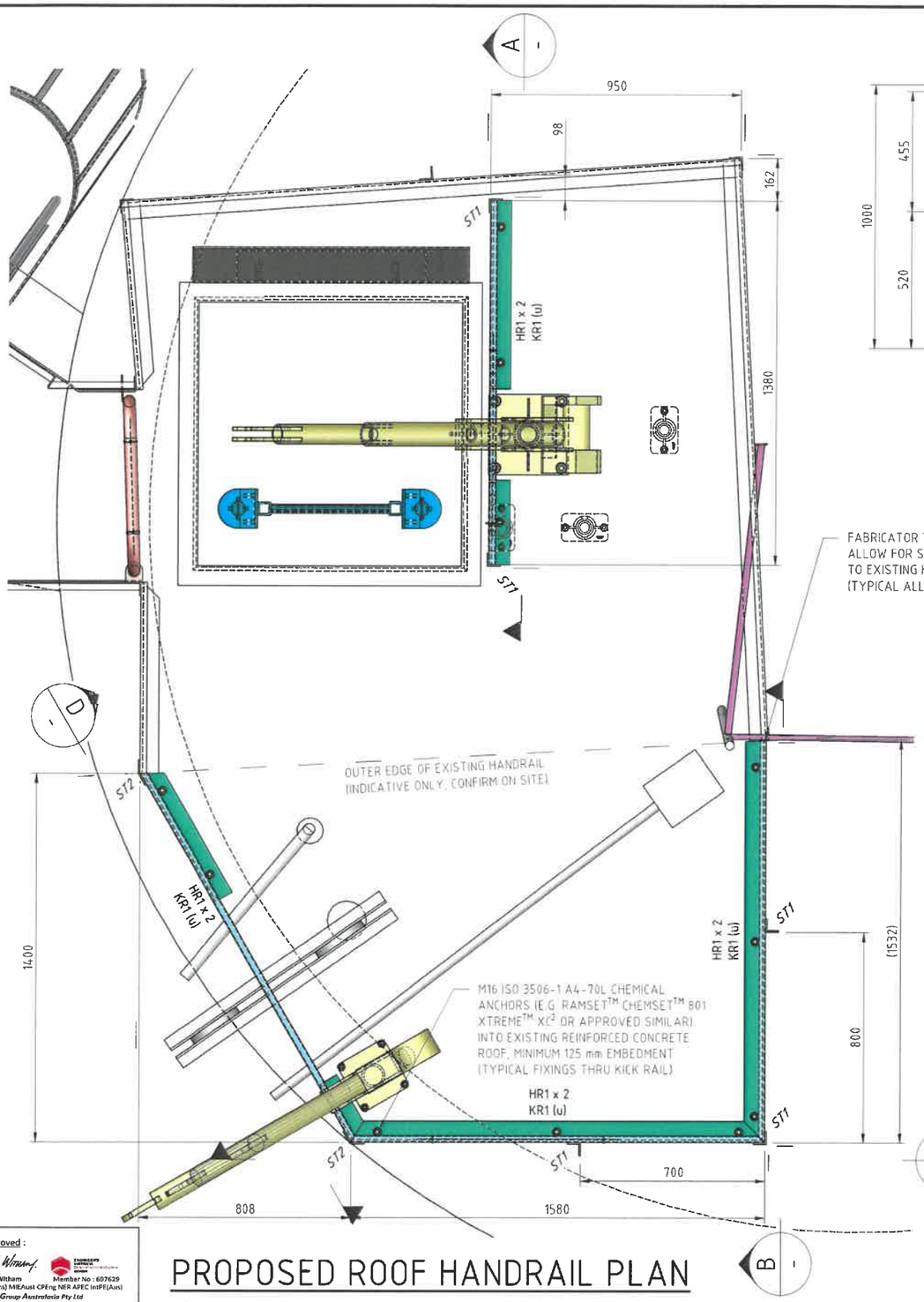
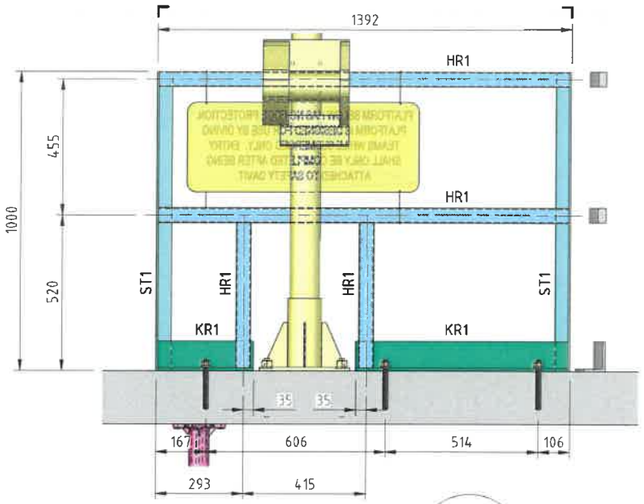
Checked by	A.BUENEN	Date	28.06.23
Engineer RPEQ 11631	C.WITHAM	Date	11.07.23

Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
SETOUT SECTIONS

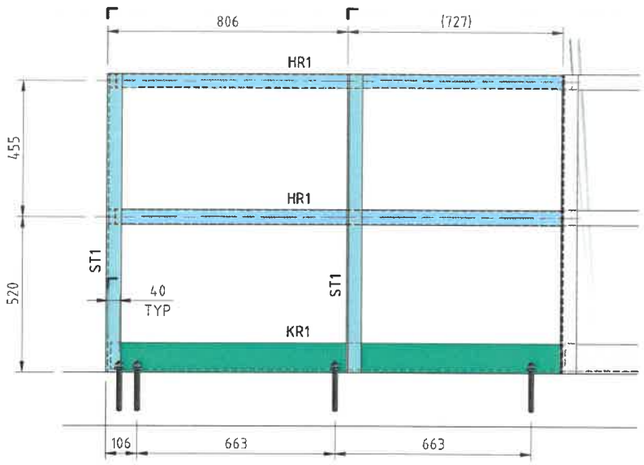
Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-006 Rev.: 0



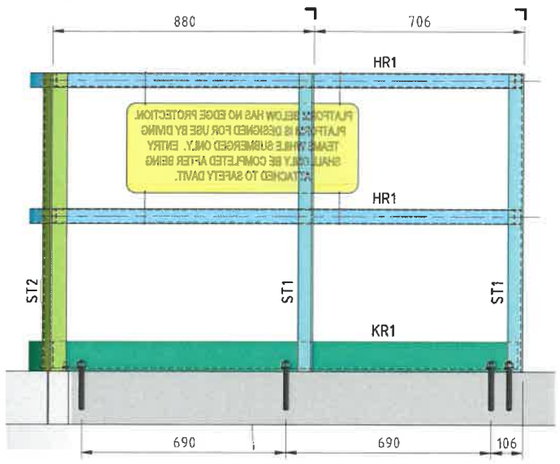
FABRICATOR TO PROVIDE GREEN TO ALLOW FOR SITE WELDED CONNECTION TO EXISTING HANDRAIL ASSEMBLIES (TYPICAL ALL TIE-IN LOCATIONS)



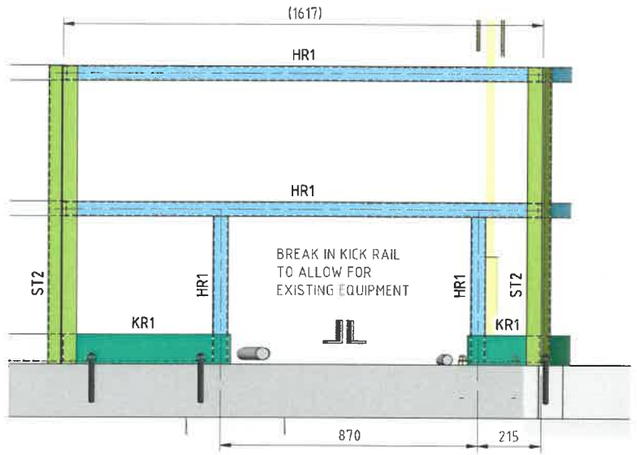
SECTION A
SCALE - 1:20



SECTION B
SCALE - 1:20



SECTION C
SCALE - 1:20



SECTION D
SCALE - 1:20

HANDRAIL RAIL ASSEMBLIES TO BE FABRICATED (FULLY WELDED) FROM ALUMINIUM SECTIONS. SIZES AND GRADES SUBJECT TO AVAILABILITY FROM MANUF. SPECS. SECTIONS AND GRADES SPECIFIED SHALL BE SOURCED (OR EQUIVALENT OR GREATER).

HR1	HANDRAIL 50 x 25 x 2.5 HOLLOW SECTION AS/NZS 1866-6060-T5
KR1	KICK RAIL 100 x 80 x 10 ANGLE AS/NZS 1866-6082-T5
ST1	STANCHION 50 x 50 x 6 ANGLE AS/NZS 1866-6060-T5
ST2	STANCHION FABRICATED FROM 2 LENGTHS OF 50 x 6 FLAT BAR AS/NZS 1866-6060-T5 TO SUIT ANGLE (OTHER THAN 90° BEND)

PROPOSED ROOF HANDRAIL PLAN

SCALE - 1:20

Approved :
Chris Witham Member No : 607629
BE(Hons) MIEAust CPEng NER APEC IntPE(Aus)
Allied Group Australasia Pty Ltd
RPEQ - 11631

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Title
BANANA SHIRE COUNCIL
RESERVOIR ACCESS UPGRADE
MOURA WATER STANDPIPE
PROPOSED ROOF HANDRAIL PLAN

Scale: AS SHOWN (AT A3)
Job No.: GD2188
Drawing No.: GD2188-007 Rev.: 0