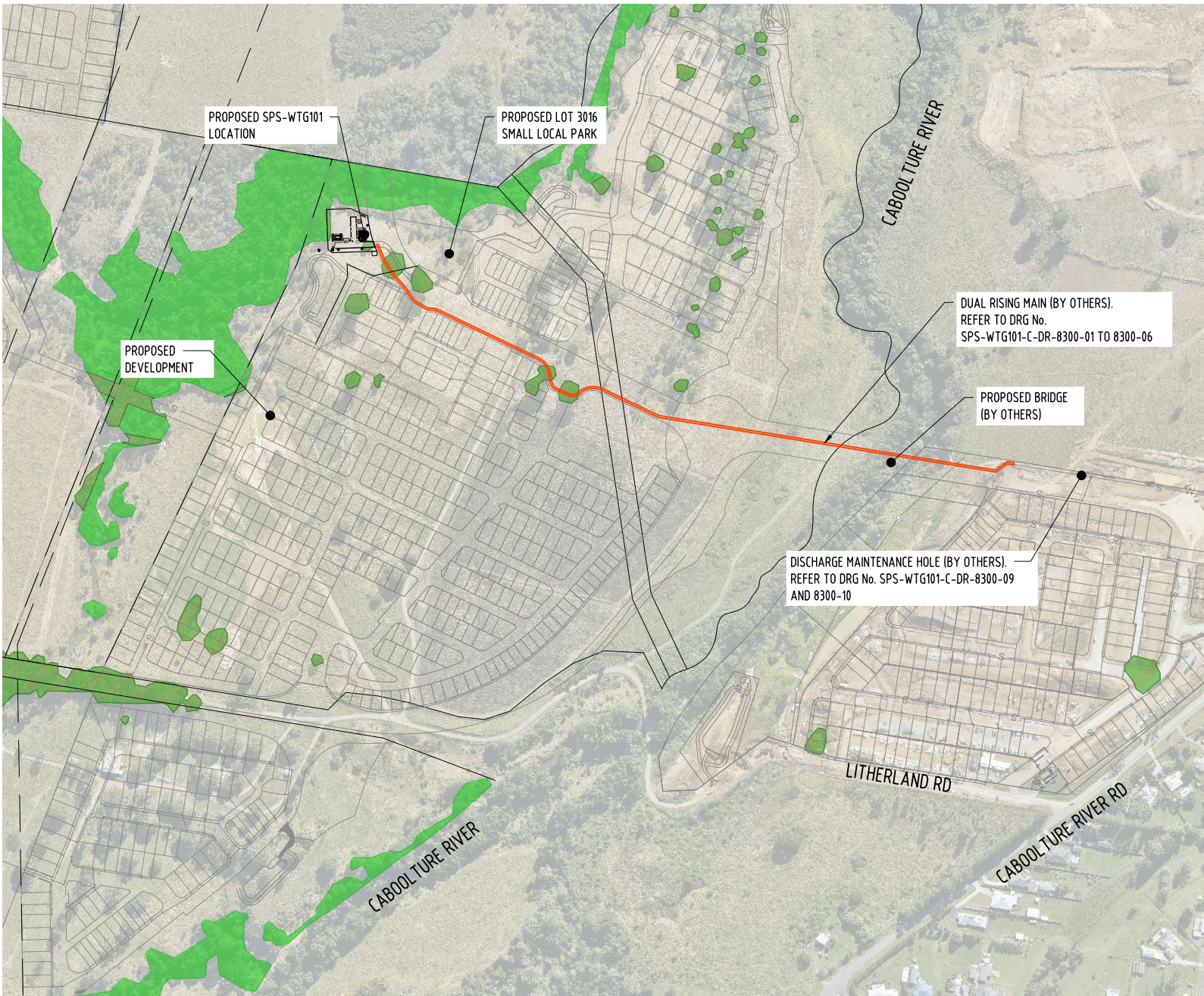


RIVERMONT BOULEVARD, WAGTAIL GROVE

SPS-WTG101 SEWAGE PUMP STATION



LOCALITY PLAN
SCALE 1:3,000 (A1)
SCALE 1:6,000 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED:
RPEQ: 12761 DATE APPROVED: 29/07/2026

0 30 60 120 180
1 : 3,000m (A1) - 1 : 6,000m (A3)

DRAWING INDEX	
SHEET No.	SHEET TITLE
GENERAL DRAWINGS - 8100 SERIES	
C-DR-8100-01	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
C-DR-8100-02	NOTES - SHEET 1
C-DR-8100-03	NOTES - SHEET 2
C-DR-8100-04	NOTES - SHEET 3
C-DR-8100-05	TRENCH DETAILS
C-DR-8100-10	PUMP AND RISING MAIN DETAILS (SYSTEM CURVE INTERACTION)
C-DR-8100-11	SYSTEM HYDRAULIC GRADE LINE
P-DR-8100-20	PIPING AND INSTRUMENTATION DIAGRAM LEGEND
P-DR-8100-25	PIPING AND INSTRUMENTATION DIAGRAM - SHEET 1
P-DR-8100-26	PIPING AND INSTRUMENTATION DIAGRAM - SHEET 2
SPS DRAWINGS - 8101 SERIES	
C-DR-8101-01	SITE LOCALITY PLAN
C-DR-8101-02	GENERAL ARRANGEMENT PLAN
C-DR-8101-05	WET WELL AND VALVE CHAMBER GENERAL ARRANGEMENT
C-DR-8101-06	WET WELL AND VALVE CHAMBER TYPICAL SECTION
C-DR-8101-07	PIPEWORK CONNECTION DETAIL, FLOWMETER AND BYPASS PIT
C-DR-8101-08	PIPEWORK TYPICAL SECTIONS
C-DR-8101-09	WET WELL AND VALVE CHAMBER COVER SLAB DETAILS
C-DR-8101-10	MISCELLANEOUS DETAILS
C-DR-8101-12	INDICATIVE WET WELL AND FLOWMETER ULTIMATE PIPEWORK ARRANGEMENT
C-DR-8101-15	PIPEWORK AND FITTINGS SCHEDULE TABLE
C-DR-8101-18	THRUST BLOCK DETAILS - SHEET 1
C-DR-8101-20	ACCESS ROAD AND CONCRETE SLAB LAYOUT PLAN
C-DR-8101-22	ACCESS ROAD PAVEMENT AND JOINTING DETAILS
C-DR-8101-23	DELIVERY BUND LAYOUT AND DETAILS
C-DR-8101-25	SERVICE VEHICLE WITH TRAILER TURNING PATH DETAILS
C-DR-8101-26	12.5m RIGID SERVICE VEHICLE TURNING PATH DETAILS
C-DR-8101-30	SEWER GRAVITY MAIN LAYOUT
C-DR-8101-31	SEWER GRAVITY MAIN DETAILS
C-DR-8101-32	SEWER GRAVITY MAIN LONGITUDINAL SECTIONS
C-DR-8101-35	ELECTRICAL CONDUIT LAYOUT PLAN
C-DR-8101-36	ELECTRICAL SERVICES TYPICAL DETAILS
C-DR-8101-37	ELECTRICAL PIT AND DRAINAGE LONGITUDINAL SECTIONS
C-DR-8101-40	INTERNAL MINOR SERVICES LAYOUT
C-DR-8101-41	INTERNAL MINOR SERVICES SETOUT TABLES
C-DR-8101-50	OVERALL SITE SETOUT PLAN
C-DR-8101-55	EARTHWORKS SECTIONS
C-DR-8101-60	LANDSCAPING AND PAVEMENT DETAILS
G-DR-8101-70	EASEMENT PLAN

DRAWING INDEX	
SHEET No.	SHEET TITLE
SPS DRAWINGS - 8101 SERIES: STRUCTURAL DRAWINGS	
S-DR-8101-100	STRUCTURAL DETAILS - SHEET 1
S-DR-8101-101	STRUCTURAL DETAILS - SHEET 2
S-DR-8101-102	STRUCTURAL DETAILS - SHEET 3
S-DR-8101-103	STRUCTURAL DETAILS - SHEET 4
S-DR-8101-105	MAINTENANCE HOLE 6m TO 10m STRUCTURAL DETAILS
S-DR-8101-106	WET WELL SURROUND SLAB PAVEMENT AND JOINTING DETAILS
S-DR-8101-109	MISCELLANEOUS STRUCTURAL DETAILS
S-DR-8101-120	COLLECTOR MAINTENANCE HOLE COVER DETAILS
S-DR-8101-130	DELIVERY BUND STRUCTURAL DETAILS
SPS STORAGE - 8500 SERIES	
C-DR-8500-01	EMERGENCY STORAGE LAYOUT PLAN
C-DR-8500-02	EMERGENCY STORAGE SECTIONS AND DETAILS
C-DR-8500-05	EMERGENCY STORAGE MISCELLANEOUS DETAILS
C-DR-8500-10	EMERGENCY STORAGE DETAILED SPRAYBAR LAYOUT
C-DR-8500-50	EMERGENCY STORAGE LIFTING PLAN
S-DR-8500-100	EMERGENCY STORAGE STRUCTURAL DETAILS - SHEET 1
S-DR-8500-101	EMERGENCY STORAGE STRUCTURAL DETAILS - SHEET 2
S-DR-8500-105	EMERGENCY STORAGE STRUCTURAL DETAILS - COVER SLAB
SPS OVERFLOW - 8600 SERIES	
C-DR-8600-01	OVERFLOW ARRANGEMENT - SHEET 1

FOR KN GROUP SEWER RISING MAIN DRAWING PACKAGE
REFER SPS-WTG101-C-DR-8300 SERIES

FOR ELECTRICAL DRAWING PACKAGE REFER
SPS-WTG101-E-DR-9000 SERIES

PROPOSED NON-CONFORMANCES (ANY NON-CONFORMANCES IDENTIFIED BY THE CONTRACTOR MUST BE APPROVED BY UNITYWATER)			
No	SEQ/WSA CODE CLAUSE	DETAILS FOR PROPOSED VARIATION	REASONS OF PROPOSED VARIATION
1	WSA04-2005 V2.1 CL11.3.4.2 PIPE COVER	SRM PIPEWORK DEPTHS EXCEED THE 15m MAXIMUM COVER SPECIFIED FOR RISING MAINS. APPLIES TO HDD INSTALLATION SECTIONS OF THE DUAL RISING MAIN.	SITE TOPOGRAPHY AND HDD INSTALLATION METHODOLOGY DICTATE PIPE DEPTHS BELOW THE RIVER CROSSING. AERIAL CROSSING NOT FEASIBLE DUE TO RISK AND COMPLEXITY. HDD METHODOLOGY PREVIOUSLY APPROVED BY UNITYWATER.
2	WSA04-2022 V3.2 CL11.3.6 VELOCITY IN PRESSURE MAINS	VELOCITIES BELOW 0.75 m/s MINIMUM IN THE DN375 DI COMBINED MANIFOLD PIPEWORK WITHIN THE SPS SITE DURING INTERIM STAGE (8,000EP).	DN375 SIZED FOR ULTIMATE 30,000EP TO AVOID AUGMENTATION OF LIVE PRESSURISED PIPEWORK. LOW VELOCITY IS TEMPORARY (INTERIM ONLY). FLUSHING REGIME, PIGGING POINT, AND ADDITIONAL FLUSHING CONNECTIONS PROVIDED. SELF-CLEANING VELOCITIES ACHIEVED AS CATCHMENTS GROWS.
3	SEQ IPAM LIST (DEC 2025) SEWERAGE PIPES AND FITTINGS - PRESSURE	USE OF OD280 PE100 (HDD SECTION, INTERIM) AND OD500 PE100 (OPEN TRENCH, ULTIMATE) RISING MAIN PIPE SIZES NOT LISTED IN THE SEQ IPAM ACCEPTED PRODUCTS LIST.	PIPE SIZED REQUIRED TO ACHIEVE OPTIMAL FLOW SPLIT AND ACCEPTABLE VELOCITIES ACROSS ALL OPERATING CONDITIONS (INTERIM AND ULTIMATE). HYDRAULIC ASSESSMENT CONFIRMS PROPOSED SIZES PROVIDE BEST PERFORMANCE. PREVIOUSLY ACCEPTED IN PRINCIPLE BY UNITYWATER (MARK ASTER, 08/01/2026)

A1	E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
	B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
	A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE

tonkin
tonkin.com.au


Stockland


Unitywater

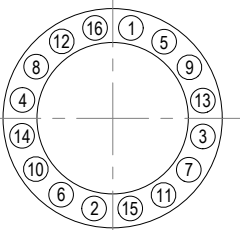
Unitywater		SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
SPS-WTG101 RIVERMONT BOULEVARD WTG101 SPS FACILITY GENERAL COVER SHEET, LOCALITY PLAN AND DRAWING INDEX		REVISION DATE	29.07.2026	REVISION E
		DISCIPLINE CODE	C	
		DRAWING NO.	SPS-WTG101-C-DR-8100-01	

- | SURVEY NOTES | |
|--------------|---|
| SU1. | THE CONTRACTOR SHALL MAKE DUE ALLOWANCE TO VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SUPPLIED AND ADVISE THE SUPERINTENDENT OF ANY AND ALL DISCREPANCIES. THIS VERIFICATION PROCESS IS REQUIRED PRIOR TO COMMENCEMENT OF INSTALLATION AND/OR MODIFICATION OF THE WORKS OR THE PROCUREMENT OF PIPES/FITTINGS THAT ARE NON-STANDARD SUPPLY ITEMS. |
| SU2. | THE SHAPES DEPICTING SERVICES ARE SYMBOLIC REPRESENTATIONS AND THEY ARE NOT TO SCALE. NOT ALL SERVICES ARE ACCURATELY LOCATED. CONTRACTOR IS TO MAKE DUE ALLOWANCE TO VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SUPPLIED. |

A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	J
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	L
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	O
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		IN

- PIPEWORK**
- P1. FOR ALL DUCTILE IRON PIPEWORK:
- A) ALL DUCTILE PIPES & FITTINGS MUST BE IN ACCORDANCE WITH UNITYWATER SPECIFICATION PR9693 - SPECIFICATION FOR MECHANICAL INSTALLATIONS AND SEQ ACCEPTABLE CIVIL IPAM LIST (SEQ WS&S D&C CODES) AND CEMENT MORTAR LINED TO AS 2280.
 - B) ALL FITTINGS SHALL BE DUCTILE CAST IRON WITH THERMAL BONDED POLYMERIC COATING TO AS2280 AND WSA PS-201. THERMAL BONDED POLYMERIC COATING SHALL ALSO FOLLOW REQUIREMENTS AND SURFACE PREPARATION PROCEDURES LISTED IN UNITYWATER SPECIFICATION PR9693 - SPECIFICATION FOR MECHANICAL INSTALLATIONS.
 - C) BURIED PIPES TO BE BITUMEN COATED AND COVERED WITH POLYETHYLENE SLEEVING/WRAPPER AS PER THE MANUFACTURER'S RECOMMENDATION AND AS 3680. WHERE PIPE SPOOLS NOTED AS THERMALLY BONDED POLYMERIC COATED (TBPC) THIS APPLIES TO INTERNAL & EXTERNAL.
 - D) DI PIPES AND FITTINGS SHALL BE RRJ DUCTILE MIN. CLASS PN35 UNLESS NOTED OTHERWISE.
 - E) PIPES AND FITTINGS SHALL COMPLY WITH REQUIREMENTS LISTED IN PR9693 AND MEET CORROSION PROTECTION REQUIREMENTS.
 - F) WHERE THERMALLY BONDED POLYMERIC COATING SPECIFIED, THIS APPLIES TO BOTH INTERNAL AND EXTERNAL.
- P2. FOR ALL POLYETHYLENE (PE) PIPEWORK:
- A) PE PIPES FOR PRESSURE MAIN SHOULD BE BLACK WITH CREAM STRIPES TO BE MANUFACTURED IN ACCORDANCE WITH AS 4130 AND COMPLY WITH THE REQUIREMENTS SPECIFIED IN THE SEQ ACCEPTABLE CIVIL IPAM LIST (SEQ WS&S D&C CODES).
 - B) POLYETHYLENE FITTINGS TO BE MANUFACTURED IN ACCORDANCE WITH AS 4129 AND COMPLY WITH THE REQUIREMENTS SPECIFIED IN THE SEQ ACCEPTABLE CIVIL IPAM LIST (SEQ WS&S D&C CODES).
 - C) PIPES TO BE INSTALLED IN ACCORDANCE WITH PR9904 FOR PRESSURE PIPE AND PR9875 FOR NON-PRESSURE PIPE.
 - D) CURVING OF THE PIPE INCLUDING LIMITING THE RADIUS OF CURVATURE SHALL BE IN ACCORDANCE WITH PIPA GUIDELINE POP202.
 - E) PE PIPE WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF PR9875 - SPECIFICATION FOR NON PRESSURE PIPE CONSTRUCTION (SECTION 8.5) ALL PE WELDING SHALL BE VIA BUTT WELDING. USE OF ELECTROFUSION COUPLINGS SUBJECT TO UNITYWATER APPROVAL.
- P3. MILD STEEL CEMENT LINED PIPE:
- A) ALL PIPE TO BE MANUFACTURED IN ACCORDANCE WITH AS1579.
 - B) MILD STEEL WITH FBPE COATING SHALL COMPLY WITH AS4321.
 - C) WELDING SHALL COMPLY WITH THE REQUIREMENTS OF AS1554.1SP AND PR9904 - SPECIFICATION FOR PRESSURE PIPE CONSTRUCTION SECTION 9.
 - D) ALL WELDING WORK SHALL BE CARRIED OUT BY A PERSON WHO;
 - HOLDS CURRENT CERTIFICATION TO AS1796 CERT. 10; OR
 - HOLDS CURRENT CERTIFICATION TO AS2214
 - E) WHERE FUSION BONDED POLYETHYLENE (FBPE) COATING SPECIFIED. THIS APPLIES TO BOTH INTERNAL AND EXTERNAL, UNO.
- P4. GENERAL PIPE CONSTRUCTION:
- A) IN ACCORDANCE WITH UNITYWATER PR9875 - SPECIFICATION FOR NON-PRESSURE PIPELINE CONSTRUCTION AND PR9904 - SPECIFICATION FOR PRESSURE PIPELINE CONSTRUCTION.
 - B) HANDLING AND STORAGE OF PIPE SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURERS REQUIREMENTS. (CONTRACTOR SHALL PROVIDE PROTECTION FOR THE PIPES AND FITTINGS FROM UV LIGHT AND DAMAGE).
 - C) CHANGES OF HORIZONTAL AND VERTICAL ALIGNMENT SHALL BE MADE BY DEFLECTING THE PIPE AT A SINGLE JOINT UNO. THE MAXIMUM PERMISSIBLE DEFLECTION SHALL BE 80% OF THE MANUFACTURER'S RECOMMENDATION. DEFLECTIONS SHALL BE CARRIED OUT ONLY AFTER THE JOINT HAS BEEN MADE. WHERE DEFLECTIONS OCCUR OVER MORE THAN ONE PIPE JOINT, THE DEFLECTION SHALL BE SPREAD EQUALLY OVER THE NUMBER OF JOINTS REQUIRED.
 - D) PIPES CAST INTO CONCRETE SHALL BE POWER TOOL CLEANED TO AS 1627.
 - E) UNRESTRAINED DISMANTLING JOINT TO SPECIFICATION WSA PS - 311 MECHANICAL COUPLINGS, UNRESTRAINED. PRESSURE CLASS SHALL BE PN16. COUPLING LENGTH SHALL BE LONG SERIES, WITH BOLTS IN ACCORDANCE WITH NOTE PS.C.
 - F) MINIMUM CLEARANCE TO SERVICES SHALL BE IN ACCORDANCE WITH AMENDMENT TO SEWAGE PUMPING STATION CODE OF AUSTRALIA (FOR PRESSURE PIPE) AND GRAVITY SEWERAGE CODE OF AUSTRALIA SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION VERSION 2.1 (SEPTEMBER 2021) (AMENDMENTS TO WSA02-2014 (FOR GRAVITY SEWER)).
 - G) FOR METAL/PLASTIC SP-SC JOINT REQUIREMENTS REFER SEQ CODE WSA 03-2011 CLAUSE 15.4.
 - H) THE CONTRACTOR SHALL CONFIRM TRENCH CONSTRUCTION TYPE WITH AN RPEQ-CERTIFIED GEOTECHNICAL ENGINEER FOLLOWING INSPECTION OF TRENCH CONDITIONS.
 - I) MINIMUM DEPTH OF PIPE COVER AS PER THE SEQ CODE, UNO.
 - DO NOT INSERT A METAL SPIGOT INTO THE SOCKET OF PLASTIC PIPE.
- P5. FOR ALL PVC PRESSURE PIPEWORK:
- A) UNLESS OTHERWISE SPECIFIED, THE MINIMUM PRESSURE RATING FOR PVC PRESSURE PIPE SHALL BE PN16, PIPES AND FITTINGS SHALL BE SERIES 2 - CAST IRON OUTSIDE DIAMETER (CIOD) SERIES AND MANUFACTURED, TESTED AND SUPPLIED IN ACCORDANCE WITH WSA PRODUCT SPECIFICATION WSA PS-209, WSA PS-210 OR WSA PS-211, AS APPLICABLE. DUCTILE IRON FITTINGS SHALL COMPLY WITH WSA PS-212 IF THEY ARE USED WITH PVC PIPES.
 - B) DUCTILE IRON FITTINGS FOR USE WITH PVC PRESSURE PIPE SHALL COMPLY WITH AS/NZS2280. FITTINGS SHALL BE COATED AND LINED WITH FUSION BONDED POLYMER IN ACCORDANCE WITH AS/NZS4150. THE USE OF MOULDED PVC FITTINGS IS NOT PERMITTED.
 - C) PVC-O PRESSURE PIPE SHALL BE MATERIAL CLASS 450, SERIES 2 - CAST IRON OUTSIDE DIAMETER (CIOD) COMPLYING WITH THE REQUIREMENTS OF AS/NZS4441.
 - D) PVC-M PRESSURE PIPE SHALL BE SERIES 2 - CAST IRON OUTSIDE DIAMETER (CIOD) COMPLYING WITH THE REQUIREMENTS OF AS4765.
 - E) ELASTOMERIC RING JOINT SEALS SHALL BE EPDM OR NR TO AS1646
 - F) THE INSTALLATION OF PVC PIPE SHALL IN GENERAL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AS2032.
 - G) PVC-U AND PVC-C PRESSURE PIPE FOR CHEMICAL SYSTEMS AND FOR SOLVENT CEMENT JOINTS SHALL BE COMPLIANT WITH AS 4130, JOINTS SHALL BE EITHER SOLVENT WELDED OR FLANGED. PIPE GLUES AND SOLVENTS SHALL BE SUITABLE FOR USE WITH THE SPECIFIC CHEMICALS AND PIPING SYSTEMS. SCREWED CONNECTIONS ARE NOT PERMITTED.
- P6. FOR ALL PVC NON-PRESSURE PIPEWORK:
- A) PVC-U PIPE AND FITTINGS SHALL COMPLY WITH THE REQUIREMENTS OF AS1260.
 - B) THE MINIMUM PIPE CLASS SHALL BE CLASS SN8 (DN150 AND ABOVE) OR SN10 (DN100 AND BELOW).
 - C) ELASTOMERIC RING JOINT SEALS SHALL BE EPDM OR NR TO AS1646

- | | |
|--|------------------------------------|
| STATUS | ISSUED FOR 100%
DESIGN APPROVAL |
| DESIGN APPROVED: <i>C. [Signature]</i> | |
| RPEQ: 12761 | DATE APPROVED: 29/07/2026 |



Approval no: DEV-2026-WAR-5170
Date: 01/09/2026

FIRM THE FLANGES TOGETHER BY HAND TIGHTENING, THEN PRE-TIGHTENING ALL BOLTS IN PROPER SEQUENCE TO 25NM BUT DO NOT EXCEED 20% OF THE TARGET TORQUE.

- ROUND 1 - TIGHTEN TO 25%
- ROUND 2 - TIGHTEN TO 50%
- ROUND 3 - TIGHTEN TO 75%
- ROUND 4 - TIGHTEN TO 100% - INITIAL TORQUE VALUE 215 Nm (FOR DN500 PE TO DN450 DI) & 103 Nm (FOR DN315 PE TO DN250 DI)
- WHERE TARGET TORQUE IS HIGH CONTRACTOR SHALL APPLY CONSIDER USE OF ADDITIONAL TORQUING ROUNDS TO AVOID TIPPING FLANGES AND CREATING MISALIGNMENT

ONCE 100% OF TARGET TORQUE IS ACHIEVED, USE ROTATIONAL CLOCKWISE TIGHTENING SEQUENCE, STARTING WITH BOLT No.1, FOR ONE COMPLETE ROUND. CONTINUE UNTIL NO FURTHER BOLT OR NUT ROTATION OCCURS AT 100% OF THE TARGET TORQUE VALUE FOR EACH NUT. RE-TORQUE TO TARGET TORQUE VALUE USING ONE OR TWO SEQUENCE ROUNDS FOLLOWED BY ONE ROTATIONAL ROUND AT THE TARGET TORQUE VALUE AFTER 4 HOURS. PRIOR TO BURIAL CHECK THAT THE ACTUAL RESIDUAL BOLT TORQUE IS NOT LESS THAN FIGURE ABOVE.

- P8. PIPE EMBEDMENT AND BACKFILL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE DESIGN DRAWINGS.
- P9. CONSTRUCTION TOLERANCES SHALL BE IN ACCORDANCE WITH WATER SUPPLY CODE OF AUSTRALIA (WSA03-2011 V3.1)
- P10. TRENCH FLOOR PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 14.1 OF WSA03-2011.
- P11. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MAINTENANCE OF EXCAVATIONS. THE CONTRACTOR SHALL PROVIDE SHORING AS MAY BE REQUIRED, WHICH SHALL BE PUT IN PLACE TO SUPPORT THE WALLS IF EXCAVATIONS AND TO PREVENT ANY MOVEMENT WHICH COULD IN ANY WAY INJURE OR ENDANGER ANY PERSONS, ADJACENT PAVEMENTS, OR EXISTING AND PROPOSED STRUCTURED, SHORING SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITIES.
- P12. ALL EXCAVATED 'SUITABLE MATERIAL' IN EXCESS OF FILLING REQUIREMENTS, SHALL BE DEALT AS SURPLUS MATERIAL AS DIRECTED BY THE CERTIFYING THE FILL IS.
- P13. ANY 'UNSUITABLE MATERIAL' LOCATED SHALL BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT FOR INSTRUCTION.
- P14. PIPELINES SHALL NOT BE CONSTRUCTED IN UNCONTROLLED FILL CERTIFICATES SHALL BE LODGED WITH THE SUPERINTENDENT CERTIFYING THE FILL IS RESILIENT FILL COMPACTED TO A DENSITY OF NO LESS THAN 95% OF ITS STANDARD MAXIMUM DRY DENSITY, IN ACCORDANCE WITH A.S. 1289.5.1.1.
- P15. ALL PIPES AND CONDUITS SHALL BE INSTALLED WITH A MARKER TAPE ABOVE THE SERVICE. FOR METALLIC PIPES AND CONDUITS CONTAINING WIRING A NON-DETECTABLE MARKER TAPE IN ACCORDANCE WITH AS/NZS 2648.1 AND WSA PS-319 SHALL BE INSTALLED. FOR NON-METALLIC PIPES AND CONDUITS NOT CONTAINING IRES A DETECTABLE MARKER TAPE IN ACCORDANCE WITH AS/NZS 2648.1 AND WSA PS-318 SHALL BE INSTALLED.
- P16. FOR ALL VALVES
- A) ALL FLANGED VALVES SHALL BE COMPATIBLE TO AS 4087, FIGURE B5 (PN16).
- B) RESILIENT SEATED GATE VALVE SHALL BE IN ACCORDANCE WITH THE PR9904 SECTION 10.1 AND ACCEPTABLE CIVIL IPAM LIST (SEQ WS&S D&C CODES):
- KNIFE GATE VALVE TO BE AVK (PN10, LUGGED), 316 SS AS SPECIFIED IN PR9904 SECTION 10.3 AND IN SEQ WATER SUPPLY AND SEWERAGE D&C CODE IPAM LIST LIST (WSAA PRODUCT SPECIFICATION NO. 266)
- C) VALVES SHALL BE INSTALLED COMPLETE WITH A SURFACE BOX, MARGIN SET, MARKER POST AND REFLECTIVE PAVEMENT MARKER IN ACCORDANCE WITH SEQ CODE DRG:
- TYPICAL VALVE ARRANGEMENT TO SEW-WAT-1301-1
 - CONCRETE SURROUND AROUND CAST IRON BOX AND LID TO SEQ-WAT-1306-1
 - CAST IRON VALVE BOX COVER TO SEQ-SPS-1607-1
 - RISING MAIN VALVE MARKING TO SEQ-SPS-1508-2
- D) ALL VALVE COVERS TO BE TRAFFICABLE (CLASS D) WITH DROP-IN LID AND KEY UNLESS OTHERWISE INDICATED ON DRAWINGS AND SHALL BE IN ACCORDANCE WITH SEQ CODE STANDARD DRAWING SEQ-WAT-1301-1.
- P17. FOR REDUCED CLEARANCE CROSSINGS OF EXISTING STORMWATER PIPELINES, NO HEAVY COMPACTION MACHINERIES OVER EXISTING STORMWATER PIPELINES IS PERMITTED. STORMWATER PIPES AT PROPOSED CROSSINGS SHALL BE CCTV SURVEYED PRE AND POST CONSTRUCTION, AND SURVEY PROVIDED TO COMB FOR REVIEW.

STATUS

**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED: 

RPEQ: 12761 DATE APPROVED: 29/07/2026

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
GENERAL
NOTES - SHEET 1

SHEET 1 OF 1 SHEETS		SCALE AS SHOWN	
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE	C		
DRAWING NO.			
SPS-WTG101-C-DR-8100-0			

CONFINED SPACES

- CS1. WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH AS2865:2009 - SAFE WORKING IN A CONFINED SPACE.
- CS2. WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH WORKPLACE HEALTH AND SAFETY QLD CONFINED SPACES CODE OF PRACTICE 2021.
- CS3. SIGNAGE IN ACCORDANCE WITH AS1319 - SAFETY SIGNAGE FOR THE OCCUPATIONAL ENVIRONMENT TO BE PROVIDED FOR ALL CONFINED SPACES.

MAINTENANCE HOLE

- MH1. OVER EXCAVATE DOWN TO SUITABLE FOUNDING MATERIAL IF REQUIRED AND BACKFILL WITH LEAN MIX CONCRETE OR C.I.S.M TO APPENDIX K OF AS2566.2.
- MH2. TOP SLAB TO BE CLASS 'D'. COVER AND SURROUND TO BE CLASS B OR D, AS SHOWN ON DRAWINGS. REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1308-8A, 9A, 10A & 11A. SEAL MANHOLES WITH "BIYSEAL" BITUMEN IMPREGNATED FOAM OR APPROVED EQUIVALENT. REFER TO LONG SECTIONS FOR MAINTENANCE HOLE DEPTHS.
- MH3. SEWER MAINTENANCE HOLES TO HAVE MECHANICALLY ANCHORED PE LINING, REFER TO SEQ-SPS-1407-1 AND SEQ-SPS-1407-2. WHERE INDICATED. LINER SHALL FORM A COMPLETELY SEALED AND WELDED ROBUST CONTINUOUS MEMBRANE SYSTEM & COVER FULL EXTENTS OF WALL, UNDERSIDE OF COVER SLAB AND NECK OF SLAB/BUILDUP TO UNDERSIDE OF COVER.
- MH4. PROVIDE PLATES, ANCHOR BRACKETS AND JOINTS AS DETAILED ON SEQ-SEW-1301-1, SEQ-SEW-1307-1 AND SEQ-SEW-1312-1.
- MH5. REFER TO SEQ CODE DRG SEQ-SEW-1313-1 FOR PE COUPLING CONNECTION AT MAINTENANCE HOLES.
- MH6. HYDROPHILIC RUBBER SEALS SHALL BE MINIMUM OF 25x6mm WITH SELF-ADHESIVE BACKING AND SHALL FULLY ENCIRCLE THE PIPE FITTING WITH A MINIMUM 50 OVERLAP THAT IS IN CONTACT WITH ITSELF. FIX AND MAKE CONTINUOUS THE HYDROPHILIC RUBBER SEAT WITH GUN GRADE HYDROPHILIC WATERSTOP MASTIC BEAD.
- MH7. REFER TO SEQ CODE DRG SEQ-SEW-1304-1, SEQ-SEW-1305-1 FOR TYPICAL MAINTENANCE HOLE CHANNEL DETAILS.

EXCAVATION ADJACENT TO POWER POLES

- PP1. ALL CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF:
- A) ELECTRICAL SAFETY CODE OF PRACTICE 2020.
- B) ENERGEX REQUIREMENTS: WORKING NEAR OVERHEAD AND UNDERGROUND ELECTRIC LINES.
- C) ANY OTHER RELEVANT AUTHORITY.

ACCEPTANCE TESTING

- AT1. CONTRACTOR SHALL DEVELOP AND SUBMIT FOR APPROVAL BY UNITYWATER INSPECTION AND TEST PLAN (ITP) INCLUDING COMPACTION, PIPE WELDING, PE LINING, MANHOLE AND PIPELINE TESTING.
- AT2. THE HYDROSTATIC TESTING PROCEDURES ARE AS FOLLOWS:
- A) PRESSURE PIPELINE (HYDROSTATIC TESTING)
- TESTING SHALL BE IN ACCORDANCE WITH PR9693 - SPECIFICATION FOR MECHANICAL INSTALLATIONS AND SEQ WS&S D&C CODE, SEWAGE PUMPING STATION CODE OF AUSTRALIA SECTION 34 (ACCEPTANCE TESTING). SRM PIPEWORK WITHIN SITE BOUNDARY SHALL BE TESTED TO 1200kPa, THE PE SEWER RISING MAIN MAY BE TESTED TO 900kPa.
- WATER PIPELINE SHALL BE TESTED TO 1200kPa, IN ACCORDANCE WITH WSA03-2011-3.2 (SEQ WS&S D&C CODE)
- B) GRAVITY MAIN AND MAINTENANCE HOLES TESTING (VACUUM TESTING)
- SHALL BE IN ACCORDANCE WITH GRAVITY SEWERAGE CODE OF AUSTRALIA SEQ QUEENSLAND SERVICE PROVIDERS EDITION (WSA02-2014-3.1) CLAUSE 213 AND SUB-CLAUSES, TO PROVE THEIR WATER TIGHTNESS.
- AT3. THE MINIMUM COMPACTION OF TRENCH FILL SHALL NOT BE LESS THAN THE VALUES GIVEN IN UNITYWATER SPECIFICATION PR9904 - SPECIFICATION FOR PRESSURE PIPELINE CONSTRUCTION. THE FREQUENCY OF COMPACTION SHALL BE IN ACCORDANCE WITH UNITYWATER SPECIFICATION PR9902 - SPECIFICATION FOR CIVIL AND EARTHWORKS.
- AT4. ALL TESTING SHALL BE CARRIED OUT BY A THIRD PARTY N.A.T.A APPROVED TESTER.
- AT5. COMPRESSIVE STRENGTH CONCRETE TESTING FREQUENCY SHALL BE AS PR9903 - SPECIFICATION FOR BUILDING AND STRUCTURAL WORKS.
- AT6. COMMISSIONING OF NETWORK SHALL FOLLOW PROCEDURES AND REQUIREMENTS LISTED IN PR8871 - SPECIFICATION FOR COMMISSIONING OF NETWORK PROJECT ASSETS.

THRUST BLOCKS

- TB1. WHERE THRUST BLOCKS (OR ANCHOR BLOCKS) ARE REQUIRED AND SPECIFIED:
- THRUST/ANCHOR BLOCKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND SEQ CODE DRG SEQ-WAT-1205-1, SEQ-WAT-1206-1 AND SEQ-WAT-1207-1.
- UN-REINFORCED CONCRETE THRUST BLOCKS SHALL BE A MINIMUM OF N25. REINFORCED CONCRETE THRUST BLOCKS SHALL BE A MINIMUM OF N32.
- THE BEARING FACE OF THE THRUST BLOCK MUST BE CAST AGAINST UNDISTURBED GROUND.
- CONCRETE MUST NOT SPILL OVER SOCKET JOINTS.
- VERTICAL THRUST BLOCKS MUST BE EMBEDDED INTO UNDISTURBED GROUND.
- A PROTECTIVE MEMBRANE TO PROTECT ABRASIVE DAMAGE TO THE SEWER MAIN SHOULD BE PROVIDED BETWEEN THE PIPE (IRRESPECTIVE OF THE PIPE MATERIAL) AND THE CONCRETE ANCHOR AND THRUST BLOCKS.
- THE CONTRACTOR SHALL CONFIRM THRUST BLOCK DIMENSIONS WITH THE PRINCIPAL PRIOR TO CONSTRUCTION FOLLOWING INSPECTION OF TRENCH CONDITIONS AND GEOTECHNICAL TESTING TO CONFIRM HORIZONTAL BEARING CAPACITY OF GROUND RESISTING THRUST FORCE.
- CONCRETE MUST BE CURED FOR AT LEAST 72 HOURS PRIOR TO CHARGING THE PIPELINE.
- VALVE RESTRAINT SHALL BE IN ACCORDANCE WITH SEQ CODE DRG SEQ-WAT-1206-1.
- ALL DI PUDDLE/THRUST FLANGES SHALL BE FACTORY FITTED ONTO PIPE. A MACHINE GROOVE SHALL BE CUT INTO THE OUTSIDE SURFACE OF THE PIPE AJD THE PUDDLE FLANGE MACHINED ACCORDINGLY, TO PROVIDE A NOMINAL INTERFACE FIT IN ACCORDANCE WITH AS 2280.

TRENCHSTOPS AND CONCRETE BULKHEADS

- TS1. TRENCHSTOPS AND CONCRETE BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND SEQ CODE DRG SEQ-WAT-1209-1
- TS2. BULKHEADS SHALL BE CONSTRUCTED TO PROVIDE SUPPORT TO PIPELINES WITH GRADES BETWEEN 15 TO 30%
- TS3. TRENCHSTOPS SHALL BE CONSTRUCTED TO PROVIDE SUPPORT TO PIPELINES WITH GRADES BETWEEN 5 TO 15%

LANDSCAPING

- L1. IN AREAS THAT SITE TOPSOIL MUST BE REINSTATED ON MASS, OUTSIDE AREAS IDENTIFIED IN EARTHWORKS DESIGN, THE SUBGRADE MUST BE CULTIVATED TO A DEPTH OF 100mm PRIOR TO SITE TOPSOIL BEING INSTALLED.
- L2. SITE TOPSOIL TO BE REINSTATED TO A DEPTH OF 100mm WHERE GROUND SURFACE HAS BEEN DISTURBED. IN THE INSTANCE SITE TOPSOIL IS NOT AVAILABLE, SUPPLY AND INSTALL IMPORTED TOPSOIL, WHICH MUST BE AS 4419:2003 COMPLIANT. ALL SURVEYED FINISH GRADES MUST BE MATCHED TO PRE-DISTURBANCE LEVELS, ONCE TOPSOIL IS REINSTATED, UNLESS OTHERWISE NOTED ON DRAWIN

ABBREVIATIONS

1. ABBREVIATIONS SHALL BE USED IN ACCORDANCE WITH STANDARDS AUSTRALIA PUBLICATION "SYMBOLS AND ABBREVIATIONS FOR BUILDING AND CONSTRUCTION" EXCEPT AS FOLLOWS:
- AEP ANNUAL EXCEEDANCE PROBABILITY
- ADWF AVERAGE DRY WATHER FLO
- AV AIR VALVE
- CI CAST IRONG
- DI DUCTILE IRON
- DICL DUCTILE IRON CEMENT LINED
- DIFBE DUCTILE IRON FUSION BONDED EPOXY
- DITBP DUCTILE IRON THERMAL BONDED POLYMER
- DN DIAMETER NOMINAL
- ECDP ELECTRICAL CONDUIT DRAW PIT
- FL FLANGE
- FSL FINISHED SURFACE LEVEL
- HDD HORIZONTAL DIRECTIONAL DRILLING
- HGL HYDRAULIC GRADE LINE
- IL INVERT LEVEL
- IV ISOLATION VALVE
- MH MAINTENANCE HOLE
- MS FBPE MILD STEEL PIPE WITH FUSION BONDED POLYETHYLENE COATING
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- OCU ODOUR CONTROL UNIT
- OD OUTSIDE DIAMETER
- PE POLYETHYLENE
- PVC-U UNPLASTICISED POLYVINYL CHLORIDE
- RM RISING MAIN
- RRJ RUBBER RING JOINT
- S SEWER
- SC SCOUR VALVE
- SGM SEWER GRAVITY MAIN
- SRM SEWER RAISING MAIN
- SP SPIGOT
- SC SOCKET
- SS STAINLESS STEEL
- STD DRG STANDARD DRAWING
- SV SLUICE VALVE
- SW STORMWATER
- TBPC THERMALLY BONDED POLYMERIC COATING
- UNK UNKNOWN MATERIAL
- UP UNDERGROUND PIPE
- UNO UNLESS NOTED OTHERWISE
- VP VENT PIPE
- WM WATER MAIN

TRAFFIC MANAGEMENT NOTES

- TM1. ALL WORKS ARE TO BE IN ACCORDANCE WITH THE CONTRACTORS APPROVED TRAFFIC MANAGEMENT PLAN FORMULATED IN ACCORDANCE WITH:
- A) MANUAL OF UNIFORM CONTROL DEVICES (QLD)
- TM2. THE CONTRACTOR SHALL MINIMISE ALL OBSTRUCTIONS TO TRAFFIC.
- TM3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVALS FROM COUNCIL AND OTHER AUTHORITIES FOR TEMPORARY TRAFFIC ARRANGEMENTS. ROAD CLOSURE PERMITS, IF REQUIRED SHALL BE OBTAINED BY CONTACTING UNITYWATER.

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



Queensland Government

ENVIRONMENTAL MANAGEMENT NOTES

- EM1. ALL WORKS SHALL BE CARRIED OUT WITHIN APPROVED DEFINED RIGHT OF WAY AND MUST BE DEMARCATED ON SITE PRIOR TO ANY WORKS COMMENCING.
- EM2. VEGETATION PROTECTION MEASURES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE APPLICABLE PERMITS, ENVIRONMENTAL MANAGEMENT PLAN, ARBORIST REPORTS AND AS4970. NO VEGETATION SHALL BE REMOVED EXPECT WHERE VEGETATION CLEARING HAS BEEN APPROVED.
- EM3. ANY TREE LOPPING REQUIRED SHALL BE UNDERTAKEN BY AN APPROVED ARBORIST.
- EM4. A FAUNA SPOTTER-CATCHER SHALL BE PRESENT PRIOR TO AND DURING ALL CLEARING OF NATIVE VEGETATION, UNLESS APPROVED OTHERWISE.
- EM5. SOIL AND FLOODING
- THE CONTRACTOR SHALL DEVELOP AN EROSION AND SEDIMENT CONTROL PLAN, IN ACCORDANCE WITH BEST PRACTICE EROSION AND SEDIMENT CONTROL (IECA), PRIOR TO CONSTRUCTION WORKS. THE PLANS MUST BE APPROVED BY UNITYWATER.
- WHERE PRACTICABLE, TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- THERE IS A POTENTIAL THAT GROUNDWATER MAY BE INTERCEPTED. DE-WATERING ACTIVITIES SHALL COMPLY WITH THE REQUIREMENT OF THE EMP.
- EM6. ALL DISTURBED AREAS SHALL BE RESTORED TO PREVIOUS CONDITION OR BETTER.
- EM7. REHABILITATION OF WORKS AREAS SHALL BE UNDERTAKEN PROGRESSIVELY.
- EM8. DISTURBED SURFACE LEVELS SHALL BE REINSTATED TO THE PREVIOUS LEVEL.
- EM9. DECLARED PEST PLANTS SHALL BE MANAGED IN ACCORDANCE WITH THE EMP TO PREVENT THEIR ESTABLISHMENT AND SPREAD.
- EM10. WHERE WORKS WILL BE UNDERTAKEN WITHIN A WATERWAY, ADDITIONAL SEDIMENT AND EROSION CONTROL WILL BE REQUIRED.

RESTORATION

- R1. ALL SURFACES SHALL BE RESTORED IN SUCH A MANNER THAT THEY CONFORM GENERALLY TO THE LEVELS, GRADES AND TYPES OF SURFACE MATERIAL EXISTING BEFORE THE WORK WAS COMMENCED.
- R2. COUNCIL RESERVES THE RIGHT TO INSPECT ALL ROAD SURFACES TO ASSESS DAMAGE DUE TO CONSTRUCTION EQUIPMENT. ANY DAMAGE TO BE REPAIRED BY THE CONTRACTOR AT THEIR COST TO COUNCIL'S SATISFACTION.
- R3. RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH UW SPECIFICATION PR9902 - SPECIFICATION FOR CIVIL AND EARTHWORKS.
- R4. IN GRASSED AREAS, THE TOP 150 MM OF THE BACKFILLING SHALL BE CARRIED OUT WITH MATERIAL APPROVED BY THE PRINCIPAL AS EQUIVALENT TO THAT REMOVED. WHERE TURFS HAVE BEEN REMOVED, THEY SHALL BE REPLACED ON THIS MATERIAL AND TOP DRESSED.

SAFETY SITEPASS

- SS1. PERSONNEL WORKING ON THE NOMINATED WORK SITE ARE REQUIRED TO BE REGISTERED WITH SITEPASS. THE PRINCIPAL WILL PROVIDE CONTRACTORS ACCESS TO ITS CONTRACTOR MANAGEMENT PORTAL, SITEPASS. THE CONTRACTOR MUST USE SITEPASS FOR THE FOLLOWING PURPOSES:
- A) THAT ALL ITS EMPLOYEES AND SUBCONTRACTORS COMPLETE THE PRINCIPAL'S ON-LINE INDUCTION MODULE.
- B) THAT ALL ITS EMPLOYEES AND SUBCONTRACTORS WORKING ON POTABLE WATER SYSTEMS COMPLETE THE PRINCIPAL'S ON-LINE WATER HYGIENE AND THE 5C'S ON-LINE MODULE.
- C) THAT ALL ITS EMPLOYEES AND SUBCONTRACTORS COMPLETE THE PRINCIPAL'S ON-LINE LOCK OUT TAG OUT (LOTO) AWARENESS MODULE, RENEWABLE ANNUALLY.
- D) VERIFICATION OF COMPETENCY RECORDS FOR ALL ITS EMPLOYEES AND SUBCONTRACTORS WHO HAVE SUCCESSFULLY COMPLETED THE FOLLOWING TRAINING:
- PRINCIPAL'S AUTHORISED ISOLATOR.
- OF ENTRY.
- VALVE OPERATOR.
- OTHER VERIFICATION OF COMPETENCY RECORDS FOR ALL ITS EMPLOYEES AND SUBCONTRACTORS NECESSARY TO COMPLETE THE WORK.
- AND MAINTAINING THE NAMES OF ITS EMPLOYEES AND SUBCONTRACTORS WHO ARE IN POSSESSION OF THE PRINCIPAL'S ACCESS KEYS.
- SS2. CONTRACTOR MUST MAINTAIN THE ACCURACY OF ITS EMPLOYEES AND ENSURE ITS SUBCONTRACTORS MAINTAIN THE ACCURACY OF THEIR EMPLOYEES IN SITEPASS BY REGULARLY UPDATING INCLUDING REMOVING THE NAMES AND RECORDS OF EMPLOYEES AND SUBCONTRACTORS NO LONGER REQUIRED.

TRENCHLESS WORKS

- T1. TRENCHLESS WORKS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF:
- PR9787 - SPECIFICATION FOR MICROTUNNELING AND PIPE JACKING
- PR9788 - SPECIFICATION FOR HORIZONTAL DIRECTIONAL DRILLING.
- PR9789 - SPECIFICATION FOR AUGER BORING.
- PR9790 - SPECIFICATION FOR PIPE RAMMING.
- PR9825 - SPECIFICATION FOR SHAFTS

ENVIRONMENTALLY RELEVANT ACTIVITY (ERA) 63

EA1. ERA63 APPLICATION MUST BE APPROVED BY DETSI PRIOR TO COMMISSIONING THE SPS.

STATUS	
ISSUED FOR 100% DESIGN APPROVAL	
DESIGN APPROVED: 	
RPEQ: 12761	DATE APPROVED: 29/07/2026

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



tonkin.com.au



Stockland



Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
GENERAL
NOTES - SHEET 2

SHEET 1 OF 1 SHEETS

REVISION DATE 29.07.2026

SCALE AS SHOWN

REVISION D

DISCIPLINE CODE C

DRAWING NO.

SPS-WTG101-C-DR-8100-03

STRUCTURAL

- S1. FOR GENERAL NOTES. REFER TO SPS-WTG101-C-DR-8100-02 AND 03.
- S2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTATION. ANY DISCREPANCY SHALL BE REFERRED TO PRINCIPAL BEFORE PROCEEDING WITH THE WORKS.
- S3. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
- S4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY WORKS AND LIFTING ANCHORS.
- S5. LIQUID RETAINING CONCRETE STRUCTURES AND ANCILLARY STRUCTURES DESIGN LIFE = 100 YEARS.
- S6. STRUCTURAL DESIGN CRITERIA

-	SELF-WEIGHT	
-	LIVE LOADS (IN ACCORDANCE WITH AS 1170.1)	
	• ALUMINIUM COVERS	2.5 kPa
	• CONCRETE TOP SLAB	AXLE LOAD TO AS5100.2
	• EXTERNAL SURCHARGE	20 kPa
	• LIVE LOAD	25kPa
	• WHEEL LOAD TO AS5100.2	80kN
	• AXLE LOAD TO AS5100.2	160kN
-	EARTH PRESSURE	
	• AT-REST COEFFICIENT, K ₀ = 0.55	
	• SOIL DENSITY = 19 kN/m³	
-	EXTERNAL GROUNDWATER AT SURFACE LEVEL.	
	-EARTHQUAKE LOADS (IN ACCORDANCE WITH AS 1170.4)	
	• IMPORTANCE LEVEL	4
	• ANNUAL PROBABILITY OF EXCEEDENCE	1:2500
	• PROBABILITY FACTOR, k _p	1.8
	• HAZARD FACTOR, Z	0.09
	• SUB-SOIL CLASS, C _e	C _e
	• EARTHQUAKE DESIGN CATEGORY (EDC)	II
-	DESIGN STANDARD	
	• WIND LOAD	AS/NZS 1170.2
	• CONCRETE STRUCTURES	AS3600
	• CONCRETE STRUCTURES FOR RETAINING LIQUIDS	AS 3735
	• STEEL STRUCTURES	AS4100
-	DESIGN LIFE	100 YEARS
-	THRUST PRESSURE	
	• WET WELL	1200kPa
	• VALVE WALLS	1200kPa

G7. MINIMUM DURABILITY REQUIREMENTS:

STRUCTURAL ELEMENT	EXPOSURE CLASSIFICATION	CONCRETE GRADE	COVER TO REINFORCEMENT (mm)
WET WELL - INTERNAL	B2	S40	75
WET WELL - EXTERNAL	B1	S40	50
VALVE PIT - INTERNAL	B2	S40	50
VALVE PIT - EXTERNAL	B1	S40	50
COLLECTOR/MH - INTERNAL	B2	S40	75
COLLECTOR/MH - EXTERNAL	B1	S40	50
WET WELL & MH BENCHING	-	S40	-
BLINDING	-	N20	-
SPS PRECAST ROOF SLAB (RIGID FORMWORK AND INTENSE COMPACTION) - TOP	B1	S40	40
SPS PRECAST ROOF SLAB (RIGID FORMWORK AND INTENSE COMPACTION) - BOTTOM	B2	S40	65
SLAB ON GROUND	B1	N32	55
CHEMICAL DELIVERY BUND	B2	S40	50
PAD FOOTING OR BORED PIERS	B1	N32	75
EMERGENCY STORAGE TANK - INTERNAL	B2	S40	75
EMERGENCY STORAGE TANK - EXTERNAL	B1	S40	75

SEE NOTE C17 FOR SPECIAL CLASS CONCRETE REQUIREMENTS.

FOUNDATIONS

- F1. REFER TO THE FOLLOWING GEOTECHNICAL INVESTIGATION REPORTS BY DOUGLAS PARTNERS FOR GUIDANCE ON SOIL CONDITIONS AND RECOMMENDATIONS FOR EARTHWORKS.

- JOB: 229472.00.R-001 (DATED 29 JULY 2024)

- JOB: 241221.00.R.001 R.001 (DATED 22 MARCH 2026)
- F2. THE MINIMUM ALLOWABLE BEARING CAPACITY OF THE FOUNDATION MATERIAL IS TO BE:

WET WELL250 kPa

VALVE CHAMBER150 kPa

MAINTENANCE HOLE (6 - 10m)150 kPa

FLOWMETER CHAMBER150 kPa

SLAB ON GROUND150 kPa
- F3. THE CONTRACTOR IS TO ALLOW FOR THE ENGAGEMENT OF A GEOTECHNICAL ENGINEER TO VERIFY THE FOUNDING MATERIAL PRIOR TO PLACEMENT OF REINFORCEMENT OR CONCRETE.
- F4. THE CONTRACTOR IS TO IMPLEMENT ALL THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
- F5. THE ASSUMED FOUNDING LEVELS OF ANY FOOTINGS AND UNDERSIDE OF STRUCTURES ARE TO BE AS INDICATED ABOVE OR ON THE DRAWINGS. EXCAVATION SHALL CONTINUE UNTIL THE REQUIRED BEARING CAPACITY IS FOUND. OVER-EXCAVATION SHALL BE BACK-FILLED WITH 15 MPa BLINDING CONCRETE TO THE REQUIRED FOUNDING LEVEL.

CONCRETE

- C1. CONCRETE WORKMANSHIP AND MATERIALS TO COMPLY WITH AS3600 AND AS3610 AND UNITYWATER TECHNICAL SPECIFICATIONS.
- C2. CONCRETE TO COMPLY WITH AS 1379, AS 1478.1, AS 1478.2, AS 3582.1 AS 3582.2, AS 3582.3 AND AS 3972
- C3. SLUMP TO BE AS REQUIRED FOR PLACEMENT, COMPACTION AND FINISHING. A SAMPLE OF FRESH CONCRETE SHALL BE TESTED FOR SLUMP AND STRENGTH UPON ARRIVAL ON SITE.
- C4. WATER NOT TO BE ADDED TO CONCRETE AFTER TRUCK HAS LEFT BATCHING PLANT UNLESS APPROVED OTHERWISE.
- C5. TEST SLUMP OF EACH BATCH OF CONCRETE DELIVERED.
- C6. DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- C7. CONCRETE CONSTRUCTION TOLERANCES AND FORMWORK TO COMPLY WITH AS3160. STEPS AT JOINTS BETWEEN FORMS SHALL BE MAXIMUM OF 1mm
- C8. CONCRETE SIZES DO NOT INCLUDE FINISHES. SIZES NOT TO BE REDUCED OR PENETRATIONS ADDED.
- C9. CONDUITS, PIPES, ETC. NOT TO BE PLACED IN CONCRETE COVER TO THE REINFORCEMENT.
- C10. EXPOSED EDGES AND RE-ENTRANT CORNERS TO HAVE 25mm CHAMFERS OR FILLETS UNLESS NOTED OTHERWISE.
- C11. CONSTRUCTION JOINTS AS DETAILED AND LOCATED ON DESIGN DRAWINGS.
- C12. CONCRETE SURFACE FINISHES TO AS 3610.

• FORMED EXPOSED SURFACESCLASS 2
- C13. CONCRETE TEMPERATURE NOT TO EXCEED TEMPERATURES STATED BELOW.

CONCRETE STRUCTURE	CONCRETE STRENGTH f'c	TEMPERATURE LIMIT
CONCRETE SECTIONS LESS THAN 600mm THICK	EQUAL TO OR MORE THAN 40MPa	35°C
CONCRETE SECTIONS EQUAL TO OR GREATER THAN 600mm THICK	EQUAL TO OR MORE THAN 40MPa	27°C

WRITTEN APPROVED ARRANGEMENTS TO BE PREPARED IF THE AIR TEMPERATURE IS BELOW 5 DEGREES CELSIUS OR ABOVE 30 DEGREES CELSIUS

- C14. CONCRETE CURING SHALL COMMENCE IMMEDIATELY AFTER FINISHING TO UNFORMED SURFACES, AND WITHIN 30 MINUTES AFTER FORMWORK STRIPPING TO FORMED SURFACES. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS3600 AND AS3735 FOR A MINIMUM OF 7 DAYS CONTINUOUSLY.
- C15. COMPLIANCE TESTING AND SAMPLING OF CONCRETE SHALL BE IN ACCORDANCE WITH AS1012, AS1379, AS3600 AND TECHNICAL SPECIFICATIONS. TESTING SHALL BE UNDERTAKEN BY AN APPROVED INDEPENDENT NATA REGISTERED LABORATORY.
- C16. COMPRESSIVE STRENGTH TEST SAMPLES SHALL BE TAKEN AT RANDOM DURING THE PLACEMENT OPERATION FROM SEPARATE BATCHES OF CONCRETE AS PER FREQUENCY BELOW:

NUMBER OF BATCHES	NUMBER OF SAMPLES
1 TO 3	EVERY BATCH
4 TO 10	4
11 TO 23	6

- C17. THE MINIMUM CONCRETE REQUIREMENTS FOR DURABILITY SHALL BE AS FOLLOWS:

• CONCRETE GRADES40

• COMPRESSIVE STRENGTH AT 28 DAYS40MPa

• MINIMUM CEMENT CONTENT380kg/m³

• MAXIMUM SUPPLEMENTARY CEMENTITIOUS MATERIAL25%

• WATER/CEMENT RATIO0.45

• NOMINAL SLUMP (SPECIFIED)80mm +/- 15mm

• DRYING SHRINKAGE AT 21 DAYS500 x 10⁻⁶

• DRYING SHRINKAGE AT 56 DAYS650 x 10⁻⁶

• TOTAL REACTIVE ALKALI NOT GREATER THAN 3.0kg Na2O PER CUBIC METER.

• HEAT OF HYDRATION TO BE CONTROLLED FOR THICK AND LARGE POURS TO CONTROL TEMPERATURE DIFFERENTIAL.

• AGGREGATE SHALL BE CALCAREOUS AT 20mm MAX AND 10mm MIN.

• MINIMUM INITIAL CURING REQUIREMENT (SEE CLAUSE 17.3.5.1) METHOD TO BE IN ACCORDANCE WITH CL 4.4.2 OF AS5100.5 SHALL CURE CONTINUOUSLY FOR AT LEAST 7 DAYS.

• MINIMUM AVERAGE COMPRESSIVE STRENGTH AT THE TIME OF COMPLETION OF ACCELERATED CURING AND/OR AT THE TIME OF STRIPPING OF FORMS OR REMOVAL OF MOULDS SHALL BE 20MPa (B1) OR 25 MPa (B2).

• CEMENT MATERIAL PROPORTIONS SHALL BE IN ACCORDANCE WITH TABLE 4.4.1 (B) OF AS5100.5 FOR THE RELEVANT EXPOSURE CLASSIFICATIONS.

• CHEMICAL CONTENT TO BE IN ACCORDANCE WITH SECTION 4.13 OF AS5100.5.
- C18. CONCRETE MIX DESIGN (INCLUDING PROPORTIONS OF CEMENTITIOUS MATERIAL, AGGREGATES, ADMIXTURES, ETC.) AND PREVIOUS TEST RESULTS SHALL BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL. IF THERE IS NO PREVIOUS TEST RESULT, CONTRACTOR TO ALLOW ENOUGH TIME FOR TRIAL MIX PRIOR TO FIRST CONCRETE POUR ON SITE.

REINFORCEMENT

- R1. REINFORCING STEEL SHALL BE GRADE D500N TO AS4671 (HOT ROLLED DEFORMED BAR) OR GRADE R250N TO AS/NZS 4671 (HOT ROLLED PLAIN ROUND BAR).
- R2. REINFORCING MESH SHALL BE CLASS L TO AS4671 (500 MPa GRADE) UNLESS NOTED OTHERWISE
- R2. REINFORCEMENT NOTATION

No. OFF12/N16-150 NF

BAR GRADE

BAR DIAMETER

LOCATION

BAR SPACING
- R3. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM. REINFORCEMENT RELATED ABBREVIATIONS USED ON THESE DRAWINGS:-

T- DENOTES TOP

B- DENOTES BOTTOM

NF- DENOTES NEAR FACE

FF- DENOTES FAR FACE

EF- DENOTES EACH FACE

ES- DENOTES EQUAL SPACING

HORIZ- DENOTES HORIZONTAL

VERT- DENOTES VERTICAL

CP- DENOTES CENTRALLY-PLACED

EW- DENOTES EACH WAY

- R4. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ON THESE DRAWINGS AND THEREFORE DOES NOT DEPICT THE PRECISE POSITIONS OR TRUE PROJECTION OF BARS.
- R5. MINIMUM DEVELOPMENT AND SPLICING LENGTHS, UNLESS NOTED OTHERWISE

	BAR SIZE	N10	N12	N16	N20	N24	N28	N32
HORIZONTAL BARS WITH MORE THAN 300mm OF CONCRETE CAST BELOW THE BAR	f _c = 32MPa	450	550	800	1100	1450	1850	2250
	f _c = 40MPa	400	450	700	1000	1300	1650	2000
VERTICAL, DIAGONAL AND ALL OTHER HORIZONTAL BARS	f _c = 32MPa	350	400	600	850	1150	1400	1750
	f _c = 40MPa	300	350	550	750	1000	1250	1550

- R6. COGS, CRANKS AND HOOKS ARE STANDARD UNLESS NOTED OTHERWISE AND SHALL BE IN ACCORDANCE WITH THE AS3600 CONCRETE STANDARD UNLESS NOTED OTHERWISE.
- R7. LAPS IN MESH SHALL BE THE SPACING OF TRANSVERSE WIRES PLUS 50mm, UNO.
- R8. REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON PLASTIC OR CONCRETE BAR CHAIRS AT NO GREATER THAN 1m CENTRES EACH WAY, SUPPORT SPACING REDUCED TO 800mm FOR MESH.
- R9. AT PENETRATIONS IN SLABS OR WALLS, REINFORCEMENT SHALL NOT BE CUT, BUT BUNDLED EQUALLY TO EACH SIDE OF PENETRATION AND EXTRA REINFORCEMENT AS DIRECTED BY THE STRUCTURAL ENGINEER, UNO.
- R10. PLACE 2-N12 BARS (1000mm LONG) IN EACH LAYER OF SLABS OR WALLS DIAGONALLY ACROSS ALL RE-ENTRANT CORNERS, UNO.

STRUCTURAL STEELWORK

- S1. ALL WORKMANSHIP AND MATERIALS SHALL ALL BE IN ACCORDANCE WITH AS4100 AND THE RELEVANT COUNCIL AUTHORITY SPECIFICATIONS.
- S2. FABRICATION, ERECTION AND ALL TOLERANCES SHALL BE IN ACCORDANCE WITH AS/NZS 5131.
- S3. STEEL TO COMPLY WITH:

- AS 1163 GRADE C350 FOR ALL HOLLOW SECTIONS.

- AS 3678 FOR PLATES AND FLOOR PLATES.

- AS 3679.1 GRADE 300 OR BHP GRADE 300 PLUS FOR PARALLEL FLANGE CHANNELS.

- AS 3679.2 GRADE 300 FOR WELDED BEAMS AND COLUMNS.

- OTHER SECTIONS TO COMPLY WITH AS 3678 OR AS 3679 GRADE 250.
- S4. WELDING TO AS 1554.1

- WELD CATEGORY SP.

- BUTT WELDS TO BE FULL PENETRATION WELDS.

- WELDS TO BE 6 MM CONTINUOUS FILLET WELDS ALL ROUND INTERFACES U.N.O.

- ELECTRODES TO AS 1554 CLASSIFICATION E48XX.
- S5. BOLTS TO AS 1275. COMMERCIAL GRADE 4.6/S TO AS 1111 AND AS 1112. HIGH STRENGTH STRUCTURAL BOLTS TO AS 1252.

- BOLTS, NUTS AND WASHERS M16 AND LARGER TO GRADE 8.8/S. M12 TO BE GRADE 4.6/S.

- STRUCTURAL CONNECTIONS TO BE 2 M16 8.8/S WITH 10 MM THICK CLEAT PLATE U.N.O.

- INSTALL WASHERS UNDER BOLT HEAD AND NUT. INSTALL TAPERED WASHERS AS REQUIRED.

- BOLT PROJECTION BEYOND NUT TO BE MINIMUM TWO THREADS AND MAXIMUM 10 MM.
- S6. HOLD DOWN BOLTS TO BE GRADE 4.6/S UNLESS NOTED OTHERWISE. HOLD DOWN BOLTS GROUPS TO BE RIGIDLY TIED FOR CORRECT SET-OUT AND LOCATION.
- S7. SEAL WELD HOLLOW SECTIONS WITH 3 MM THICK CAP PLATE UNLESS NOTED OTHERWISE.
- S8. GROUT BASE PLATES WITH HIGH STRENGTH NON-SHRINK PRE-MIXED GROUT BEFORE COLUMNS ARE LOADED.
- S9. STEELWORK TO BE HOT DIP GALVANISED TO AS 4680 SYSTEM DESIGNATION HDG600 AND THREADED FASTENERS TO AS 1214.
- S10. DAMAGED GALVANISED COATING REPAIR:

- POWER CLEAN TO AS 1627.2

- SOLVENT CLEAN/ DEGREASE TO AS 1627.1

- APPLY TIN/ZINC TO PRE-HEATED STEEL OVERLAPPING THE GALVANISING COATING.

EPOXY ANCHORS / BOLTS

- E1. EPOXY ANCHORS / BOLTS SHALL BE AS PER THAT SPECIFIED ON THE DESIGN DRAWINGS AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- E2. REINFORCEMENT WITHIN THE CONCRETE SUBSTRATE SHALL BE LOCATED USING A COVER METER PRIOR TO DRILLING TO ENSURE THAT REINFORCING STEEL IS AVOIDED, CORING IS NOT PERMITTED UNDER ANY CIRCUMSTANCES.
- E3. WHERE NOT ON DETAILS, CHEMICAL ANCHORS TO BE HILTI HIT RES00V3 OR APPROVED EQUIVALENT.

POLYETHYLENE LINER (PE LINER)

- PL1. THE PE LINER SHALL FORM A COMPLETELY SEALED AND WELDED ROBUST CONTINUOUS MEMBRANE SYSTEM. THE PE LINER SHALL BE BUILT TO THE MH CONSTRUCTION TOLERANCES WITHOUT ANY DEFECTS SUCH AS BULGING, WARPING, PINCHING, OVERLAPPING.
- PL2. THE PE SHEETS SHALL:

- HAVE A MINIMUM THICKNESS OF 2.5mm.

- ACHIEVE A MECHANICAL BOND BETWEEN THE CONCRETE AND LINER.

- BE INSTALLED BY AN ACCREDITED APPLICATOR APPROVED BY THE MANUFACTURER.

- BE TENSIONED OVER THE FORMWORK WITHIN THE YIELD ELONGATION LIMIT PRIOR TO SECURING TO THE FORMWORK.
- PL3. PREPARATION, APPLICATION AND INSTALLATION TO COMPLY WITH THE MANUFACTURER'S SPECIFICATION.
- PL4. POURED CONCRETE TO BE AT A COOLER AMBIENT TEMPERATURE THAN THE TEMPERATURE WHEN THE PE SHEETS WERE ATTACHED TO THE FORMWORK.
- PL5. EXTRUSION WELDING AND WELD TESTING AT SEAMS TO BE UNDERTAKEN BY THE APPROVED APPLICATOR TO THE MANUFACTURER'S SPECIFICATION.
- PL6. ENCAPSULATION OF ANCHORS TO BE CHECKED BY TAPPING THE SURFACE TO DETECT HOLLOW SOUNDS THAT INDICATE VOIDS. VOIDS TO BE FILLED BY INJECTION GROUT AND PE SHEET REPAIRED BY EXTRUSION WELDING OVER THE INJECTION HOLE.
- PL6. UNITYWATER REQUIRE PE LINER TO EXTEND FULL WALL HEIGHT, TO TOP OF BASE, REGARDLESS OF BENCHING LEVEL.

HOLD/WITNESS POINTS

- H1. ALL WORKS ARE TO COMPLY WITH THE HOLD/WITNESS POINTS NOMINATED BY UNITYWATER SPECIFICATIONS.
- H2. ALL NEW STANDARD MIX DESIGNS TO BE APPROVED BY THE LOCAL AUTHORITY PRIOR TO FIRST CONCRETE POUR. SEE NOTE C18.
- H3. INSPECTION OF REINFORCING STEEL MUST BE UNDERTAKEN BY A STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE. 48 HOURS NOTICE TO BE GIVEN FOR ALL INSPECTIONS.

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
ISSUED FOR 100% DESIGN APPROVAL
DESIGN APPROVED: *C. [Signature]*
RPEQ: 12761 DATE APPROVED: 29/07/2026

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE

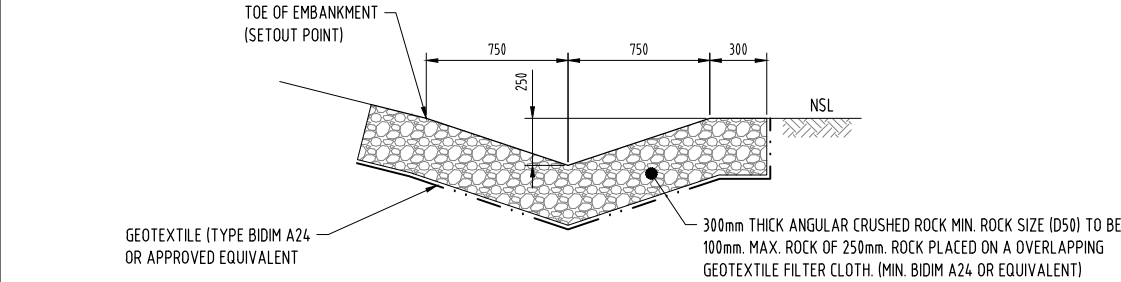
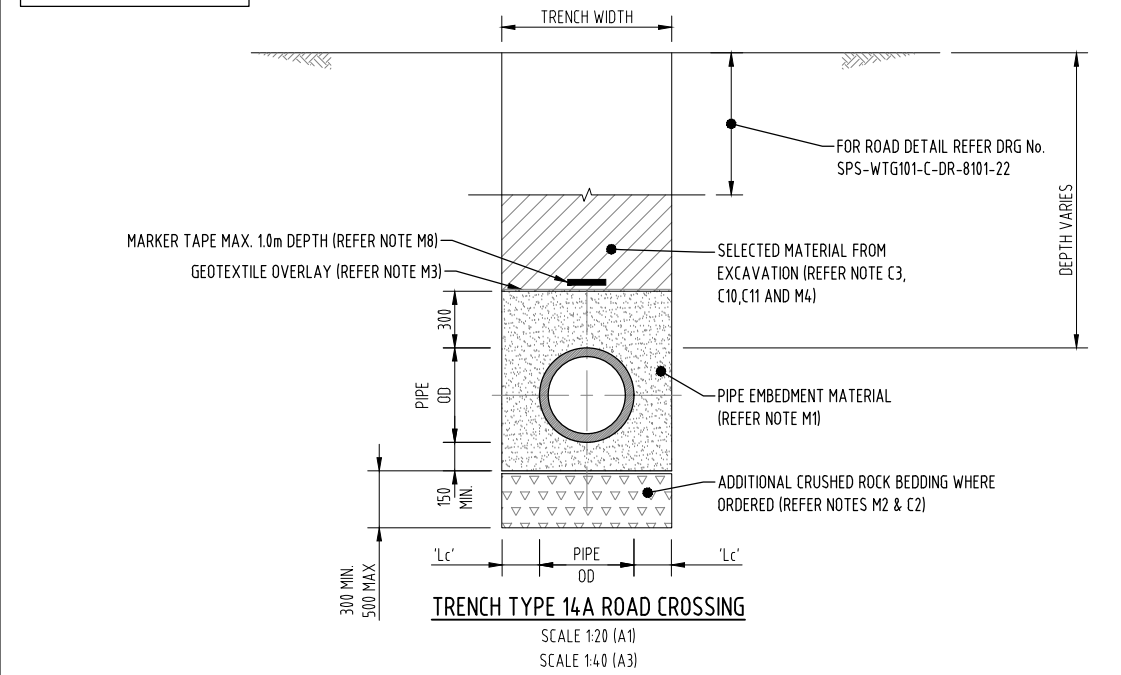
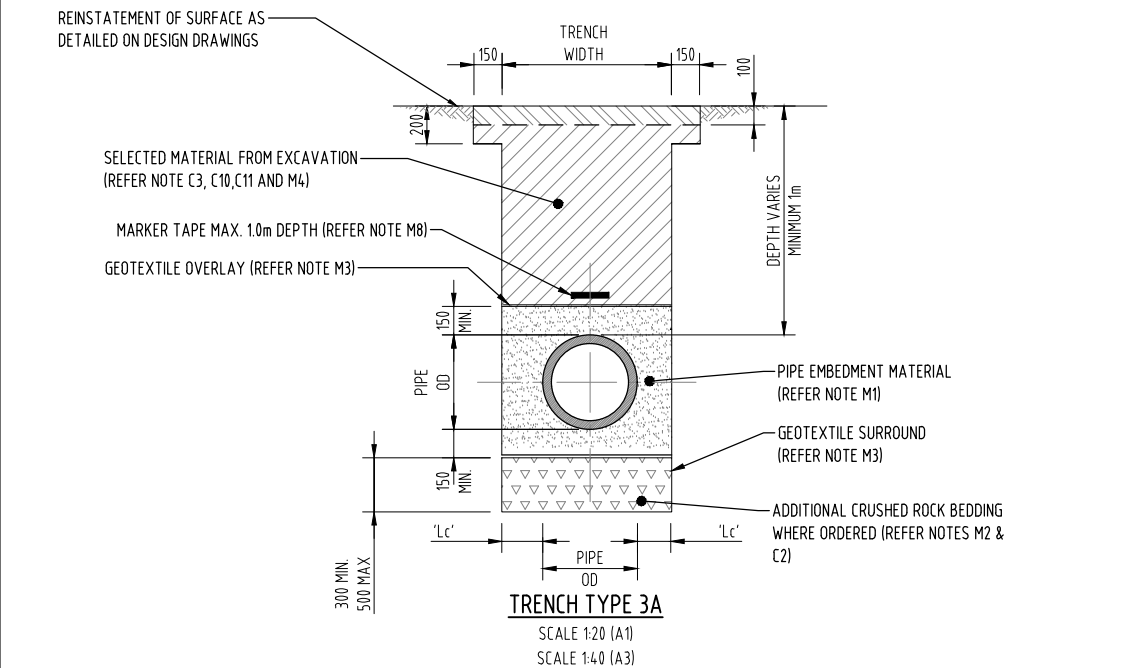


Unitywater

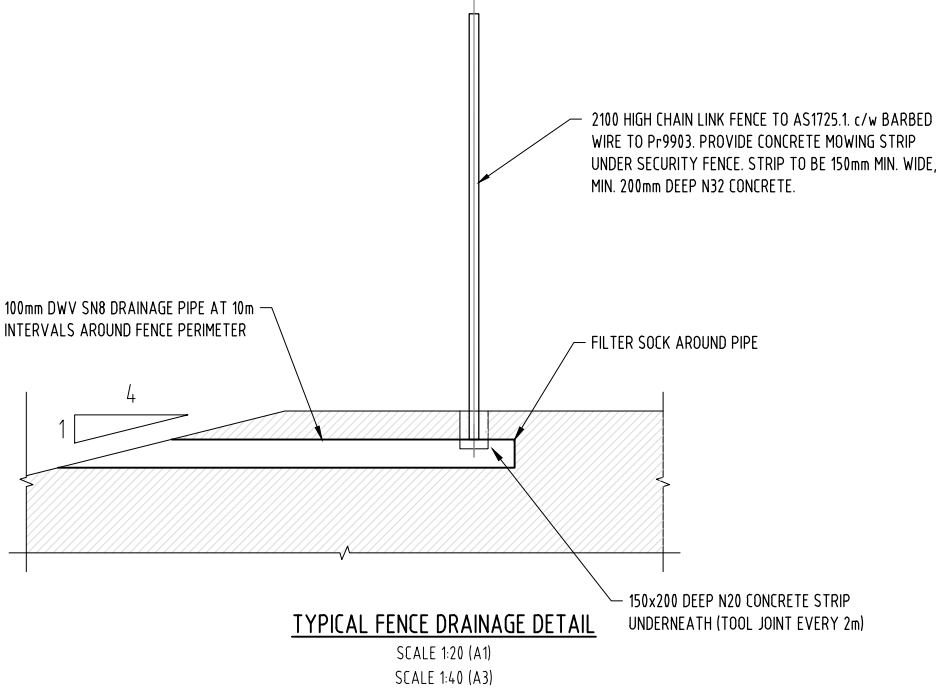
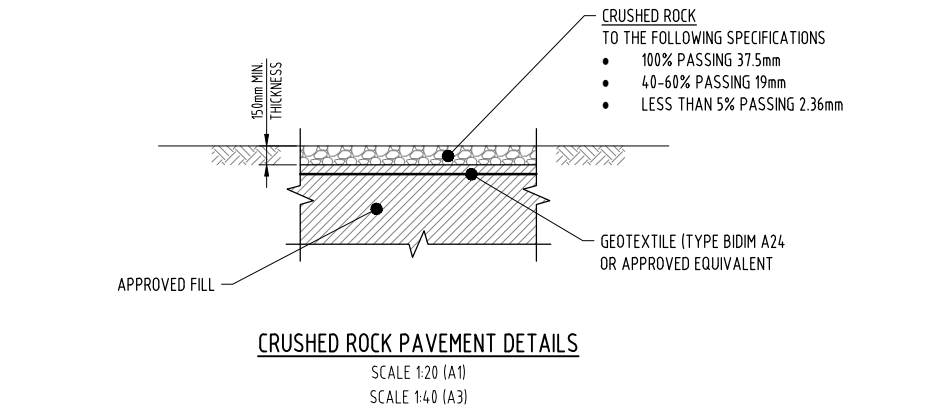
SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
GENERAL
NOTES - SHEET 3

SHEET 1 OF 1 SHEETS
REVISION DATE 29.07.2026
SCALE AS SHOWN
REVISION D

DISCIPLINE CODE C
DRAWING NO.
SPS-WTG101-C-DR-8100-04



TYPICAL EMBANKMENT PROTECTION AND SWALE
DRAIN DETAILS
SCALE 1:20 (A1)
SCALE 1:40 (A3)

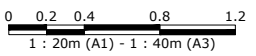


PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026

- NOTES
- GENERAL
- G1 FOR GENERAL NOTES REFER TO DRG No's SPS-WTG101-C-DR-8100-02 TO SPS-WTG101-C-DR-8100-04.
- MATERIALS
- M1 PIPE EMBEDMENT MATERIAL SHALL BE A 5mm SINGLE SIZE AGGREGATE COMPLYING WITH WSA PS-351 AND TABLE G2 OF AS2566.2. WHERE PIPELINE IS INSTALLED UNDER PAVEMENT THEN SAND BEDDING IS REQUIRED BY UNITYWATER. PROVIDE GEOTEKSTILE BARRIER WHERE DISSIMILAR BEDDING TYPE USED.
- M2 ADDITIONAL CRUSHED ROCK BEDDING SHALL BE A 30mm NOMINAL SIZE CRUSHED ROCK COMPLYING WITH TABLE G2 OR G3 OF AS2566.2.
- M3 GEOTEKSTILE SHALL BE TYPE BIDIM A24 OR APPROVED EQUIVALENT.
- M4 IF TRENCH EXCAVATED MATERIAL IS NOT SUITABLE, IMPORTED MATERIAL SHALL BE USED. IMPORTED BACKFILL MATERIAL SHALL HAVE A SOAKED CBR VALUE OF NOT LESS THAN 15% AND A MAXIMUM PARTICLE SIZE OF 50mm WITH A MAXIMUM SHRINK / SWELL INDEX OF 1%. REFER TO GEOTECHNICAL REPORT PROVIDED. DO NOT USE MEDIUM TO HIGH PLASTICITY MATERIAL AS BACKFILL MATERIAL.
- M5 IF ASPHALT SURFACE NOMINATED, THEN:
- A) PAVEMENT GRADING B OR C AS CONTAINED IN THE DTMR TECHNICAL SPECIFICATION MRTS05 "UNBOUND PAVEMENTS".
- ROAD BASE SHALL COMPLY WITH THE REQUIREMENTS FOR BASE MATERIAL TYPE 2.1 (CBR 80).
- B) ROAD SUB-BASE SHALL COMPLY WITH THE REQUIREMENTS FOR SUB-BASE MATERIAL TYPE 2.3 (CBR45)
- M6 BITUMEN EMULSION SHALL COMPLY WITH THE REQUIREMENTS OF THE DTMR TECHNICAL SPECIFICATION MRTS11 "BITUMEN EMULSION", AND SHALL BE APPLIED BETWEEN THE BASE AND THE ASPHALT LAYER.
- M7 ASPHALT SHALL COMPLY WITH THE REQUIREMENTS OF THE DTMR TECHNICAL SPECIFICATION MRTS30 "DENSE GRADED ASPHALT PAVEMENTS".
- M8 MARKER TAPE SHALL BE PLACED ABOVE THE PIPE EMBEDMENT. THE TAPE SHALL CONTAIN A CONTINUOUS METAL STRIP AND BE COLOURED AND PROVIDED WITH A DESCRIPTION OF THE WATER PRODUCT WITHIN. MARKER TAPE SHALL COMPLY WITH SEQ ACCEPTABLE CIVIL IPAM LIST (SEQ WS&S D&C CODE).
- CONSTRUCTION
- C1 FOR EACH BEDDING ZONE, PIPE EMBEDMENT MATERIAL SHALL BE PLACED IN THE TRENCH TO THE DEPTH SHOWN ON THE DRAWINGS AND COMPACTED IN 150mm LAYERS FOR THE FULL WIDTH OF THE TRENCH BY TWO PASSES OF A VIBRATING PLATE. ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR.
- C2 TRENCH FLOOR BASE TO BE FIRM TO SUPPORT BEDDING MATERIAL AND MINIMISE SETTLEMENT. ADDITIONAL CRUSHED ROCK BEDDING SHALL BE PROVIDED WHERE THE ENGINEER'S REPRESENTATIVE CONSIDERS THE BOTTOM OF THE TRENCH TO BE TOO SOFT OR WET TO PROVIDE ADEQUATE SUPPORT FOR THE PIPE. THE ADDITIONAL BEDDING SHALL BE WRAPPED IN GEOTEKSTILE. THE DEPTH OF THE ADDITIONAL BEDDING SHALL BE AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE.
- C3 A) TRENCH FILL ABOVE THE BEDDING MATERIALS SHOULD BE PLACED IN LAYERS NOT EXCEEDING 200mm THICKNESS, WITH EACH LAYER COMPACTED TO A MINIMUM DRY DENSITY RATIO OF:
- 90% - NON TRAFFICABLE AREAS
- 95% - TRAFFICABLE AREAS
- 98% - DEEP PIPELINES (>6m TO INVERT) & INDUSTRIAL AREAS
- 100% - UNDERSTRUCTURES
- RELATIVE TO STANDARD COMPACTION AND MOISTURE CONTENT WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT (OMC), AS DETERMINED BY TEST 5.1.1 OF AS1289.
- B) COMPACTION OF FILLING WITHIN 1.5m OF DESIGN SUBGRADE LEVEL FOR PAVEMENTS SHOULD BE INCREASED TO A MINIMUM DRY DENSITY RATIO OF 100% RELATIVE TO STANDARD COMPACTION.
- C4 EXCAVATE AND COMPACT TRENCH FLOOR TO PROVIDE FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT.
- C5 THE DEVIATION OF THE FINISHED SURFACE LEVEL TO THE EXISTING ROAD SHALL NOT EXCEED 5mm.
- C6 REINSTATEMENT OF KERB TO BE MINIMUM 5m (2.5m EITHER SIDE OF CUT IN).
- C7 SAWCUT EXISTING ASPHALT SURFACE - MIN 50mm DEPTH. APPLY BITUMEN EMULSION JOINT SEAL. RESURFACE WITH 50mm DENSE GRADED ASPHALT 14mm MIX WITH TACK COAT.
- C8 REFER TO GEOTECHNICAL REPORT FOR INFORMATION ON SUB-SURFACE CONDITIONS AND ALLOWABLE TEMPORARY BATTER SLOPES.
- C9 DEEP TRENCH EXCAVATION WILL BE UNDERTAKEN. SUB-CONTRACTOR TO PROVIDE SHORING BOXES TO SUIT WALL SUPPORT REQUIREMENTS. SHORING TO CONFORM WITH AS4744.1-200.
- C10 PUMP STATION PAVEMENT TO BE CONSTRUCTED AFTER PIPELINE INSTALLATION. NO SAW CUTS ALLOWED THROUGH CONCRETE SURFACE.
- C11 LEAN MIX CONCRETE SHALL CONSIST OF A GRADED SAND AND GRAVEL AGGREGATE OF 40mm MAXIMUM SIZE WITH THE ADDITION OF 5% BY MASS OF PORTLAND CEMENT OR 1 PART PORTLAND CEMENT TO 19 PARTS OF GRADED AGGREGATE AND SUFFICIENT WATER TO ENSURE SLUMP OF LESS THAN 12mm.



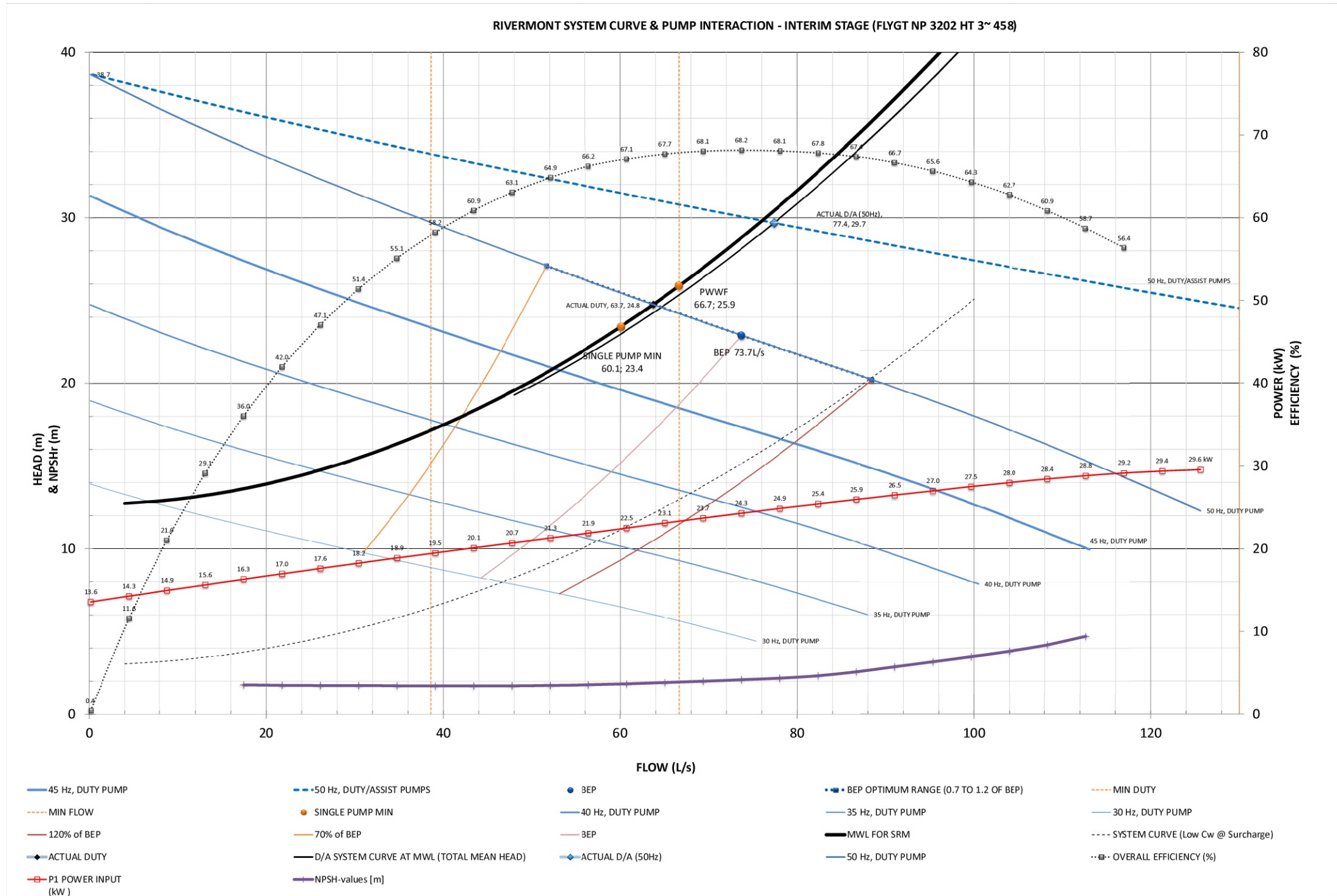
STATUS

ISSUED FOR 100% DESIGN APPROVAL

DESIGN APPROVED: C. [Signature]

RPEQ_12761 DATE APPROVED: 29/07/2026

A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS				tonkin.com.au			Unitywater SPS-WTG101 RIVERMONT BOULEVARD WTG101 SPS FACILITY GENERAL TRENCH DETAILS	SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026					REVISION DATE	29.07.2026	REVISION D
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026					DISCIPLINE CODE	C	
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026					DRAWING NO.	SPS-WTG101-C-DR-8100-05	
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE							



PUMP DETAILS		
	INTERIM	ULTIMATE CONCEPT (NOTE 3)
NUMBER OF DUTY PUMPS	1	1
NUMBER OF ASSIST PUMPS	1	1
NUMBER OF STANDBY PUMPS	0	0
TOTAL NUMBER OF PUMPS	2	2
PUMP MANUFACTURER	FLYGT	FLYGT
PUMP MODEL	NP 3202 HT 3~458	NP 3306/665 3~670
IMPELLER DIAMETER	310mm	445mm
MOTOR kW RATING	37 Kw	75 Kw
MOTOR START TYPE	VSD	VSD
MOTOR VOLTAGE	415 V	400 V
MOTOR SPEED AT 50Hz	1475 rpm	985 rpm
DUTY POINT (FLOW & HEAD) - 50Hz	63.7L/s @24.8m	218.9 L/s @22.5m
HYDRAULIC EFFICIENCY @ DUTY POINT	67.54%	67.46%

SEWER RISING MAIN DETAILS		
	INTERIM	ULTIMATE
DESCRIPTION	SINGLE SRM	DUAL SRM
PIPE NOMINAL DIAMETER	DN315	DN315 & DN500
PIPE MATERIAL	PE100	PE100
PIPE MANUFACTURER	UNKNOWN	UNKNOWN
PIPE INTERNAL DIAMETER (mm)	256mm OPEN TRENCH SECTION 215mm HDD SECTION	256 & 407 mm OPEN TRENCH SECTION 215 & 347 mm HDD SECTION
PIPE OUTSIDE DIAMETER (mm)	315mm OPEN TRENCH SECTION 280mm HDD SECTION	315 & 500 mm OPEN TRENCH SECTION 280 & 450 mm HDD SECTION
PIPE PN RATING	PN16 OPEN TRENCH SECTION PN20 HDD SECTION	PN16 OPEN TRENCH SECTION PN20 HDD SECTION
RIISING MAIN VOLUME (m³)	35.7m3	166m3
MEAN STATIC HEAD AT ZERO FLOW (m)	12.7m	12.862m

FLOW DETAILS		
PLANNING HORIZON		
	INTERIM	ULTIMATE
EP	8,000	30,000
PWWF (L/s)	66.67	250.00
PDWF (L/s)	30.49	99.51
ADWF (L/s)	16.67	62.50

SYSTEM PERFORMANCE			
	ADWF FLOW RATE INTO SPS (L/s)	VELOCITY IN RISING MAIN (m/s) NOTE 2	RIISING MAIN DETENTION TIME (MINUTES)
ESTIMATED DAY 1 FLOW (564 EP)	1.18	1.65	508
INTERIM FLOWS (8000 EP)	16.67	1.65	37
ULTIMATE FLOWS (30000 EP)	62.50	0.94	60

- NOTE:
- MEAN STATIC HEAD BASED ON DISCHARGE SEWER OBVERT.
 - VELOCITY IN MAIN BASED ON MIN SINGLE DUTY PUMP CAPACITY.
 - CONCEPT ULTIMATE PUMP SELECTION TO BE CONFIRMED DURING PUMP STATION ULTIMATE STAGE DESIGN. FOR INFORMATION ONLY.
 - PUMPS TO BE SUPPLIED WITH COOLING JACKETES.
 - DAY 1 IS ASSUMED TO COMMENCE ONCE THE 200 LOT TANKERING LIMIT IS REACHED.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



A1

E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
GENERAL
PUMP AND RISING MAIN DETAILS (SYSTEM CURVE INTERACTION)

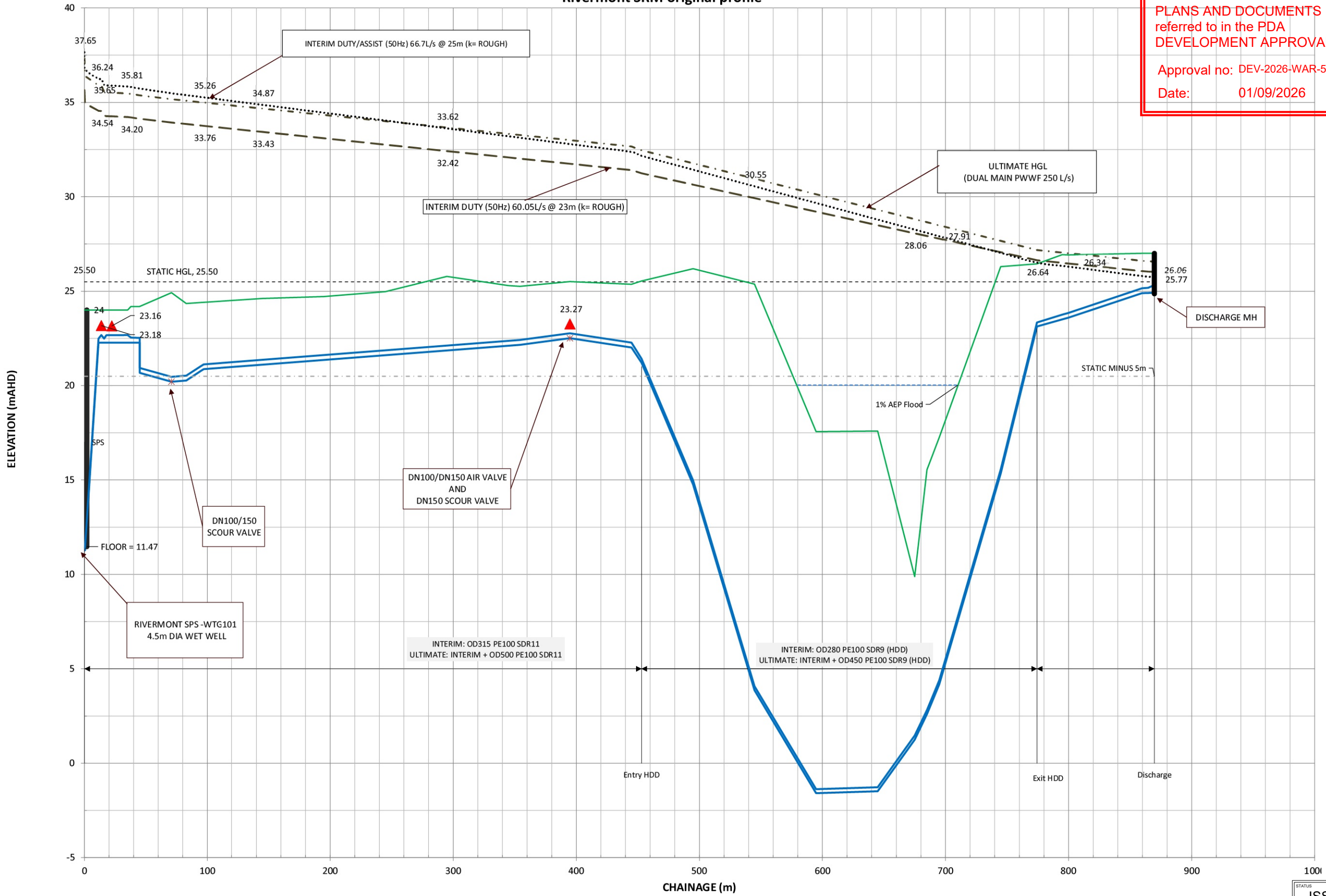
SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8100-10	

Rivermont SRM original profile

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



NOTE:

- DUAL SRM BY OTHERS. FOR LONGITUDINAL SECTIONS REFER TO DRG No's SPS-WTG101-C-DR-8300-01 TO 8300.
- INTERIM HGL THROUGH INTERIM SINGLE MAIN. ULTIMATE THROUGH ULTIMATE DUAL MAIN.

ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED: *C. S.*

RPEQ_12761 DATE APPROVED: 29/07/2026

A1

E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



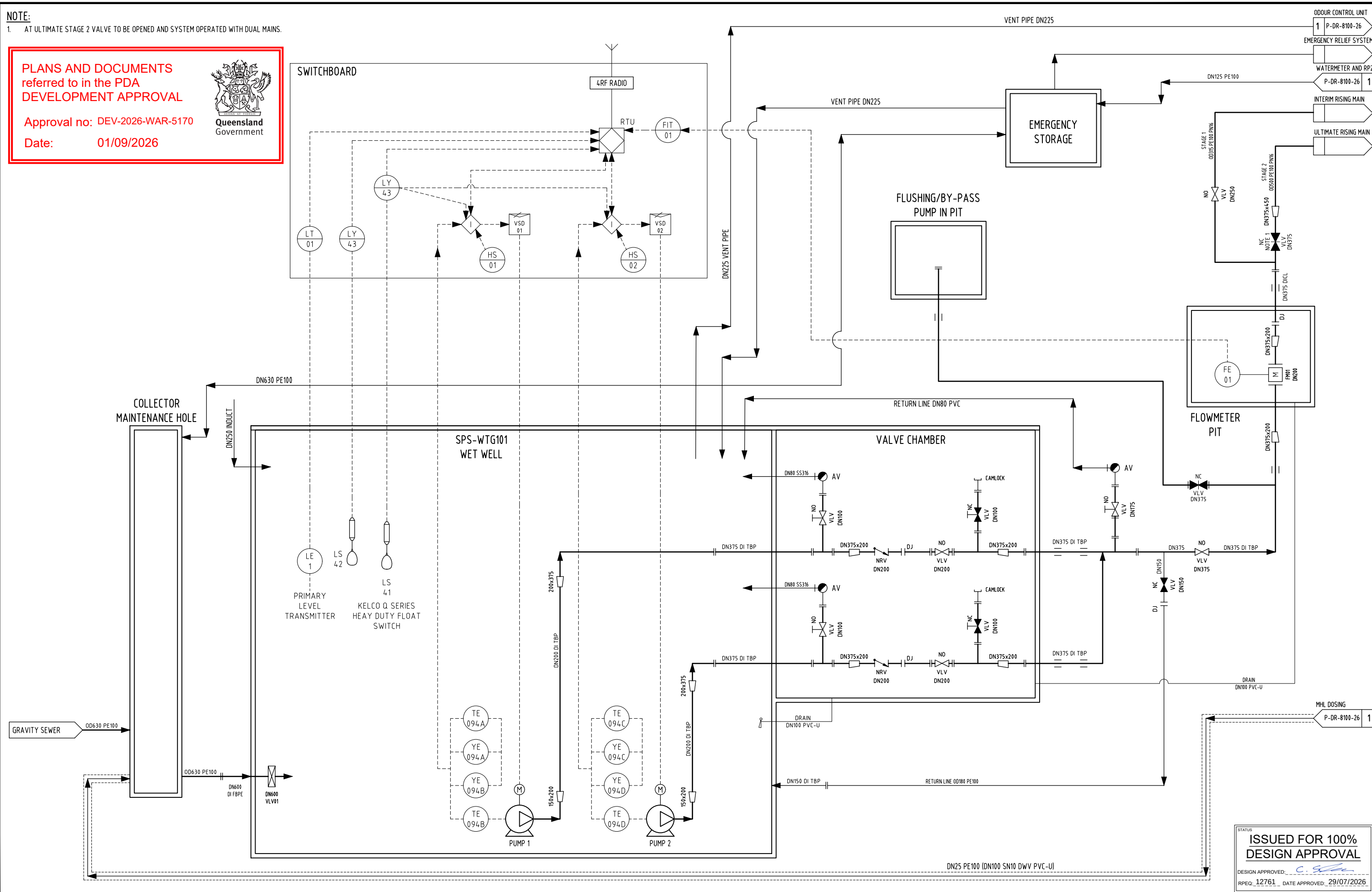
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
GENERAL
SYSTEM HYDRAULIC GRADE LINE

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION E	
DISCIPLINE CODE C		
DRAWING NO. SPS-WTG101-C-DR-8100-11		

1. AT ULTIMATE STAGE 2 VALVE TO BE OPENED AND SYSTEM OPERATED WITH DUAL MAINS.

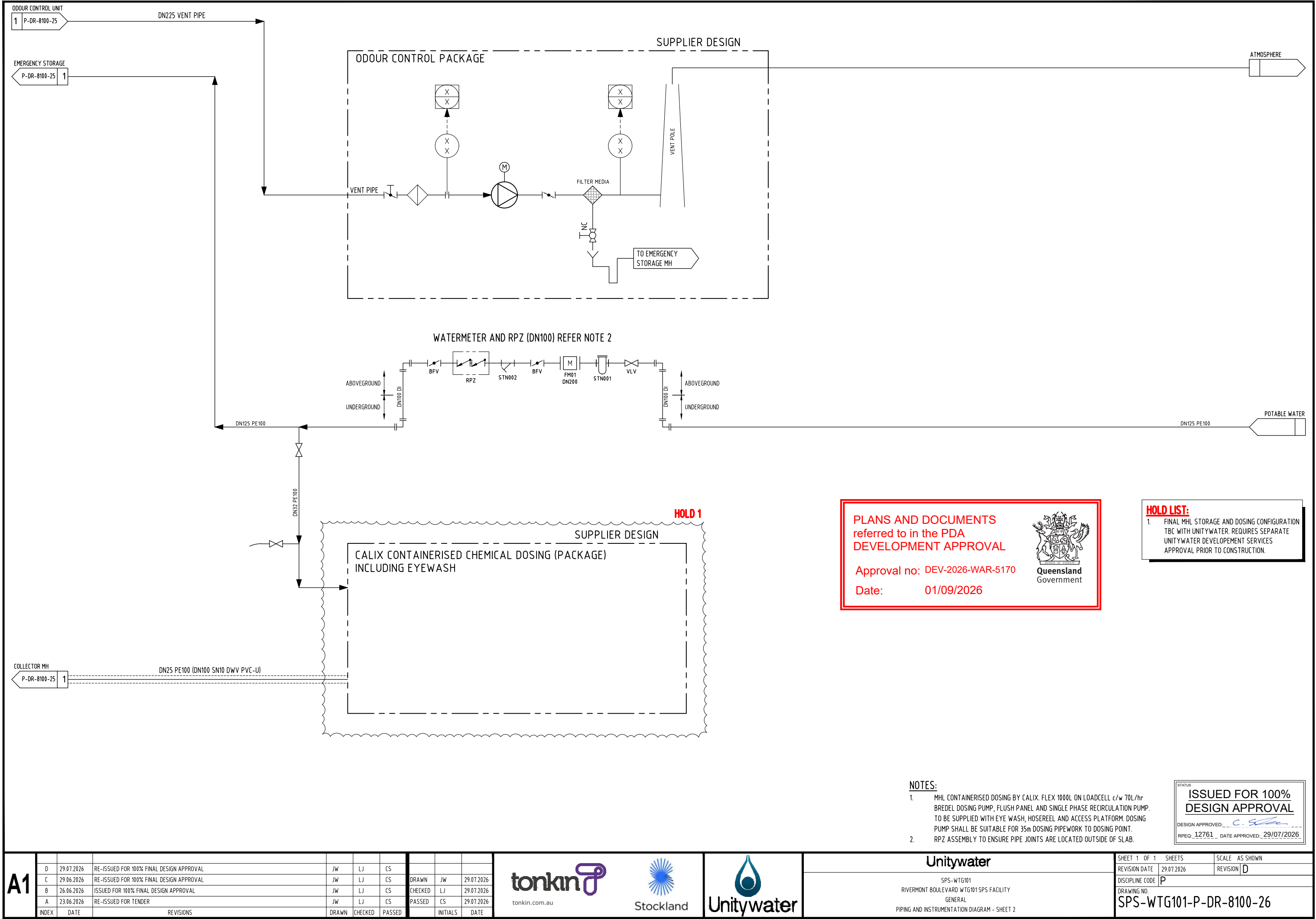
Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED: C. S. S.
RPEQ: 12761 DATE APPROVED: 29/07/20

A1	G	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS				 tonkin.com.au	 Stockland	 Unitywater	Unitywater			SHEET 1 OF 1 SHEETS	SCALE AS SHOWN
	F	29.06.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS							REVISION DATE 29.07.2026	REVISION G			
	E	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026				DISCIPLINE CODE P				
	D	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026				DRAWING NO.	SPS-WTG101-P-DR-8100-25			
	C	28.05.2026	RE-ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026				PIPING AND INSTRUMENTATION DIAGRAM - SHEET 1				
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE									





PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



SPS-WTG101 SITE FOR GENERAL ARRANGEMENT
REFER TO DRG No. C-DR-8101-02

A 6m WIDE EASEMENT IS TO BE PROVIDED OVER THE
AREA CONTAINING THE EMERGENCY OVERFLOW AND
STORMWATER DRAINAGE OUTLET PIPE AND HEADWALL.
FOR EASEMENT PLAN, REFER DRG No. G-DR-8101-70

EMERGENCY OVERFLOW/STORMWATER
DRAINAGE LOCATION

STORMWATER BASIN (BY OTHERS)

SEWAGE PUMPING STATION 50m
BUFFER ZONE FROM CENTER OF WELL

60x40m CONSTRUCTION LAYDOWN & SITE FACILITIES AREA.
ADDITIONAL AREA TO THE SOUTH AVAILABLE PRIOR TO
DEVELOPMENT OF LOTS FOR STOCKPILES AND STORAGE.

LOT 3016
SMALL LOCAL PARK

PROPOSED PAD MOUNTED
TRANSFORMER

DUAL RISING MAIN ALIGNMENT
(BY OTHERS)

SPS-WTG101 SITE LOCALITY
SCALE 1:500 (A1)
SCALE 1:1,000 (A3)

LEGEND:

- SPS-WTG101 SITE
- EPBC APPROVAL - REGENERATING KHA TO BE RETAINED
- EPBC APPROVAL - REGENERATING KHA TO REMOVE
- SEWAGE PUMPING STATION 50m BUFFER ZONE
- INCOMING GRAVITY SEWER (BY OTHERS)
- SEWER RISING MAIN (BY OTHERS)
- 1% AEP (20.02m AHD)

0 5 10 20 30
1 : 500m (A1) - 1 : 1,000m (A3)

ISSUED FOR 100%
DESIGN APPROVAL
DESIGN APPROVED: *C. S.*
RPEQ: 12761 DATE APPROVED: 29/07/2026

A1

E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
SITE LOCALITY PLAN

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION E	
DISCIPLINE CODE C		
DRAWING NO.		
SPS-WTG101-C-DR-8101-01		



**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



2100 HIGH CHAIN LINK FENCE TO AS1725.1. c/w BARBED WIRE TO Pr9903. PROVIDE CONCRETE MOWING STRIP UNDER SECURITY FENCE. STRIP TO BE 150mm MIN. WIDE, MIN. 200mm DEEP N32 CONCRETE.

WATER OFF-TAKE CONNECTION FOR FUTURE TANK WASH-OUT AND MAINTENANCE

INDICATIVE TEMPORARY WORKS FOR ULTIMATE TANK CONSTRUCTION. REFER NOTE 2

TEMPORARY GENERATOR SETDOWN SLAB (6.00m x 3.30m). REFER NOTE 3.

EMERGENCY STORAGE TANK. FOR DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8500-01

STORMWATER DRAINAGE FROM DELIVERY BUND DISCHARGE LINE

ZC3000 ODOUR CONTROL UNIT c/w 3m VENT POLE, FILTER, EXTRACTION FAN (HFSRB1200) AND CONDENSATE DRAIN TO EMERGENCY OVERFLOW MAINTENANCE HOLE. INCLUDE BOLLARDS INSTALLED AT 1500 C/C ALONG EDGE OF ACCESS ROAD

OVERFLOW SCREENING CHAMBER FOR DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8600-01.

EMERGENCY OVERFLOW HEADWALL

DN1800 EMERGENCY OVERFLOW MAINTENANCE HOLE

0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

WATER OFF-TAKE CONNECTION FOR FUTURE TANK WASH-OUT AND MAINTENANCE

DELIVERY BUND FOR MHL DOSING FOR DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8101-23

1200sq. DIVERSION PIT AND 600sq. INTERCEPT PIT FOR LOADING BAY

TEMPORARY GENERATOR SETDOWN SLAB

1200 SQ. ELECTRICAL PIT

FUTURE SWITCHROOM ULTIMATE STAGE

1200 SQ. ELECTRICAL PIT

REFER NOTE 4.

SWITCHBOARD, REFER NOTE 5.

1200 SQ. ELECTRICAL PIT TYP. FOR MAIN ELECTRICAL FEED.

3m x 3m 1% SLOPE AREA FOR PUMP SET DOWN

GENERAL ARRANGEMENT PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

A
8101-55

FOR FUTURE EMERGENCY STORAGE TANK WORKS ASSUME SECTION OF FENCING TO BE TEMPORARILY REMOVED FOR CONSTRUCTION WORKS ACCESS

ALLOCATION FOR DN100 RPZ AND WATER METER INSTALLED ON CONCRETE SLAB

OFFTAK FROM WATER RETICULATION SERVICE IN ROAD CORRIDOR. REFER KN GROUP DRAWINGS FOR DETAILS

HOLD 1

CONCRETE SLAB WITH TEMPORARY DOSING ARRANGEMENT - CONTAINERISED CDU (1kL CAPACITY) BY CALIX OR SIMILAR

INDICATIVE FUTURE MHL DOSING BUILDING FOOTPRINT FOR ULTIMATE (DESIGN BY OTHERS)

FLUSHING/BY-PASS PUMP IN ARRANGEMENT

GAS RELEASE VALVE CABINET FOR DETAILS REFER TO DRG. No. SPS-WTG101-C-DR-8101-08

Ø4.5m WET WELL AND VALVE CHAMBER FOR DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8101-05

FLOWMETER PIT

7m WIDE DOUBLE LEAF ACCESS GATE

BOLT DOWN SURFACE MOUNTED BOLLARDS (YELLOW)

00630 SDR21 PE100 INCOMING GRAVITY SEWER

1200 SQ. ELECTRICAL PIT

DN1800 COLLECTOR MAINTENANCE HOLE. MIN. 25mm THICK INTERNAL PE LINER (LIGHT COLOUR) CORROSION PROTECTION SYSTEM TO ALL INTERNAL CONCRETE SURFACES. c/w 1200sq ACCESS OPENING FOR TEMPORARY PUMP INSTALLATION. FOR COVER DETAILS REFER TO DRG. No. SPS-WTG101-S-DR-8101-120.

LEGEND:

S	INCOMING GRAVITY SEWER
SRM	SEWER RISING MAIN
E/U	UNDERGROUND ELECTRICAL CONDUITS
OD	ODOUR CONTROL PIPEWORK
CHEM	CHEMICAL DOSING PIPEWORK
SW	STORMWATER DRAINAGE
D	DRAINAGE BETWEEN PROPOSED PITS
W	INCOMING WATER SUPPLY
CON	CONDENSATE LINE
G	H2S MONITORING CONDUITS
PROPOSED FENCE LINE	
(B32)	BOREHOLE LOCATION AND NUMBER DOUGLAS PARTNERS GEOTECHNICAL INVESTIGATION 29 JULY 2024

SPS BOREHOLE LOCATION TABLE

BOREHOLE No.	EASTING	NORTHING
BH32	488386.80	7001923.10
BH32A	488391.60	7001919.70

NOTE: COORDINATE OF BOREHOLE PROVIDED IN MGA2020 ZONE 56.

NOTES:

- FOR CONNECTION DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8101-07.
- FUTURE TANK CONSTRUCTION EXCAVATION TO BE SUPPORTED WITH PRE DRILLED SHEET PILES OR BORED PILES AND BRACING. ULTIMATE DESIGNER TO CONFIRM LOCATION AND IF SCARIFIICAL PILING USED TO SUPPORT STRUCTURE AND MANAGE FLOTATION.
- GENERATOR SET DOWN SLAB SHALL BE REMOVED AND REINSTATED TO PROVIDE WORKING ROOM FOR FUTURE EMERGENCY STORAGE TANK.
- PROVIDE ADDITIONAL ANTENNA MAST ADJACENT TO SWITCHBOARD SLAB, CONSISTING OF TIMBER POLE (4.8m HIGH) WITH DURALUMIN ANTENNA MAST. LIMIT DURALUMIN MAST HEIGHT TO LESS THAN 3.0 m. REFER TO RADIO SURVEY FOR ADDITIONAL DETAILS.
- SWITCHBOARD ARRANGEMENT BASED ON 90% DESIGN. CONTRACTOR TO UNDERTAKE D&C DELIVERY OF ELECTRICAL DESIGN INCLUDING SWITCHBOARD AND LIGHTING DESIGN, PRIOR TO CONSTRUCTION.

LIMIT OF SPS CONTRACT
REFER NOTE 1.

HOLD LIST:

- FINAL MHL STORAGE AND DOSING CONFIGURATION TBC WITH UNITYWATER. REQUIRES SEPARATE UNITYWATER DEVELOPMENT SERVICES APPROVAL PRIOR TO CONSTRUCTION.

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. J. [Signature]*
RPEQ 12761 DATE APPROVED: 29/07/2026

A1

F	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
E	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
C	28.05.2026	RE-ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
GENERAL ARRANGEMENT PLAN

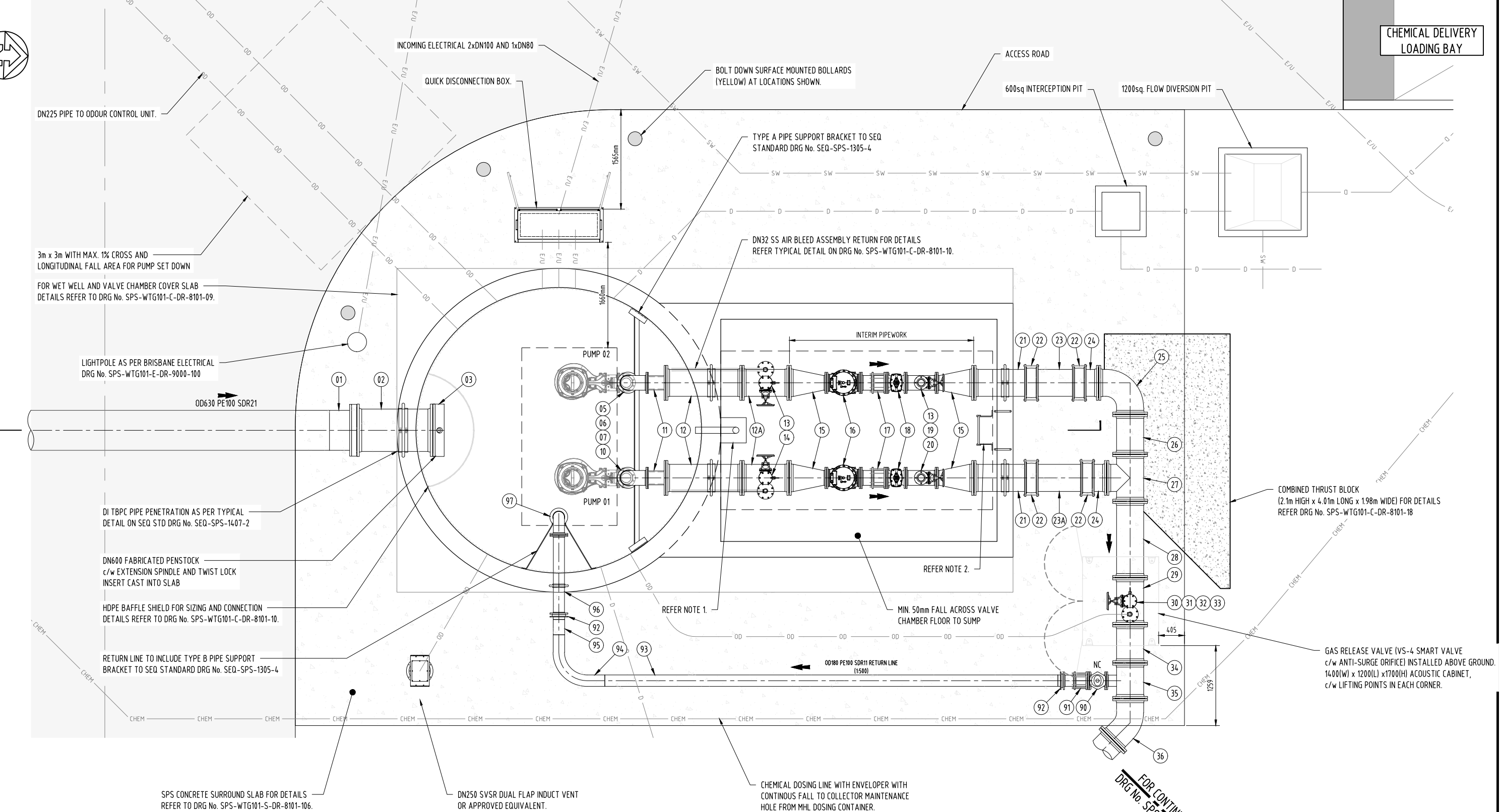
SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION F
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-02	



8101-06

A1

INDEX



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: **DEV-2026-WAR-5170**

Date: **01/09/2026**

Queensland
Government

WET WELL GENERAL ARRANGEMENT PLAN (WET WELL COVER SLAB REMOVED)
SCALE 1:30 (A1)
SCALE 1:60 (A3)

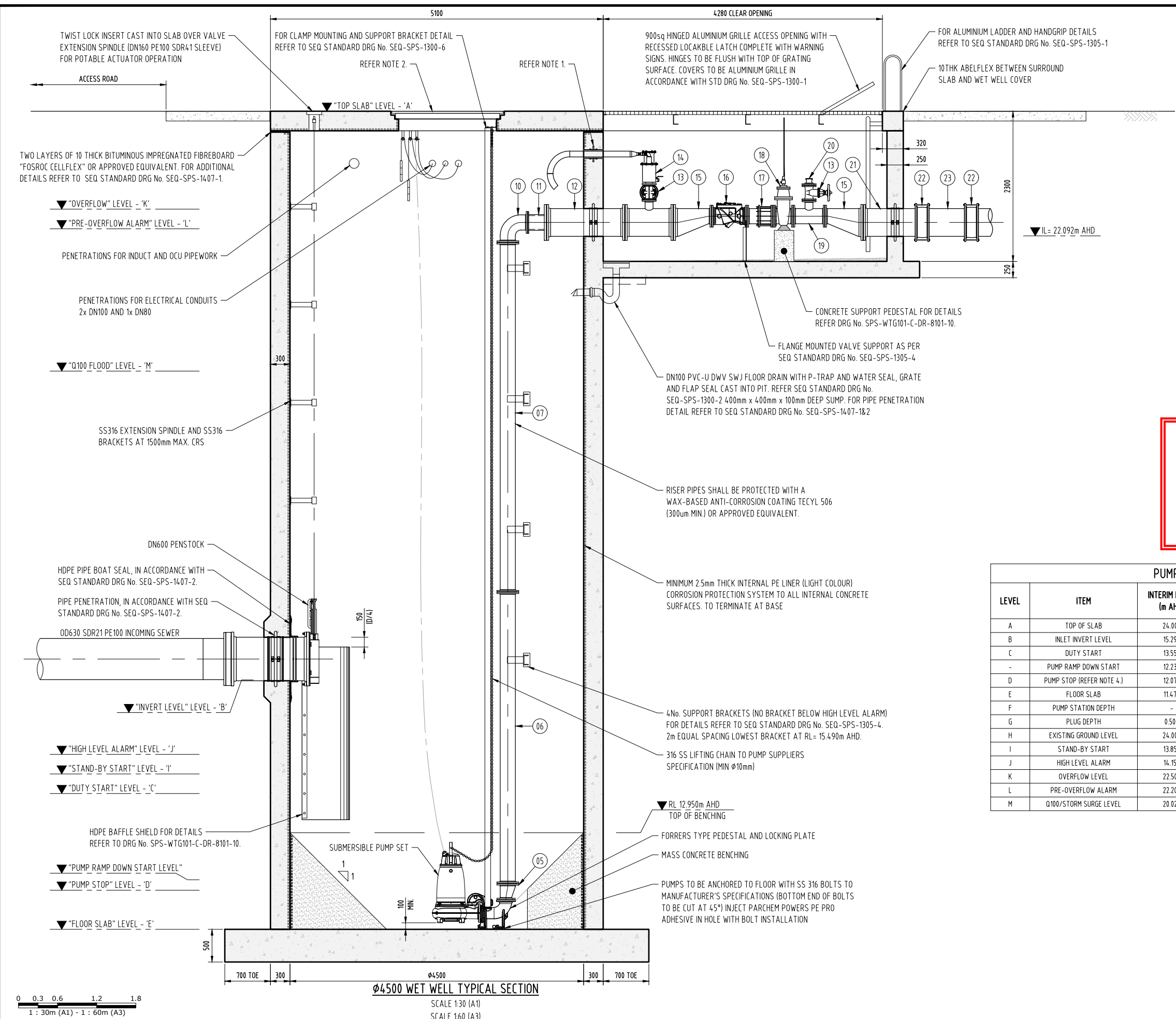
- NOTE:**
- 300sq x 100 DEEP SUMP. c/w FLOOR DRAIN P TRAP AND DN100 SWJ PVC-U SN10 PIPEWORK FALLING TO WET WELL.
 - FOR ALUMINIUM LADDER AND HANDGRIP DETAILS REFER TO SEQ STANDARD DRG No. SEQ-SPS-1305-1.
 - FOR PIPEWORK AND FITTING SCHEDULE TABLE REFER TO DRG No. SPS-WTG101-C-DR-8101-15.

STATUS

**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED: *C. [Signature]*

RPEQ_12761 DATE APPROVED: 29/07/2026



- NOTES:**
- DN32 SS AIR BLEED ASSEMBLY RETURN c/w THRUST FLANGE LOCATED CENTRALLY IN WALL AND PE COLLAR FUSION WELDED TO BE SLEEVE ON PIPE. CENTRAL PIPE COLLAR TO BE SEALED. FOR ADDITIONAL DETAILS REFER TYPICAL DETAIL ON DRG No. SPS-WTG101-C-DR-8101-10.
 - WET WELL COVER IN ACCORDANCE WITH SEQ STD DRG No. SEQ-SPS-1304 SERIES OPTION 1 (McBERNS OR SIMILAR APPROVED GAS TIGHT LIDS WITH ALUMINIUM SAFETY GRATE).
 - INTERIM OPERATING VOLUME INCREASED TO PROVIDE 2 TIMES HDD UPHILL VOLUME FOR FLUSHING, DUE TO HIGHER RISK OF SOLIDS BUILDUP WITH INTERMITTENT PUMPING DURING INITIAL STAGES. AT ULTIMATE 1 TIMES VOLUME AVAILABLE. FLUSHING CYCLE CAN BE IMPLEMENTED AT ULTIMATE TO HOLD BACK FLOW IN NETWORK TO ACHIEVE VOLUME FOR FULL FLUSHING, IF REQUIRED.
 - PUMP STOP/OFF LEVEL SET SO THAT DUTY PUMP 30 SECOND RAMP DOWN TIME DOESNT LOWER BWL BELOW PUMP MIN. SUBMERGENCE.
 - CONCEPT ULTIMATE LEVELS TO BE CONFIRMED DURING PUMP STATION ULTIMATE STAGE DESIGN. CURRENTLY SHOWN FOR INFORMATION ONLY.
 - SCADA SHALL BE CONFIGURED SO THAT OPERATIONS ATTEND SITE WHEN THE WET WELL LEVEL HAS EXCEEDED RL18.67m AHD, TO CHECK EMERGENCY STORAGE FACILITY AND INITIATE WASHDOWN PROCEDURES, IF REQUIRED.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



PUMP STATION CONTROL LEVELS					
LEVEL	ITEM	INTERIM LEVEL (m AHD)	INTERIM HEIGHT FROM BASE (m)	ULTIMATE LEVEL (m AHD) REFER NOTE 5	ULTIMATE HEIGHT FROM BASE (m) REFER NOTE 5.
A	TOP OF SLAB	24.000	12.530	24.000	12.530
B	INLET INVERT LEVEL	15.290	3.820	15.290	3.820
C	DUTY START	13.550	2.080	14.590	3.120
-	PUMP RAMP DOWN START	12.230	0.760	12.690	1.220
D	PUMP STOP (REFER NOTE 4.)	12.070	0.600	12.370	0.900
E	FLOOR SLAB	11.470	0.000	11.470	0.000
F	PUMP STATION DEPTH	-	12.530	-	12.530
G	PLUG DEPTH	0.500	-	0.500	-
H	EXISTING GROUND LEVEL	24.000	12.530	24.000	12.530
I	STAND-BY START	13.850	2.380	14.890	3.420
J	HIGH LEVEL ALARM	14.150	2.680	15.190	3.720
K	OVERFLOW LEVEL	22.500	11.030	22.500	11.030
L	PRE-OVERFLOW ALARM	22.200	10.730	22.200	10.730
M	Q100/STORM SURGE LEVEL	20.020	-	20.020	-

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED: *[Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

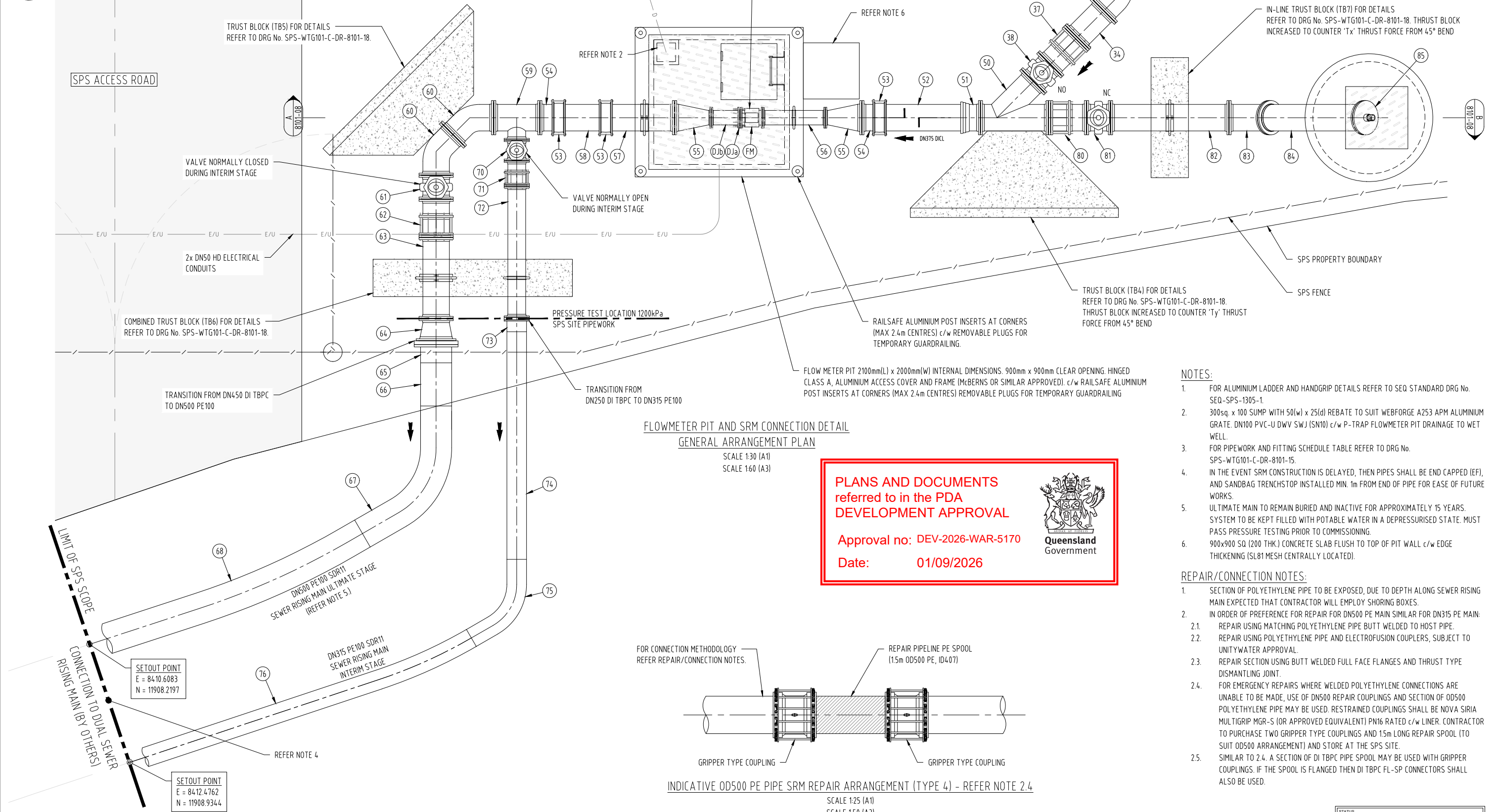
A1	E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
	B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
	A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
WET WELL AND VALVE CHAMBER TYPICAL SECTION

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-06	



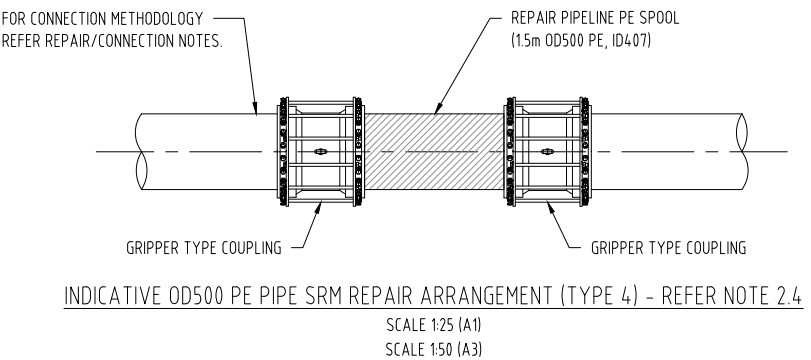
FLOWMETER PIT AND SRM CONNECTION DETAIL
GENERAL ARRANGEMENT PLAN
SCALE 1:30 (A1)
SCALE 1:60 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026

Queensland
Government

- NOTES:
- FOR ALUMINIUM LADDER AND HANDGRIP DETAILS REFER TO SEQ. STANDARD DRG No. SEQ-SPS-1305-1.
 - 300sq. x 100 SUMP WITH 50(w) x 25(d) REBATE TO SUIT WEBFORGE A253 APM ALUMINIUM GRATE. DN100 PVC-U DWV SWJ (SN10) c/w P-TRAP FLOWMETER PIT DRAINAGE TO WET WELL.
 - FOR PIPEWORK AND FITTING SCHEDULE TABLE REFER TO DRG No. SPS-WTG101-C-DR-8101-15.
 - IN THE EVENT SRM CONSTRUCTION IS DELAYED, THEN PIPES SHALL BE END CAPPED (EF), AND SANDBAG TRENCHSTOP INSTALLED MIN. 1m FROM END OF PIPE FOR EASE OF FUTURE WORKS.
 - ULTIMATE MAIN TO REMAIN BURIED AND INACTIVE FOR APPROXIMATELY 15 YEARS. SYSTEM TO BE KEPT FILLED WITH POTABLE WATER IN A DEPRESSURISED STATE. MUST PASS PRESSURE TESTING PRIOR TO COMMISSIONING.
 - 900x900 SQ (200 THK.) CONCRETE SLAB FLUSH TO TOP OF PIT WALL c/w EDGE THICKENING (SL81 MESH CENTRALLY LOCATED).
- REPAIR/CONNECTION NOTES:
- SECTION OF POLYETHYLENE PIPE TO BE EXPOSED, DUE TO DEPTH ALONG SEWER RISING MAIN EXPECTED THAT CONTRACTOR WILL EMPLOY SHORING BOXES.
 - IN ORDER OF PREFERENCE FOR REPAIR FOR DN500 PE MAIN SIMILAR FOR DN315 PE MAIN:
 - REPAIR USING MATCHING POLYETHYLENE PIPE BUTT WELDED TO HOST PIPE.
 - REPAIR USING POLYETHYLENE PIPE AND ELECTROFUSION COUPLERS, SUBJECT TO UNITYWATER APPROVAL.
 - REPAIR SECTION USING BUTT WELDED FULL FACE FLANGES AND THRUST TYPE DISMANTLING JOINT.
 - FOR EMERGENCY REPAIRS WHERE WELDED POLYETHYLENE CONNECTIONS ARE UNABLE TO BE MADE, USE OF DN500 REPAIR COUPLINGS AND SECTION OF OD500 POLYETHYLENE PIPE MAY BE USED. RESTRAINED COUPLINGS SHALL BE NOVA SIRIA MULTIGRIP MGR-S (OR APPROVED EQUIVALENT) PN16 RATED c/w LINER. CONTRACTOR TO PURCHASE TWO GRIPPER TYPE COUPLINGS AND 15m LONG REPAIR SPOOL (TO SUIT OD500 ARRANGEMENT) AND STORE AT THE SPS SITE.
 - SIMILAR TO 2.4. A SECTION OF DI TBPC PIPE SPOOL MAY BE USED WITH GRIPPER COUPLINGS. IF THE SPOOL IS FLANGED THEN DI TBPC FL-SP CONNECTORS SHALL ALSO BE USED.



A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE

tonkin

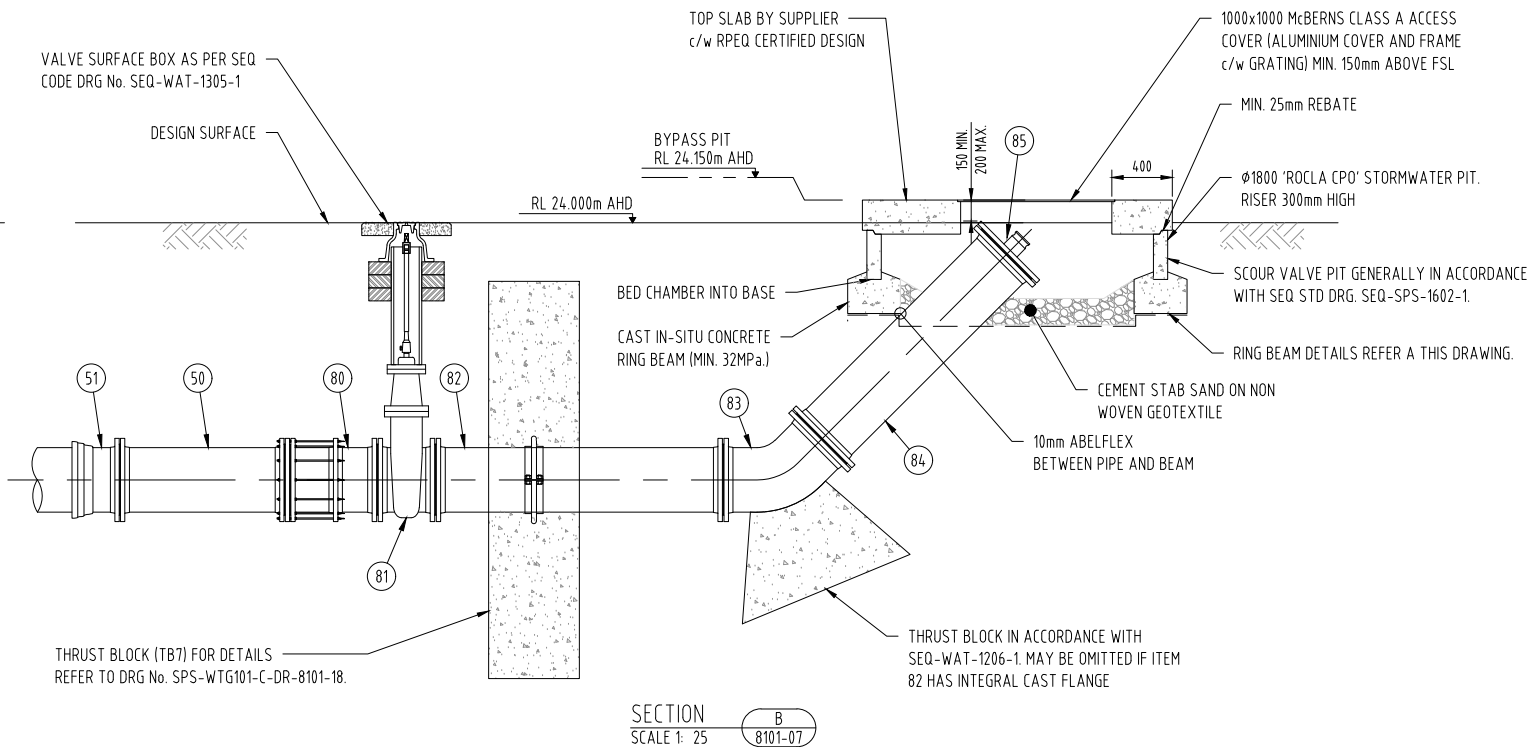
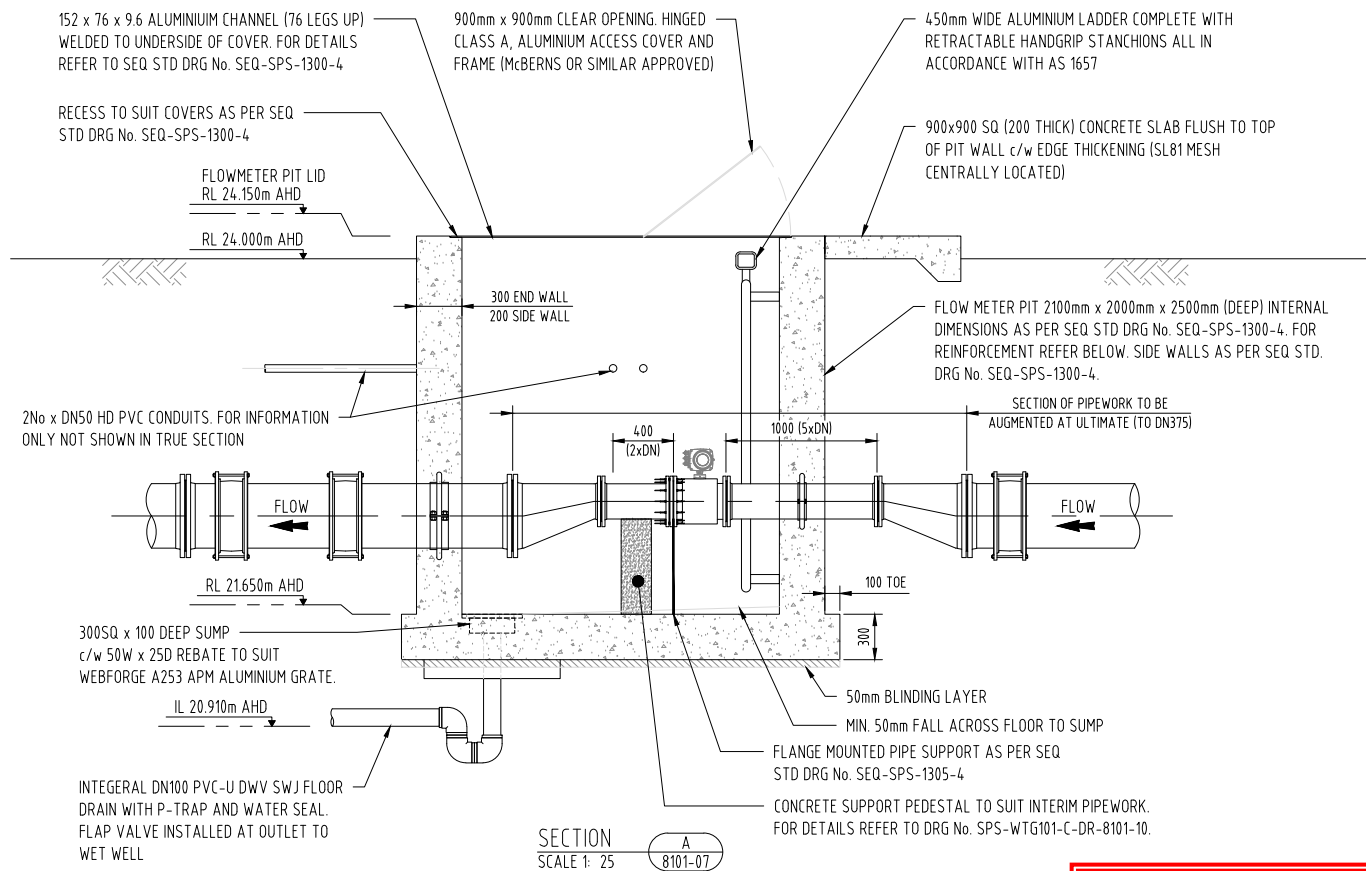
Stockland

Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
PIPEWORK CONNECTION DETAIL, FLOWMETER AND BYPASS PIT

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-07	

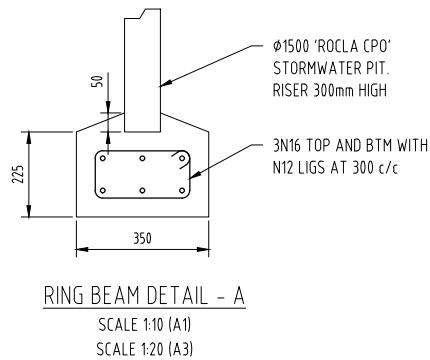


PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026

Queensland Government

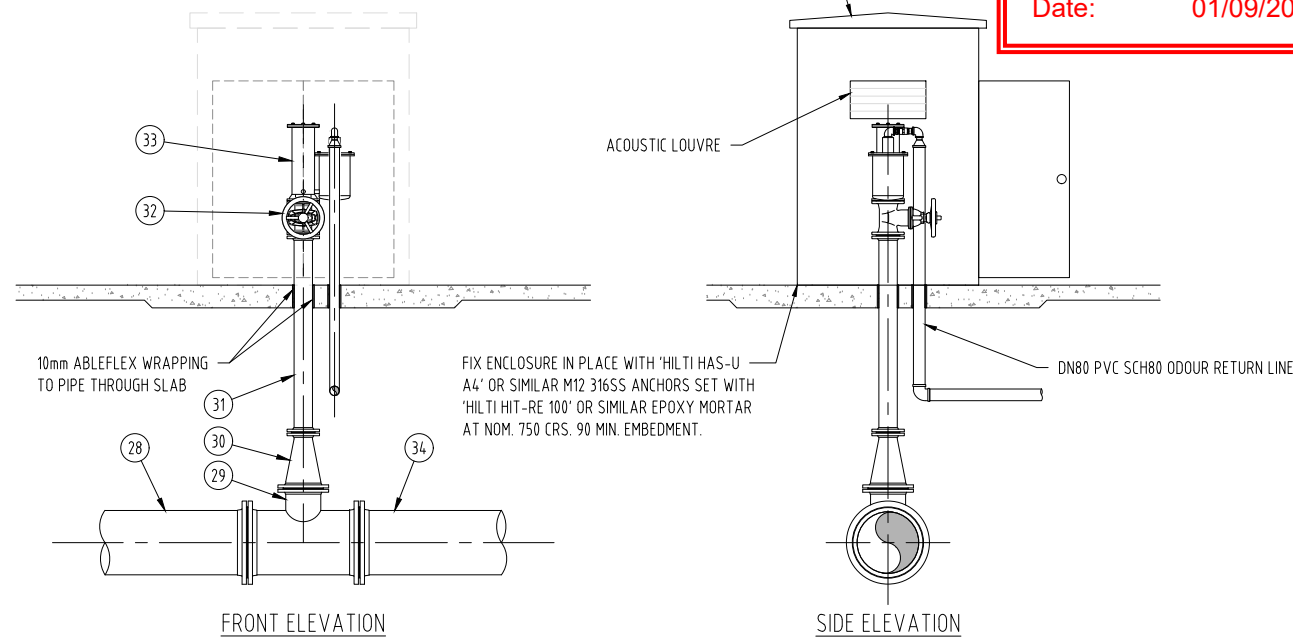


ACOUSTIC CABINET NOTES:

- THE CABINET SHALL BE PREFABRICATED FROM MINIMUM OF 3mm MARINE GRADE ALUMINUM. ALL EDGES AND CORNERS NEATLY FOLDED.
- ALL METALWORK IS TO BE WELDED AT JOINTS. ALL EXTERNAL JOINTS ARE TO BE FULLY (CONTINUOUS) WELDED AND STIFFENED WHERE NECESSARY TO FORM A RIDGED IP56 WEATHERPROOF ENCLOSURE. ALL WELDS ARE TO BE GRIND SMOOTH AND FREE FROM CREVICES. ALL BURRS AND SHARP EDGES ARE TO BE REMOVED PRIOR TO POWDER COATING.
- THE CABINET AND DOOR SHALL BE POWDER COATED, COLOUR 'MIST GREEN'.
- THE CABINET SHALL BE FITTED WITH VENTS. EACH VENT IS TO BE FITTED WITH REMOVABLE STAINLESS STEEL GAUZE WITH 1.5mm² OPENINGS.
- DOORS SHALL INCLUDE A NEOPRENE GASKET TO EXCLUDE WATER AND DUST.

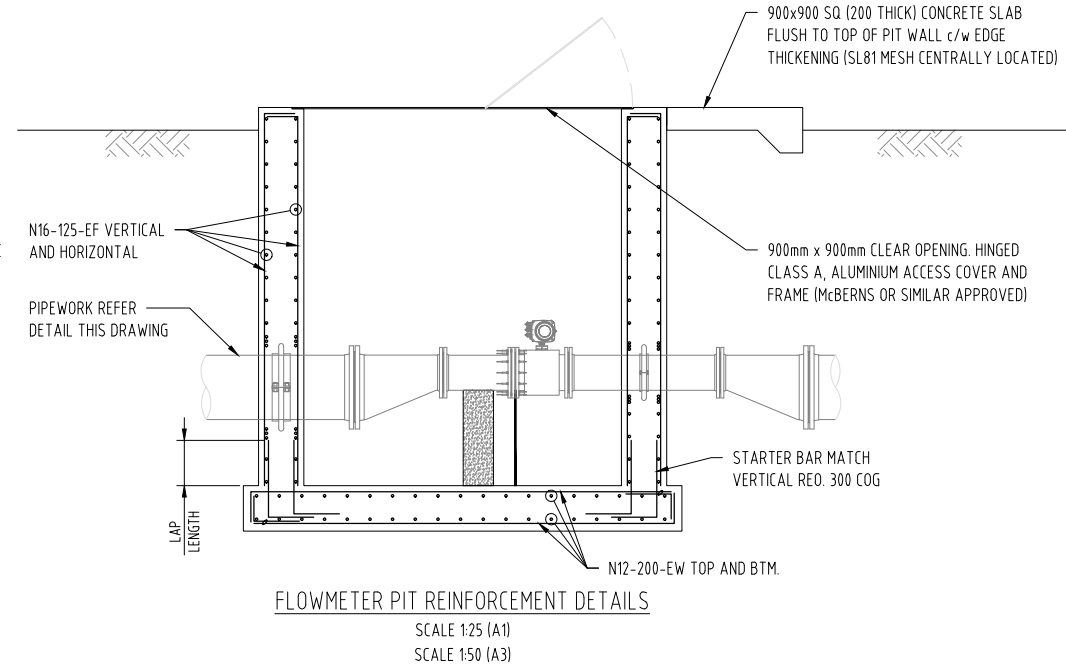
NOTE:

- 300sq x 100 DEEP SUMP. c/w FLOOR DRAIN P TRAP AND DN100 SWJ PVC-U SN10 PIPEWORK FALLING TO WET WELL.
- FOR ALUMINIUM LADDER AND HANDGRIP DETAILS REFER TO SEQ STANDARD DRG No. SEQ-SPS-1305-1.
- 300SQ. x 100 SUMP WITH 50(w) x 25(d) REBATE TO SUIT WEBFORGE A253 APM ALUMINIUM GRATE. DN100 PVC-U DWV SWJ (SN10) c/w P-TRAP FLOWMETER PIT DRAINAGE TO WET WELL.
- FOR PIPEWORK AND FITTING SCHEDULE TABLE REFER TO DRG No. SPS-WTG101-C-DR-8101-15.



GAS RELEASE VALVE AND CABINET DETAILS

SCALE 1:25 (A1)
SCALE 1:50 (A3)



FLOWMETER PIT REINFORCEMENT DETAILS

SCALE 1:25 (A1)
SCALE 1:50 (A3)

0 0.25 0.5 1 1.5
1 : 25m (A1) - 1 : 50m (A3)

0 0.1 0.2 0.4 0.6
1 : 10m (A1) - 1 : 20m (A3)

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS 29.07.2026

tonkin

Stockland

Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
PIPEWORK TYPICAL SECTIONS AND DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-08	

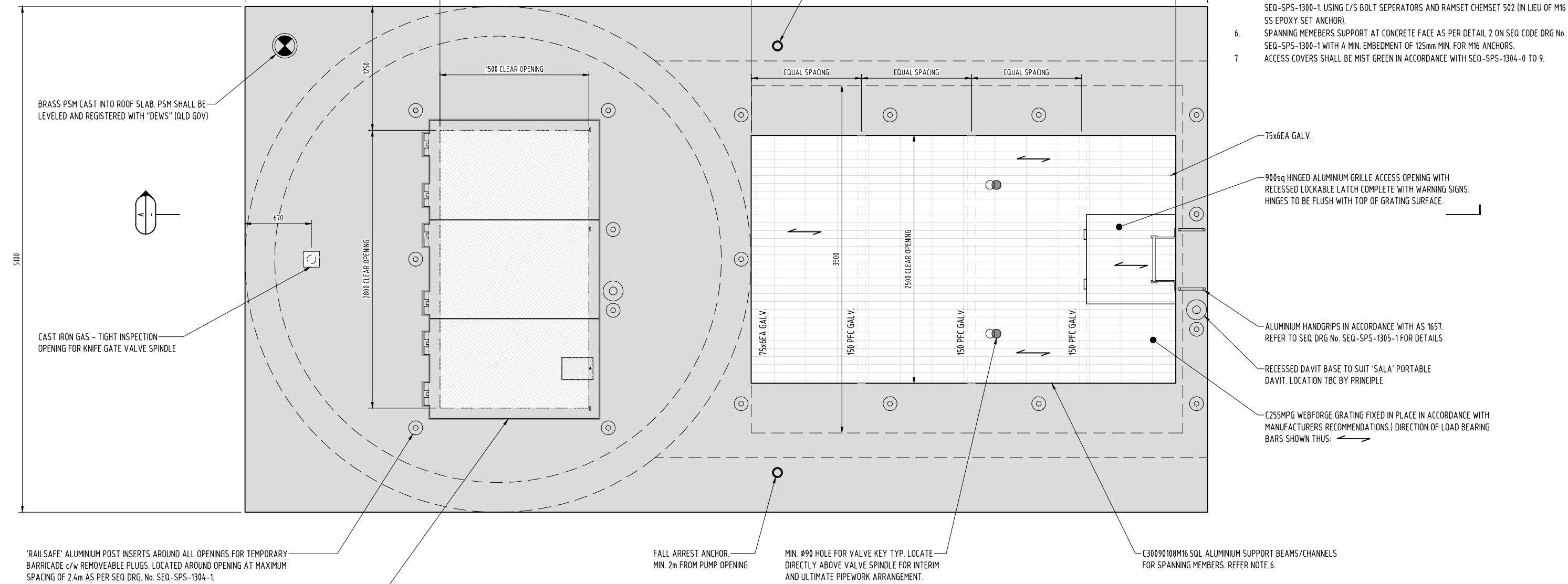
ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED: C. [Signature]
RPEQ 12761 DATE APPROVED: 29/07/2026

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

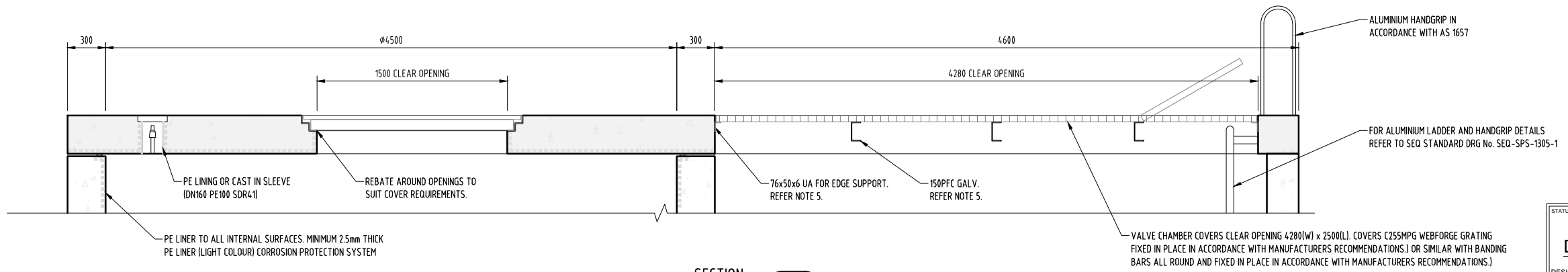
Date: 01/09/2026



- NOTES:**
1. FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-UCB002-C-DR-8100-02, 03, 04 AND 05.
 2. DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
 3. FOR LIFTING AND STRUTURAL DETAILS REFER TO DRG No. SPS-UCB002-S-DR-8101-103.
 4. REFER TO SEQ CODE DRG SEQ-SPS-1300-1 FOR DETAILS OF REQUIREMENTS FOR PSM, WARNING SIZES, PUMP LABELLING ETC.
 5. FIXINGS FOR SUPPORTS AT CONCRETE FACE AS PER DETAIL 1 AND 2 ON SEQ CODE DRG No. SEQ-SPS-1300-1. USING C/S BOLT SEPERATORS AND RAMSET CHEMSET 502 (IN LIEU OF M16 SS EPOXY SET ANCHOR).
 6. SPANNING MEMEBERS SUPPORT AT CONCRETE FACE AS PER DETAIL 2 ON SEQ CODE DRG No. SEQ-SPS-1300-1 WITH A MIN. EMBEDMENT OF 125mm MIN. FOR M16 ANCHORS.
 7. ACCESS COVERS SHALL BE MIST GREEN IN ACCORDANCE WITH SEQ-SPS-1304-0 TO 9.

WET WELL AND VALVE CHAMBER COVER SLAB DETAILS

SCALE 1:20 (A1)
SCALE 1:40 (A3)



0 0.2 0.4 0.8 1.2
1 : 20m (A1) - 1 : 40m (A3)

SECTION
SCALE 1: 20

ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED: *C. S.*
RPEQ: 12761 DATE APPROVED: 29/07/2026

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE

tonkin.com.au

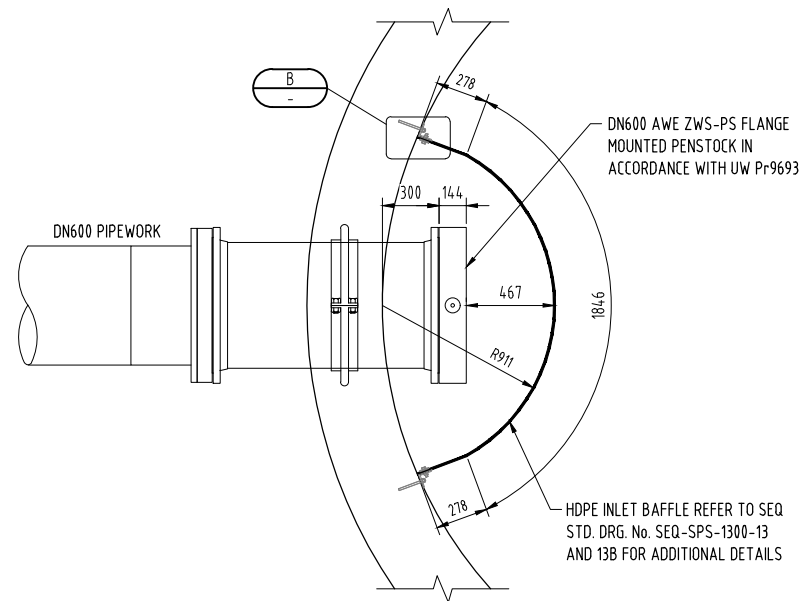
Stockland

Unitywater

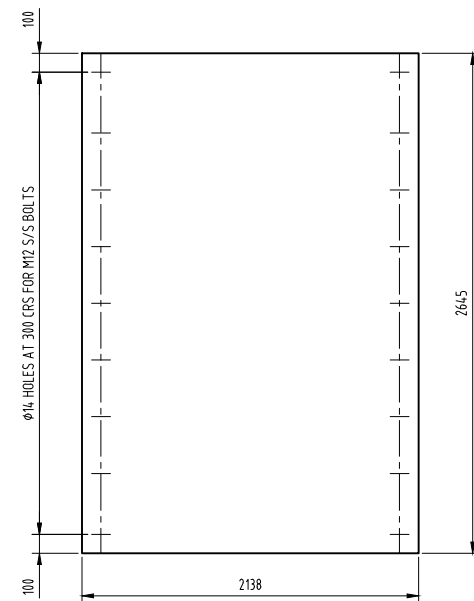
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
WET WELL AND VALVE CHAMBER COVER SLAB DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION D	
DISCIPLINE CODE C		
DRAWING NO. SPS-WTG101-C-DR-8101-09		



PLAN

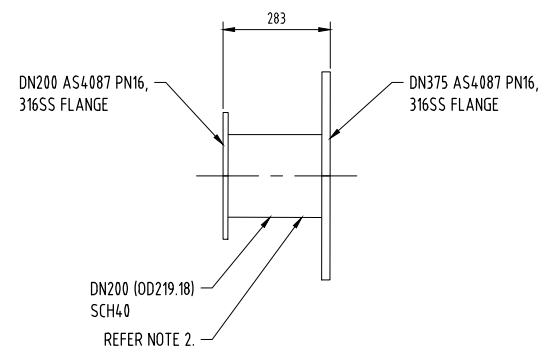


ELEVATION

HDPE BAFFLE WALL DETAILS

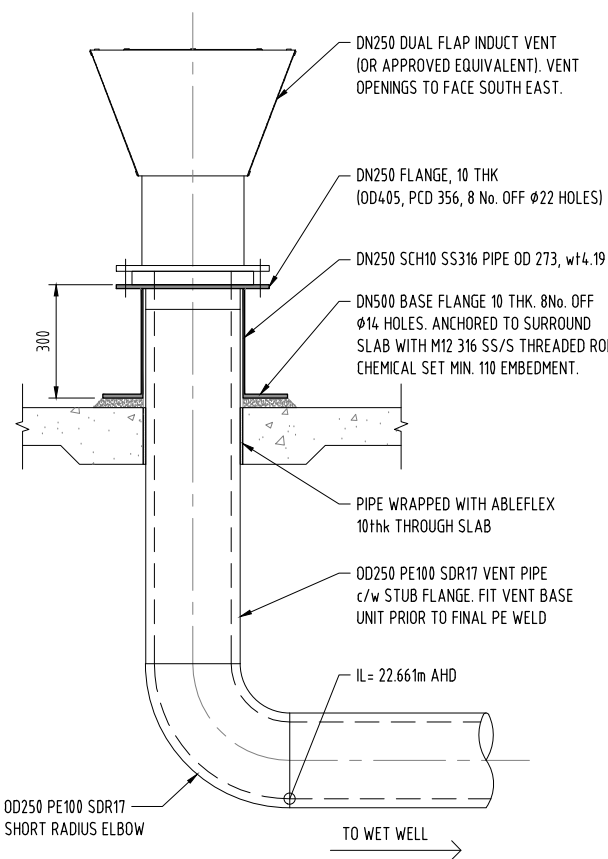
SCALE 1:20 (A1)
SCALE 1:40 (A3)

(BAFFLE WALL TO BE IN ACCORDANCE WITH SEQ-SPS-1300-13 AND 13B)



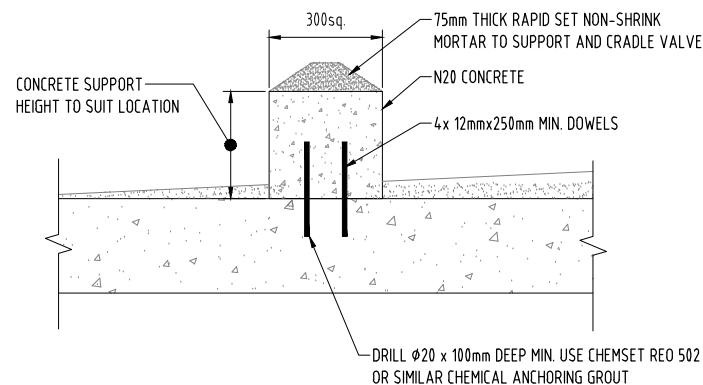
FABRICATION DETAIL (ITEM 11)

SCALE 1:10 (A1)
SCALE 1:20 (A3)



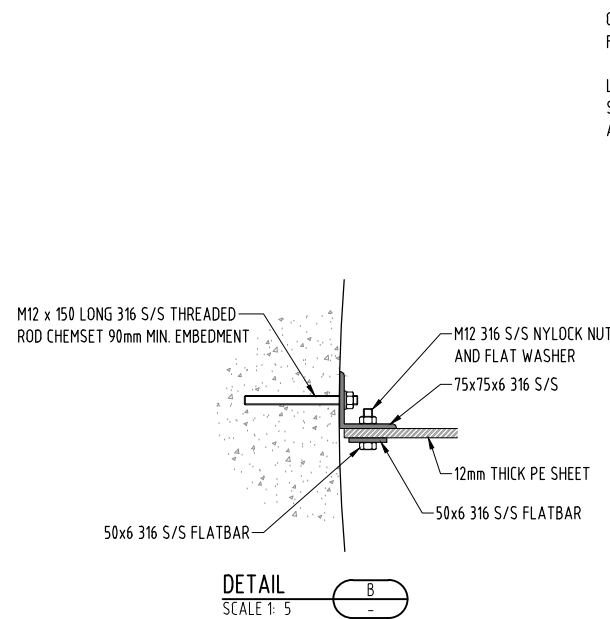
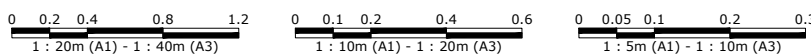
DN250 INDUCT VENT DETAILS

SCALE 1:10 (A1)
SCALE 1:20 (A3)

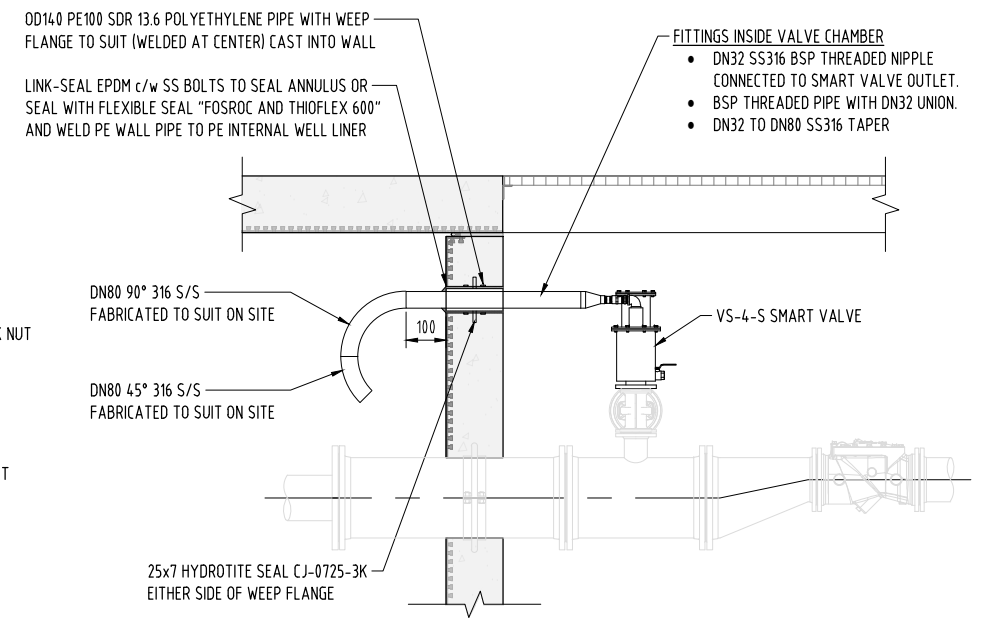


CONCRETE SUPPORT PEDESTAL TYPICAL DETAIL

SCALE 1:10 (A1)
SCALE 1:20 (A3)

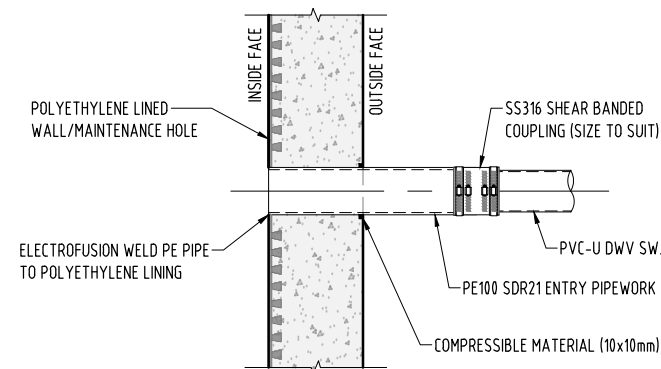


DETAIL
SCALE 1: 5



AIR BLEED RETURN ASSEMBLY

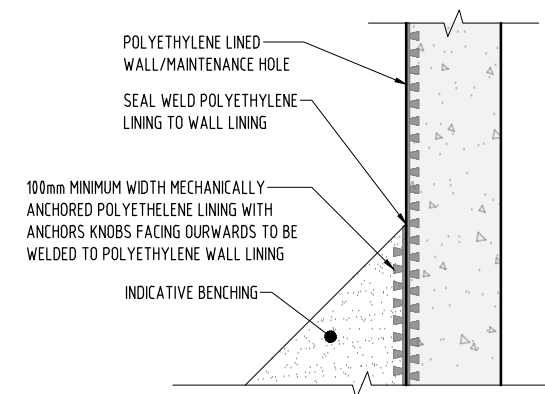
SCALE 1:20 (A1)
SCALE 1:40 (A3)



PVC PIPE PENETRATION TO PE LINED STRUCTURE

(WET WELL) TYPICAL DETAIL

NOT TO SCALE



POLYETHELENE LINING AT BENCHING TYPICAL DETAIL

SCALE 1:10 (A1)
SCALE 1:20 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

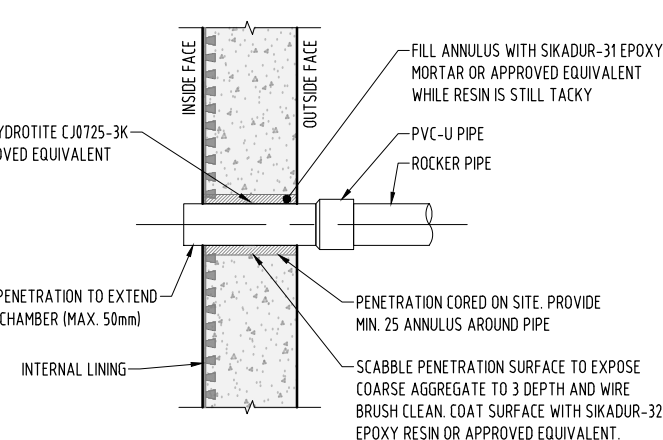
Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



NOTES:

- FOR PIPEWORK AND FITTING SCHEDULE TABLE REFER TO DRG No. SPS-WTG101-C-DR-8101-15.
- ALL STAINLESS STEEL COMPONENTS SHALL BE ELECTROPOLISHED AS PER Pr0693, SYSTEM 22.



ALTERNATIVE PVC PENETRATION (DN25-150)

TYPICAL DETAIL

NOT TO SCALE

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. J. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

A1

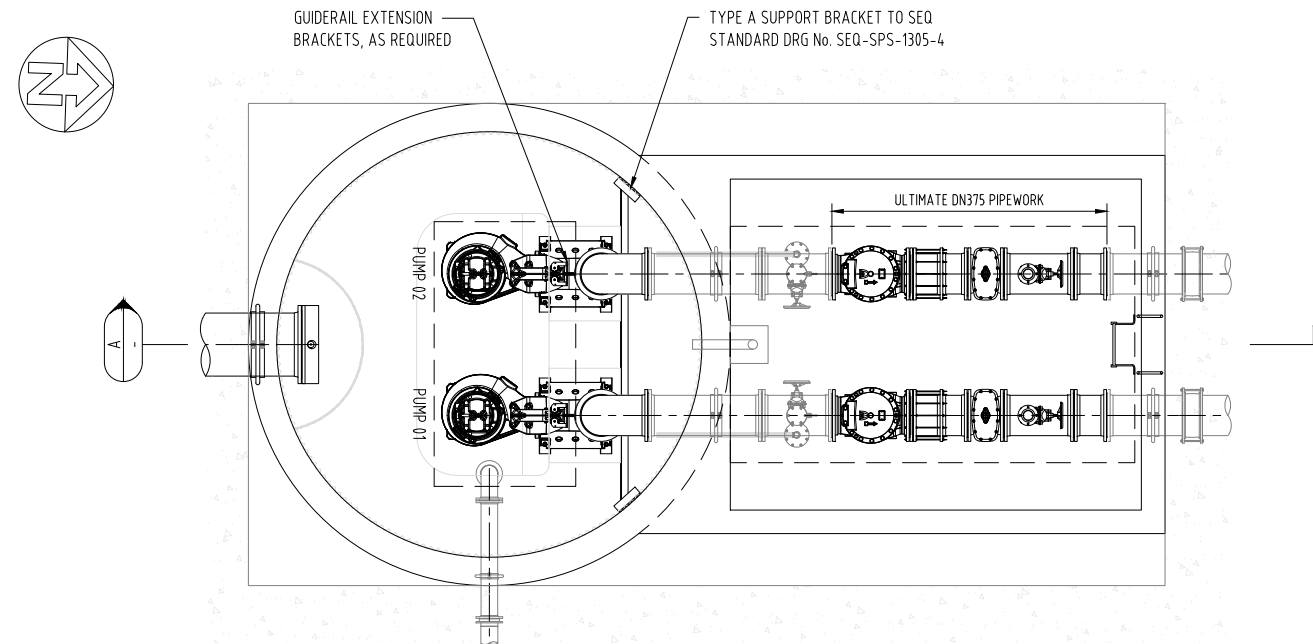
E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE	



Unitywater

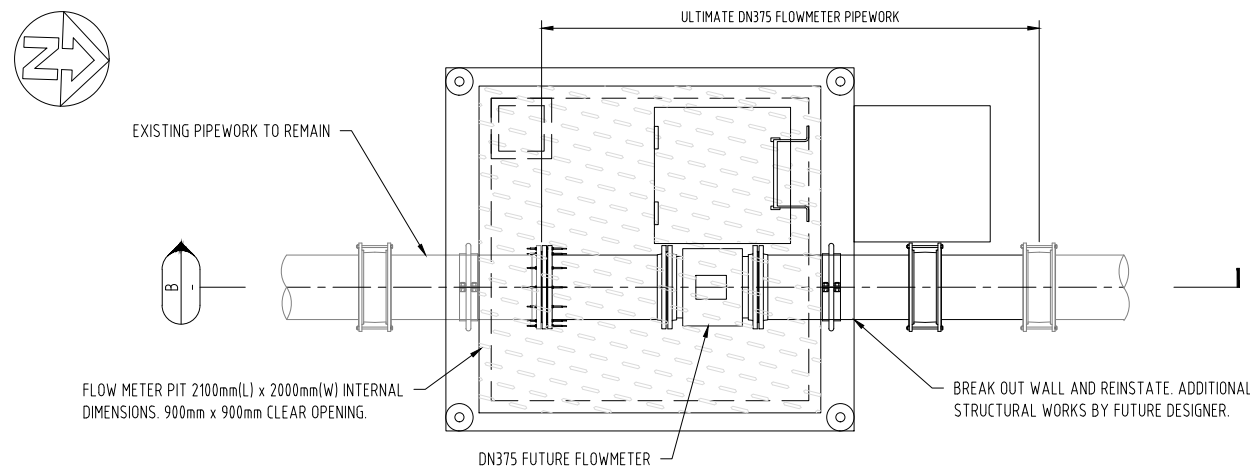
SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
MISCELLANEOUS DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION E	
DISCIPLINE CODE C		
DRAWING NO. SPS-WTG101-C-DR-8101-10		



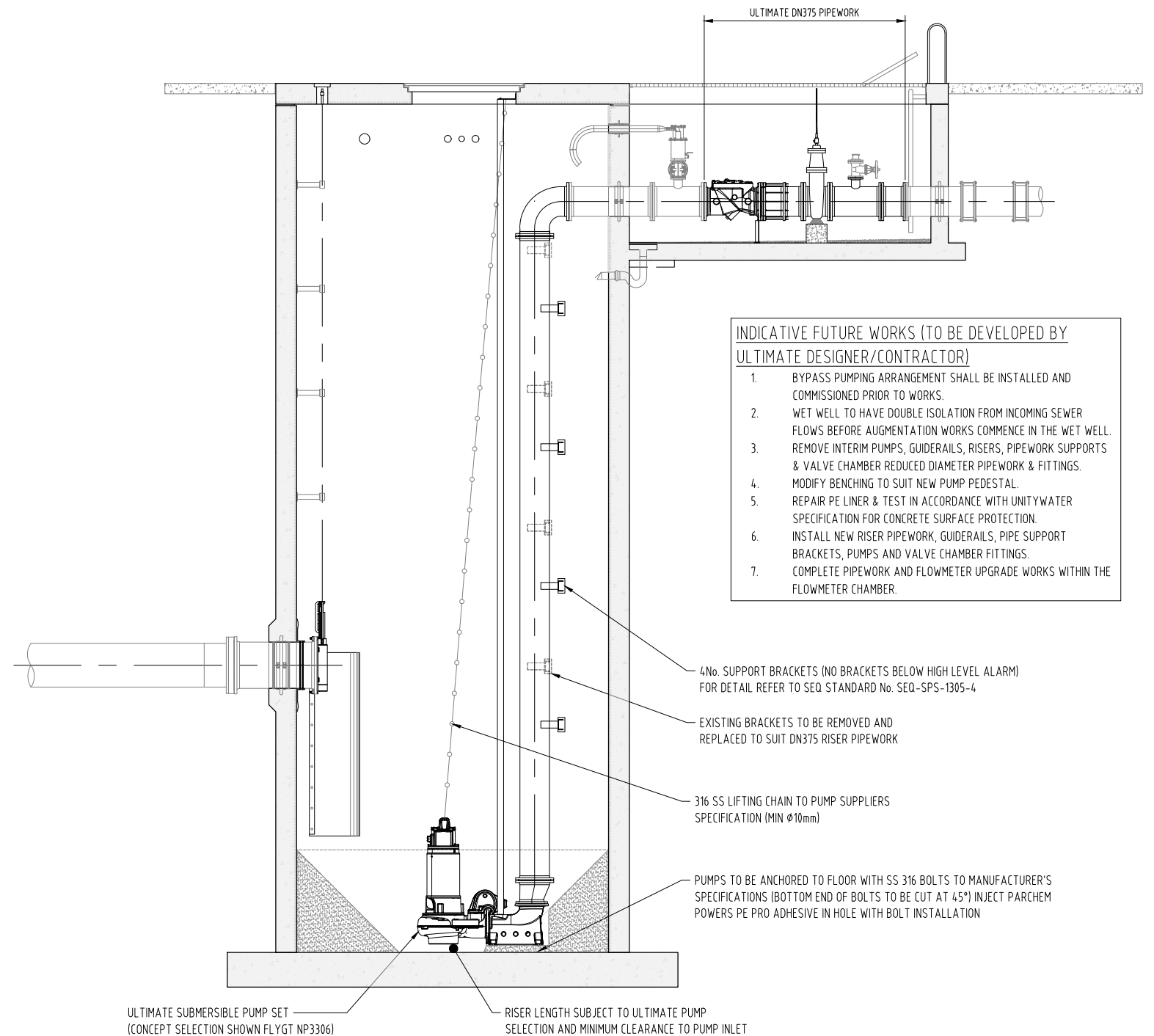
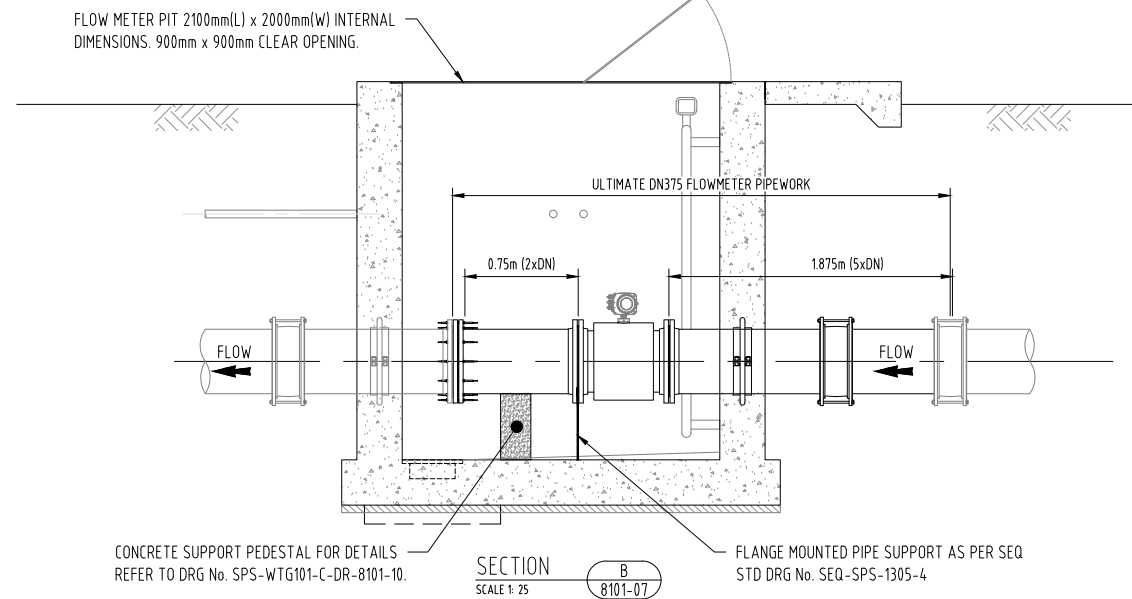
INDICATIVE WET WELL AND VALVE CHAMBER ULTIMATE PIPEWORK

SCALE 1:40 (A1)
SCALE 1:80 (A3)



INDICATIVE FLOWMETER CHAMBER ULTIMATE PIPEWORK

SCALE 1:25 (A1)
SCALE 1:50 (A3)



INDICATIVE FUTURE WORKS (TO BE DEVELOPED BY ULTIMATE DESIGNER/CONTRACTOR)

1. BYPASS PUMPING ARRANGEMENT SHALL BE INSTALLED AND COMMISSIONED PRIOR TO WORKS.
2. WET WELL TO HAVE DOUBLE ISOLATION FROM INCOMING SEWER FLOWS BEFORE AUGMENTATION WORKS COMMENCE IN THE WET WELL.
3. REMOVE INTERIM PUMPS, GUIDERAILS, RISERS, PIPEWORK SUPPORTS & VALVE CHAMBER REDUCED DIAMETER PIPEWORK & FITTINGS.
4. MODIFY BENCHING TO SUIT NEW PUMP PEDESTAL.
5. REPAIR PE LINER & TEST IN ACCORDANCE WITH UNITYWATER SPECIFICATION FOR CONCRETE SURFACE PROTECTION.
6. INSTALL NEW RISER PIPEWORK, GUIDERAILS, PIPE SUPPORT BRACKETS, PUMPS AND VALVE CHAMBER FITTINGS.
7. COMPLETE PIPEWORK AND FLOWMETER UPGRADE WORKS WITHIN THE FLOWMETER CHAMBER.

SECTION A
SCALE 1:40 (A1)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

0 0.4 0.8 1.6 2.4 1 : 40m (A1) - 1 : 80m (A3)
0 0.25 0.5 1 1.5 1 : 25m (A1) - 1 : 50m (A3)

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
B	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	CHECKED	26.06.2026
A	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	PASSED	26.06.2026

tonkin
tonkin.com.au

Stockland

Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
INDICATIVE WET WELL AND FLOWMETER ULTIMATE PIPEWORK ARRANGEMENT

SHEET 1 OF 1 SHEETS
REVISION DATE 26.06.2026
DISCIPLINE CODE C
DRAWING NO.
SPS-WTG101-C-DR-8101-12

SCALE AS SHOWN
REVISION B

INLET PIPEWORK – PIPE AND FITTINGS SCHEDULE				
ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
01	OD630	PE100 SDR21	FULL FACE STUB FLANGE c/w SS BACKING RING	1
02	DN600	DI TBPC	FL-FL PIPE (LENGTH 1200mm) c/w THRUST FLANGE 500mm FROM INTERNAL PENSTOCK	1
03	DN600	SS 316	AWE PIPE FLANGE MOUNTED PENSTOCK	1

PUMP DISCHARGE PIPEWORK – PIPE AND FITTINGS SCHEDULE				
ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
PS	DN150	-	FLYGT 37kW PUMP FITTED WITH ADAPTOR/LOCKING PLATE, REFER DRG No. SPS-WTG101-C-DR-8100-10 FOR PUMP DETAILS. MIN. 17m CABLE.	2
05	DN150 x DN200	DI TBPC	FL-FL ECCENTRIC REDUCER (FLAT SIDE TOWARD INLET)	2
06	DN200	DI TBPC	FL-FL PIPE SPOOL (LENGTH 4442mm)	2
07	DN200	DI TBPC	FL-FL PIPE SPOOL (LENGTH 5350mm)	2
08	-	-	-	
09	-	-	-	
10	DN200	DI TBPC	FL-FL 90° BEND	2
11	DN200 x DN375	SS 316	FL-FL SPECIAL (REFER DETAIL ON DRG No. SPS-WTG101-C-DR-8101-10)	2
12	DN375	DI TBPC	FL-FL PIPE SPOOL (LENGTH 1200mm) c/w THRUST FLANGE 485mm FROM END	2
12A	DN375 x DN100	DI TBPC	FL-FL-FL REDUCING TEE (BRANCH ROTATED UPWARDS)	2
13	DN100	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE c/w HANDWHEEL	4
14	-	SS	VS-4-S SMART VALVE	2
15	DN375 x DN200	DI TBPC	FL-FL ECCENTRIC REDUCER (FLAT SIDE TOP)	4
16	DN200	DI TBPC	FL-FL CHECK VALVE (VALMATIC SWING FLEX)	2
17	DN200	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	2
18	DN200	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE c/w EXTENSION SPINDLE	2
19	DN200 x DN100	DI TBPC	FL-FL-FL REDUCING TEE (BRANCH ROTATED UPWARDS)	2
20	DN100	SS 316	MALE CAMLOCK c/w DUST CAP	2
21	DN375	DI TBPC	FL-SP PIPE SPOOL (LENGTH 900mm) c/w THRUST FLANGE CAST IN WALL 490mm FROM FLANGED END	2
22	DN375	DI/SS 316	GIBAULT JOINT	4
23	DN375	DI TBPC	SP-SP PIPE SPOOL (LENGTH 750mm)	1
23A	DN375	DI TBPC	SP-SP PIPE SPOOL (LENGTH 880mm)	1
24	DN375	DI TBPC	FL-SP CONNECTOR	2
25	DN375	DI TBPC	FL-FL 90° BEND	1
26	DN375	DI TBPC	FL-FL PIPE SPOOL (LENGTH 630mm)	1
27	DN375	DI TBPC	FL-FL-FL EQUAL TEE	1
28	DN375	DI TBPC	FL-FL PIPE SPOOL (LENGTH 1200mm)	1
29	DN375 x DN200	DI TBPC	FL-FL-FL REDUCING TEE (BRANCH ROTATED UPWARDS)	1
30	DN200 x DN100	DI TBPC	FL-FL CONCENTRIC REDUCER	1
31	DN100	DI TBPC	FL-FL PIPE SPOOL (LENGTH 1300mm)	1
32	DN100	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE (NORMALLY OPEN) c/w HANDWHEEL	1
33	DN100	SS	VS-4-S SMART VALVE	1
34	DN375	DI TBPC	FL-FL PIPE SPOOL (LENGTH 600mm)	2
35	DN375 x DN150	DI TBPC	FL-FL-FL SCOUR TEE	1
36	DN375	DI TBPC	FL-FL 45° BEND	1
37	DN375	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	1
38	DN375	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE c/w EXTENSION SPINDLE	1

NOTE:

1.
- PIPE SPOOLS TBPC SHALL BE INTERNALLY AND EXTERNALLY THERMALLY BONDED POLYMERIC COATED. CEMENT MORTAR LINING SHALL NOT BE USED.
2.
- ALL DUCTILE IRON PIPE AND FITTINGS LOCATED WITHIN THE WET WELL SHALL BE COATED WITH COATING SYSTEM 26 OF Pr9693. WAX-BASED ANTI-CORROSION COATING TECTYL 506 (300um MIN.) OR APPROVED EQUIVALENT.
3.
- THE CONTRACTOR SHALL SUPPLY A FLOWMETER WITH PRE-CONFIGURED HEARTBEAT TECHNOLOGY SOFTWARE FUNCTIONALITY. THIS FUNCTIONALITY ENABLES UNITYWATER TO PERFORM IN-SITU VERIFICATION OF SLIME BUILD-UP, TRIGGERED BY THE STANDARD “FLOWRATE OUT OF ENGINEERING RANGE” ALARM, WITHOUT REMOVING THE METER FROM SERVICE. THIS REQUIREMENT SHALL BE REFLECTED IN THE O&M MANUAL.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



tonkin.com.au



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
PIPEWORK AND FITTING SCHEDULE TABLE

SHEET 1 OF 1	SHEETS	SCALE	AS SHOWN
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE	C		
DRAWING NO.	SPS-WTG101-C-DR-8101-15		

FLOWMETER PIT – PIPE AND FITTINGS SCHEDULE

ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
50	DN375	DI TBPC	FL-FL-FL WYE	1
51	DN375	DI TBPC	FL-SOC CONNECTOR	1
52	DN375	DI TBPC	SP-SP SPOOL PIPE (LENGTH 1,425mm)	1
53	DN375	DI/SS 316	GIBAULT JOINT	3
54	DN375	DI TBPC	FL-SP CONNECTOR	2
55	DN375x DN200	DI TBPC	FL-FL ECCENTRIC TAPER (FLAT TOP)	2
56	DN200	DI TBPC	FL-FL SPOOL PIPE (LENGTH 1000mm) c/w THRUST FLANGE CENTRALLY CAST	1
FM	DN200	-	FLOWMETER E&H PROMAG W400 FLOW METER, LENGTH 350mm (OR APPROVED EQUIVALENT) - REFER NOTE 3.	1
DJa	DN200	DI TBPC	NON-THRUST DISMANTLING JOINT	1
DJb	DN200	DI TBPC	FL-SP PIPE SPOOL (LENGTH 465mm)	1
57	DN375	DI TBPC	FL-SP SPOOL PIPE (LENGTH 1,100mm) c/w THRUST FLANGE 480mm FROM FLANGE END	1
58	DN375	DI TBPC	SP-SP SPOOL PIPE (LENGTH 750mm)	1
59	DN375x DN250	DI TBPC	FL-FL-FL REDUCING TEE	1

SEWER RISING MAIN CONNECTIONS – PIPE AND FITTINGS SCHEDULE

ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
60	DN375	DI TBPC	FL-FL 45° BEND	2
61	DN375	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE c/w EXTENSION SPINDLE	1
62	DN375	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	1
63	DN375	DI TBPC	FL-FL SPOOL PIPE (LENGTH 1,300mm) c/w THRUST FLANGE CENTRALLY CAST	1
64	DN375 x DN450	DI TBPC	FL-FL ECCENTRIC REDUCER (FLAT SIDE TOP)	1
65	OD500	PE100 SDR11	FULL FACE MAXI STUB FLANGE c/w SS BACKING RING	1
66	OD500	PE100 SDR11	PE PIPE SPOOL APPROX 700mm LONG. CUT TO SUIT	1
67	OD500	PE100 SDR11	45° LONG RADIUS SWEEP BEND	1
68	OD500	PE100 SDR11	PE PIPE SPOOL APPROX 4,800mm LONG. CUT TO SUIT	1
69	-	-	-	
70	DN250	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE c/w EXTENSION SPINDLE	1
71	DN250	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	1
72	DN250	DI TBPC	FL-SP SPOOL PIPE (LENGTH 2,100mm) c/w THRUST FLANGE LOCATED 625mm FROM ONE END	1
73	OD315	PE100 SDR11	FULL FACE MAXI STUB FLANGE c/w SS BACKING RING	1
74	OD315	PE100 SDR11	PE PIPE TO SUIT (LENGTH 3,650mm)	1
75	OD315	PE100 SDR11	45° LONG RADIUS SWEEP BEND	1
76	OD315	PE100 SDR11	PE PIPE SPOOL APPROX 5,900mm LONG. CUT TO SUIT	1

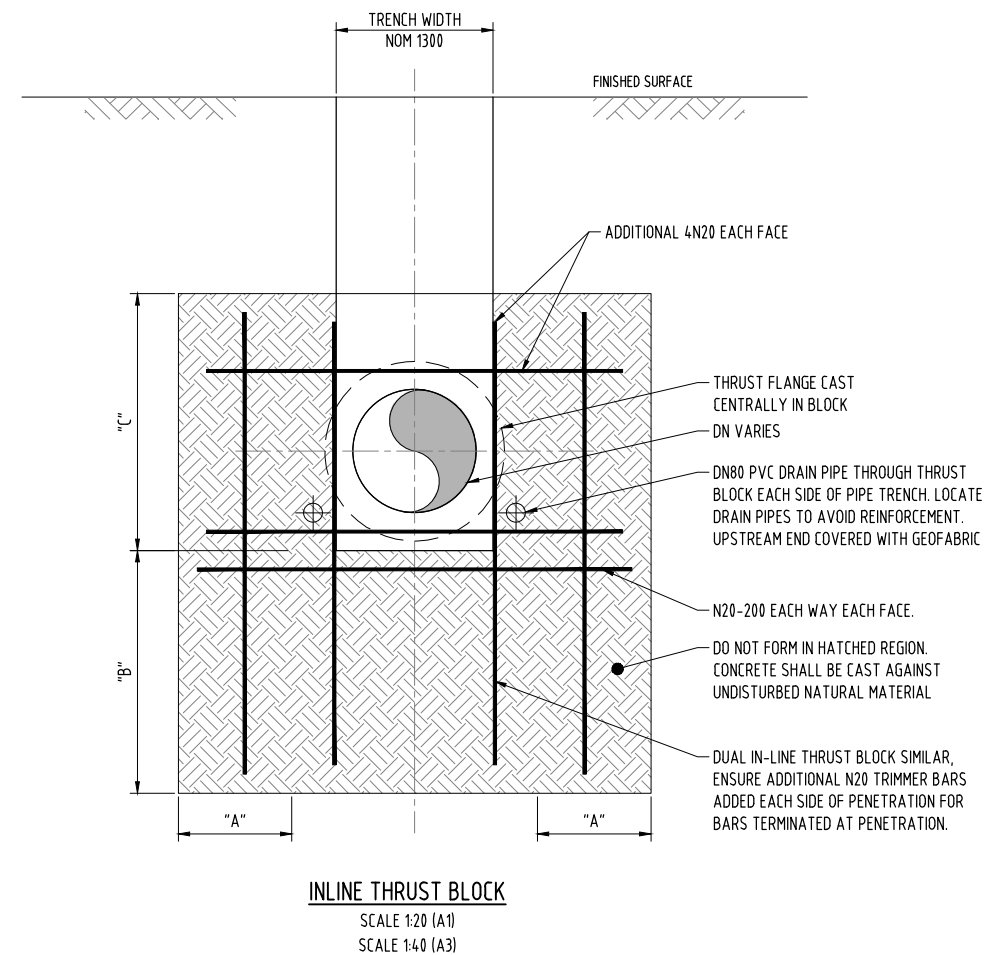
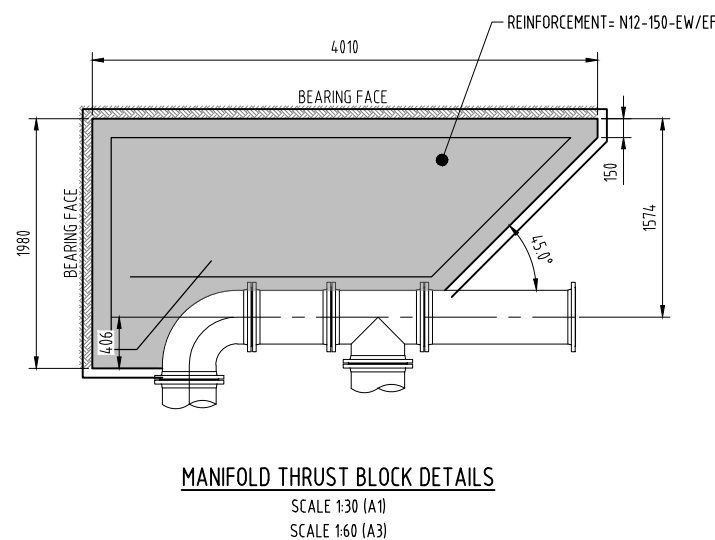
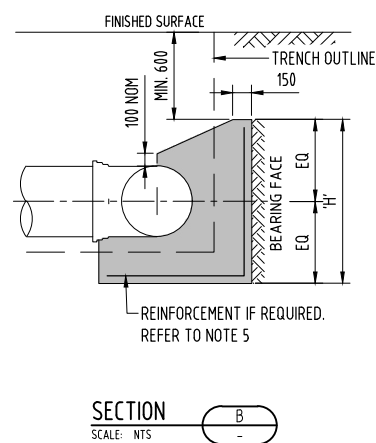
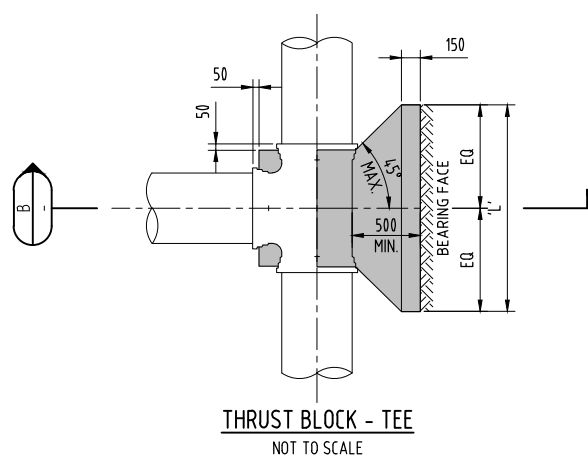
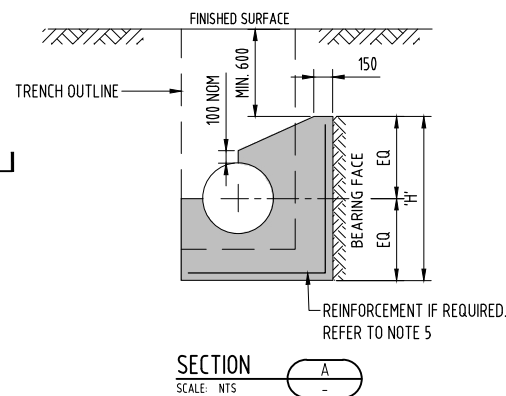
BYPASS/PUMP-IN – PIPE AND FITTINGS SCHEDULE

ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
80	DN375	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	1
81	DN375	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE (NORMALLY CLOSED) c/w EXTENSION SPINDLE	1
82	DN375	DI TBPC	FL-FL SPOOL PIPE (LENGTH 1,900mm) c/w THRUST FLANGE CENTRALLY CAST	1
83	DN375	DI TBPC	FL-FL 45° BEND	1
84	DN375	DI TBPC	FL-FL SPOOL PIPE (LENGTH 1700mm)	1
85	DN375	SS 316	BLIND FLANGE c/w DN100 CAMLOCK & DUST CAP	1

RETURN LINE – PIPE AND FITTINGS SCHEDULE

ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
90	DN150	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE (NORMALLY CLOSED) c/w EXTENSION SPINDLE AND VALVE BOX.	1
91	DN150	DI TBPC	THRUST TYPE DISMANTLING JOINT (LENGTH 600mm)	1
92	OD180	PE100 SDR11	FULL FACE STUB FLANGE c/w SS BACKING RING	2
93	OD180	PE100 SDR11	PIPE (LENGTH APPROX. 7,500mm - CUT TO SUIT)	1
94	OD180	PE100 SDR11	SWEEP BEND 90° LONG SPIGOT	1
95	OD180	PE100 SDR11	PIPE (LENGTH APPROX. 300mm - CUT TO SUIT)	1
96	DN150	DI TBPC	FL-FL PIPE SPOOL (LENGTH 1250mm) THRUST FLANGE CAST IN WALL 435mm FROM FLANGED END	1
97	DN150	DI TBPC	FL-FL 90° BEND c/w 1500mm LONG DI TBPC DROPPER PIPE	1



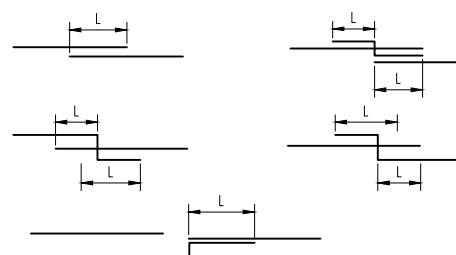


Date: 01/09/2026



- FOR NOTES REFER TO DRG No. SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03 AND SPS-WTG101-C-DR-8100-04.
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE AHBP ON SITE AT EACH THRUST BLOCK LOCATION AND CONFIRM THRUST BLOCK DIMENSION PRIOR TO ORDERING REINFORCEMENT OR POURING CONCRETE. GEOTECHNICAL REPRESENTATIVE IS TO CONFIRM AHBC ONSITE.
- WHERE THE BEARING FACE(S) ARE NOT CAST AGAINST NATURAL UNDISTURBED MATERIAL, THE AREA BETWEEN THE BEARING FACE AND UNDISTURBED NATURAL MATERIAL SHALL BE BACKFILLED THE CEMENT STABILISED SAND (20:1 SAND:CEMENT)
- CONTRACTOR TO INSTALL SL72 MESH WITH 75mm MINIMUM COVER ON LONG FACE OF THRUST BLOCKS WHERE NOTED.
- CONCRETE GRADE TO BE MINIMUM 40MPa FOR INLINE THRUST BLOCKS. NON-REINFORCED THRUST BLOCKS SHALL BE N25 EXPOSURE CLASSIFICATION = B1
- 7.1. REINF' COVER = 45mm (NOT CAST AGAINST GROUND)
- 7.2. REINF' COVER = 75mm (CAST AGAINST GROUND)
- REINFORCING BARS NEAREST TO THE PIPE SHALL BE LOCATED 75mm FROM THE PIPE.
- THRUST BLOCK HAS BEEN SIZED FOR ALLOWABLE LATERAL BEARING CAPACITY. CONTRACTOR TO CONFIRM SOIL HAS AT LEAST THE BEARING CAPACITY OUTLINED IN THRUST BLOCK TABLES.
- CONCRETE MUST NOT SPILL OVER SOCKET JOINTS.
- A PROTECTIVE MEMBRANE TO PROTECT ABRASIVE DAMAGE TO THE WATER MAIN SHOULD BE PROVIDED BETWEEN THE PIPE (IRRESPECTIVE OF THE PIPE MATERIAL) AND THE CONCRETE ANCHOR AND THRUST BLOCKS.
- CONCRETE MUST BE CURED FOR 72HRS (MINIMUM) PRIOR TO CHARGING THE PIPELINE.
- PROVIDE LAPS ONLY AT LOCATIONS SHOWN AND OF DIMENSIONS AS FOLLOWS UNLESS DETAILED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.

BAR SIZE	BAR WITH 300mm OR LESS DEPTH OF CONCRETE (40MPa) UNDER THE BAR	BAR WITH MORE THAN 300mm DEPTH OF CONCRETE (40MPa) UNDER THE BAR
N16	700	910
N20	900	1170
N24	1100	1430



Horizontal Thrust Block Summary Table								
Location	Type	Pipe Size	Applied Thrust Capacity (kN)	Bearing Capacity (kPa)	Min Area (m2)	H (m)	L (m)	Reinforcement
Manifold	Combined 90 Degree and Tee	DN375	292.3 + 206.7	50	-	2.1	4.01	Yes (Refer Detail)
TB3	Bend - 45°	DN375	163.5	50	3.27	1.25	2.62	NO
TB4	Valve/Tee	DN375	333.7	50	6.67	2.0	3.34	NO
TB5	Bend - 2x 45°	DN375	327.1	50	6.54	2.00	3.27	NO

INLINE THRUST BLOCKS											
LOCATION	TYPE	PIPE SIZE	APPLIED THRUST (kN)	BEARING CAPACITY (kPa)	MIN AREA (m ²)	BLOCK WIDTH (W)	TRENCH WIDTH (m)	A (m)	B (m)	C (m)	THICKNESS (m)
TB6	INLINE - DUAL PIPE	DN375 & DN250	310.0	50	6.20	2.76	1.570	0.6	2	1	0.6
TB7	INLINE	DN375	263.8	50	5.28	2.03	0.83	0.6	2.05	1	0.6



D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE

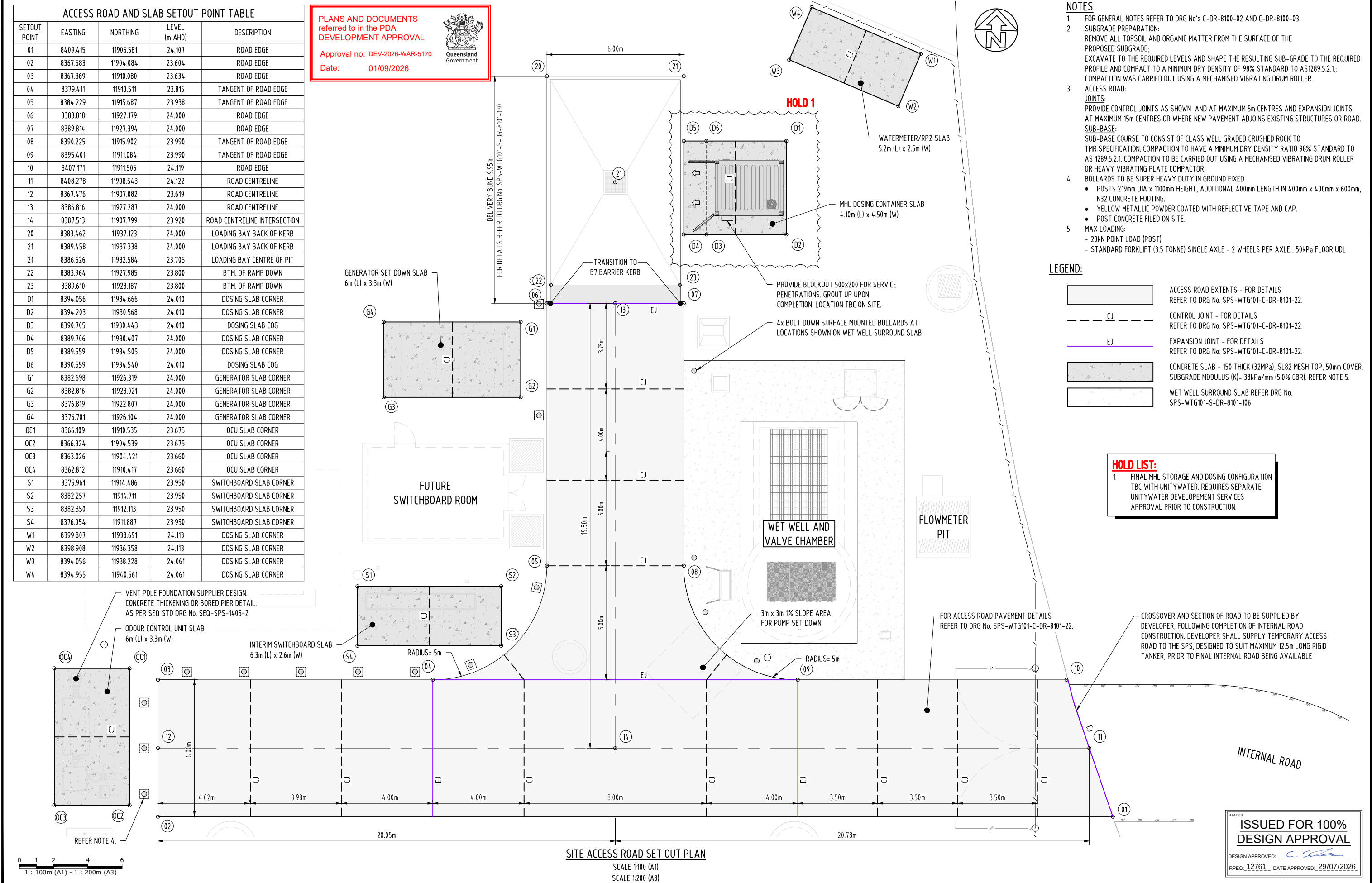
ACCESS ROAD AND SLAB SETOUT POINT TABLE				
SETOUT POINT	EASTING	NORTHING	LEVEL (m AHD)	DESCRIPTION
01	8409.415	11905.581	24.107	ROAD EDGE
02	8367.583	11904.084	23.604	ROAD EDGE
03	8367.369	11910.080	23.634	ROAD EDGE
04	8379.411	11910.511	23.815	TANGENT OF ROAD EDGE
05	8384.229	11915.687	23.938	TANGENT OF ROAD EDGE
06	8383.818	11927.179	24.000	ROAD EDGE
07	8389.814	11927.394	24.000	ROAD EDGE
08	8390.225	11915.902	23.990	TANGENT OF ROAD EDGE
09	8395.401	11911.084	23.990	TANGENT OF ROAD EDGE
10	8407.171	11911.505	24.119	ROAD EDGE
11	8408.278	11908.543	24.122	ROAD CENTRELINE
12	8367.476	11907.082	23.619	ROAD CENTRELINE
13	8386.816	11927.287	24.000	ROAD CENTRELINE
14	8387.513	11907.799	23.920	ROAD CENTRELINE INTERSECTION
20	8383.462	11937.123	24.000	LOADING BAY BACK OF KERB
21	8389.458	11937.338	24.000	LOADING BAY BACK OF KERB
22	8386.626	11932.584	23.705	LOADING BAY CENTRE OF PIT
23	8383.964	11927.985	23.800	BTM. OF RAMP DOWN
24	8389.610	11928.187	23.800	BTM. OF RAMP DOWN
D1	8394.056	11934.666	24.010	DOSING SLAB CORNER
D2	8394.203	11930.568	24.010	DOSING SLAB CORNER
D3	8390.705	11930.443	24.010	DOSING SLAB COG
D4	8389.706	11930.407	24.000	DOSING SLAB CORNER
D5	8389.559	11934.505	24.000	DOSING SLAB CORNER
D6	8390.559	11934.540	24.010	DOSING SLAB COG
G1	8382.698	11926.319	24.000	GENERATOR SLAB CORNER
G2	8382.816	11923.021	24.000	GENERATOR SLAB CORNER
G3	8376.819	11922.807	24.000	GENERATOR SLAB CORNER
G4	8376.701	11926.104	24.000	GENERATOR SLAB CORNER
OC1	8366.109	11910.535	23.675	OCU SLAB CORNER
OC2	8366.324	11904.539	23.675	OCU SLAB CORNER
OC3	8363.026	11904.421	23.660	OCU SLAB CORNER
OC4	8362.812	11910.417	23.660	OCU SLAB CORNER
S1	8375.961	11914.486	23.950	SWITCHBOARD SLAB CORNER
S2	8382.257	11914.711	23.950	SWITCHBOARD SLAB CORNER
S3	8382.350	11912.113	23.950	SWITCHBOARD SLAB CORNER
S4	8376.054	11911.887	23.950	SWITCHBOARD SLAB CORNER
W1	8399.807	11938.691	24.113	DOSING SLAB CORNER
W2	8398.908	11936.358	24.113	DOSING SLAB CORNER
W3	8394.056	11938.228	24.061	DOSING SLAB CORNER
W4	8394.955	11940.561	24.061	DOSING SLAB CORNER

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026

Queensland Government



A1	REVISIONS			DRAWN			CHECKED			PASSED			INITIALS			DATE		
	DATE	REVISIONS		DRAWN	CHECKED	PASSED												
	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS												
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026									
			B	23.06.2026	RE-ISSUED FOR TENDER		JW	LJ	CS	CHECKED	LJ	29.07.2026						
			A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW		JW	LJ	CS	PASSED	CS	29.07.2026						
			INDEX	DATE	REVISIONS		DRAWN	CHECKED	PASSED		INITIALS	DATE						

tonkin

tonkin.com.au



Stockland



Unitywater

Unitywater

SPS-WTG101

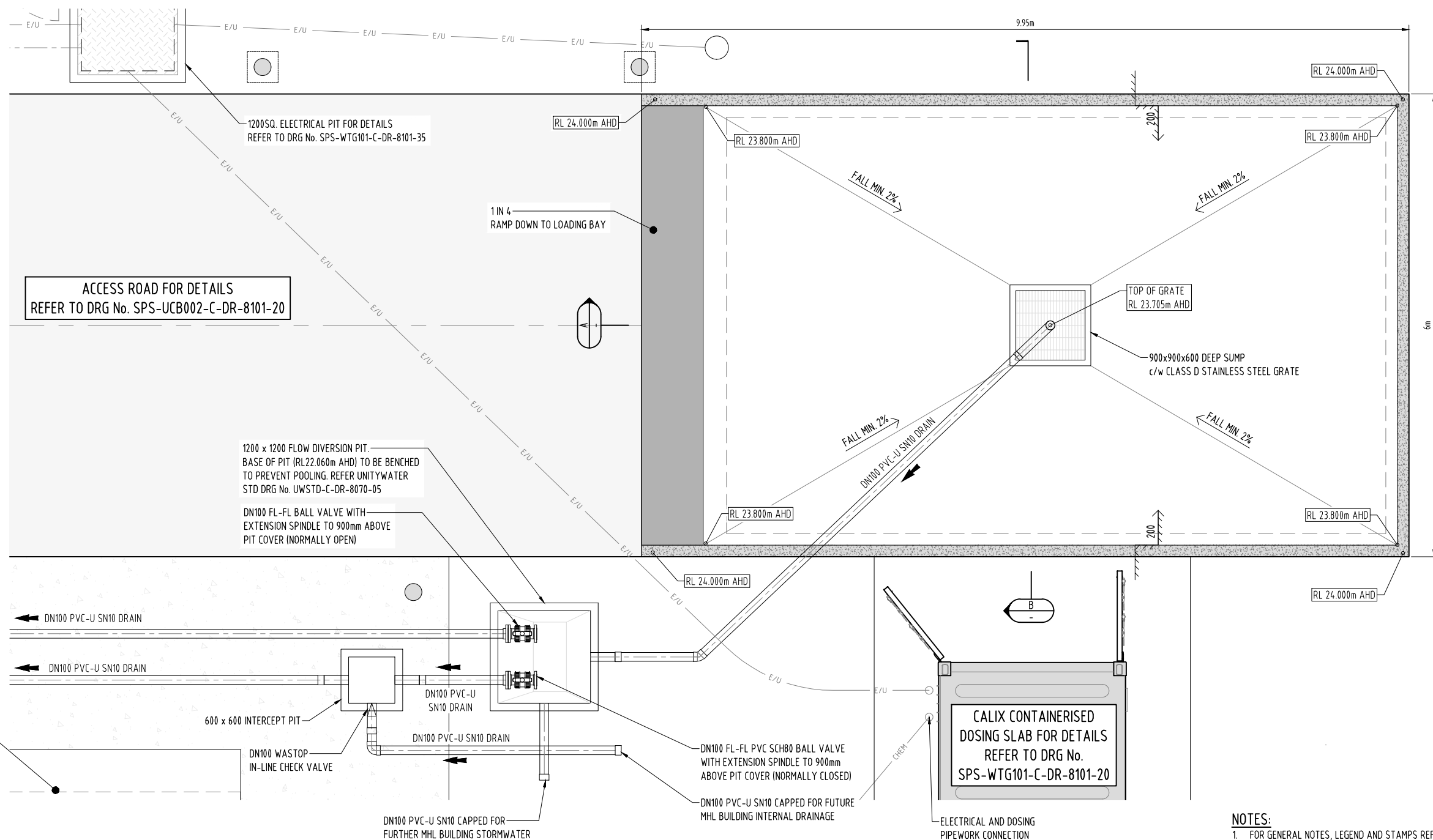
RIVERMONT BOULEVARD WTG101 SPS FACILITY

SEWAGE PUMP STATION

ACCESS ROAD AND CONCRETE SLAB LAYOUT PLAN

SHEET 1 OF 1 SHEETS		SCALE AS SHOWN	
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE		C	
DRAWING NO.		SPS-WTG101-C-DR-8101-20	



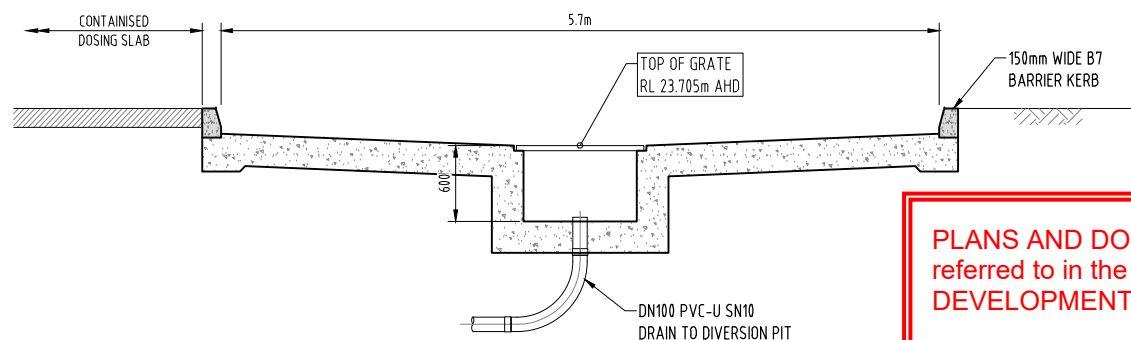


DELIVERY BUND LAYOUT PLAN

SCALE 1:30 (A1)
SCALE 1:60 (A3)

NOTES:

- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03, SPS-WTG101-C-DR-8100-04 & SPS-WTG101-C-DR-8100-05.
- FOR SETOUT CO-ORDINATES, REFER TO DRG. No. SPS-WTG101-C-DR-8101-50.
- FOR DELIVERY BUND STRUCTURAL DETAILS REFER TO DRG No. SPS-WTG101-S-DR-8101-109.
- B7 BARRIER KERB SHALL BE PAINTED YELLOW. COATING TO UNITYWATER SPECIFICATIONS.



CHEMICAL TANKER DELIVERY BUND - SECTION

SECTION B
SCALE 1: 30

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



CHEMICAL TANKER DELIVERY BUND - SECTION

SECTION A
SCALE 1: 30



A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS 29.07.2026



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
DELIVERY BUND LAYOUT AND DETAILS

SHEET 1 OF 1 SHEETS

REVISION DATE 29.07.2026

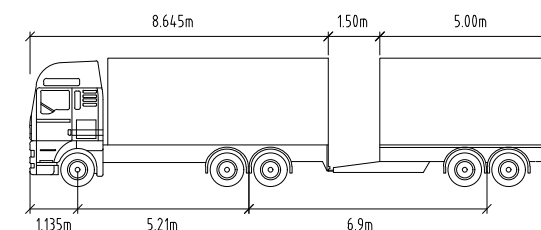
DISCIPLINE CODE C

DRAWING NO.

SPS-WTG101-C-DR-8101-23

SCALE AS SHOWN

REVISION D



	meters	
Truck Width	: 2.50	Trailer Width : 2.50
Truck Track	: 2.50	Trailer Track : 2.50
Lock to Lock Time	: 6.0	Articulating Angle : 70.0
Steering Angle	: 35.6	

	VEHICLE FORWARD PATH
	VEHICLE REVERSE PATH
	VEHICLE PATH CENTERLINE
	VEHICLE BODY EXTENTS
	VEHICLE TIRE PATH EXTENTS



SCALE 1:100 (A1)
SCALE 1:200 (A3)

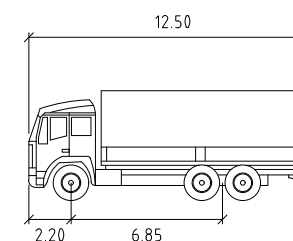
0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

A1	E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
	C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
	B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
	A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
SERVICE VEHICLE WITH TRAILER TURNING PATH DETAILS

SHEET 1 OF 1 SHEETS		SCALE AS SHOWN	
REVISION DATE	29.07.2026	REVISION	E
DISCIPLINE CODE	C		
DRAWING NO. SPS-WTG101-C-DR-8101-25			



	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

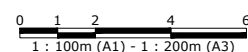
	VEHICLE FORWARD PATH
	VEHICLE REVERSE PATH
	VEHICLE PATH CENTERLINE
	VEHICLE BODY EXTENTS
	VEHICLE TIRE PATH EXTENTS

NOTE:
CALIX MHL DELIVERY VEHICLE, SMALLER (10.140m) AND IS
UNITYWATERS PREFERRED DOSING DELIVERY VEHICLE.

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



SCALE 1:100 (A1)
SCALE 1:200 (A3)



A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS				tonkin tonkin.com.au Stockland Unitywater	Unitywater SPS-WTG101 RIVERMONT BOULEVARD WTG101 SPS FACILITY SEWAGE PUMP STATION 12.5M RIGID SERVICE VEHICLE TURNING PATH DETAILS	SHEET 1 OF 1 SHEETS	SCALE AS SHOWN
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026			REVISION DATE 29.07.2026	REVISION D
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026			DISCIPLINE CODE C	
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026			DRAWING NO.	
			REVISIONS	JW	LJ	CS						SPS-WTG101-C-DR-8101-26	
	INDEX	DATE		DRAWN	CHECKED	PASSED	INITIALS	DATE					



EMERGENCY STORAGE TANK FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8500-01.

EMERGENCY STORAGE
TANK INTERIM STAGE

FUTURE SWITCHROOM
ULTIMATE STAGE

Ø4.5m WET WELL

Ø4.5m WET WELL. FOR DETAILS
REFER TO DRG No. C-DR-8101-05

EMERGENCY OVERFLOW HEADWALL. FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8600-01

OD630 PE100 SDR21

OD630 PE100 SDR21

OD630 PE100 SDR21

EMERGENCY OVERFLOW SCREEN CHAMBER. FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8600-01

DN1800 EMERGENCY STORAGE MAINTENANCE
HOLE. FOR BENCHING AND COVER DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8101-31.

DN1800 COLLECTOR MAINTENANCE HOLE.
FOR BENCHING AND COVER DETAILS REFER
TO DRG No. SPS-WTG101-C-DR-8101-31

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



PROPOSED BASIN
(BY OTHERS)

MAINTENANCE HOLE MH01/01
(REFER KN GROUP DRG 24-288-07) BY OTHERS.
PROVIDE 10m STUB WITH SANDBAG
TRENCHSTOP FOR TIE IN WORKS.

LIMIT OF CONTRACT

GRAVITY SEWER LAYOUT PLAN

SCALE 1:75 (A1)
SCALE 1:150 (A3)

NOTE:

- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03 AND SPS-WTG101-C-DR-8100-04.
- FOR >6m DEEP MAINTENANCE HOLE STRUCTURAL DETAILS REFER DRG. No. SPS-WTG101-S-DR-8101-105.
- FOR LONGITUDINAL SECTIONS REFER TO DRG. No. C-DR-8101-32

STATUS

ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED:

RPEQ 12761 DATE APPROVED: 29/07/2026

0 0.75 1.5 3 4.5
1 : 75m (A1) - 1 : 150m (A3)

A1

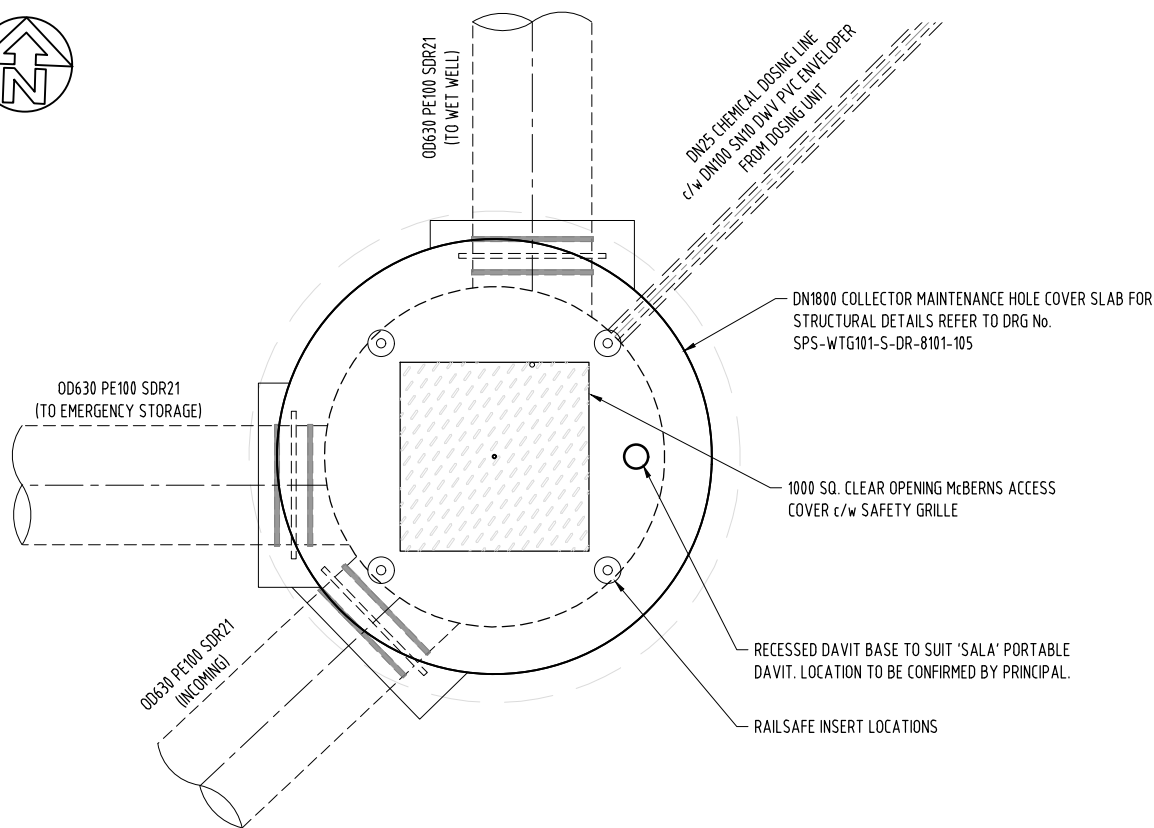
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

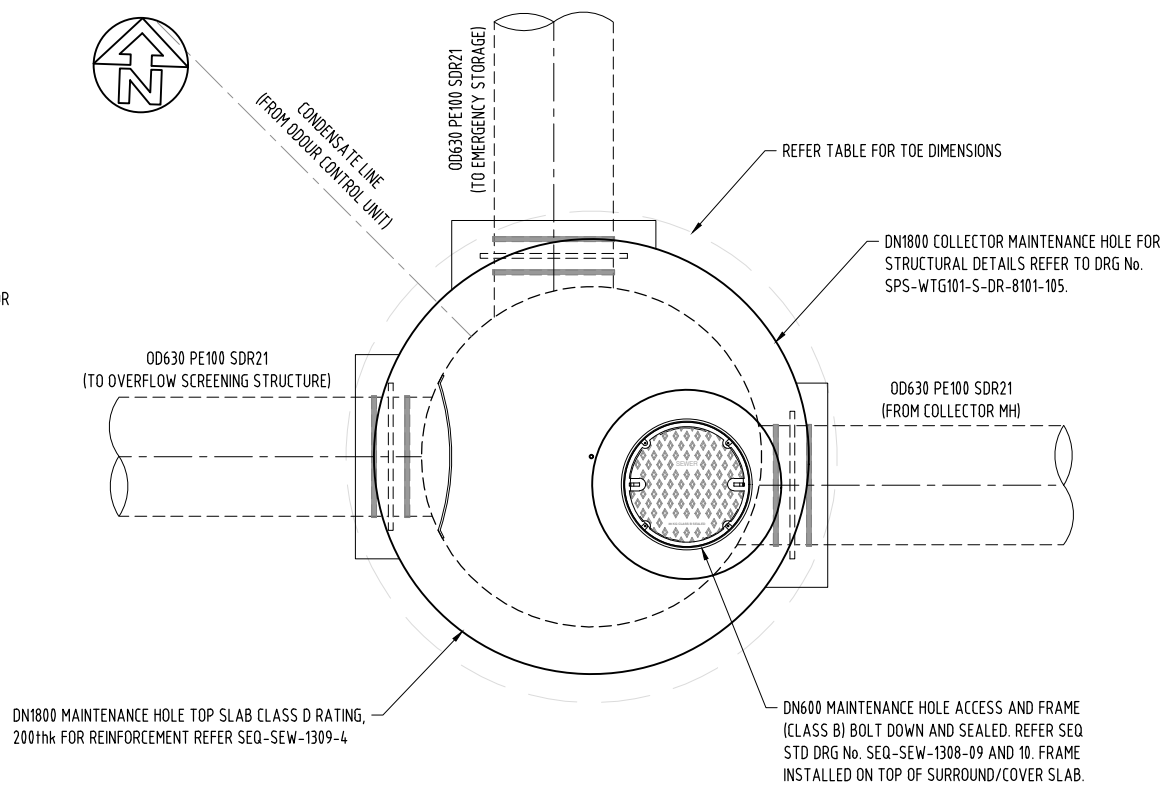
SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
SEWER GRAVITY MAIN LAYOUT

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION D	
DISCIPLINE CODE C		
DRAWING NO.		
SPS-WTG101-C-DR-8101-30		



COLLECTOR MAINTENANCE HOLE (CM/1) DETAILS
(WITH COVER SLAB)

SCALE 1:75 (A1)
SCALE 1:150 (A3)



EMERGENCY STORAGE MAINTENANCE HOLE (1/2) DETAILS
(WITH COVER SLAB)

SCALE 1:75 (A1)
SCALE 1:150 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

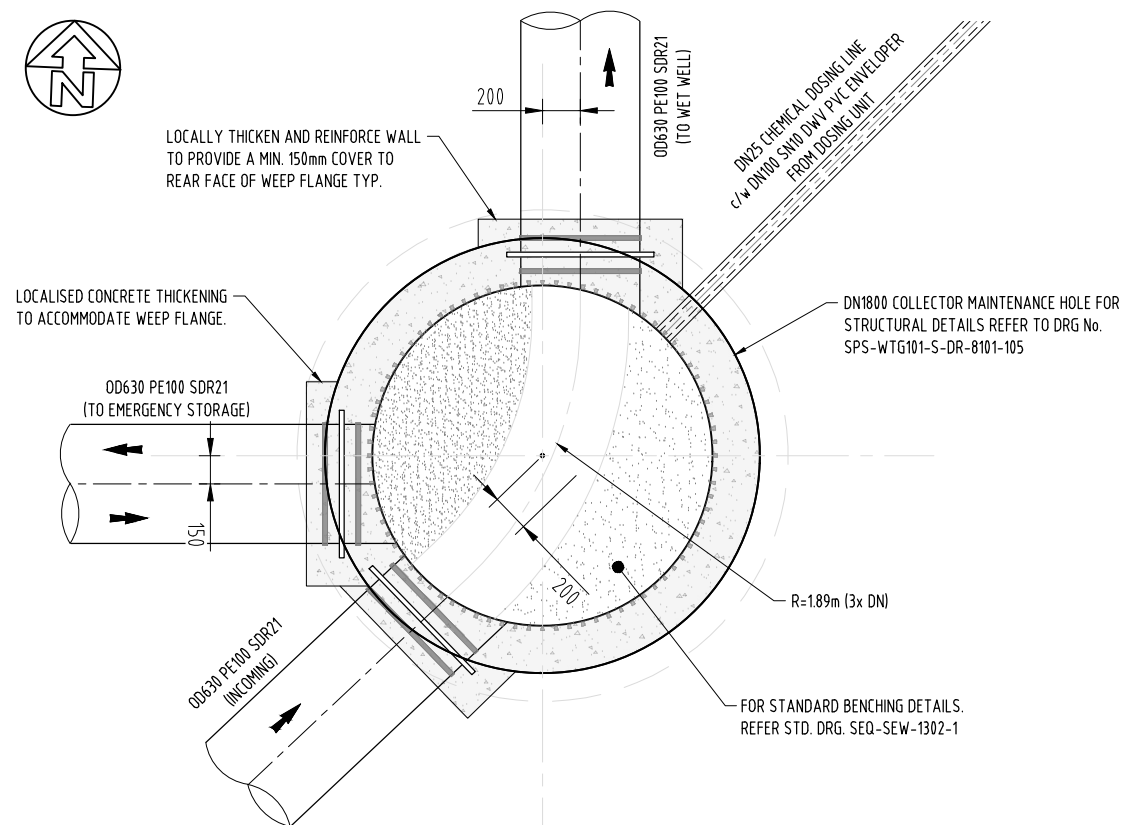
Date: 01/09/2026



MAINTENANCE HOLE DETAILS				
MAINTENANCE HOLE	WALL THICKNESS (mm)	BASE THICKNESS (mm)	TOE (mm)	BASE DIA (mm)
COLLECTOR (CM/1)	250	300	150	2660
EMERGENCY STORAGE (2/1)	250	300	150	2660

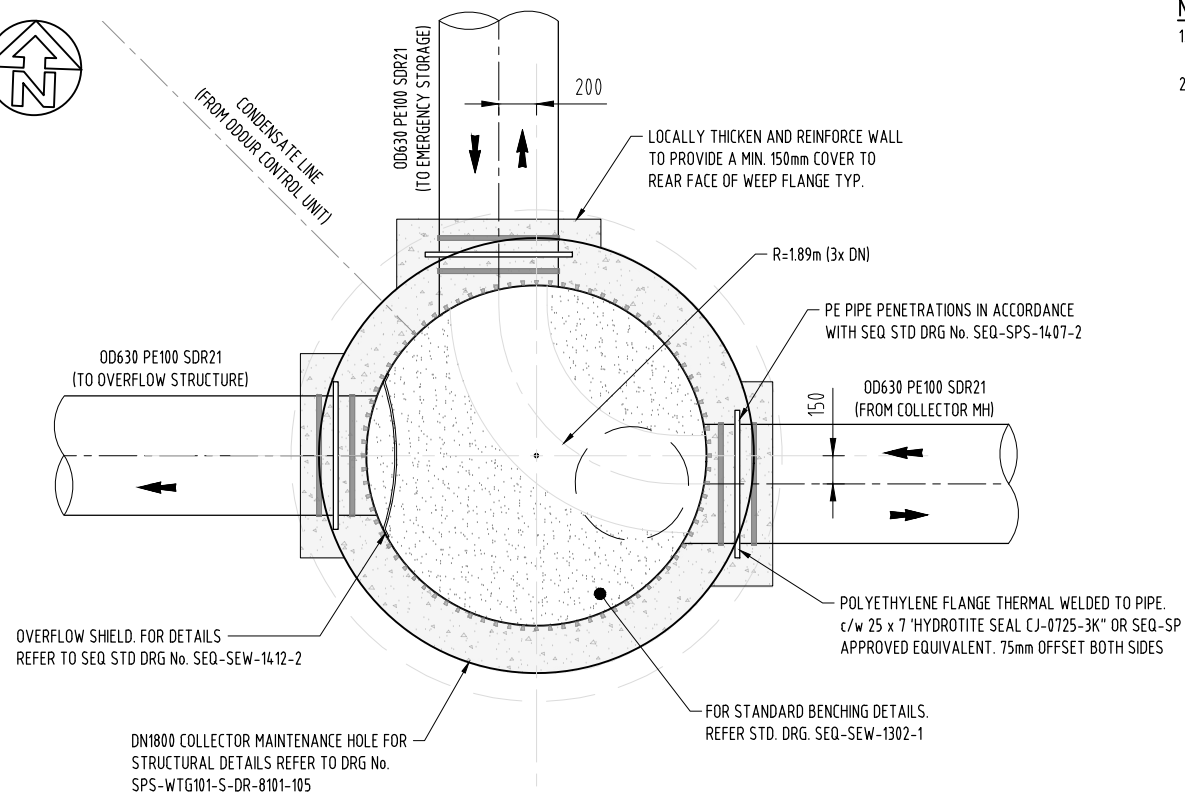
NOTES:

- WHERE MAINTENANCE COVER INSTALLED ADJACENT TO ROAD, 10mm ABELFLEX TO BE INSTALLED BETWEEN STRUCTURES.
- FOR PVC PIPE ENTRY TO MAINTENANCE HOLE, SEAL PE LINER TO PIPE USING PIPE BOAT, IN ACCORDANCE WITH SEQ-SPS-1407-2.



COLLECTOR MAINTENANCE HOLE (CM/1) DETAILS
(WITH COVER SLAB REMOVED)

SCALE 1:75 (A1)
SCALE 1:150 (A3)



EMERGENCY STORAGE MAINTENANCE HOLE (1/2) DETAILS
(WITH COVER SLAB REMOVED)

SCALE 1:75 (A1)
SCALE 1:150 (A3)

0 0.75 1.5 3 4.5
1 : 75m (A1) - 1 : 150m (A3)

STATUS	
ISSUED FOR 100% DESIGN APPROVAL	
DESIGN APPROVED: <i>C. S.</i>	
RPEQ_12761	DATE APPROVED: 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS 29.07.2026



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
SEWER GRAVITY MAIN DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION D	
DISCIPLINE CODE C		
DRAWING NO.		
SPS-WTG101-C-DR-8101-31		

CM/1	1/2	ES/2
S*	S*	EMERGENCY STORAGE TANK
B	B (BD)	
GM01	OF01	-
A (2.65)	2.65	A

OUT	OF	1/2
		0.71

STRUCTURE TYPE	
G	900Ø CONCRETE LOCATED IN ROADS, FOOTPATHS OR LOTS. DEPTH=3.00m
F	1200Ø CONCRETE LOCATED IN ROADS OR LOTS. 3.00m<DEPTH<4.25m
X	1200Ø CONCRETE LOCATED IN ROADS OR LOTS. DEPTH<4.25m
S	DN1800 CAST IN-SITU IN ACCORDANCE WITH DRG NO. SPS-WTG101-S-DR-8101-105.

STRUCTURE COVER TYPE	
B	NON-TRAFFICABLE
D	TRAFFICABLE
D(BD)	TRAFFICABLE WITH BOLT DOWN

MAINTENANCE HOLE DROP TYPE	
A	FALL THROUGH MH
C	OBLIQUE 45° BACKDROP
D	EXTERNAL BACKDROP

1. REFER TO KNGROUP DRAWINGS FOR DETAILS OF MH 1/1 AND U/S NETWORK.
2. PE LINING OF WALLS TO TERMINATE AT THE TOP OF BASE LEVEL.

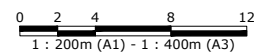
[illegible][illegible]

GM01



Queensland
Government

SCALE 1:200 (A1)
SCALE 1:400 (A3)



D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	DATE	INITIALS	DATE



SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
SEWER GRAVITY MAIN LONGITUDINAL SECTIONS

SHEET 1 OF 1	SHEETS	SCALE	AS SHOWN
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE		C	
DRAWING NO.			
SPS-WTG101-C-DR-8101-32			



DELIVERY BUND FOR MHL DOSING FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8101-23

TEMPORARY GENERATOR SETDOWN SLAB (6.0m x 3.3m) FOR
SLAB DETAILS REFER DRG No. SPS-WTG101-C-DR-8101-20.

LIGHT POLE

TEMPORARY
GENERATOR
SETDOWN SLAB

SHORT SECTIONS OF ELECTRICAL CONDUITS
TO BE SEALED/CAPPED FOR FUTURE USE.

ANTENNA POLE

FUTURE SWITCHROOM
ULTIMATE STAGE

EMERGENCY STORAGE
TANK INTERIM STAGE

QUICK DISCONNECT BOX

Ø4.5m WET WELL

FLOWMETER PIT

SWITCHBOARD ON A 2.6m x 6.3m CONCRETE SLAB.
FOR SLAB DETAILS REFER DRG No. SPS-WTG101-C-DR-8101-20.

DUE TO POTENTIAL HIGH WATER TABLE PITS
SHALL BE 150thk WALLS, 150thk BASE AND
HAVE A TOE OF 100mm.

ELECTRICAL PIT SIZES

PIT No.	ITEM	DEPTH (mm)	EASTING	NORTHING	PIT COVER LEVEL
JB01	1200sq.	1500	8404.229	11902.494	24.03
JB02	1200sq.	1325	8383.869	11901.765	23.76
JB03	1200sq.	1050	8383.157	11920.488	23.96
JB04	1200sq.	1090	8383.276	11917.144	23.95

NOTE: SET OUT POINTS ARE TO CENTRE OF ELECTRICAL PITS.

NOTES:

- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03, SPS-WTG101-C-DR-8100-04 & SPS-WTG101-C-DR-8100-05.
- ELECTRICAL CONDUITS SHALL HAVE 600mm MIN. COVER.
- REFER ELECTRICAL CONDUIT DRAINAGE LONGSECTIONS ON DRG. No. SPS-WTG101-C-DR-8101-37.
- REFER TYPICAL CONDUIT TRENCH DETAILS ON DRG. No. SPS-WTG101-C-DR-8101-36.
- CONDUITS SHALL BE:
 - POWER, CONTROL AND INSTRUMENTATION - ORANGE HEAVY DUTY PVC-U.
 - COMMUNICATIONS - WHITE PVCu, CLASS 9 OR SIMILAR.
- ALL PITS SHALL BE PRECAST CONCRETE AND RPEQ CERTIFIED BY THE SUPPLIER TO COMPLY WITH Pr9380 AND BE SUITABLE FOR WHEEL LOADS (CLASS B). LIDS SHALL HAVE ALUMINIUM COVERS MARKED 'ELECTRICAL' UNO.
- PROVIDE MECHANICAL PROTECTION AND MARKER TAPE TO CONDUITS, IN ACCORDANCE WITH Pr9380.
- SITE RUN SMALL DIAMETER CONDUITS TO TANK LOCATIONS UNDER SLAB, IN ACCORDANCE WITH MHL BUILDING MECHANICAL LAYOUT.
- ALL CONDUIT ENTRY AND EXIT AT PITS SHALL HAVE BELLMOUTHS FITTED.
- MINIMUM CONDUIT DEFLECTION RADIUS SHALL BE 150 TIMES CONDUIT DN.
- FOR CONDUIT NUMBER AND SEIZES REFER TO BRISBANE ELECTRICAL DRG No. SPS-WTG101-E-DR-9000-100.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



SEWAGE PUMPING STATION ELECTRICAL CONDUIT PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED: 29/07/2026

0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
ELECTRICAL CONDUIT LAYOUT PLAN

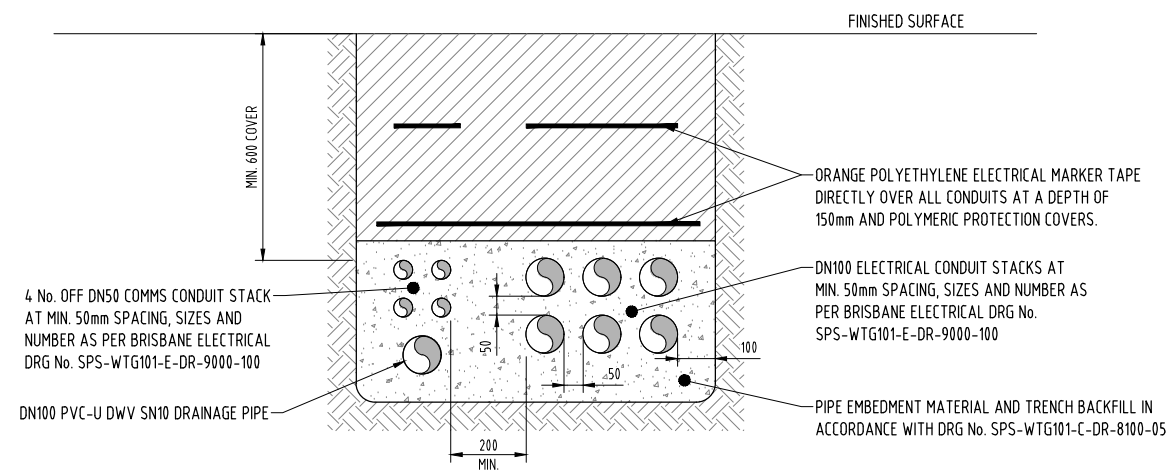
SHEET 1 OF 1 SHEETS SCALE AS SHOWN

REVISION DATE 29.07.2026 REVISION D

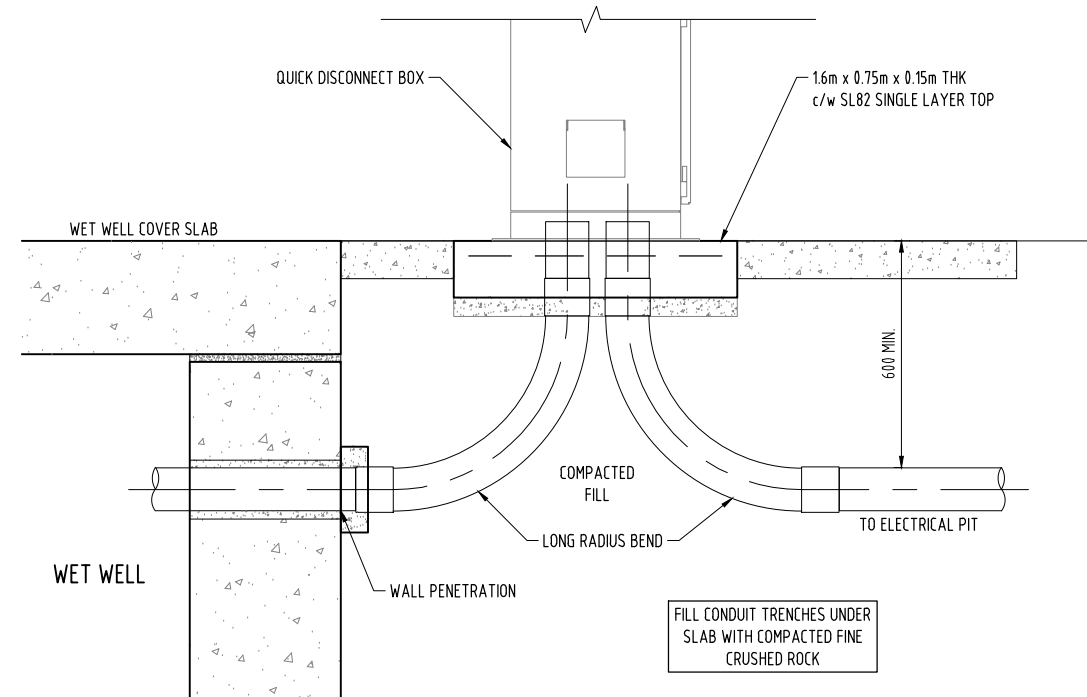
DISCIPLINE CODE C

DRAWING NO.

SPS-WTG101-C-DR-8101-35



TYPICAL ELECTRICAL CONDUIT TRENCH
(REFER DRG No. SPS-WTG101-E-DR-9000-100 FOR ACTUAL NUMBERS)
SCALE 1:10 (A1)
SCALE 1:20 (A3)



SECTION - ELECTRICAL CONDUIT TO WET WELL
SCALE 1:10 (A1)
SCALE 1:20 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



0 0.1 0.2 0.4 0.6
1 : 10m (A1) - 1 : 20m (A3)

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. S.*
RPEQ 12761 DATE APPROVED: 29/07/2026

A1

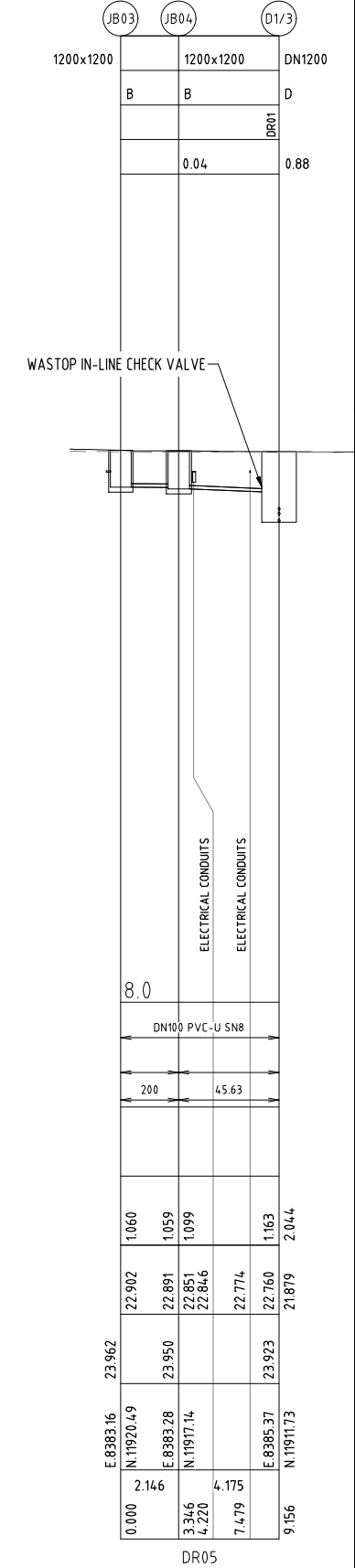
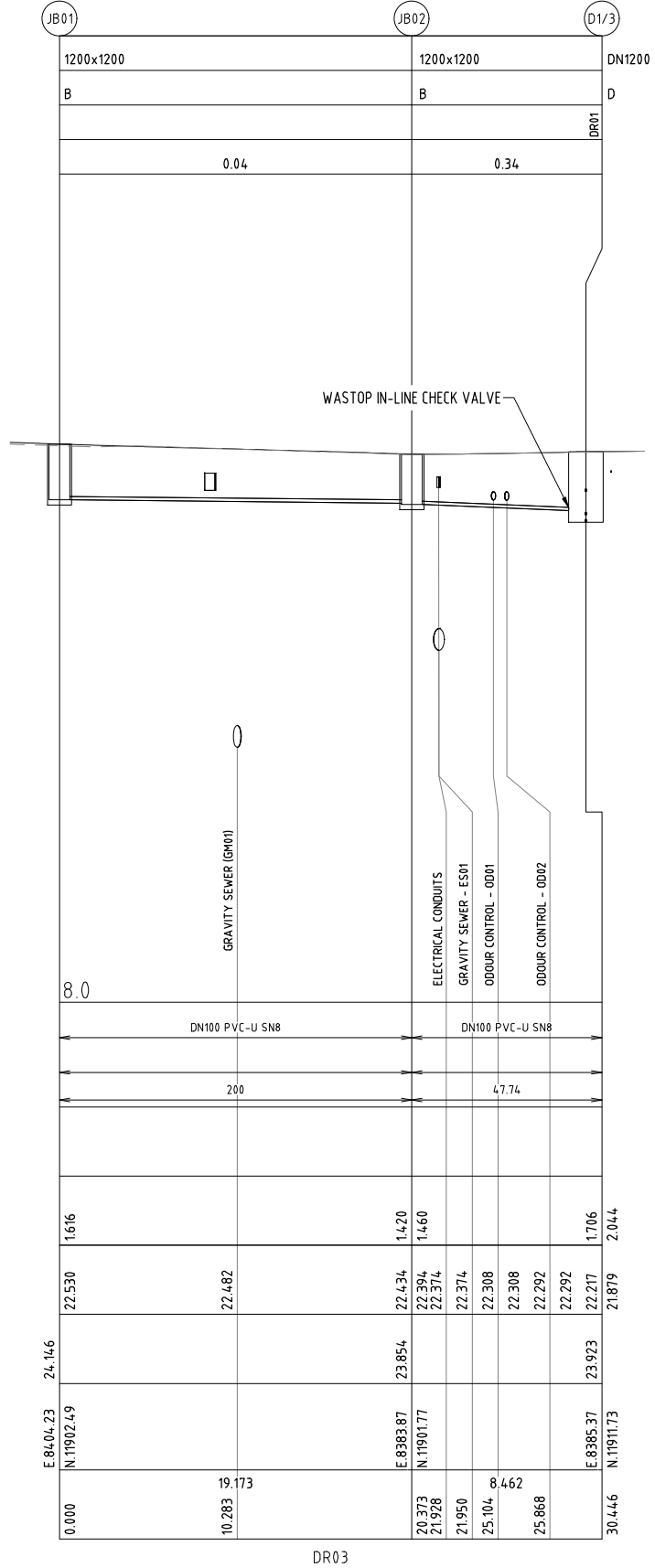
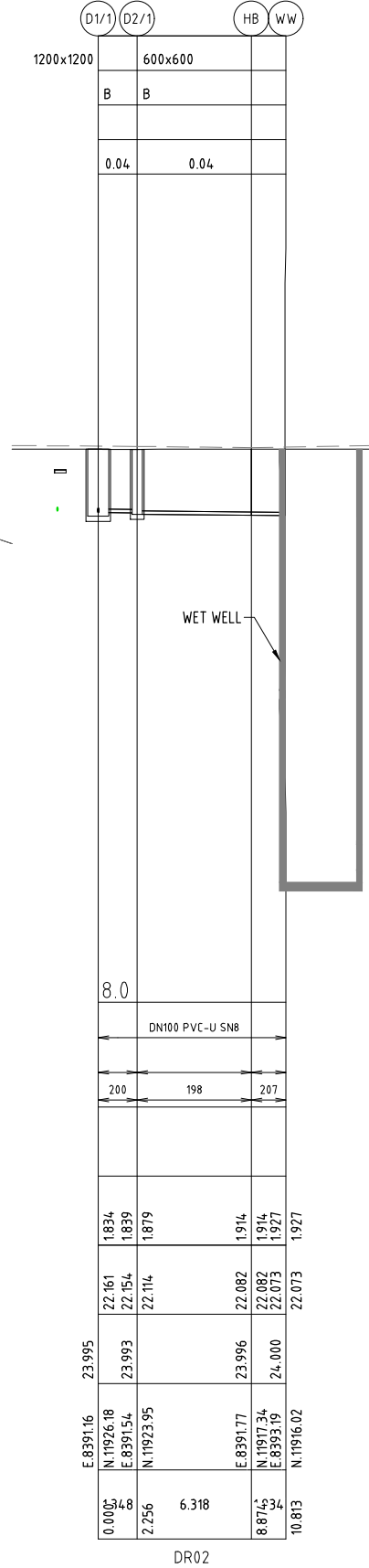
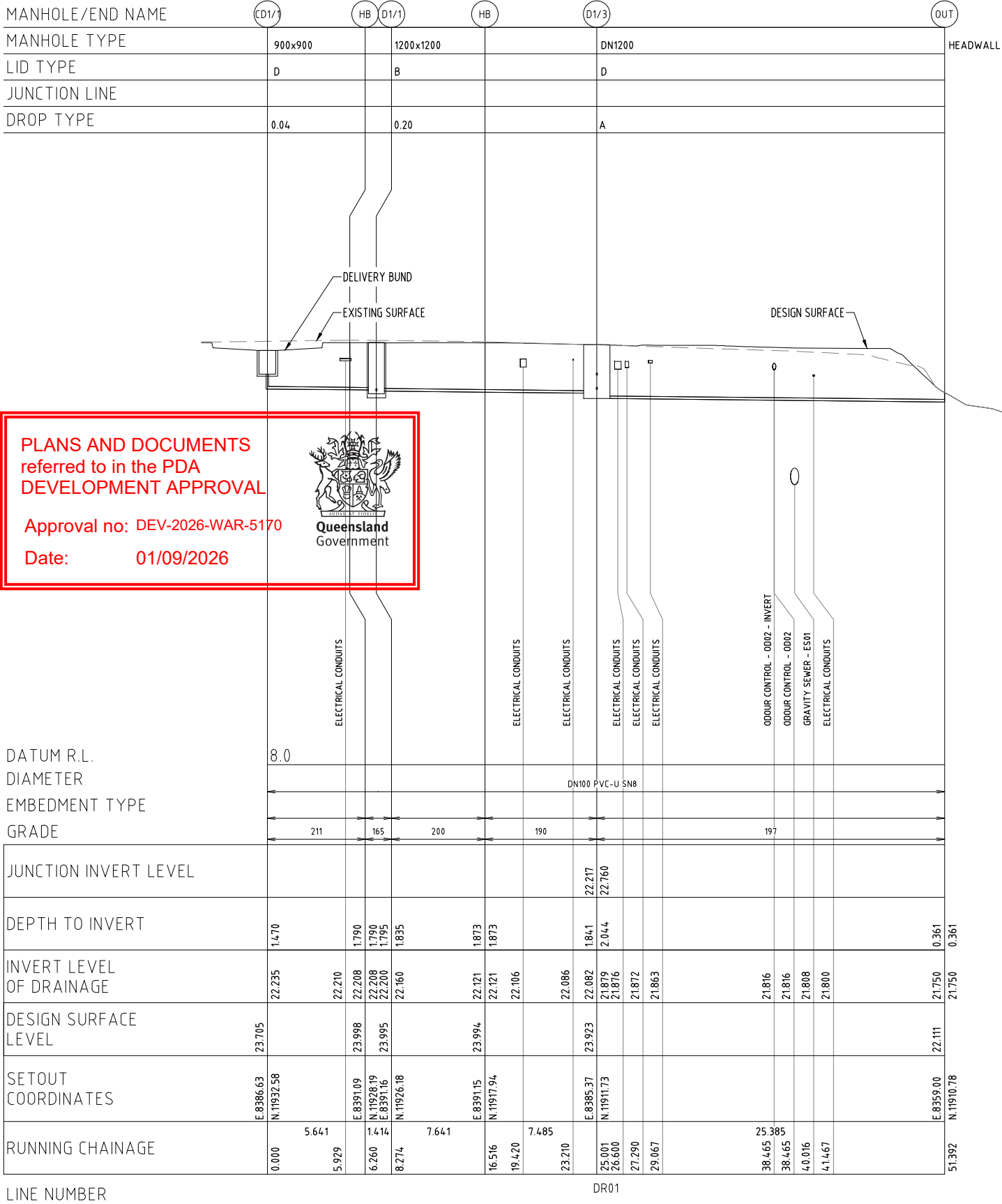
C	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

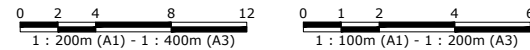
SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
ELECTRICAL PIT AND DRAINAGE LONGITUDINAL SECTIONS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION C
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-36	



NOTES:

1. REFER DRG No. C-DR-8101-35 AND C-DR-8101-40 FOR STRUCTURE NOTATIONS.



PIT DRAINAGE LONGITUDINAL SECTIONS

HORIZONTAL SCALE 1:200

VERTICAL SCALE 1:100

STATUS

ISSUED FOR 100% DESIGN APPROVAL

DESIGN APPROVED: C. S.

RPEQ 12761 DATE APPROVED 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
C	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	PASSED	CS 29.07.2026



tonkin.com.au



Stockland



Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
ELECTRICAL SERVICES TYPICAL DETAILS

SHEET 1 OF 1	SHEETS	SCALE	AS SHOWN
REVISION DATE	29.07.2026	REVISION	C
DISCIPLINE CODE	C		
DRAWING NO.	SPS-WTG101-C-DR-8101-37		



WATER SERVICE LINE - WM01 (OD125 PE100 SDR11)
GRADE= VARIES%
UPSTREAM IL= 23.233m AHD
DOWNSTREAM IL= 23.402m AHD

WATER OFF-TAKE CONNECTION FOR FUTURE
TANK WASH-OUT AND MAINTENANCE.
PROVIDE CAPPED TEE

WATER CONNECTION TO INTERNAL SPRAY BAR
ARRANGEMENT WITHIN EMERGENCY STORAGE TANK. FOR
DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8500-10

ZC3000 c/w FILTER EXTRACTION FAN (FIFSRB1200)
FOR BOTH INTERIM AND ULTIMATE TREATMENT.
REFER NOTE 2.

McBERNS ACRULOG
PPM AND PPB CABINET

CONDENSATE LINE - CON01 (DN25 PVC-U SCH80)
GRADE= 1.00%
PROVIDE WATER-FILLED U-TRAPS (300mm DEEP)
AT U/S END

ODOUR LINE - OD01 (DN225 SWJ PVC-U SN8)
GRADE= 1.00%

ODOUR LINE - OD02 (DN225 SWJ PVC-U SN8)
GRADE= 1.00%

ODOUR LINE - DOS01
(DN25 PE100 c/w DN100 SN10 DWV PVC ENVELOPER)
GRADE= 1.00%

0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

SEWAGE PUMPING STATION INTERNAL MINOR SERVICES LAYOUT PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

LEGEND:

OD	ODOUR CONTROL PIPEWORK
CHEM	CHEMICAL DOSING PIPEWORK
SW	STORMWATER DRAINAGE
D	DRAINAGE BETWEEN PROPOSED PITS
W	INCOMING WATER SUPPLY
CON	CONDENSATE LINE (DN25 PVC-U SCH80)
G	ANALYSER CABINET INLET & OUTLET H2S CONDUITS (DN32 PVC-U), TO MCBERNS REQUIREMENTS.
S	INCOMING GRAVITY SEWER REFER DRG No. SPS-WTG101-C-DR-8101-30
SRM	SEWER RISING MAIN REFER DRG No. SPS-WTG101-C-DR-8300 SERIES
E/U	UNDERGROUND ELECTRICAL CONDUITS REFER DRG No. SPS-WTG101-C-DR-8101-35
---	PROPOSED FENCELINE

NOTES:

- WASTOP INLINE CHECK VALVE (OR APPROVED EQUIVALENT) ENSURE DRAINAGE LINES FROM ELECTRICAL PITS HAVE MIN. 220mm FALL. FAN SHALL BE INSTALLED WITHIN AN ACOUSTIC ENCLOSURE 1000mm(L)x1000mm(W)x900mm(H). CONSTRUCTED OF MIN. 4mm ALUMINIUM SHEET (MIN. MASS 10.8kg/m²). c/w 50mm thk INSULATION (MIN 32kg/m³ MASS) ATTACHED TO ALL INSIDES OF ENCLOSURE CABINET. COVER TO HAVE A SINGLE ACOUSTIC LOURVE MIN 0.9m². VENT POLE DIA. TO SUIT DN225 VENT PIPE. OUTLET CONE DIA. 170mm FOR VELOCITY > 15m/s.
- H2S MONITORING SHALL BE PROVIDED IN ACCORDANCE WITH Pr10999.
- CONDENSATE LINE SHALL BE PROVIDED WITH MIN 300mm WATER TRAP HEIGHTS & GAS TIGHT INSPECTION PORT
- FINAL SLAB PENETRATIONS FOR ELECTRICAL, SAMPLING & CONDENSATE LINES TO BE CONFIRMED WITH OCU SUPPLIERS SHOP DRAWINGS.
- FOR SETOUT TABLES FOR MINOR SERVICES, REFER DRG No. C-DR-8101-41

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED: 29/07/2026

A1

E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	29.06.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
INTERNAL MINOR SERVICES LAYOUT

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-40	



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



DELIVERY BUND FOR MHL DOSING FOR DETAILS, SETOUT AND LEVELS
REFER TO DRG No. C-DR-8101-23 AND C-DR-8101-20.

SITE SETOUT POINT TABLE				
SETOUT POINT	EASTING	NORTHING	LEVEL (m AHD)	DESCRIPTION
01	8397.595	11922.469	24.000	WET WELL COVER SLAB CORNER
02	8397.942	11912.776	24.000	WET WELL COVER SLAB CORNER
03	8392.845	11912.593	24.000	WET WELL COVER SLAB CORNER
04	8392.498	11922.287	24.000	WET WELL COVER SLAB CORNER
05	8389.903	11924.896	23.990	SURROUND SLAB CORNER
06	8399.597	11925.243	23.990	SURROUND SLAB CORNER
07	8400.098	11911.252	23.990	SURROUND SLAB CORNER
30	8375.943	11914.985	23.948	ELECTRICAL MAST
40	8365.589	11903.512	23.785	CORNER OVERFLOW CHAMBER
41	8365.650	11901.813	23.785	CORNER OVERFLOW CHAMBER
42	8363.651	11901.742	23.785	CORNER OVERFLOW CHAMBER
43	8363.590	11903.441	23.785	CORNER OVERFLOW CHAMBER
50	8405.782	11911.956	REFER NOTE 2	FENCE GATE
51	8406.033	11904.960	REFER NOTE 2	FENCE GATE
52	8406.156	11901.512	REFER NOTE 2	FENCE CORNER
53	8364.334	11900.015	REFER NOTE 2	FENCE CORNER
54	8360.323	11903.074	REFER NOTE 2	FENCE CORNER
55	8360.128	11908.510	REFER NOTE 2	FENCE CORNER
56	8358.864	11944.720	REFER NOTE 2	FENCE CORNER
57	8383.536	11945.603	REFER NOTE 2	FENCE CORNER
58	8389.616	11942.886	REFER NOTE 2	FENCE CORNER
59	8401.198	11938.422	REFER NOTE 2	FENCE CORNER
60	8402.505	11929.020	REFER NOTE 2	FENCE CORNER
61	8404.556	11919.591	REFER NOTE 2	FENCE CORNER
62	8405.639	11915.966	REFER NOTE 2	FENCE CORNER
80	8410.643	11901.823	24.250	TOP BATTER
81	8365.327	11900.201	23.638	TOP BATTER
82	8362.500	11902.357	23.620	TOP BATTER
83	8362.207	11910.538	23.538	TOP BATTER
84	8362.132	11912.644	23.500	TOP BATTER
85	8361.097	11941.548	23.838	TOP BATTER
86	8390.624	11942.605	24.134	TOP BATTER
E1	8373.920	11919.554	23.920	EMERGENCY STORAGE TANK ROOF CORNER
E2	8374.135	11913.558	23.920	EMERGENCY STORAGE TANK ROOF CORNER
E3	8365.141	11913.236	23.920	EMERGENCY STORAGE TANK ROOF CORNER
E4	8364.926	11919.232	23.920	EMERGENCY STORAGE TANK ROOF CORNER
F1	8400.303	11919.314	24.150	FM PIT CORNER
F2	8402.702	11919.400	24.150	FM PIT CORNER
F3	8402.798	11916.701	24.150	FM PIT CORNER
F4	8400.400	11916.616	24.150	FM PIT CORNER
H1	8351.198	11902.147	21.698	EMERGENCY OVERFLOW HEADWALL
H2	8359.000	11910.780	21.750	DRAINAGE HEADWALL
M1	8395.514	11903.733	24.000	CENTRE COLLECTOR MH
M2	8370.816	11902.849	23.475	CENTRE MH 1/2
QD	8392.074	11915.117	24.000	QUICK DISCONNECT BOX
S1	8401.428	11928.440	24.150	SCOUR/BYPASS PIT CENTRE
V1	8399.170	11913.180	24.000	VENT CENTRE
VP	8363.777	11910.001	23.675	CENTRE OF VENT POLE
WW	8395.302	11915.233	24.000	WET WELL CENTRE

- NOTE:
- FOR ACCESS ROAD SET OUT AND LEVELS
REFER TO DRG No. SPS-WTG101-C-DR-8101-20.
 - TIE IN WITH DEVELOPMENT SITE LEVELS AND
EXISTING LEVELS



0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

OVERALL SITE SETOUT PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

A1

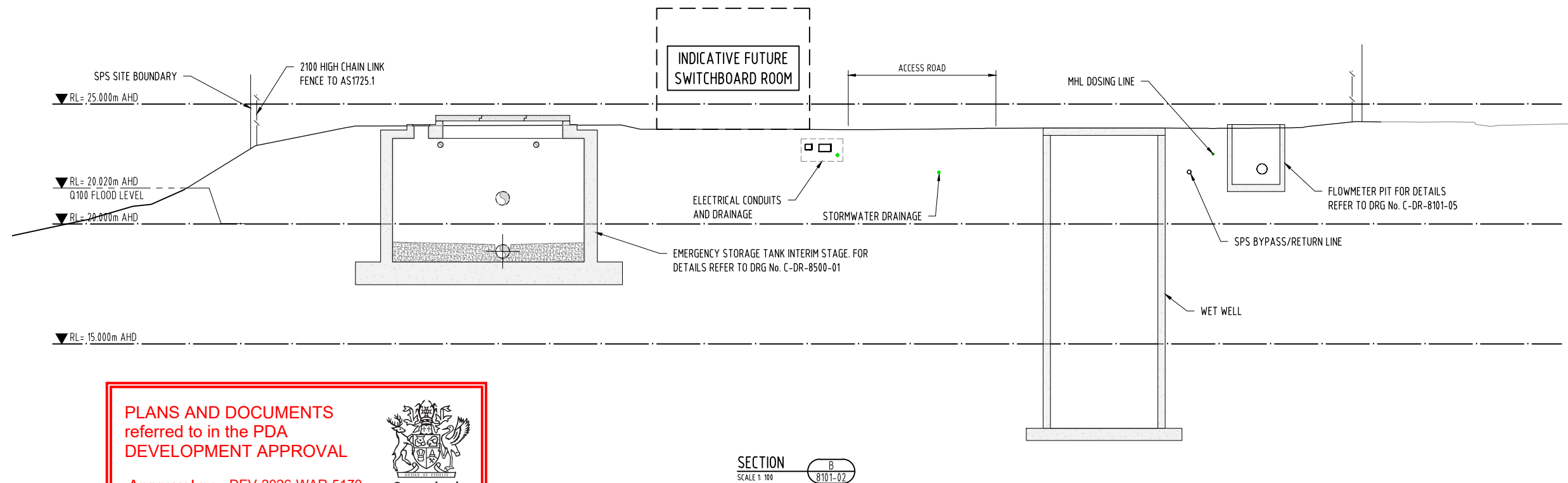
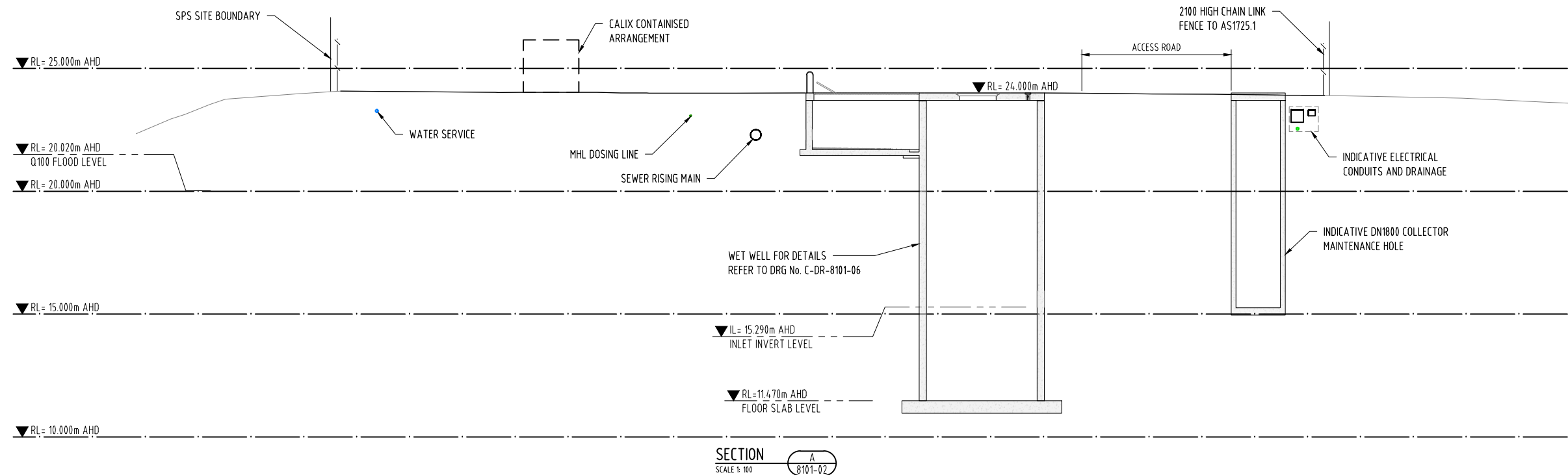
C	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE	



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
OVERALL SITE SETOUT PLAN

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION C
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-50	



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

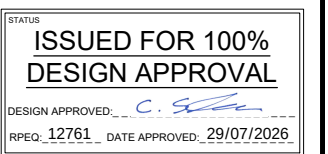
Date: 01/09/2026



0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

NOTES:

1. INTERNAL GRADING AND LEVELS TO BE CONFIRMED WITH KN GROUP.



A1

E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
B	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EARTHWORKS SECTIONS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-55	



LANDSCAPING NOTES:

1. REMOVE ANY TOPSOIL, DELETERIOUS, SOFT OR FIRM, WET OR HIGHLY COMPRESSIBLE SOILS OR MATERIALS RICH IN ORGANICS OR ROOT MATTER.
2. PROOF ROLL THE EXPOSED SUBGRADE BENEATH THE PROPOSED FILL PLATFORM WITH AT LEAST SIX PASSES OF A SMOOTH DRUM ROLLER WITH A MINIMUM STATIC WEIGHT OF 12 TONNES TO DETECT THE PRESENCE OF ANY SOFT OR LOOSE ZONES. THESE ZONES SHOULD BE EXCAVATED AND REPLACED WITH COMPACTED SELECT FILLING, AS APPROPRIATE.
3. PLACE APPROVED FILLING IN LAYERS NOT EXCEEDING 300mm LOOSE THICKNESS, WITH EACH LAYER COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% STANDARD WITHIN 2% OF OMC DURING AND AFTER COMPACTION. SUITABLE FILLING WOULD COMPRISE A LOW PLASTICITY CLEAN FILLING FREE OF UNSUITABLE MATERIALS AND WITH A MINIMUM CBR VALUE OF 5%.
4. SEAL OR COVER ANY COMPACTED CLAY FOUNDATION SOIL CLOSE TO ANY FOOTING FORMATION LEVELS WITH A MINIMUM 150mm OF SELECT GRANULAR FILL (MINIMUM CBR 15%) AS SOON AS PRACTICABLE, TO REDUCE THE OPPORTUNITY FOR OCCURRENCE OF DESICCATION AND CRACKING. UNDERTAKE 'LEVEL 1' INSPECTION AND TESTING, AS DETAILED IN AS3798-2007 (REF. 3), ON THE FILLING FOR PUMP STATION SETOUT COORDINATES REFER TO DRG No. SPS-UCB002-C-DR-8101-10.
5. 2100 HIGH CHAIN LINK SECURITY FENCE TO AS1725.1. PROVIDE CONCRETE MOWING STRIP UNDER SECURITY FENCE. STRIP TO BE 150mm MIN. WIDE, MIN. 200mm DEEP N32 CONCRETE.

ENSURE DRAINAGE THROUGH MOWING STRIP PROVIDED TO AVOID PONDING WHERE FENCELINE IS AT THE TOE OF A BATTER SLOPE. REFER TYPICAL FENCE DRAINAGE DETAIL ON DRG No. SPS-WTG101-C-DR-8100-05

300mm THICK ANGULAR CRUSHED ROCK MIN. SIZE (D50) TO BE 100mm. MAX. ROCK OF 250mm. ROCK PLACED ON AN OVERLAPPING GEOTEXTILE FILTER CLOTH (BIDIM A24 OR EQUIVALENT). MAX. BED SLOPE = 3.0% APPROX. 5.30m²

300mm THICK ANGULAR CRUSHED ROCK MIN. SIZE (D50) TO BE 100mm. MAX. ROCK OF 250mm. ROCK PLACED ON AN OVERLAPPING GEOTEXTILE FILTER CLOTH (BIDIM A24 OR EQUIVALENT). MAX. BED SLOPE = 3.0% APPROX. 15.8m²

PROPOSED LOT BOUNDARY

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



CRUSHED ROCK
PAVEMENT

ACCESS ROAD

ACCESS ROAD

CRUSHED ROCK
PAVEMENT

DELIVERY BUND FOR DETAILS REFER TO
DRG No. SPS-WTG101-C-DR-8101-23

SPS SURROUND SLAB FOR DETAILS
REFER TO DRG No. S-DR-8101-106

WET WELL AND VALVE CHAMBER FOR DETAILS
REFER TO C-DR-8101-09

LEGEND:

- PROPOSED PUMPING STATION FENCE (LENGTH APPROX. 165m)
- ACCESS ROAD (APPROX. 350m²) FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8101-22
- REINFORCED CONCRETE SURROUND/SLAB (APPROX. 197m²).
REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
- CRUSHED ROCK PAVEMENT c/w WEEDMAT (APPROX. 1240m²)
REFER DETAIL ON DRG No. SPS-WTG101-C-DR-8100-05

0 1 2 4 6
1 : 100m (A1) - 1 : 200m (A3)

SPS PAD AND LANDSCAPING PLAN

SCALE 1:100 (A1)

SCALE 1:200 (A3)

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ_12761 DATE APPROVED: 29/07/2026

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



tonkin.com.au



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
LANDSCAPING AND PAVEMENT DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8101-60	



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



EASEMENTS FOR DRAINAGE PIPELINES AND HEADWALLS

PROPOSED SEWAGE PUMPING
STATION SPS-WTG101

TOTAL SPS EASEMENT AREA
1973.28m²

EASEMENT AND LOT SETOUT POINT
EASTING = 8411.006 NORTHING = 11901.436

ENERGEX TRANSFORMER LOT - FOR EASEMENT
DETAILS REFER KN GROUP DRAWINGS.

EASEMENT AND LOT SETOUT POINT
EASTING = 8359.903 NORTHING = 11907.810

TOTAL EASEMENT AREA
44.70m²

EASEMENT AND LOT SETOUT POINT
EASTING = 8359.982 NORTHING = 11905.613

TOTAL EASEMENT AREA
103.46m²

EASEMENT PLAN INSET

SCALE 1:100 (A1)
SCALE 1:200 (A3)

LOT LAYOUT PLAN

SCALE 1:150 (A1)
SCALE 1:300 (A3)

LEGEND



PROPOSED SPS LOT - REFER KN GROUP DRAWINGS



PROPOSED EASEMENTS



0 1.5 3 6 9
1 : 150m (A1) - 1 : 300m (A3)

0 1.5 3 6 9
1 : 150m (A1) - 1 : 300m (A3)

A1

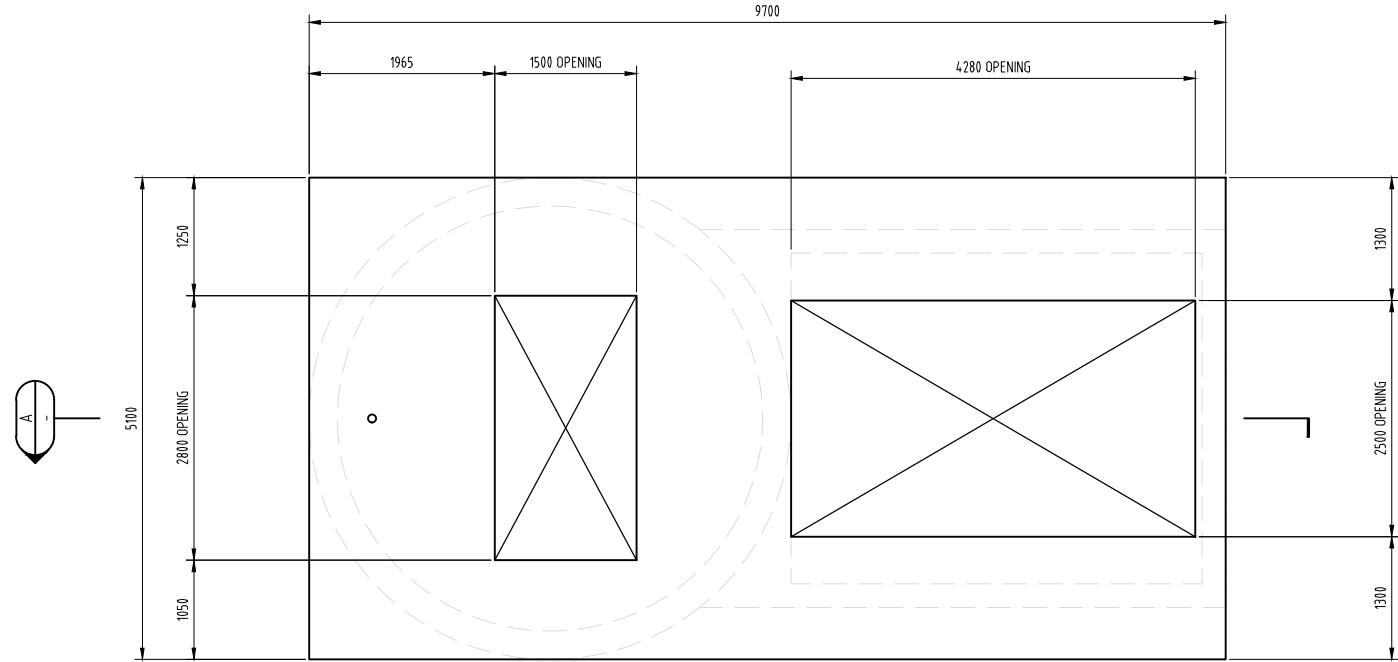
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
B	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	CHECKED	29.07.2026
A	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	PASSED	29.07.2026



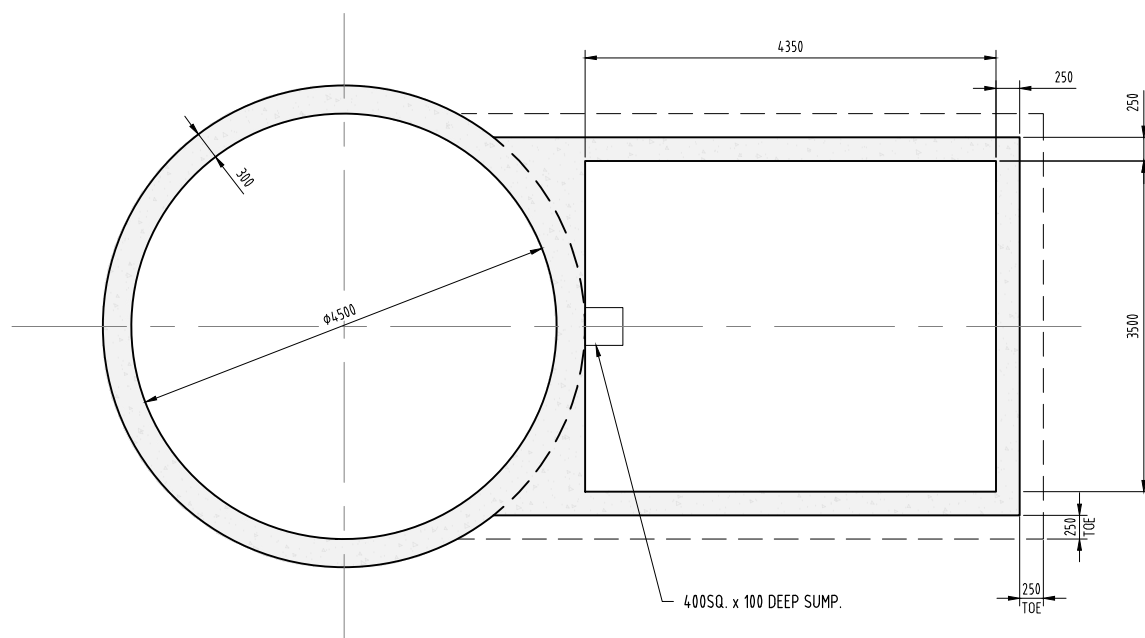
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EASEMENT PLAN

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION B
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-G-DR-8101-70	

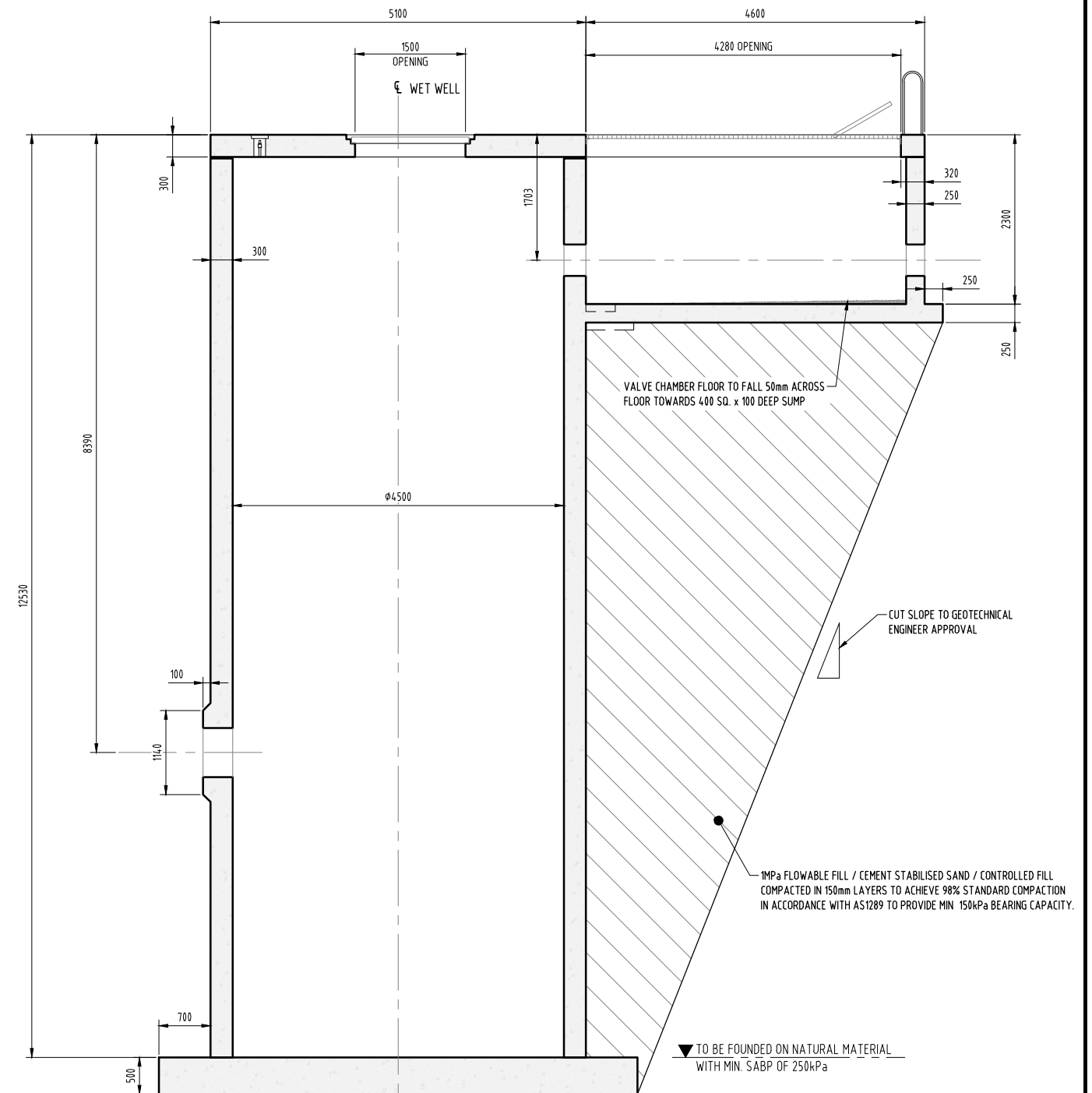


PLAN AT LID LEVEL
SCALE 1:40 (A1)
SCALE 1:80 (A3)



PLAN AT VALVE CHAMBER LEVEL
SCALE 1:40 (A1)
SCALE 1:80 (A3)

0 0.4 0.8 1.6 2.4
1 : 40m (A1) - 1 : 80m (A3)



SECTION
SCALE 1: 40

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



NOTES:

- ALL DIMENSIONS IN MILLIMETERS U.N.O.
- REINFORCEMENT IS SHOWN DIAGRAMMATICALLY FOR INFORMATION ONLY.

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Paul Wines*
RREQ_21742 DATE APPROVED: 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW 29.07.2026

tonkin
tonkin.com.au

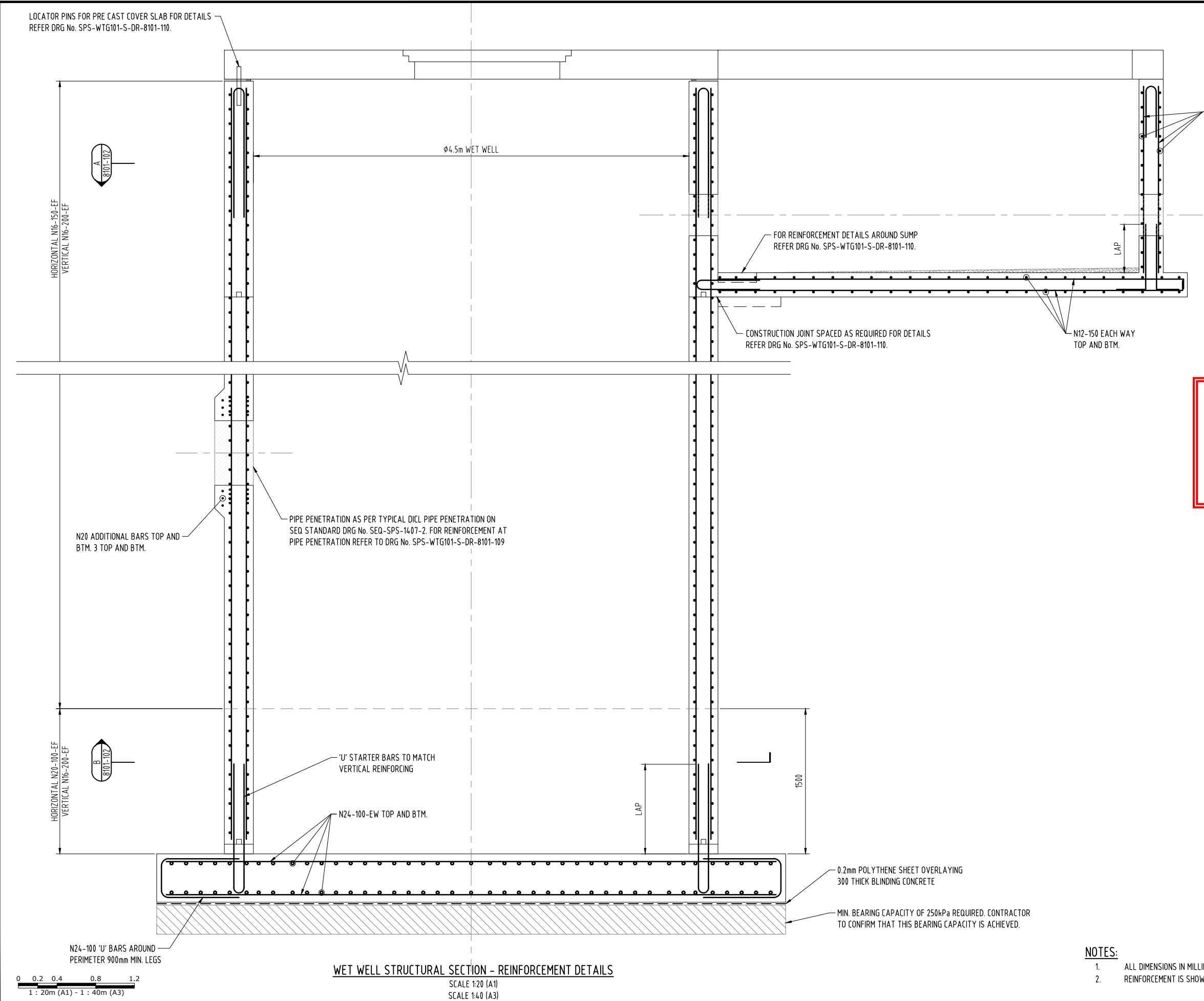
Stockland

Unitywater

Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
STRUCTURAL DETAILS - SHEET 1

SHEET 1 OF 1 SHEETS
REVISION DATE 29.07.2026
SCALE AS SHOWN
DISCIPLINE CODE S
REVISION D
DRAWING NO.
SPS-WTG101-S-DR-8101-100



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



Queensland
Government

- NOTES:
- ALL DIMENSIONS IN MILLIMETERS U.N.O.
 - REINFORCEMENT IS SHOWN DIAGMATICALLY FOR INFORMATION ONLY.

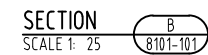
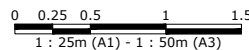
STATUS

ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED: *Reid Wilson*

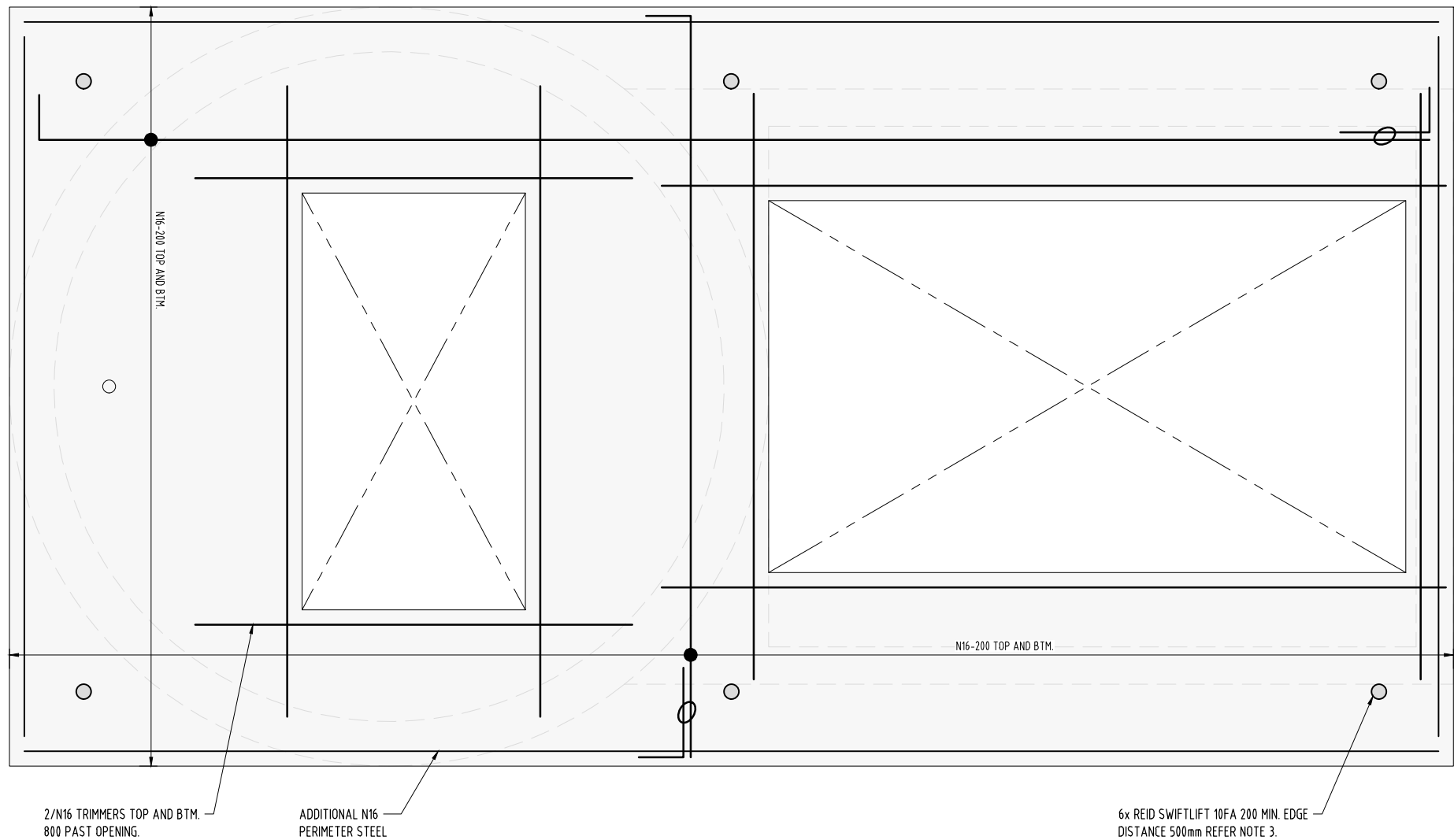
RPEQ_21742 DATE APPROVED: 29/07/2026

A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW					 tonkin.com.au	 Stockland	 Unitywater	Unitywater			SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026	REVISION DATE				29.07.2026	REVISION	D			
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026	DISCIPLINE CODE				S	DRAWING NO. SPS-WTG101-S-DR-8101-101				
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026										
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE	SPS-WTG101				RIVERMONT BOULEVARD WTG101 SPS FACILITY SEWAGE PUMP STATION STRUCTURAL DETAILS - SHEET 2					



DESIGN APPROVED:
RPEQ: 21742 DATE APPROVED: 29/07/2026

A1	D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW				 tonkin.com.au Stockland Unitywater	Unitywater			SHEET 1 OF 1 SHEETS	SCALE AS SHOWN
	C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026		REVISION D				
	B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026		DISCIPLINE CODE S				
	A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026		DRAWING NO.				
												SPS-WTG101-S-DR-8101-102			
	INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE							



ROOF SLAB REINFORCEMENT PLAN
(SLAB WEIGHT = 24.5t)
SCALE 1:20 (A1)
SCALE 1:40 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



0 0.2 0.4 0.8 1.2
1 : 20m (A1) - 1 : 40m (A3)

NOTES:

1. ALL DIMENSIONS IN MILLIMETERS U.N.O.
2. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY FOR INFORMATION ONLY.
3. LIFTING ANCHORS SHOWN ARE INDICATIVE ONLY AND PROVIDED FOR COORDINATION PURPOSES. DESIGN IS ASSUMING USE OF SPREADER BAR AND VERTICAL LOADS ONLY. THE LIFTING CONTRACTOR SHALL UNDERTAKE A PROJECT-SPECIFIC LIFTING ASSESSMENT AND BE RESPONSIBLE FOR THE FINAL SELECTION, DESIGN, VERIFICATION AND CERTIFICATION OF THE LIFTING SYSTEM, INCLUDING ANCHOR CAPACITIES, RIGGING CONFIGURATION AND LIFTING PROCEDURES. THE CONTRACTOR SHALL PROVIDE THE DESIGN LIFTING LOADS TO THE STRUCTURAL ENGINEER WHERE REQUIRED FOR VERIFICATION OF THE CONCRETE ELEMENT.

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Reid Wilson*
RPEQ: 21742 DATE APPROVED: 29/07/2026

A1

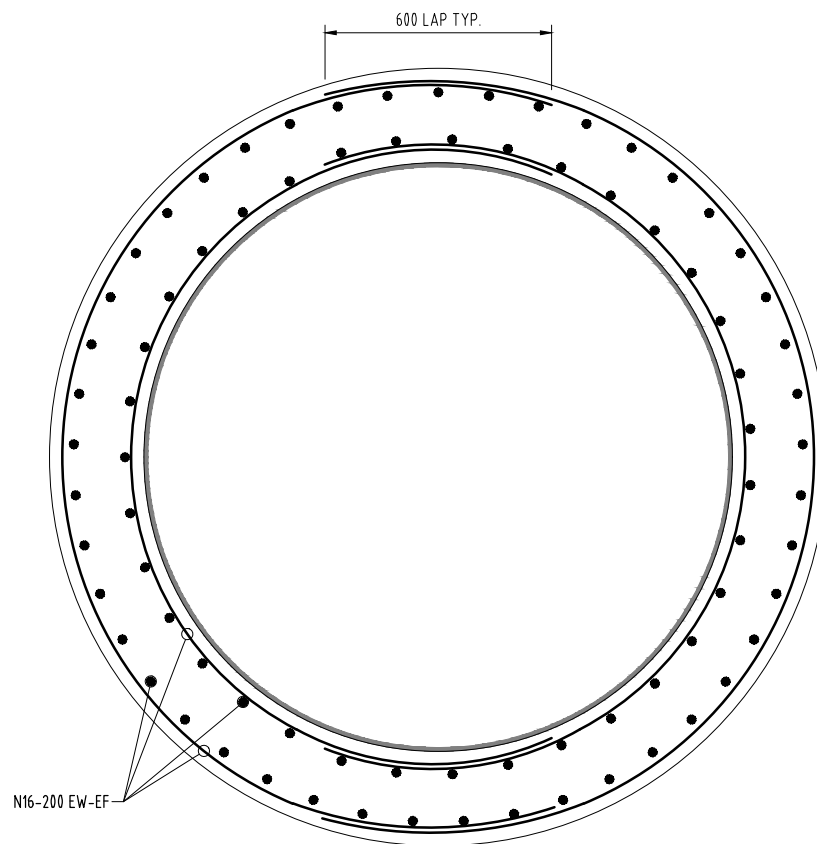
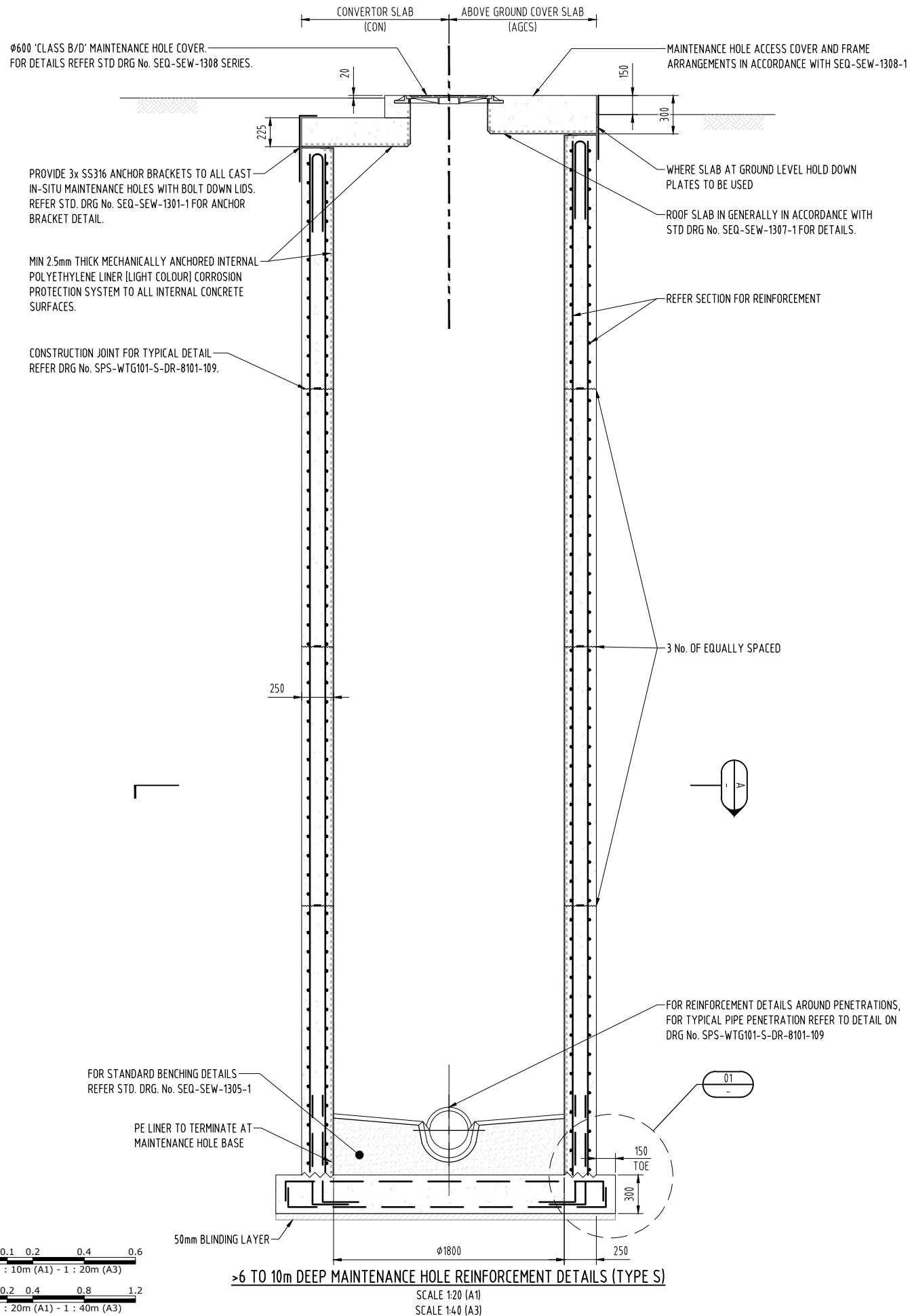
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



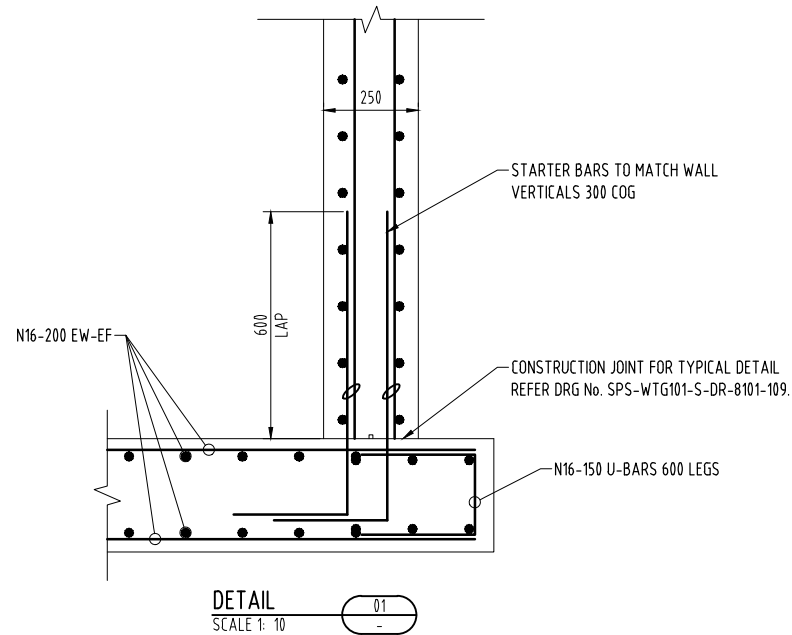
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
STRUCTURAL DETAILS - SHEET 4

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	S	
DRAWING NO.	SPS-WTG101-S-DR-8101-103	



SECTION
SCALE 1: 10



NOTES:

- CONCRETE
 - S40MPa.
 - MIX DESIGN AS PER Pr9903, AS3735 & WSA REQUIREMENTS.
 - CALCAREOUS AGGREGATE
- REINFORCEMENT STEEL:
 - ABBREVIATIONS FOR STEEL GRADE AND TYPE: - "N" - GRADE D500N DEFORMED BAR TO AS/NZS 4671.
 - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
 - ENSURE THE CORRECT SPACING OF BARS IS MAINTAINED AND ALL REINFORCEMENT IS SUPPORTED IN ITS CORRECT POSITION BY APPROVED PLASTIC BAR CHAIRS, SPACERS OR SUPPORT BARS AT 800 MAX CRS IN BOTH DIRECTIONS.
 - TIE ALL INTERSECTIONS OF BARS WITH 1.25mm MIN DIA. ANNEALED WIRE TIES SUCH THAT THEY ARE SUPPORTED AND MAINTAINED IN POSITION.
 - DO NOT WELD REINFORCEMENT WITHOUT APPROVAL OF THE ENGINEER.
 - DO NOT CUT REINFORCEMENT TO CLEAR SMALL PENETRATIONS. DISPLACE INSTEAD OR PROVIDE TRIMMER BARS.
- FORMWORK IN ACCORDANCE WITH AS 3610.
- DESIGNED FOR:
 - 25 kPa LIVE LOAD.
 - 80 kN WHEEL LOAD TO AS5100.2
 - 160 kN AXLE LOAD TO AS5100.2
- REINFORCEMENT COVER 75 MIN. U.N.O.
- ALL DIMENSIONS IN MILLIMETRES.
- REFER PLAN FOR OVERALL DIMENSIONS.
- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03, SPS-WTG101-C-DR-8100-04 & SPS-WTG101-C-DR-8100-05.
- SUPPLIER TO PROVIDE RPEQ CERTIFIED DESIGN OF COVER SLAB INCLUDING LIFTING POINTS.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Reilly Wilson*
RPEQ: 21742 DATE APPROVED: 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	29.07.2026

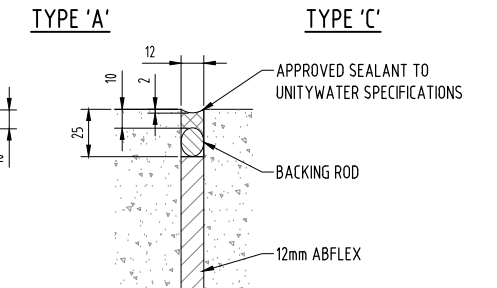
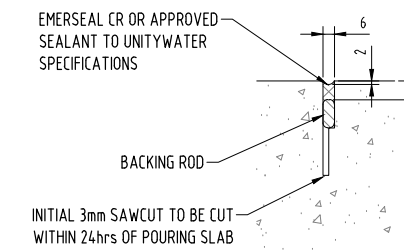
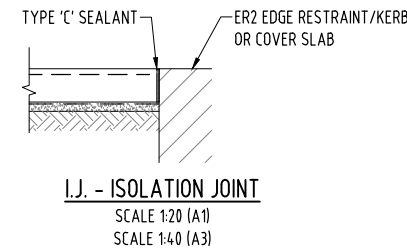
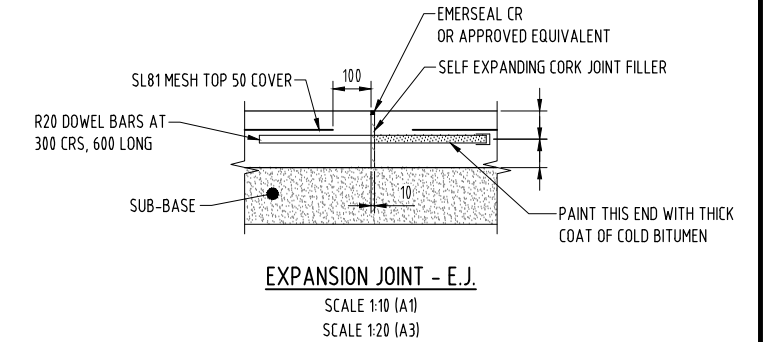
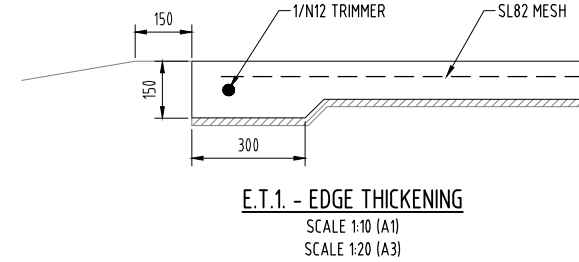
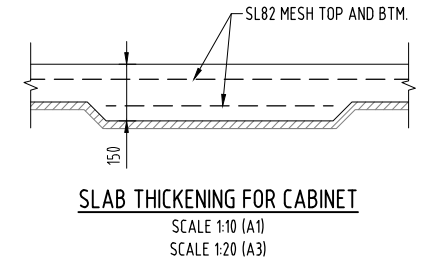
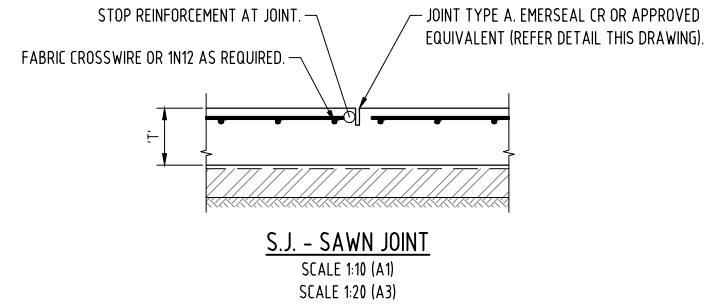
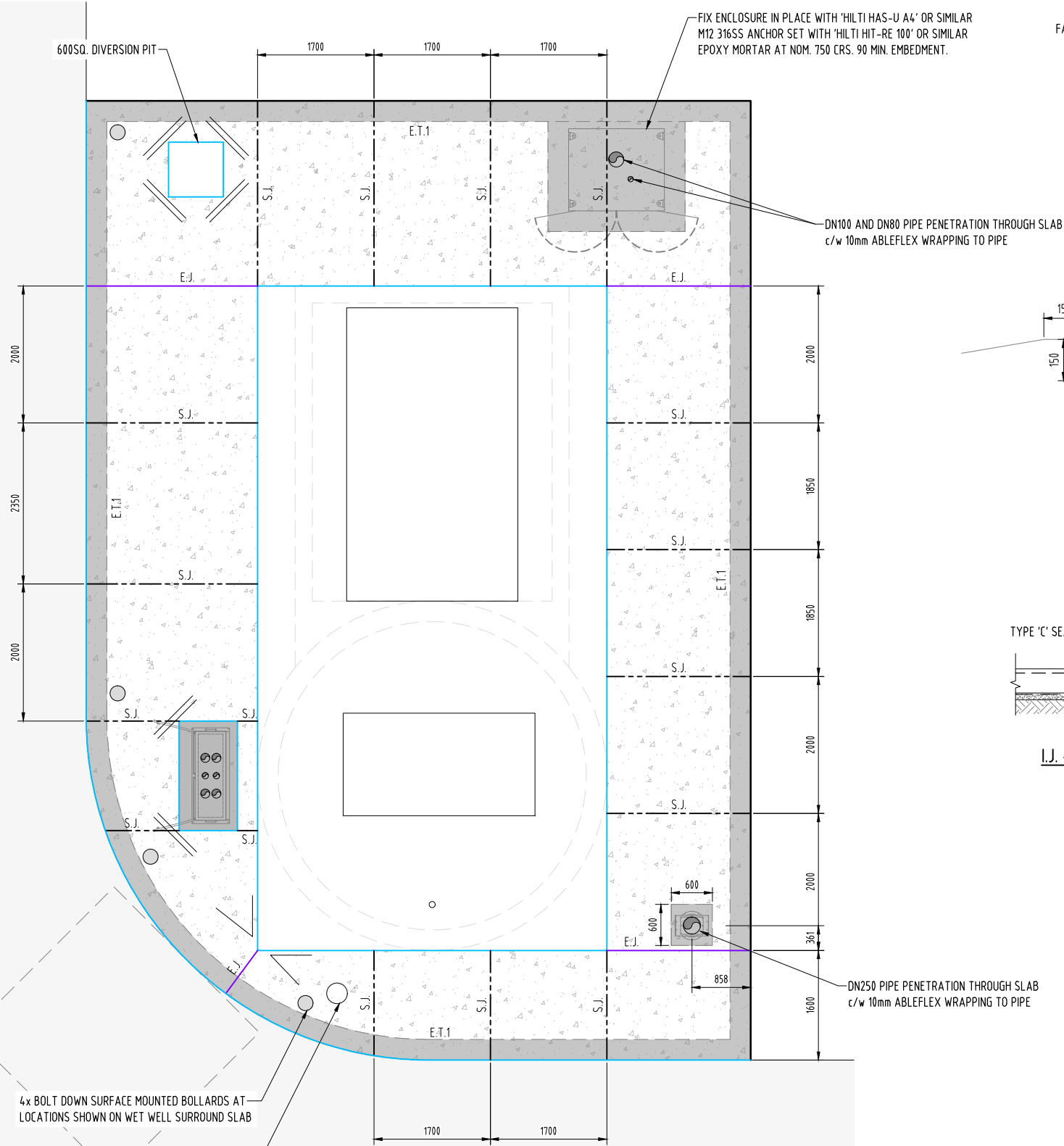
tonkin



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
MAINTENANCE HOLE >6M TO 10M STRUCTURAL DETAILS

SHEET 1 OF 1	SHEETS	SCALE	AS SHOWN
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE	S		
DRAWING NO.	SPS-WTG101-S-DR-8101-105		

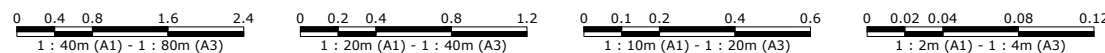


JOINT FILLING TYPES
SCALE 1:2 (A1)
SCALE 1:4 (A3)

LEGEND

	DENOTES 100 THICK SLAB F'c = 32 MPa WITH SL82 MESH TOP, 40 COVER ON 50mm BED OF SAND OR CRUSHED DUST. JOINTING AS SHOWN. LAP MESH 2 WIRES +25mm
	CONCRETE ACCESS DRIVEWAY PAVEMENT.
	S.J. - SAWN JOINT 3 x 25mm DEEP WITHIN 24 HOURS OF POURING SLAB. CUT EVERY 2nd BAR OF MESH AND FILL WITH WATER PROOF FLEXIBLE JOINT FILLING TYPE 'A'.
	E.T.1 - EDGE/SLAB THICKENING
	I.J. - ISOLATION JOINT (JOINT FILLING TYPE 'C')
	E.J. - EXPANSION JOINT
	1/N12 HAIRPIN TRIMMER (600 LEGS TYP.)
	2/N12-100 (1200 LONG)

REINFORCED CONCRETE ACCESS ROAD FOR DETAILS
REFER TO DRG No. SPS-WTG101-C-DR-8101-20



**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



A1

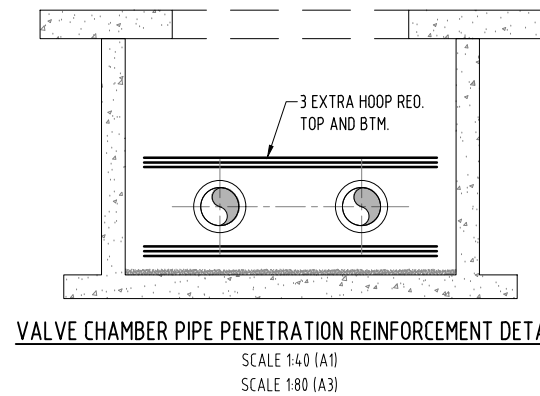
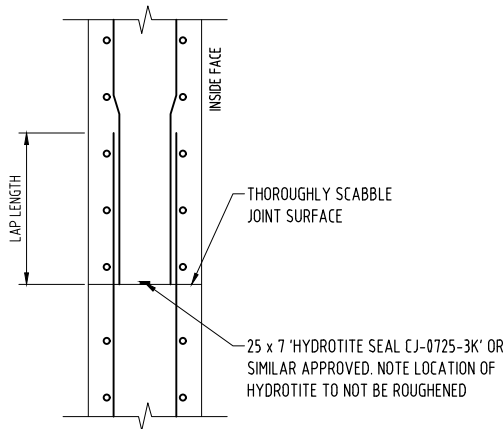
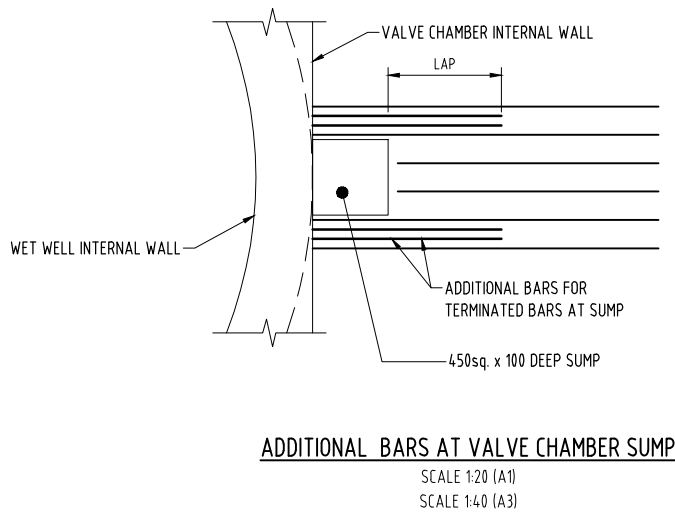
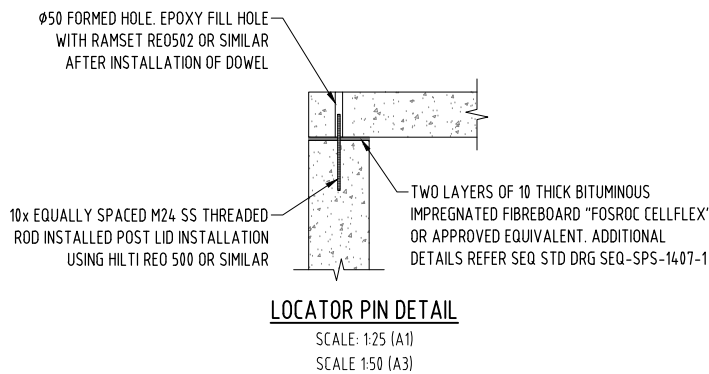
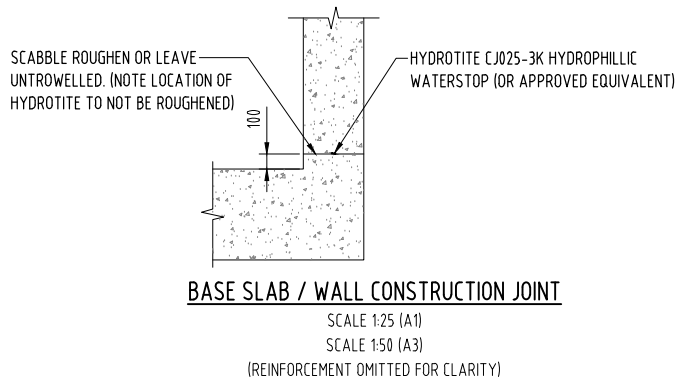
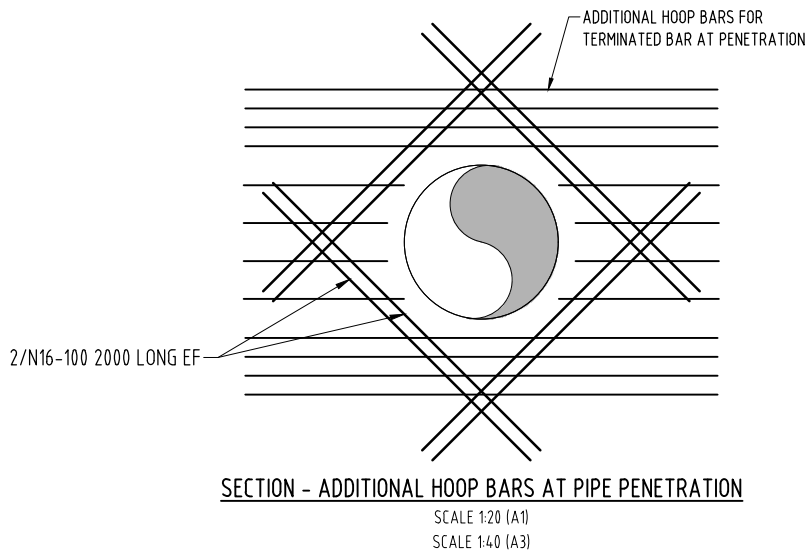
E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
D	29.06.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



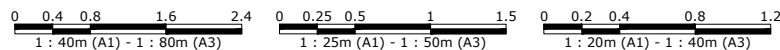
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
WET WELL SURROUND SLAB PAVEMENT AND JOINTING DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION E	
DISCIPLINE CODE S		
DRAWING NO. SPS-WTG101-S-DR-8101-106		



- NOTES:**
- CONCRETE
 - $f'c = 40$.
 - MIX DESIGN AS PER AS3735 & WSA REQUIREMENTS.
 - CALCAREOUS AGGREGATE
 - REINFORCEMENT STEEL:
 - ABBREVIATIONS FOR STEEL GRADE AND TYPE: - "N" - GRADE D500N DEFORMED BAR TO AS/NZS 4671.
 - REINFORCEMENT WAS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
 - ENSURE THE CORRECT SPACING OF BARS IS MAINTAINED AND ALL REINFORCEMENT WAS SUPPORTED IN ITS CORRECT POSITION BY APPROVED PLASTIC BAR CHAIRS, SPACERS OR SUPPORT BARS AT 800 MAX CRS IN BOTH DIRECTIONS.
 - TIE ALL INTERSECTIONS OF BARS WITH 125mm MIN DIA. ANNEALED WIRE TIES SUCH THAT THEY ARE SUPPORTED AND MAINTAINED IN POSITION.
 - DO NOT WELD REINFORCEMENT WITHOUT APPROVAL OF THE ENGINEER.
 - DO NOT CUT REINFORCEMENT TO CLEAR SMALL PENETRATIONS. DISPLACE INSTEAD OR PROVIDE TRIMMER BARS.
 - FORMWORK IN ACCORDANCE WITH AS 3610.
 - DESIGNED FOR:
 - 25 kPa LIVE LOAD.
 - 80 kN WHEEL LOAD TO AS5100.2
 - W80 WHEEL LOAD
 - 160 kN AXLE LOAD TO AS5100.2
 - 1x 35t CONCENTRATED LOAD FROM PUMP
 - REINFORCEMENT COVER 75 MIN. U.N.O.
 - FLOTATION DESIGN BASED ON REMOVAL OF THE COVER SLAB. SELF WEIGHT OF INTERNAL BENCHING EXCLUDED FROM FLOTATION.
 - ALL DIMENSIONS IN MILLIMETRES.
 - REFER PLAN FOR OVERALL DIMENSIONS.
 - FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's C-DR-8100-02, C-DR-8100-03 & C-DR-8100-04.
 - ROOF SLAB LIFTING POINTS TO BE CONFIRMED AND CERTIFIED BY ROOF SUPPLIER.



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Paul Wines*
RPEQ_21742 DATE APPROVED: 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	29.07.2026

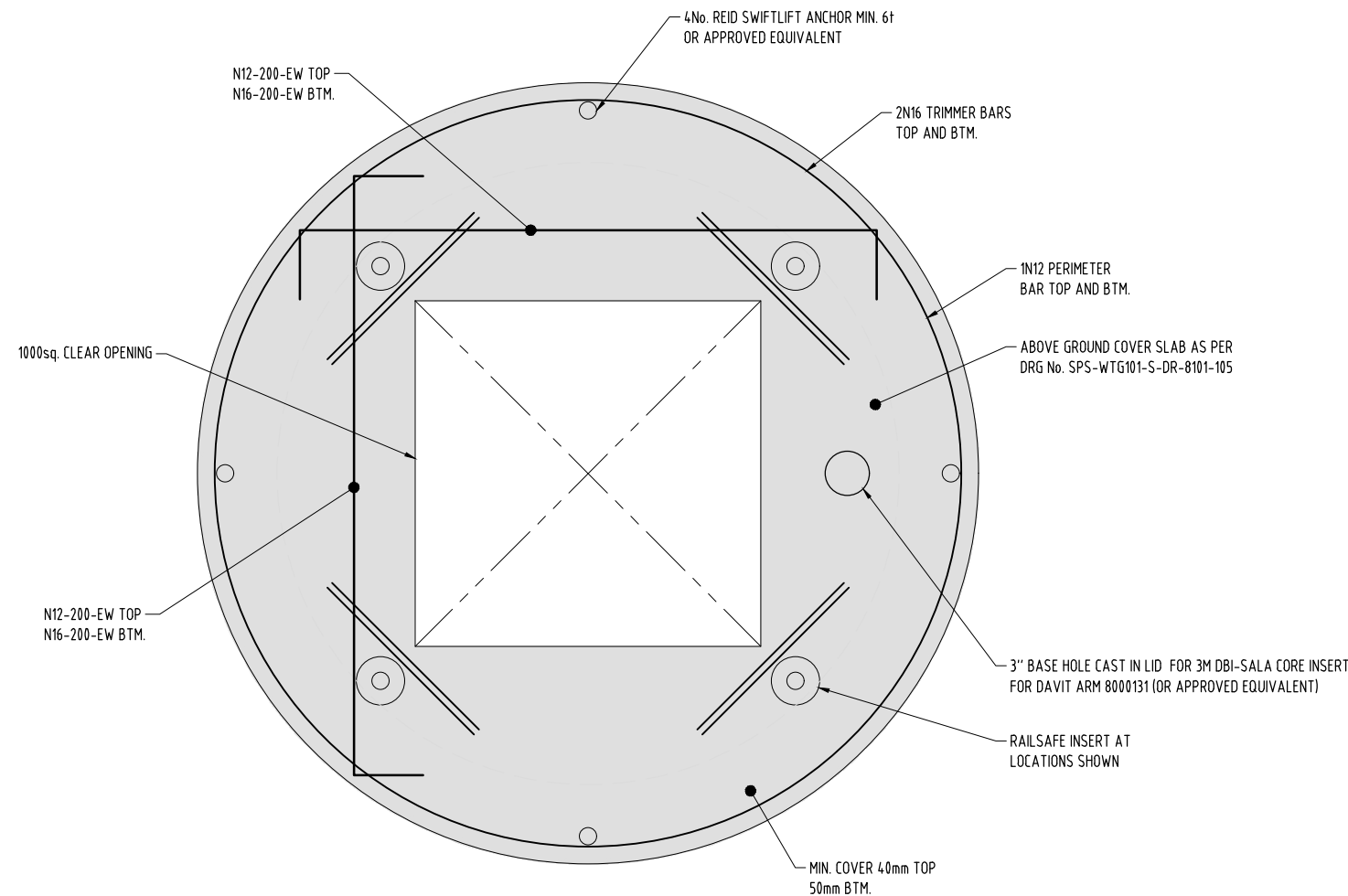
tonkin



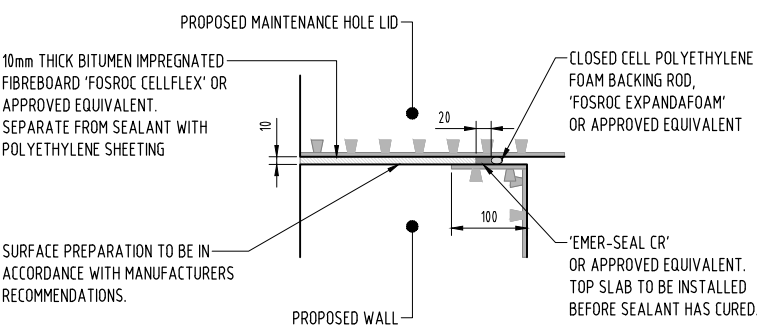
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
MISCELLANEOUS STRUCTURAL DETAILS

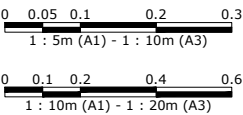
SHEET 1 OF 1	SHEETS	SCALE	AS SHOWN
REVISION DATE	29.07.2026	REVISION	D
DISCIPLINE CODE	S		
DRAWING NO.	SPS-WTG101-S-DR-8101-109		



COLLECTOR MAINTENANCE HOLE COVER REINFORCEMENT PLAN (300mm THICK)
SCALE 1:10 (A1)
SCALE 1:20 (A3)



COVER SLAB CONNECTION DETAIL
SCALE 1:5 (A1)
SCALE 1:10 (A3)



STRUCTURAL NOTES:

- 1. CONCRETE
 - 1.1. $f'c = 40$.
 - 1.2. MIX DESIGN AS PER AS3735 & WSA REQUIREMENTS.
 - 1.3. CALCAREOUS AGGREGATE
- 2. REINFORCEMENT STEEL:
 - RS1. ABBREVIATIONS FOR STEEL GRADE AND TYPE: - "N" - GRADE D500N DEFORMED BAR TO AS/NZS 4671.
 - RS2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
 - RS3. ENSURE THE CORRECT SPACING OF BARS IS MAINTAINED AND ALL REINFORCEMENT IS SUPPORTED IN ITS CORRECT POSITION BY APPROVED PLASTIC BAR CHAIRS, SPACERS OR SUPPORT BARS AT 800 MAX CRS IN BOTH DIRECTIONS.
 - RS4. TIE ALL INTERSECTIONS OF BARS WITH 125mm MIN DIA. ANNEALED WIRE TIES SUCH THAT THEY ARE SUPPORTED AND MAINTAINED IN POSITION.
 - RS5. DO NOT WELD REINFORCEMENT WITHOUT APPROVAL OF THE ENGINEER.
 - RS6. DO NOT CUT REINFORCEMENT TO CLEAR SMALL PENETRATIONS. DISPLACE INSTEAD OR PROVIDE TRIMMER BARS.
- 3. FORMWORK IN ACCORDANCE WITH AS 3610.
- 4. DESIGNED FOR:
 - 25 kPa LIVE LOAD.
 - 80 kN WHEEL LOAD TO AS5100.2
 - W80 WHEEL LOAD
 - 160 kN AXLE LOAD TO AS5100.2
- 5. REINFORCEMENT COVER 75 MIN. U.N.O.
- 6. ALL DIMENSIONS IN MILLIMETRES.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



STATUS

ISSUED FOR 100%
DESIGN APPROVAL

DESIGN APPROVED: *Reid Wilson*

RPEQ_21742 DATE APPROVED: 29/07/2026

A1

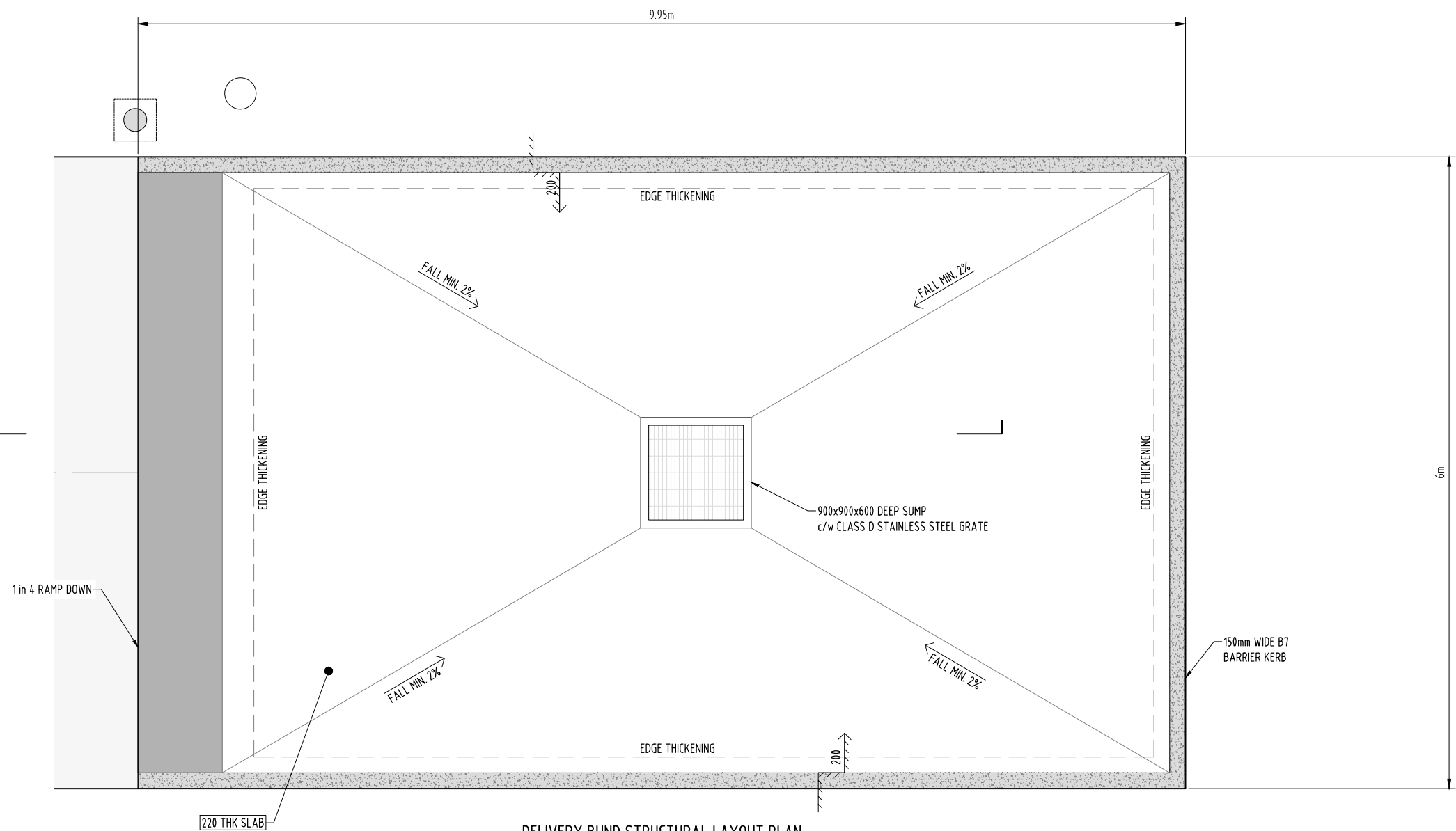
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



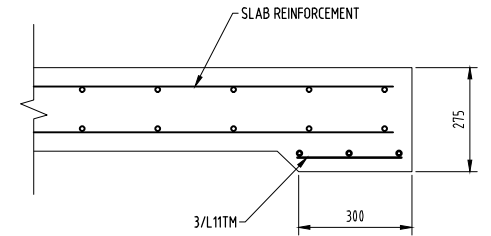
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
COLLECTOR MAINTENANCE HOLE COVER DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	S	
DRAWING NO.	SPS-WTG101-S-DR-8101-120	



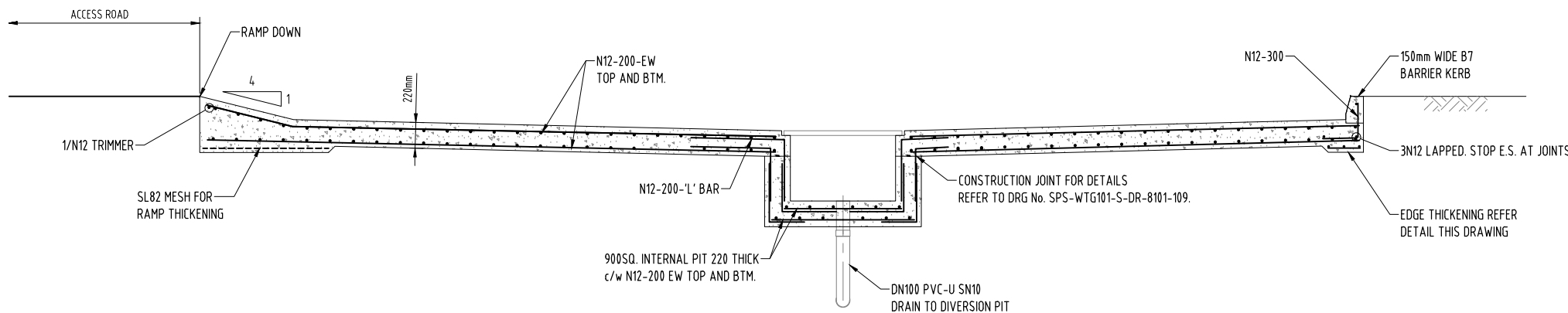
DELIVERY BUND STRUCTURAL LAYOUT PLAN
SCALE 1:25 (A1)
SCALE 1:50 (A3)



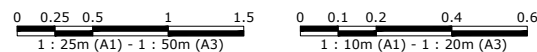
DELIVERY BUND EDGE THICKENING DETAIL
SCALE 1:10 (A1)
SCALE 1:20 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

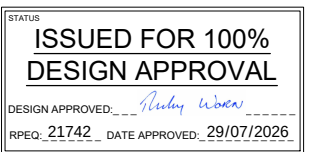
Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



CHEMICAL TANKER DELIVERY BUND - REINFORCEMENT SECTION
SECTION A-A
SCALE 1: 25



- NOTES:
- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03, SPS-WTG101-C-DR-8100-04 & SPS-WTG101-C-DR-8100-05.
 - FOR SETOUT CO-ORDINATES, REFER TO DRG. No. SPS-WTG101-C-DR-8101-20.
 - FOR ADDITIONAL DELIVERY BUND DETAILS REFER TO DRG No. SPS-WTG101-C-DR-8101-23.
 - DIMENSIONS IN MILLIMETERS U.N.O.
 - DELIVERY BUND:
 - 220mm THICK
 - SL82 MESH TOP 50mm TOP COVER.
 - S40MPa
 - SUBGRADE MODULUS (K)= 38kPa/mm (5.0% CBR) MIN. THICKNESS 150mm.
 - MAX LOADING: AXLE LOAD 160kN, W80kN 50kPa FLOOR UDL.
 - ENSURE BROOM FINISH.



A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
C	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		29.07.2026
B	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		29.07.2026
A	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW		29.07.2026



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
DELIVERY BUND STRUCTURAL DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION C
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-S-DR-8101-130	



CONDENSATE LINE FROM OCU AND FAN TO DRAIN TO OVERFLOW MAINTENANCE HOLE

DN1800 EMERGENCY OVERFLOW MAINTENANCE HOLE.

900 x 600 CLASS A (McBERNS) ALUMINIUM COVER WITH SAFETY GRATE AT LOCATIONS SHOWN

EMERGENCY STORAGE TANK INTERIM STAGE (APPROX. 107kL)

WATER OFF-TAKE CONNECTION FOR TANK WASH-OUT AND MAINTENANCE

CONTINUATION/STARTER WALL FOR FUTURE ULTIMATE STAGE EMERGENCY STORAGE TANK

WATER OFF-TAKE CONNECTION FOR FUTURE TANK WASH-OUT AND MAINTENANCE

2100 HIGH CHAIN LINK FENCE TO AS1725.1 c/w BARBED WIRE TO Pt9903. PROVIDE CONCRETE MOWING STRIP UNDER SECURITY FENCE. STRIP TO BE 150mm MIN. WIDE, MIN. 200mm DEEP N32 CONCRETE.

SEWAGE PUMP STATION PROPERTY BOUNDARY

FUTURE EMERGENCY STORAGE TANK TOE EXTENTS

WATER OFF-TAKE CONNECTION FOR FUTURE TANK WASH-OUT AND MAINTENANCE

EMERGENCY STORAGE TANK ULTIMATE STAGE

SHEET PILING FOR FUTURE EMERGENCY STORAGE

FUTURE SWITCHROOM ULTIMATE STAGE

TEMPORARY GENERATOR SET DOWN SLAB.(REFER NOTE 3)

DOSING LOADING BAY

EMERGENCY STORAGE GENERAL ARRANGEMENT PLAN

SCALE 1:75 (A1)
SCALE 1:150 (A3)

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



0 0.75 1.5 3 4.5
1 : 75m (A1) - 1 : 150m (A3)

NOTES:

- SAFETY GRATES TO BE PROVIDED ON EMERGENCY STORAGE TANK DUE TO RISK OF DROWNING / FALL HEIGHT.
- FUTURE EMERGENCY STORAGE TANK EXTENSION SHALL BE CONSTRUCTED PRIOR TO SWITCHROOM.
- IF GENERATOR SLAB NEEDS TO BE REMOVED FOR FUTURE CONSTRUCTION IT SHALL BE REINSTATED TO SUIT.
- FUTURE TANK EXTENSION SHALL HAVE THE SAME SIZED MAINTENANCE ACCESS TO FACILITATE MEWP VEHICLE.



A1

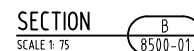
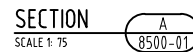
E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026
B	24.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE	



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE LAYOUT PLAN

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8500-01	



STATUS

**ISSUED FOR 100%
DESIGN APPROVAL**

DESIGN APPROVED: *C. Allen*

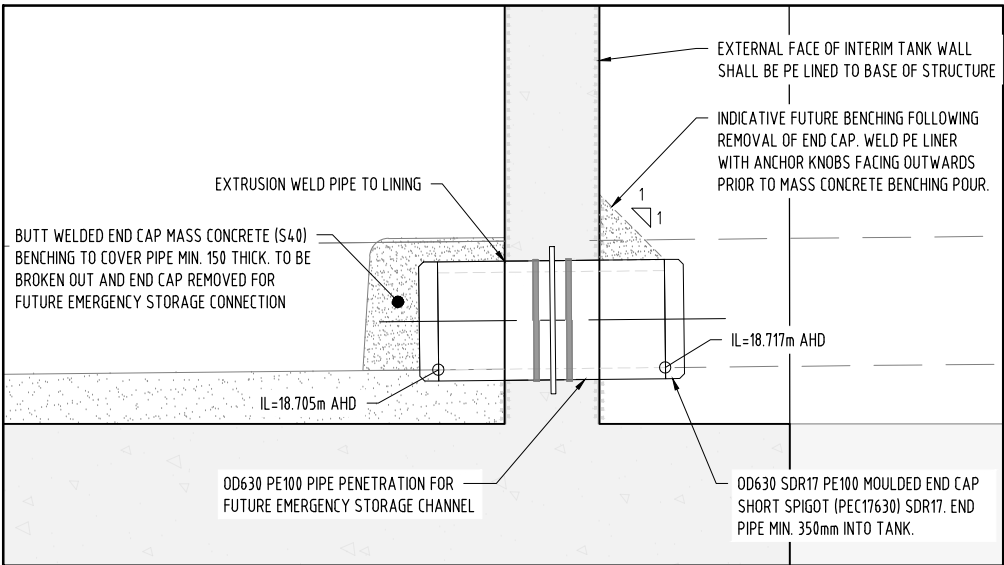
RPEQ: 12761 DATE APPROVED: 29/07/2026

A1	E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS				  	Unitywater SPS-WTG101 RIVERMONT BOULEVARD WTG101 SPS FACILITY SEWAGE PUMP STATION EMERGENCY STORAGE SECTIONS	SHEET 1 OF 1 SHEETS	SCALE AS SHOWN
	D	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS						REVISION DATE 29.07.2026	REVISION E
	C	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	DRAWN	JW	29.07.2026			DISCIPLINE CODE C	
	B	24.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	CHECKED	LJ	29.07.2026			DRAWING NO.	
	A	28.11.2025	ISSUED FOR 30% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026			SPS-WTG101-C-DR-8500-02	
	INDEX	DATE		DRAWN	CHECKED	PASSED		INITIALS	DATE				

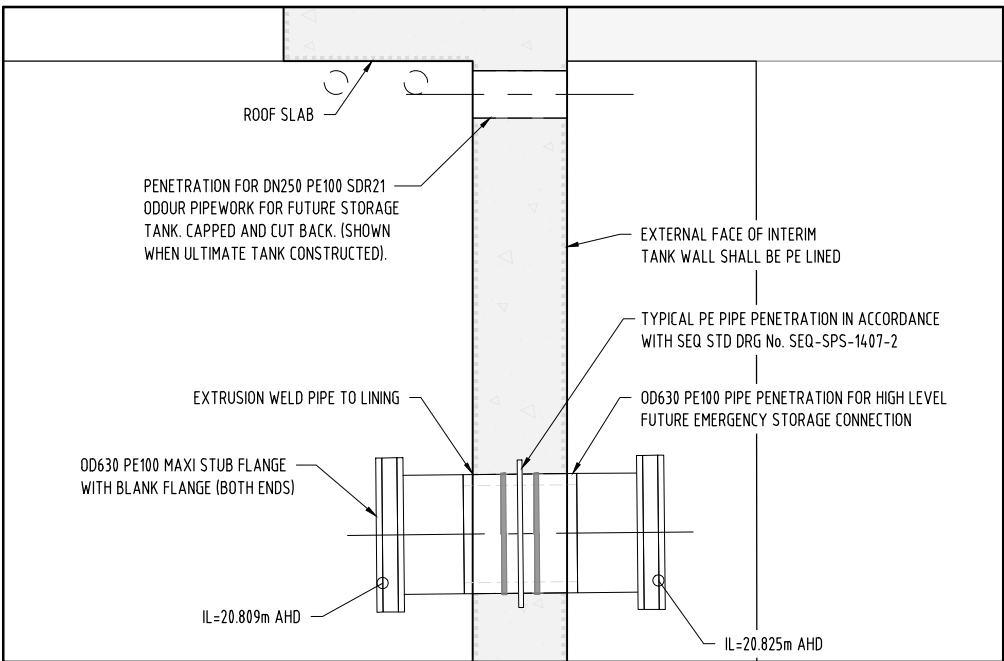
PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



DETAIL A
SCALE 1: 20
8500-02



DETAIL B
SCALE 1: 20
8500-02

0 0.2 0.4 0.8 1.2
1 : 20m (A1) - 1 : 40m (A3)

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

A1

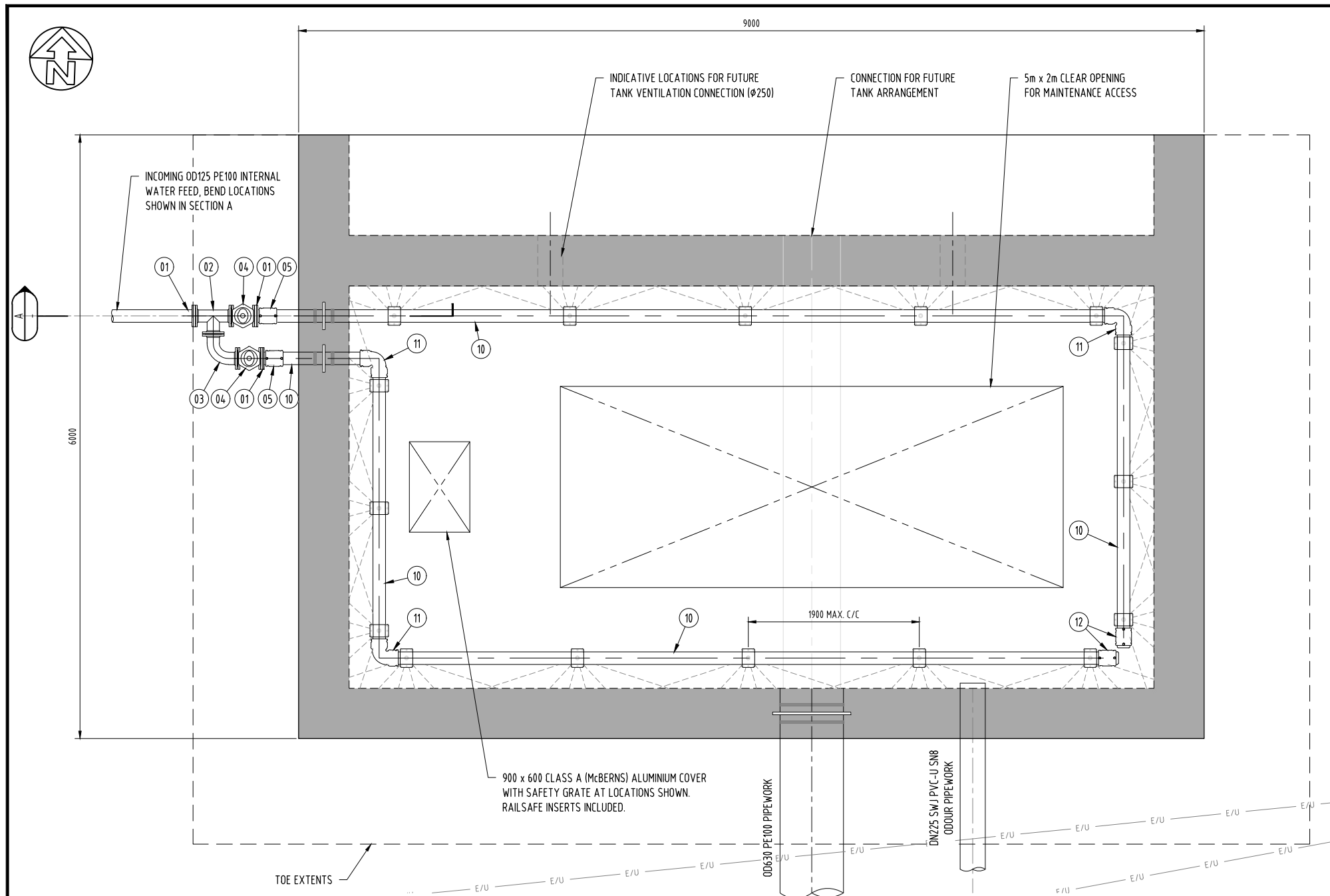
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE MISCELLANEOUS DETAILS

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION D
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8500-05	



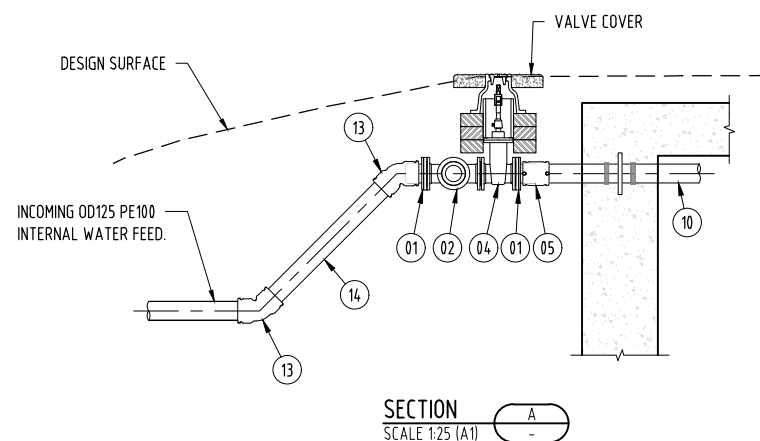
EMERGENCY STORAGE DETAILED ROOF LAYOUT PLAN

SCALE 1:25 (A1)
SCALE 1:50 (A3)

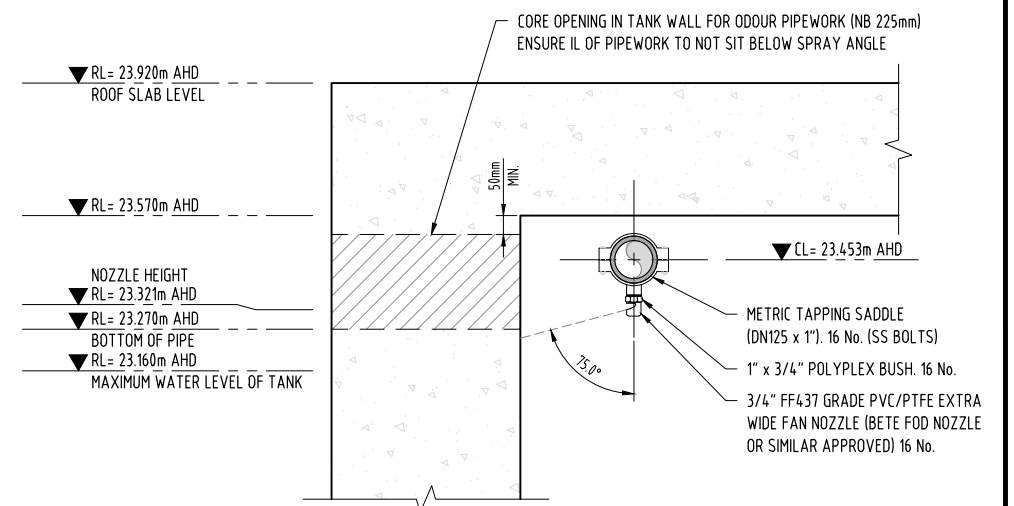
EMERGENCY STORAGE SRAY BAR FITTING SCHEDULE				
ITEM No.	SIZE	MATERIAL	DESCRIPTION	QTY
01	OD125	PE 100	FULL FACED MAXI STUB SLANGE	3
02	DN100	DI TBPC	FL-FL-FL EQUAL TEE	1
03	DN100	DI TBPC	FL-FL 90° BEND	1
04	DN100	DI TBPC	FL-FL RESILIENT SEATED GATE VALVE (NORMALLY CLOSED) c/w EXTENSION SPINDLE AND VALVE COVER	2
05	OD125	PE 100	ELECTROFUSION COUPLING	2
10	OD125	PE 100	PIPE (23500mm APPROX. LENGTH) INCLUDING WEEP FLANGES FOR WALL PENETRATIONS. c/w SPRAY BARS AS SHOWN AT MAX. 1900mm CRS. FOR DETAILS REFER TYPICAL DETAIL THIS DRAWING.	1
11	OD125	PE 100	ELECTROFUSION 90° BEND	3
12	OD125	PE 100	ELECTROFUSION END CAP	2
13	OD125	PE 100	ELECTROFUSION 45° BEND	2
14	OD125	PE 100	PIPE (1160mm APPROX. LENGTH)	1

0 0.1 0.2 0.4 0.6
1 : 10m (A1) - 1 : 20m (A3)

0 0.25 0.5 1 1.5
1 : 25m (A1) - 1 : 50m (A3)



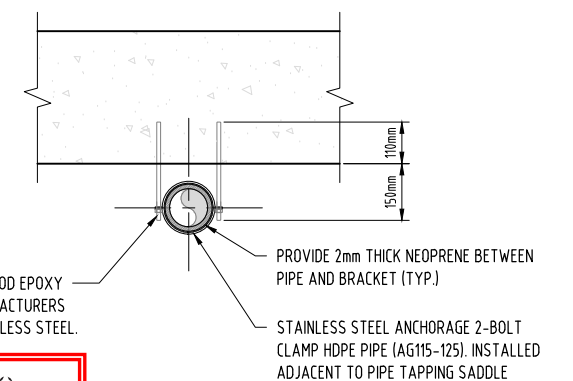
SECTION A
SCALE 1:25 (A1)



SPRAY BAR TYPICAL SECTION DETAIL

SCALE 1:10 (A1)
SCALE 1:20 (A3)

Ø16 GRADE 316 STAINLESS STEEL THREADED ROD EPOXY SET INTO UNDERSIDE OF ROOF SLAB TO MANUFACTURERS SPECIFICATIONS. NUTS TO BE GRADE 316 STAINLESS STEEL.



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



BRACKET DETAIL

SCALE 1:10 (A1)
SCALE 1:20 (A3)

NOTES:

- ASSUMES MANUAL VALVE OPERATION FOR TANK FLUSHING FOLLOWING EMERGENCY TANK USE. ONLY ONE BRANCH SHALL BE OPENED AT A TIME.
- AS INTERIM AND ULTIMATE TANKS ARE CONSTRUCTED AT DIFFERENT TIMES AND SEPARATED BY DIVIDING WALL, THEY SHALL BE TREATED AS SEPARATE CLEANING ACTIVITIES.
- ALL STAINLESS STEEL COMPONENTS TO BE ELECTROPLATED AS PER Pr9693, SYSTEM 22.

STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
D	29.06.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS 29.07.2026



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE DETAILED SPRAY BAR LAYOUT

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	C	
DRAWING NO.	SPS-WTG101-C-DR-8500-10	

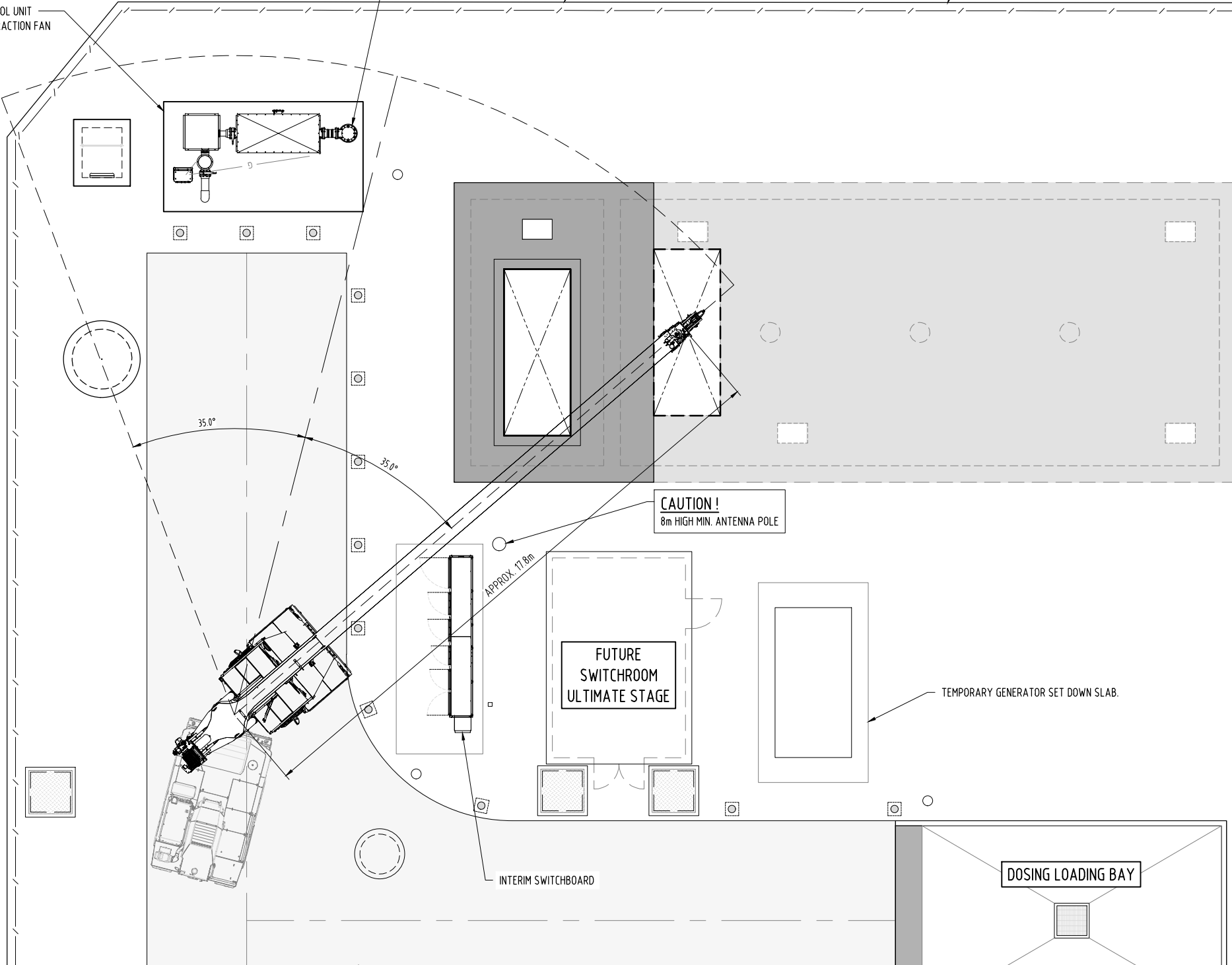


ZC3000 ODOUR CONTROL UNIT
c/w FILTER AND EXTRACTION FAN

CAUTION!
3m HIGH VENT POLE

2100 HIGH CHAIN LINK FENCE TO AS1725.1 c/w BARBED WIRE TO
Pr9903. PROVIDE CONCRETE MOWING STRIP UNDER SECURITY FENCE.
STRIP TO BE 150mm MIN. WIDE, MIN. 200mm DEEP N32 CONCRETE.

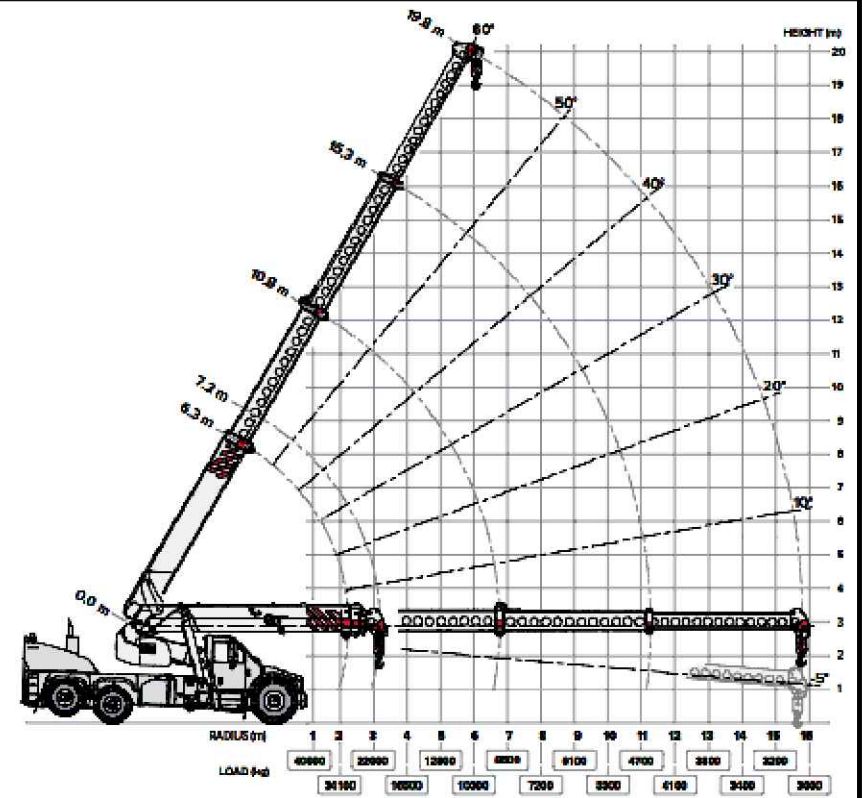
SEWAGE PUMP STATION
PROPERTY BOUNDARY



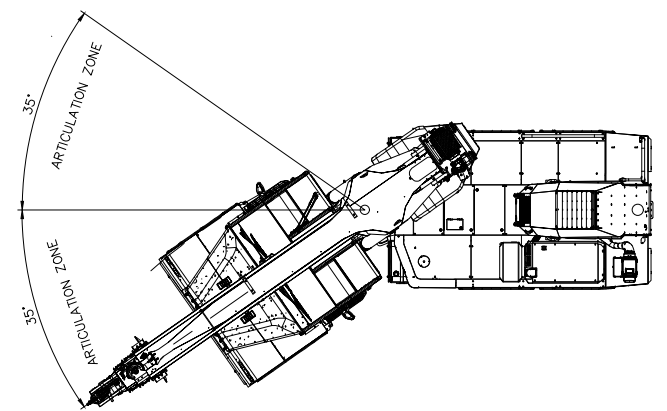
EMERGENCY STORAGE COVER LIFTING PLAN

SCALE 1:75 (A1)
SCALE 1:150 (A3)

0 0.75 1.5 3 4.5
1 : 75m (A1) - 1 : 150m (A3)



RADIUS LOAD CHART
NTS



FRANNA AT40 VEHICLE OPERATION DETAILS
NTS

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

A1

INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW 29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ 29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS 29.07.2026

tonkin
tonkin.com.au

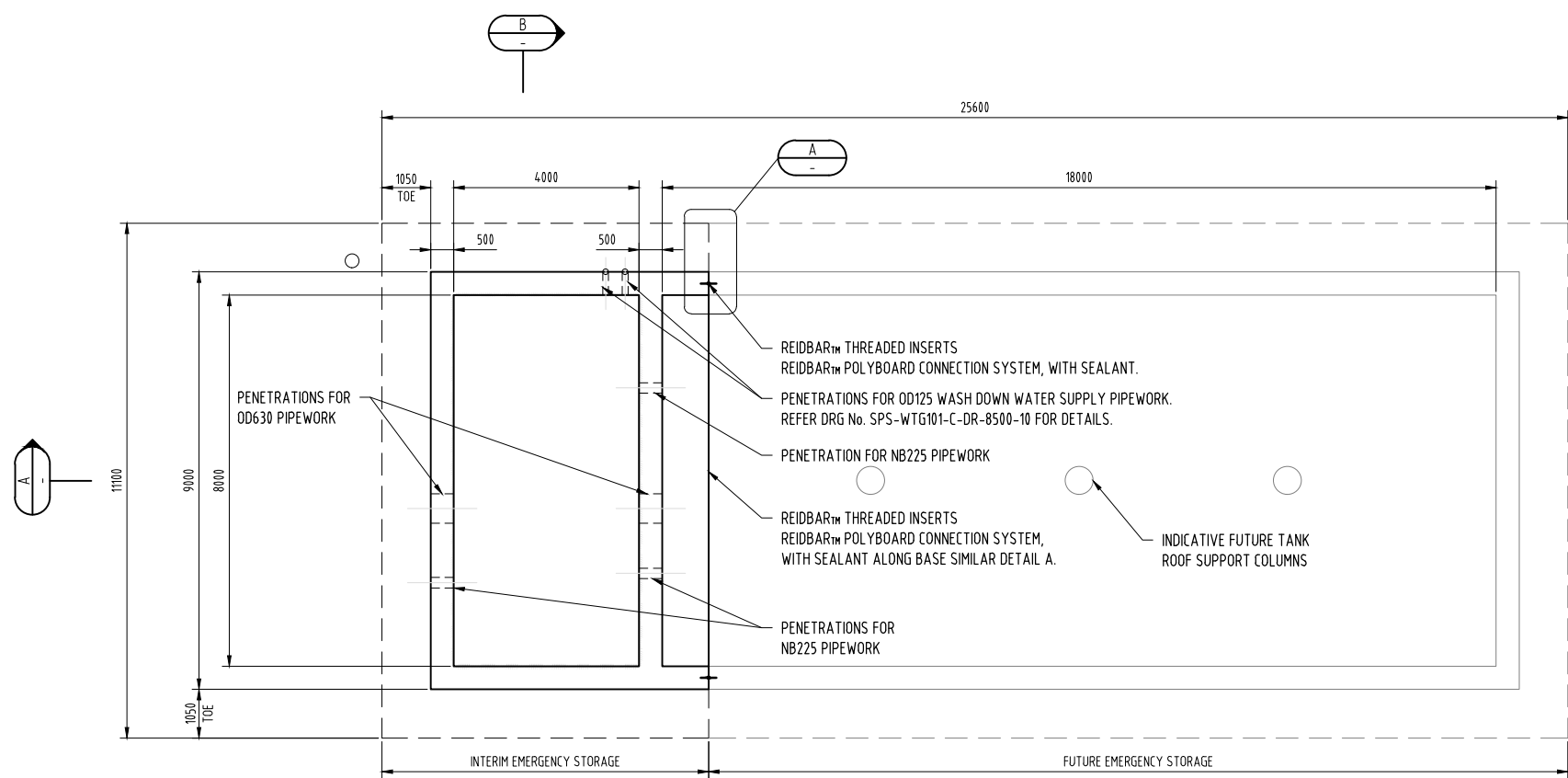


Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE COVER LIFTING PLAN

SHEET 1 OF 1 SHEETS
REVISION DATE 29.07.2026
DISCIPLINE CODE C
DRAWING NO.
SPS-WTG101-C-DR-8500-50

SCALE AS SHOWN
REVISION D

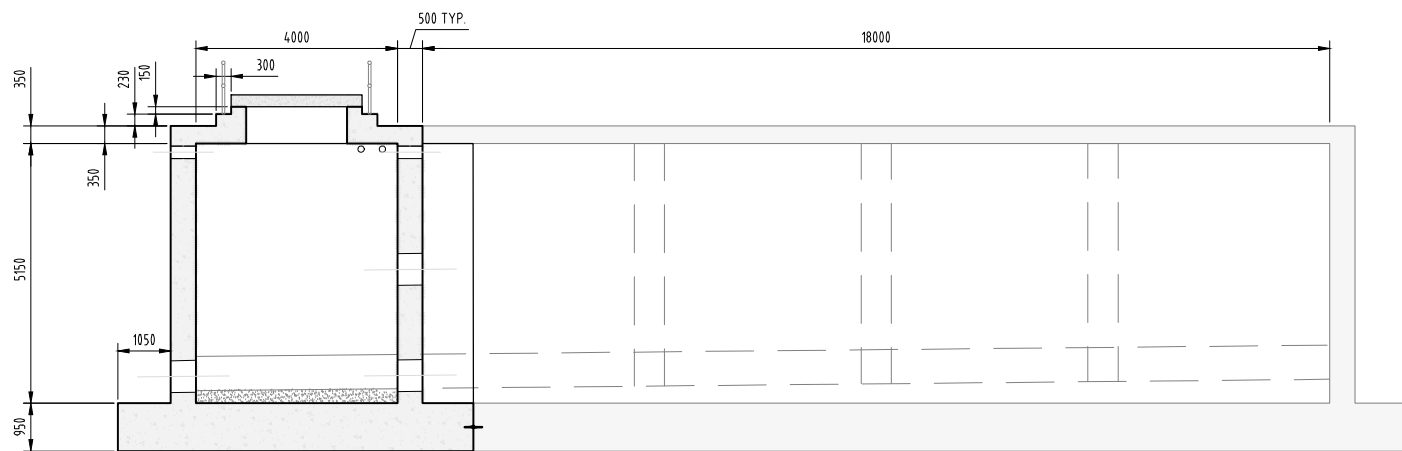


EMERGENCY STORAGE TANK DIMENSION PLAN
(COVER SLAB NOT SHOWN)

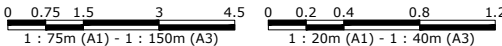
SCALE 1:75 (A1)
SCALE 1:150 (A3)

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170
Date: 01/09/2026

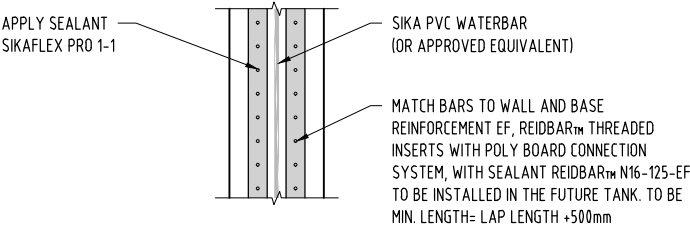


SECTION
SCALE 1:75



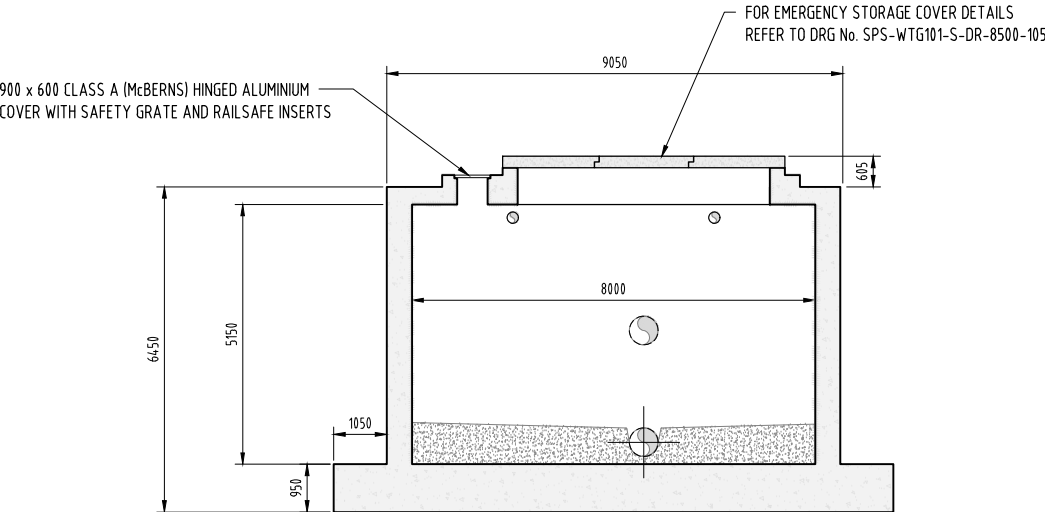
NOTES:

- CONCRETE
 - S40MPa.
 - MIX DESIGN AS PER Pr9903, AS3735 & WSA REQUIREMENTS.
 - CALCAREOUS AGGREGATE
- REINFORCEMENT STEEL:
 - ABBREVIATIONS FOR STEEL GRADE AND TYPE: - "N" - GRADE D500N DEFORMED BAR TO AS/NZS 4671.
 - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
 - ENSURE THE CORRECT SPACING OF BARS IS MAINTAINED AND ALL REINFORCEMENT IS SUPPORTED IN ITS CORRECT POSITION BY APPROVED PLASTIC BAR CHAIRS, SPACERS OR SUPPORT BARS AT 800 MAX CRS IN BOTH DIRECTIONS.
 - TIE ALL INTERSECTIONS OF BARS WITH 1.25mm MIN DIA. ANNEALED WIRE TIES SUCH THAT THEY ARE SUPPORTED AND MAINTAINED IN POSITION.
 - DO NOT WELD REINFORCEMENT WITHOUT APPROVAL OF THE ENGINEER.
 - DO NOT CUT REINFORCEMENT TO CLEAR SMALL PENETRATIONS. DISPLACE INSTEAD OR PROVIDE TRIMMER BARS.
- FORMWORK IN ACCORDANCE WITH AS 3610.
- DESIGNED FOR:
 - 5.0 kPa LIVE LOAD OR 31kN
- REINFORCEMENT COVER 75 MIN. U.N.O.
- ALL DIMENSIONS IN MILLIMETRES.
- REFER PLAN FOR OVERALL DIMENSIONS.
- FOR GENERAL NOTES, LEGEND AND STAMPS REFER TO DRG No's SPS-WTG101-C-DR-8100-02, SPS-WTG101-C-DR-8100-03, SPS-WTG101-C-DR-8100-04 & SPS-WTG101-C-DR-8100-05.
- SUPPLIER TO PROVIDE RPEQ CERTIFIED DESIGN OF COVER SLAB INCLUDING LIFTING POINTS.



FUTURE EMERGENCY STORAGE TANK CONNECTION - DETAIL A

SCALE 1:20 (A1)
SCALE 1:40 (A3)
(WALL DETAIL SHOWN, BASE ARRANGEMENT SIMILAR)



SECTION
SCALE 1:75



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Reidley Wilson*
RPEQ: 21742 DATE APPROVED: 29/07/2026

A1

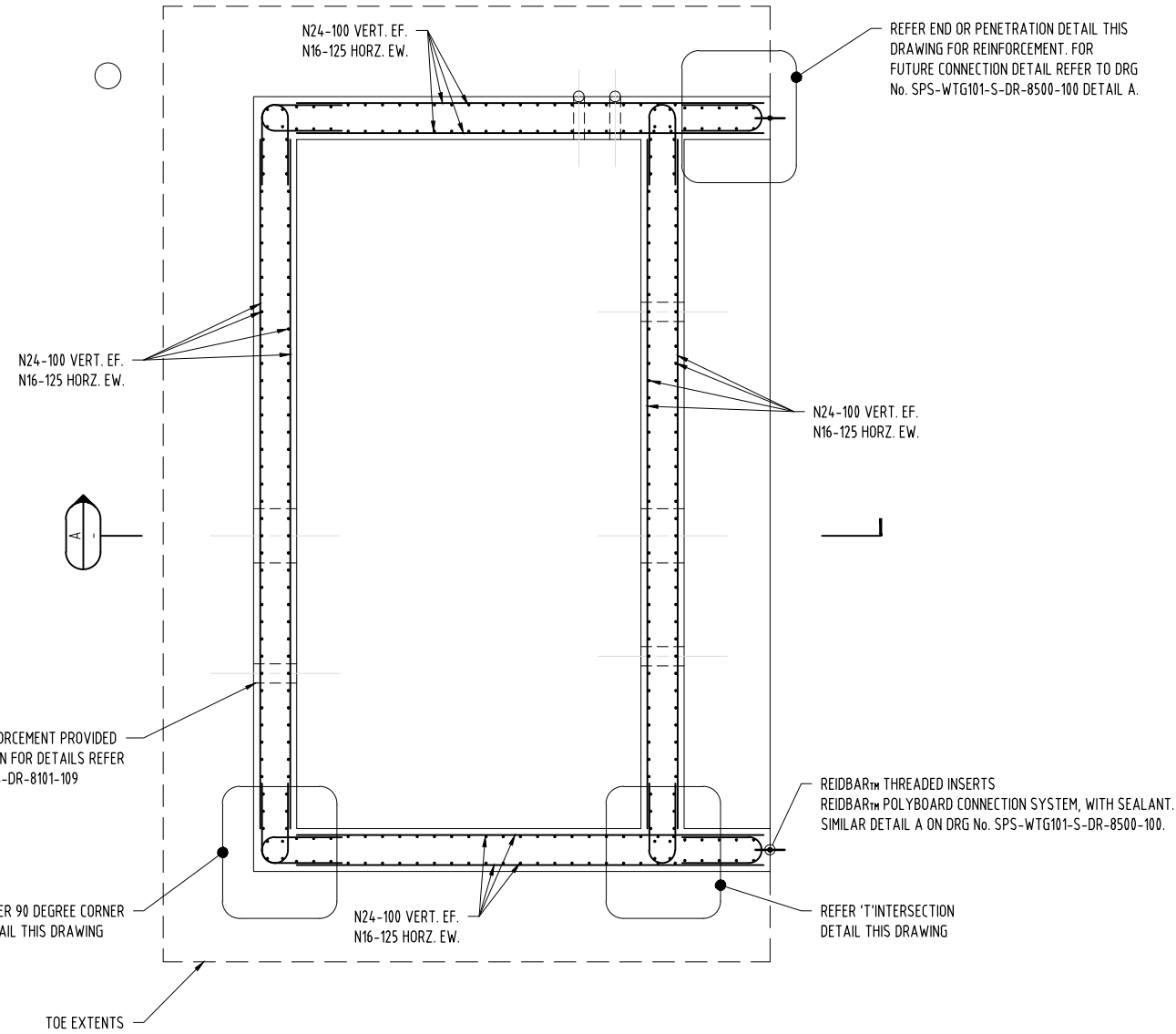
E	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
D	29.06.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	JD	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	RW	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



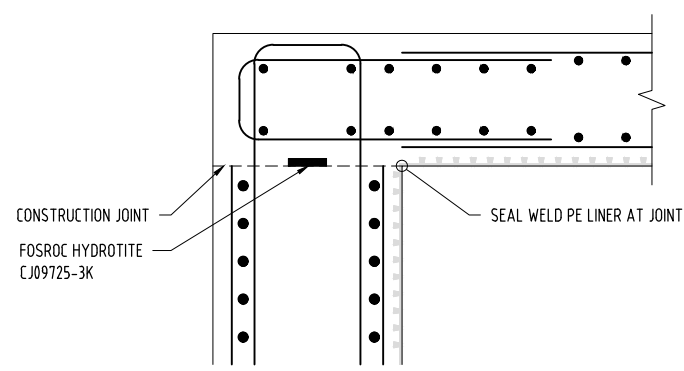
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE STRUCTURAL DETAILS - SHEET 1

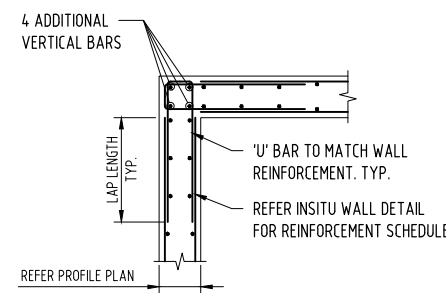
SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE	29.07.2026	REVISION E
DISCIPLINE CODE	S	
DRAWING NO.	SPS-WTG101-S-DR-8500-100	



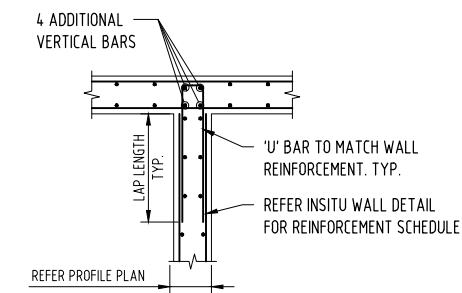
EMERGENCY STORAGE TANK REINFORCEMENT DETAILS
SCALE 1:75 (A1)
SCALE 1:150 (A3)
(INTERNAL BENCHING AND PE LINER NOT SHOWN FOR CLARITY)



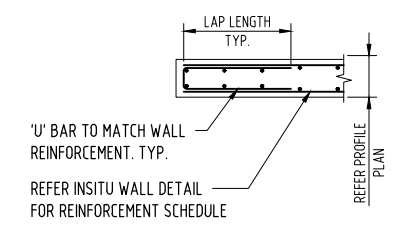
WALL TO CAST-IN-SITU ROOF CONNECTION DETAIL
SCALE 1:10 (A1)
SCALE 1:20 (A3)



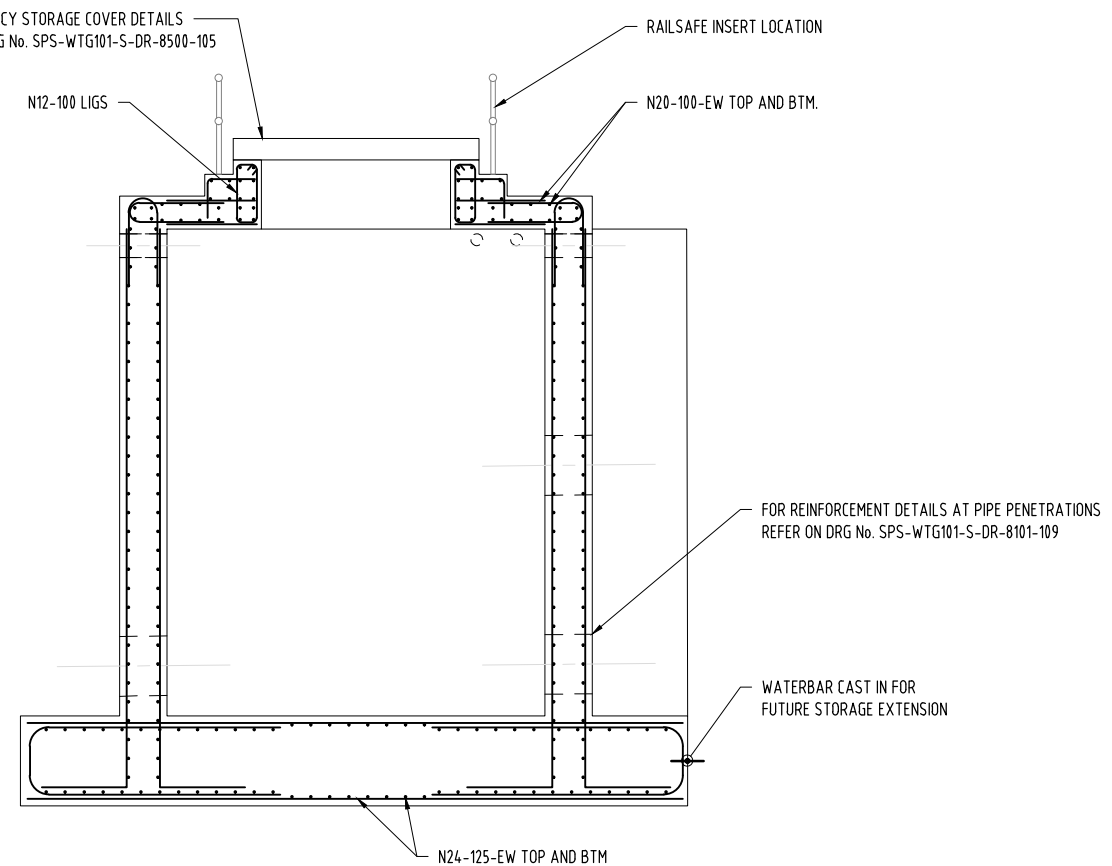
90 DEGREE CORNER



T INTERSECTION
TYPICAL INSITU WALL JUNCTION DETAIL
NOT TO SCALE



END OR PENETRATION



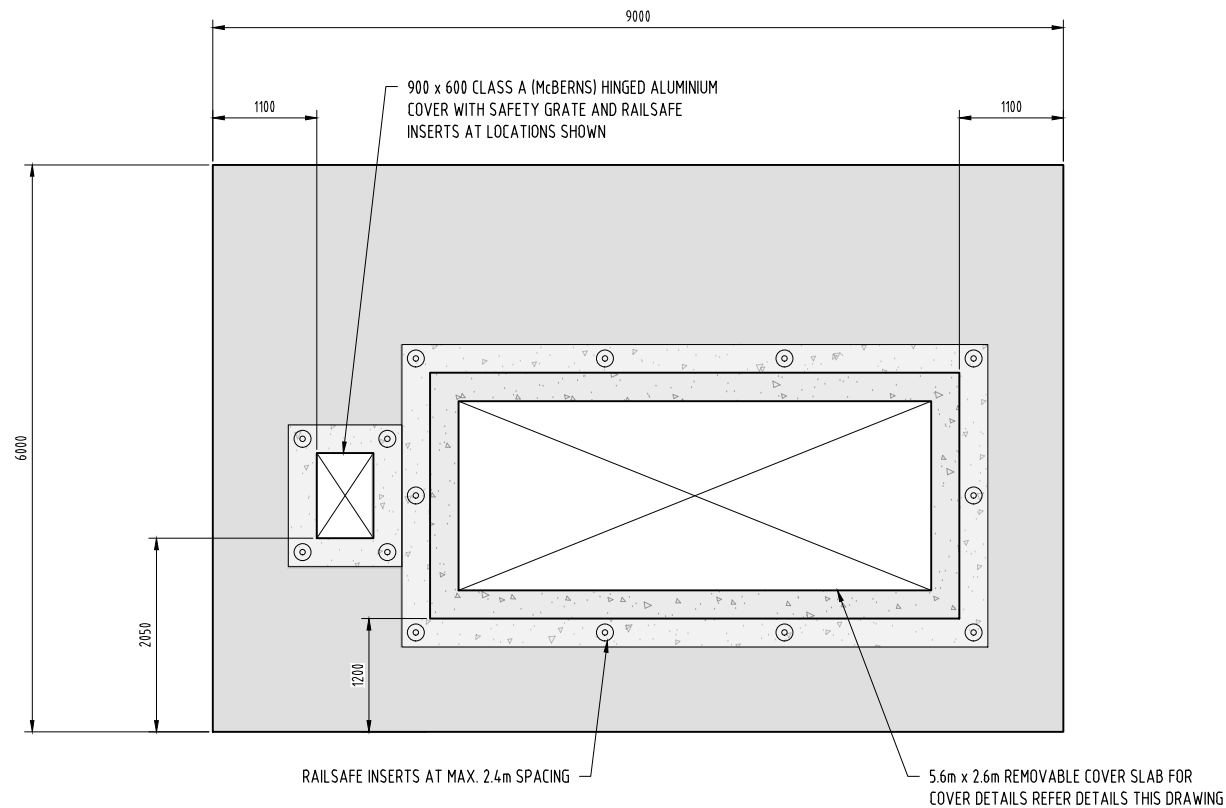
SECTION A
SCALE 1:75
(INTERNAL BENCHING AND PE LINER NOT SHOWN FOR CLARITY)

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV-2026-WAR-5170
Date: 01/09/2026



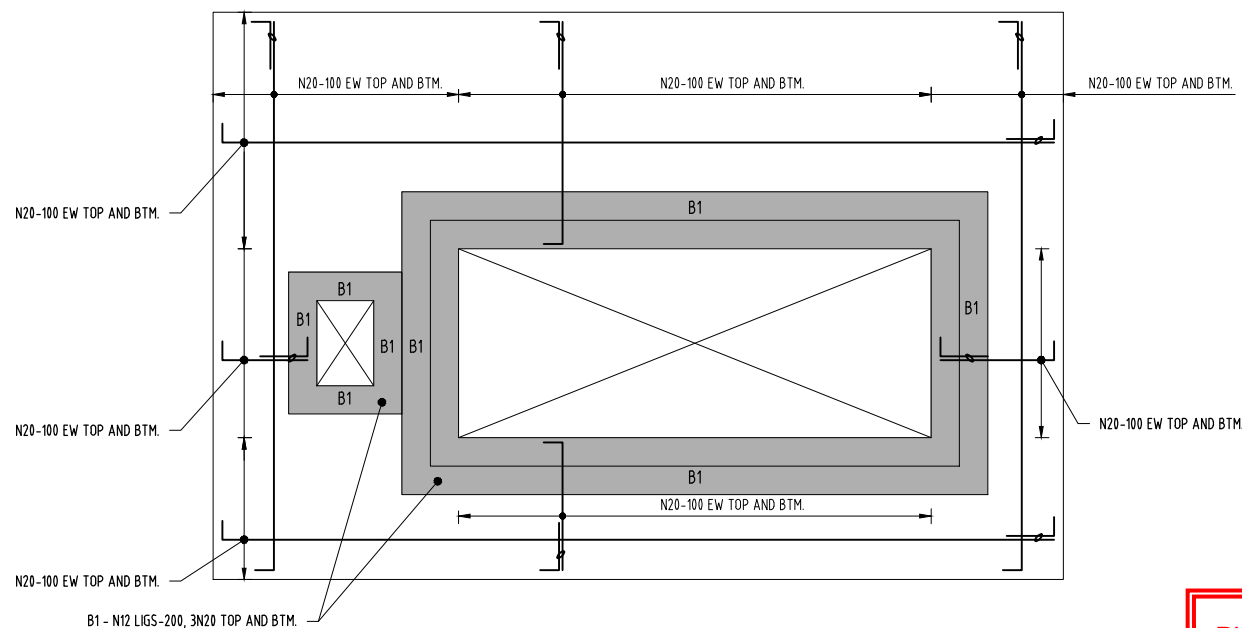
- NOTES:
- ALL DIMENSIONS IN MILLIMETERS U.N.O.
 - REINFORCEMENT IS SHOWN DIAGMATICALLY FOR INFORMATION ONLY.

ISSUED FOR 100% DESIGN APPROVAL
DESIGN APPROVED: [Signature]
RPEQ_21742 DATE APPROVED: 29/07/2026



EMERGENCY STORAGE COVER SLAB DETAILS

SCALE 1:40 (A1)
SCALE 1:80 (A3)



EMERGENCY STORAGE COVER SLAB REINFORCEMENT DETAILS

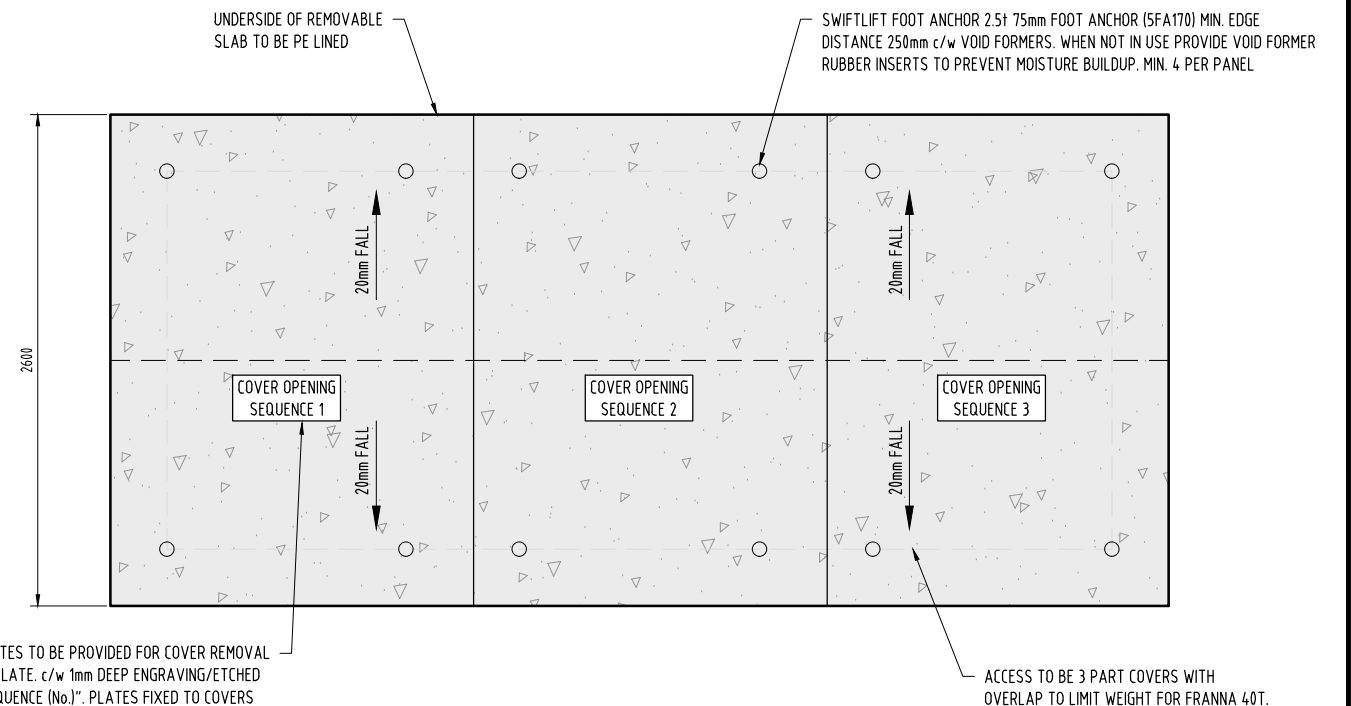
SCALE 1:40 (A1)
SCALE 1:80 (A3)

0 0.4 0.8 1.6 2.4
1 : 40m (A1) - 1 : 80m (A3)

0 0.2 0.4 0.8 1.2
1 : 20m (A1) - 1 : 40m (A3)

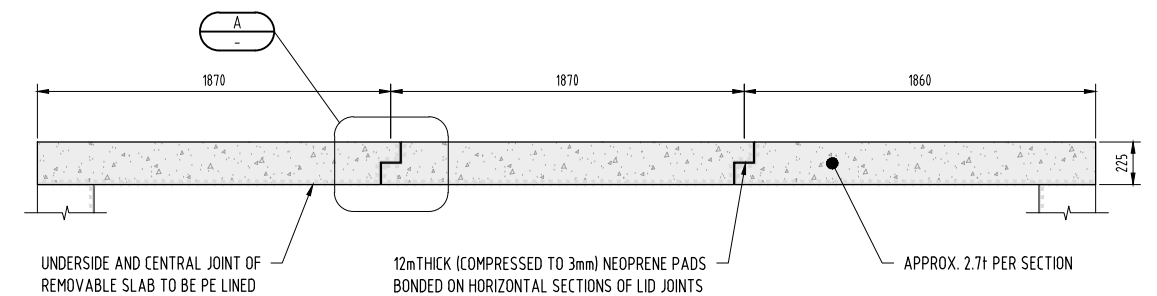
0 0.05 0.1 0.2 0.3
1 : 5m (A1) - 1 : 10m (A3)

STAINLESS STEEL IDENTIFICATION PLATES TO BE PROVIDED FOR COVER REMOVAL ORDER. MIN. 300x150x3mm THK SS316 PLATE. c/w 1mm DEEP ENGRAVING/ETCHED TEXT 40mm HIGH. "COVER OPENING SEQUENCE (No.)". PLATES FIXED TO COVERS WITH 4No. 6mm DIA 316 SS ROUND HEAD BOLTS 80 LONG, EPOXY GROUTED INTO HOLE 16mm DIA HOLE x 90 DEEP, AT CORNERS OF PLATE.



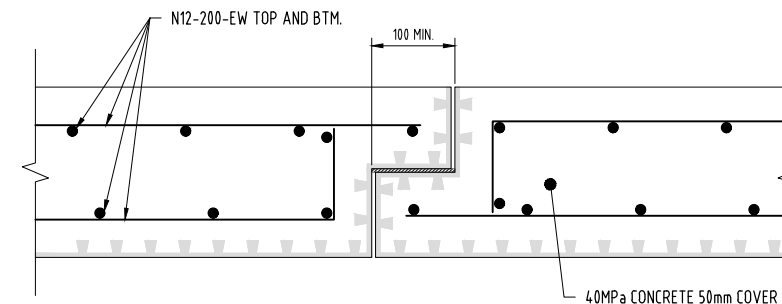
REMOVABLE ACCESS COVER LAYOUT PLAN

SCALE 1:20 (A1)
SCALE 1:40 (A3)



REMOVABLE ACCESS COVER SECTION

SCALE 1:20 (A1)
SCALE 1:40 (A3)



DETAIL
SCALE 1:5

NOTES:

- ALL DIMENSIONS IN MILLIMETERS U.N.O.
- REINFORCEMENT IS SHOWN DIAGMATTICALLY FOR INFORMATION ONLY.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



STATUS
**ISSUED FOR 100%
DESIGN APPROVAL**
DESIGN APPROVED: *Paulie Wilson*
RPEQ_21742 DATE APPROVED: 29/07/2026

A1

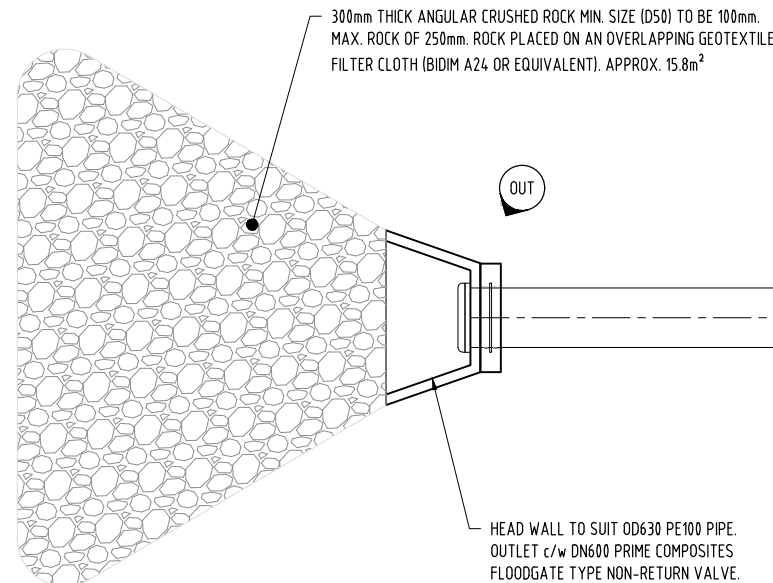
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED	INITIALS	DATE
D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW		
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	JD	RW	DRAWN	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	JD	RW	CHECKED	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	JD	RW	PASSED	29.07.2026



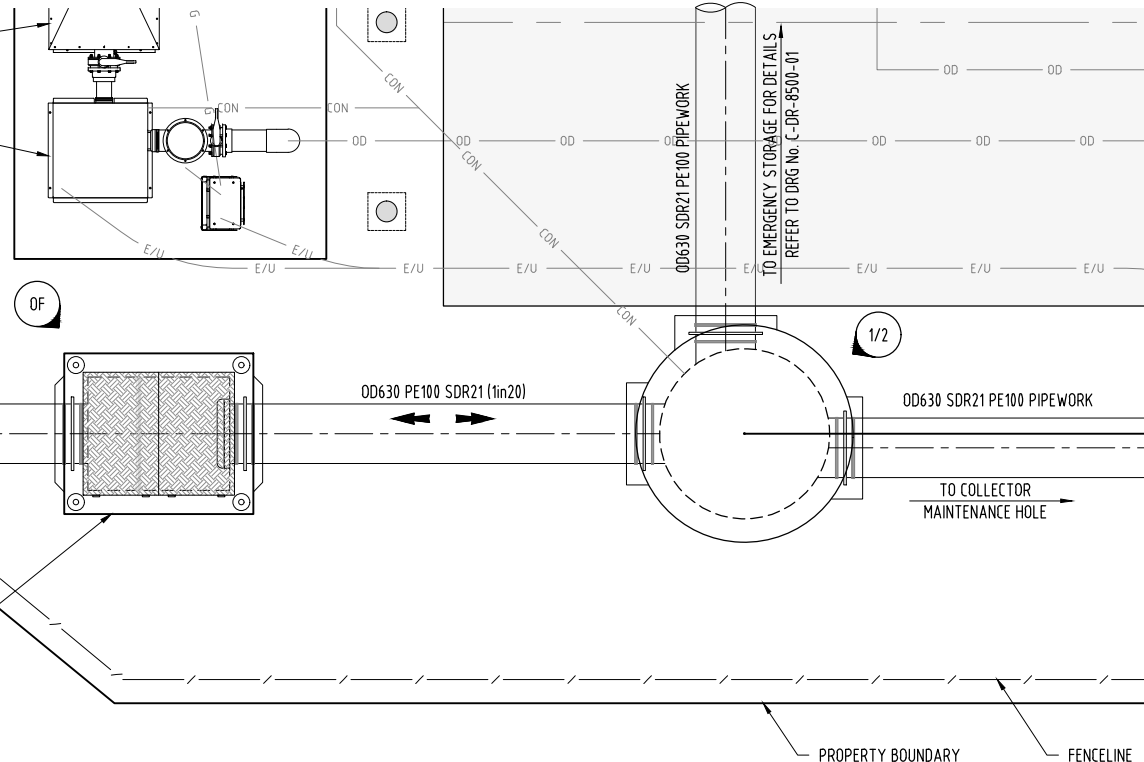
Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
EMERGENCY STORAGE STRUCTURAL DETAILS - COVER SLAB

SHEET 1 OF 1 SHEETS
REVISION DATE 29.07.2026
SCALE AS SHOWN
DISCIPLINE CODE S
DRAWING NO. SPS-WTG101-S-DR-8500-105



ODOUR CONTROL UNIT AND VENT POLE. ZC3000 UNIT c/w FILTER AND EXTRACTION FAN



PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

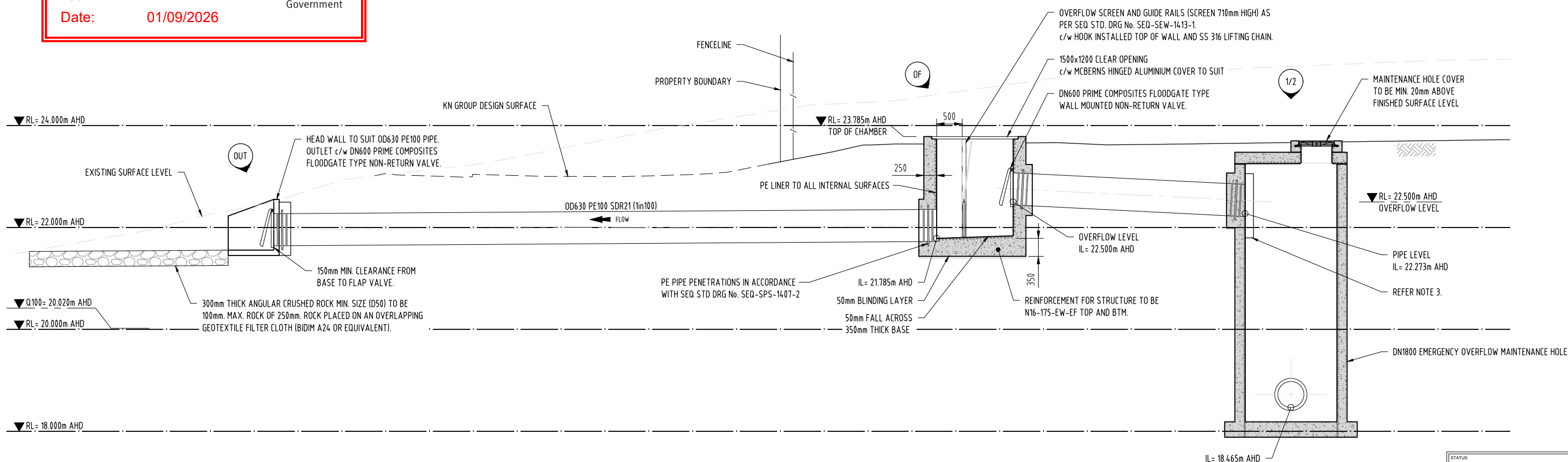
Approval no: DEV-2026-WAR-5170

Date: 01/09/2026



EMERGENCY OVERFLOW ARRANGEMENT PLAN

SCALE 1:40 (A1)
SCALE 1:80 (A3)



NOTES:

- FOR GENERAL NOTES REFER TO DRG No. SPS-WTG101-C-DR-8100-02 TO SPS-WTG101-C-DR-8100-03.
- OVERFLOW DETAILS TO BE GENERALLY IN ACCORDANCE WITH SEQ. CODE DRG No. SEQ-SEW-1413-1.
- OVERFLOW SHIELD SHALL BE 10mm THICK HDPE. FABRICATED AND TO BE IN ACCORDANCE WITH SEQ. STANDARD DRG No. SEQ-SEW-1412-1 AND 1412-2.

EMERGENCY OVERFLOW SECTION

SCALE 1:40 (A1)
SCALE 1:80 (A3)

0 0.4 0.8 1.6 2.4
1 : 40m (A1) - 1 : 80m (A3)

STATUS
ISSUED FOR 100% DESIGN APPROVAL
DESIGN APPROVED: *C. [Signature]*
RPEQ 12761 DATE APPROVED 29/07/2026

A1

D	29.07.2026	RE-ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS			
C	26.06.2026	ISSUED FOR 100% FINAL DESIGN APPROVAL	JW	LJ	CS	DRAWN	JW	29.07.2026
B	23.06.2026	RE-ISSUED FOR TENDER	JW	LJ	CS	CHECKED	LJ	29.07.2026
A	27.04.2026	ISSUED FOR 50% DESIGN REVIEW	JW	LJ	CS	PASSED	CS	29.07.2026
INDEX	DATE	REVISIONS	DRAWN	CHECKED	PASSED		INITIALS	DATE



LEVEL 5
135 WICKHAM TERRACE
SPRING HILL, QLD
tonkin.com.au



Unitywater

SPS-WTG101
RIVERMONT BOULEVARD WTG101 SPS FACILITY
SEWAGE PUMP STATION
OVERFLOW ARRANGEMENT - SHEET 1

SHEET 1 OF 1	SHEETS	SCALE AS SHOWN
REVISION DATE 29.07.2026	REVISION D	
DISCIPLINE CODE C		
DRAWING NO. SPS-WTG101-C-DR-8600-01		