PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

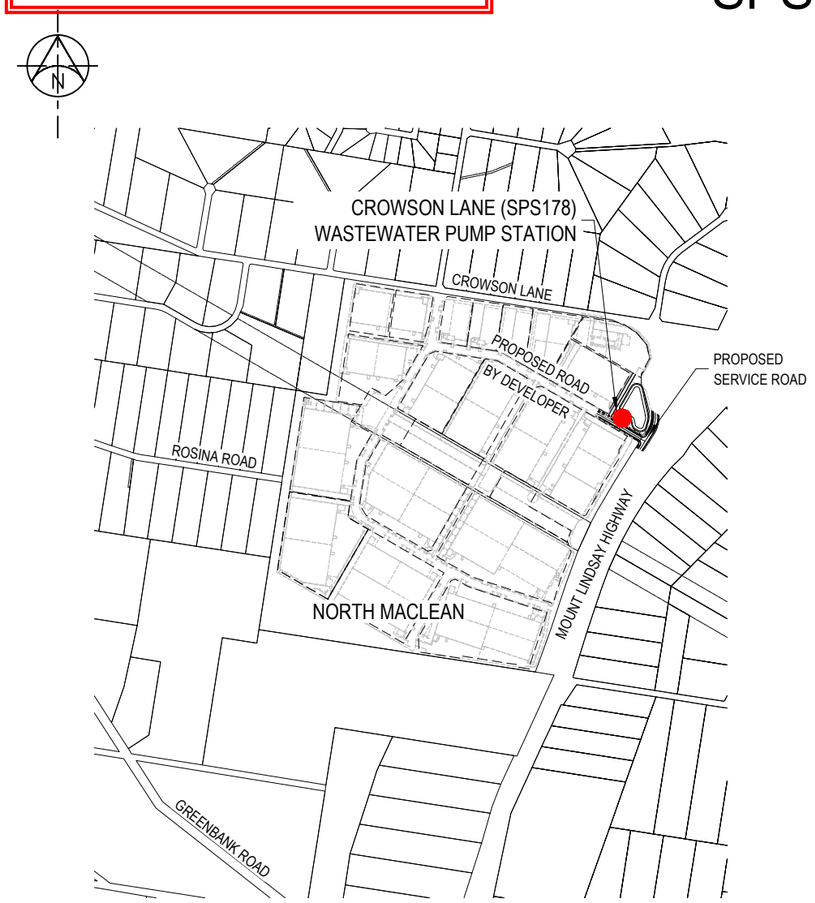
Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

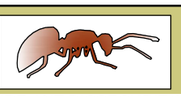
SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

SPS178 WASTEWATER PUMP STATION



SITE PLAN
SCALE 1:10000

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.



FIRE ANT BIOSECURITY
ZONE 2

MOVEMENT OF RESTRICTED ITEMS SHALL BE IN ACCORDANCE WITH DEPARTMENT OF AGRICULTURE AND FISHERIES REQUIREMENTS. REFER TO www.daf.qld.gov.au

WARNING

DIAL1100
BEFORE YOU DIG

SITE SPECIFIC DRAWINGS

DRAWING No	TITLE
DT8003-02-S-DWG-ND-91-0000	COVER SHEET, LOCALITY PLAN, DRAWING LIST AND SITE SPECIFIC NOTES
DT8003-02-S-DWG-ND-91-0040	SYSTEM AND PUMP RESISTANCE CURVES
DT8003-02-S-DWG-ND-91-0041	HYDRAULIC PROFILE
DT8003-02-S-DWG-ND-91-0050	SITE ACCESS, LAYDOWN AREA, ROW AND BOREHOLE LOCATIONS
DT8003-02-S-DWG-ND-91-0060	SITE SETOUT CO-ORDINATES
DT8003-02-S-DWG-PR-91-1000	P & ID
DT8003-02-S-DWG-CI-91-2000	GENERAL ARRANGEMENT - OVERALL SITE PLAN
DT8003-02-S-DWG-CI-91-2001	SITE PLAN
DT8003-02-S-DWG-CI-91-2002	PUMP STATION SECTIONS AND BENCHING DETAILS
DT8003-02-S-DWG-CI-91-2003	WET WELL AND PIPING PLAN, PIPE AND FITTINGS SCHEDULE
DT8003-02-S-DWG-CI-91-2004	PIPING SECTIONS
DT8003-02-S-DWG-CI-91-2006	GRAVITY MAIN CONNECTION DETAILS PIPE, AND FITTINGS SCHEDULE
DT8003-02-S-DWG-CI-91-2007	INLET GRAVITY MAIN, LONGITUDINAL SECTION
DT8003-02-S-DWG-CI-91-2009	PIPE DETAILS, SPECIAL ITEMS 001, 002 AND 003
DT8003-02-S-DWG-CI-91-2010	WET WELL AND VALVE PIT ROOF PLAN
DT8003-02-S-DWG-CI-91-2020	SITE SET OUT PLAN
DT8003-02-S-DWG-CI-91-2025	CHEMICAL DELIVERY BUND, PLAN, SECTIONS AND DETAILS
DT8003-02-S-DWG-CI-91-2031	OVERFLOW DETAILS
DT8003-02-S-DWG-CI-91-2040	SITE SERVICES PLAN
DT8003-02-S-DWG-CI-91-2041	PLUMBING SERVICES PLAN
DT8003-02-S-DWG-EN-91-7100	LANDSCAPING PLAN - PUMP STATION LANDSCAPE SPECIFICATION
DT8003-02-S-DWG-EN-91-7101	LANDSCAPING PLAN - PUMP STATION LANDSCAPE SPECIFICATION AND PLANT SCHEDULE
DT8003-02-S-DWG-EN-91-7110	LANDSCAPING PLAN - PUMP STATION, LAYOUT

SITE SPECIFIC STRUCTURAL DRAWINGS

DRAWING No	TITLE
DT8003-02-S-DWG-ST-91-3000	WET WELL CONCRETE SETOUT, PLAN AND SECTIONS
DT8003-02-S-DWG-ST-91-3001	CONCRETE REINFORCEMENT, PLAN AND SECTIONS
DT8003-02-S-DWG-ST-91-3002	CONCRETE REINFORCEMENT, PRECAST SHAFT DETAILS
DT8003-02-S-DWG-ST-91-3003	WET WELL CONCRETE SETOUT, PENETRATION THICKENING DETAILS
DT8003-02-S-DWG-ST-91-3005	VALVE PIT, STRUCTURAL DETAILS
DT8003-02-S-DWG-ST-91-3006	OVERFLOW CHAMBER, STRUCTURAL DETAILS
DT8003-02-S-DWG-ST-91-3007	CHEMICAL DELIVERY BUND, PLAN
DT8003-02-S-DWG-ST-91-3008	CHEMICAL DELIVERY BUND, SECTIONS
DT8003-02-S-DWG-ST-91-3009	CHEMICAL DELIVERY BUND, DETAILS
DT8003-02-S-DWG-ST-91-3010	DRIVEWAY AND HARDSTAND, CONCRETE PLAN
DT8003-02-S-DWG-ST-91-3011	DRIVEWAY AND HARDSTAND, CONCRETE DETAILS
DT8003-02-S-DWG-ST-91-3012	INLINE THRUST BLOCK DETAILS

SITE SPECIFIC NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG'S PM001-01-P-DWG-ND-0020 TO ND-0023.
2. FOR STRUCTURAL NOTES REFER TO STD DWG'S PM001-00-P-DWG-ND-0025 TO ND-0026.
3. FOR LEGEND REFER TO STD DWG PM001-00P-DWG-ND-0030.
4. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL INVESTIGATION REPORT - PG-8971 DATED NOVEMBER 2022 BY PACIFIC GEOTECH.
5. DESIGN DRAWINGS ARE BASED ON 3D STRING DESIGN FILE '221009 North Maclean.dwg' PROVIDED BY DEVELOPER. (09/10/2022)
6. THE 1% AEP FLOOD LEVEL AT THE PUMP STATION SITE WAS SOURCED FROM FLOOD STUDY SUBMITTED BY ARCADIS.
7. FOR STANDARD, REFERENCE AND AS CONSTRUCTED DRAWINGS REFER TO DOCUMENT No. DT8003-02-S-DWG-ND-91-0900.
8. THE PROPOSED PRESSURE PIPEWORK SHALL BE HYDROSTATICALLY PRESSURE TESTED IN ACCORDANCE WITH CLAUSE 36.5 AND SUB-CLAUSE OF WSA 04-2005 (SEQ WS&S D&C CODE) MINIMUM TEST PRESSURE OF 1200kPa.
9. FOR PROJECT SPECIFIC SCOPE OF WORKS, REFER TO DT8003-00-S-SOW-CI-2001
10. FOR PROJECT SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN REFER TO DT8003-00-W-MPL-EN-7100
11. 11. FOR DISPERSIVE SOIL INFORMATION, REFER TO TOPO DOCUMENT NO. 23-0022/R2591

LOGAN WATER - STANDARD DRAWINGS

GENERAL SET

DRAWING No	TITLE
PM001-00-P-DWG-ND-0000	COVER SHEET AND DRAWING LIST
PM001-00-P-DWG-ND-0020	GENERAL NOTES, SHEET 1 OF 4
PM001-00-P-DWG-ND-0021	GENERAL NOTES, SHEET 2 OF 4
PM001-00-P-DWG-ND-0022	GENERAL NOTES, SHEET 3 OF 4
PM001-00-P-DWG-ND-0023	GENERAL NOTES, SHEET 4 OF 4
PM001-00-P-DWG-ND-0025	GENERAL STRUCTURAL NOTES, SHEET 1 OF 2
PM001-00-P-DWG-ND-0026	GENERAL STRUCTURAL NOTES, SHEET 2 OF 2
PM001-00-P-DWG-ND-0030	INFRASTRUCTURE LEGEND
PM001-00-P-DWG-ND-0040	SECURITY FENCING
PM001-00-P-DWG-ND-0042	STANDARD PAVEMENT DETAILS
PM001-00-P-DWG-ND-0043	REINFORCED CONCRETE PAVEMENT JOINT DETAILS
PM001-00-P-DWG-ND-0047	TYPICAL RPZ INSTALLATION DETAILS
PM001-00-P-DWG-ND-0050	TYPICAL TRENCH DETAILS, SHEET 1 OF 2
PM001-00-P-DWG-ND-0051	TYPICAL TRENCH DETAILS, SHEET 2 OF 2
PM001-00-P-DWG-ND-0055	TYPICAL ELECTRICAL TRENCH DETAILS
PM001-00-P-DWG-PR-1000	PIPE AND INSTRUMENTATION DIAGRAM, LEGEND SHEET 1 OF 3
PM001-00-P-DWG-PR-1001	PIPE AND INSTRUMENTATION DIAGRAM, LEGEND SHEET 2 OF 3
PM001-00-P-DWG-PR-1002	PIPE AND INSTRUMENTATION DIAGRAM, LEGEND SHEET 3 OF 3

WASTEWATER PUMP STATIONS AND SEWER RISING MAINS SET

DRAWING NO	TITLE
PM001-01-S-DWG-CI-2000	WASTEWATER PUMP STATION, TYPICAL BYPASS PUMP OUT PIT AND FLOW METER PIT
PM001-01-S-DWG-CI-2001	WASTEWATER PUMP STATION TYPICAL DETAILS, TYPICAL OVERFLOW CHAMBER ARRANGEMENT
PM001-01-S-DWG-CI-2002	WASTEWATER PUMP STATION TYPICAL DETAILS, TYPICAL ODOUR CONTROL UNIT ARRANGEMENT.
PM001-01-S-DWG-CI-2010	WASTEWATER PUMP STATION ,TYPICAL DETAILS, TYPICAL HANDRAIL, COVER, SAFETY GRILLE ARRANGEMENT
PM001-01-S-DWG-CI-2013	WASTEWATER PUMP STATION, TYPICAL DETAILS, TYPICAL LEVEL CONTROLS AND INSTRUMENTATION DETAILS

GRAVITY SEWER MAINS SET

DRAWING NO	TITLE
PM001-01-S-DWG-CI-0070	GRAVITY SEWER MAINS, TYPICAL LARGE INTERNALLY LINED MAINTENANCE HOLE DETAILS, TYPE C
PM001-01-S-DWG-CI-0072	GRAVITY SEWER MAINS,MISCELLANEOUS CONNECTION DETAILS

SEQ WS&S D&C CODE STANDARD DRAWINGS

DRAWING No	TITLE
SEQ-SEW-1412-2	TYPICAL OVERFLOW SHIELD - SHIELDED OUTLET
SEQ-SEW-1413-1	SEWAGE OVERFLOW ARRANGEMENT - TYPICAL OVERFLOW WITH SCREENED OUTLET
SEQ-SPS-1407-1	POLYETHYLENE LINING TOP SLAB AND WALL TYPICAL DETAILS
SEQ-SPS-1407-2	POLYETHYLENE LINING WALL PIPE PENETRATION TYPICAL DETAILS
SEQ-WAT-1206-1	TYPICAL THRUST AND ANCHOR BLOCKS FOR VALVES

IPWEAQ STANDARD DRAWINGS

DRAWING No	TITLE
RS-051	DRIVEWAYS, HEAVY DUTY VEHICLE CROSSING
RS-065	PATHWAYS CONCRETE PATHWAY CONSTRUCTION DETAILS
RS-080	KERB AND CHANNEL PROFILES AND DIMENSIONS INCLUDING EDGE RESTRAINS, MEDIAN AND CHANNEL
GS-041	FENCING - CHAIN WIRE SECURITY FENCE

0 100 200 400 600m
A1 - 1:10000

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	SG	SD	12/06/2023

DESIGNED BY S. GOHAR	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

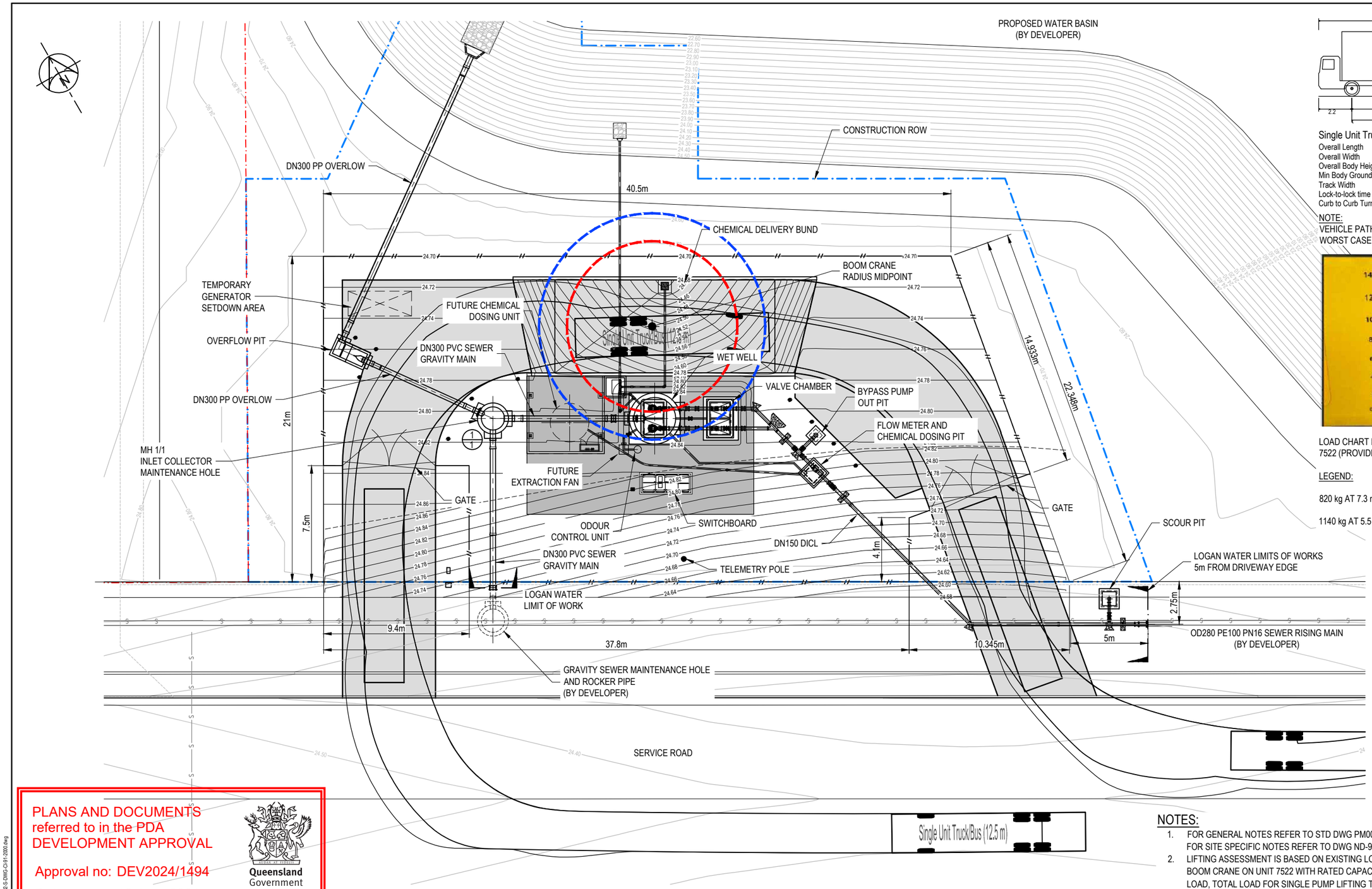
LOGAN WATER
CITY OF LOGAN

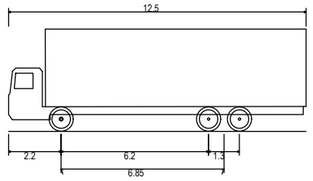
PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
COVER SHEET, LOCALITY PLAN, DRAWING LIST AND
SITE SPECIFIC NOTES

PROJECT DRAWING No. DT8003-02-S-DWG-ND-91-0000
DESIGN COMPANY. LOGAN WATER
REV. 0
ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-ND-91-0000.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 3:27pm

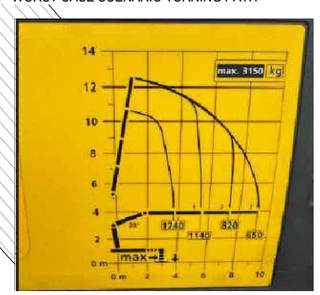




Single Unit Truck/Bus (12.5 m)

Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

NOTE:
VEHICLE PATH SHOWN IS THE 12.5 HEAVY RIGID WORST CASE SCENARIO TURNING PATH



LOAD CHART FOR LARGE PALFINGER CRANE ON UNIT 7522 (PROVIDED BY LOGAN WATER OPERATIONS).

LEGEND:

820 kg AT 7.3 m RADIUS AT 0 DEG ANGLE

1140 kg AT 5.5 m RADIUS AT 0 DEG ANGLE

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. LIFTING ASSESSMENT IS BASED ON EXISTING LOGAN WATER PALFINGER KNUCKLE BOOM CRANE ON UNIT 7522 WITH RATED CAPACITY OF 3,150 KG PER PROVIDED LOAD, TOTAL LOAD FOR SINGLE PUMP LIFTING TO BE CONFIRMED TO INCLUDE PUMP SET MASS OF 655 KG AND WEIGHT OF SLINGS/CHAINS AND HOOK BLOCK.

OVERALL SITE PLAN
SCALE 1:125

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

0 2.5 5.0 7.5m
A1 - 1:125

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	RS	S. D.	12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE:
SPS178 WASTEWATER PUMP STATION
GENERAL ARRANGEMENT
OVERALL SITE PLAN

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2000

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2000.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 1:49pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

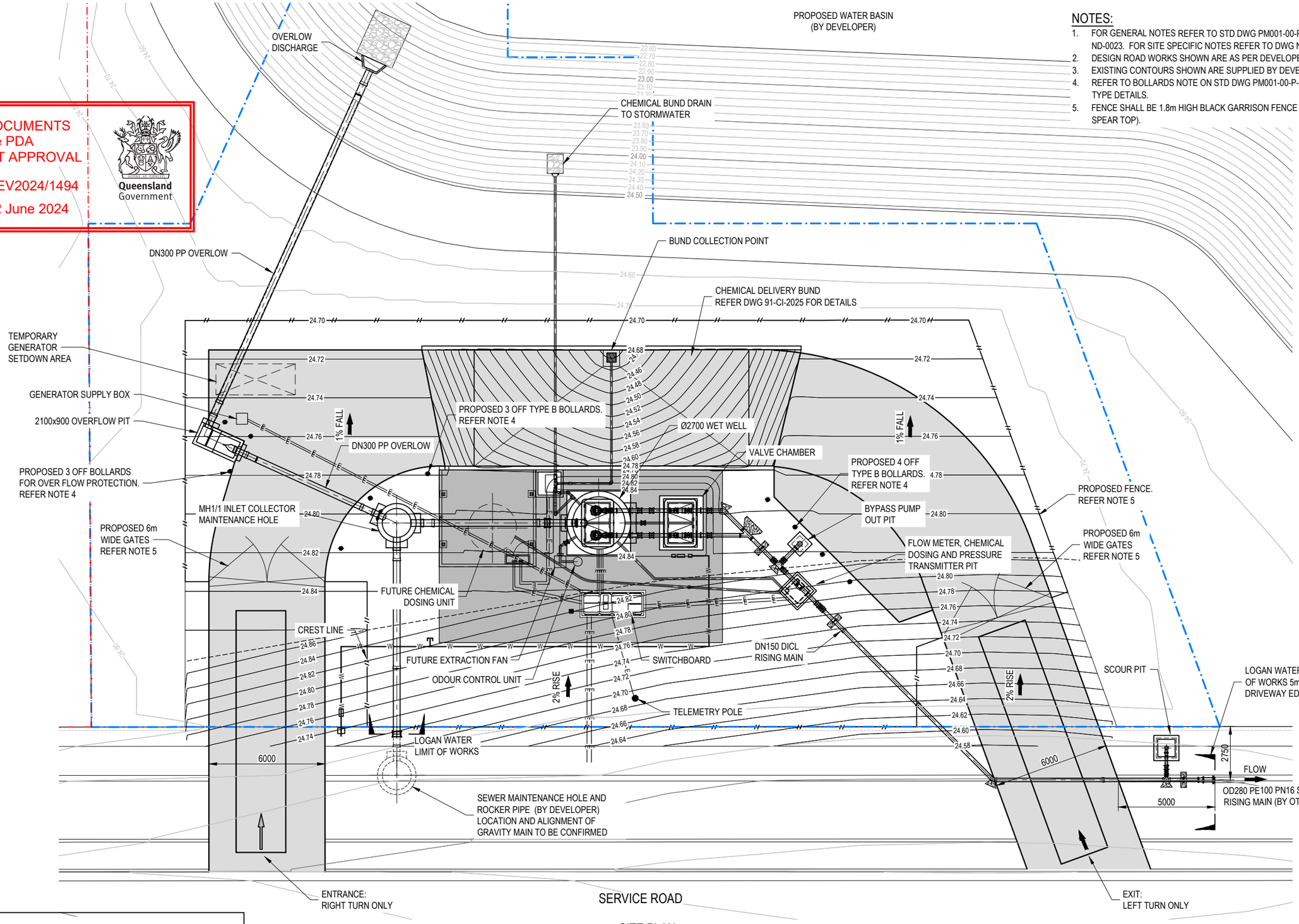
Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. DESIGN ROAD WORKS SHOWN ARE AS PER DEVELOPER DESIGN PLANS.
3. EXISTING CONTOURS SHOWN ARE SUPPLIED BY DEVELOPER.
4. REFER TO BOLLARDS NOTE ON STD DWG PM001-00-P-DWG-ND-0022 FOR TYPE DETAILS.
5. FENCE SHALL BE 1.8m HIGH BLACK GARRISON FENCE (VERTICAL POLE, SPEAR TOP).



SITE PLAN
SCALE 1:100

0 1 2 4 6m
A1 - 1:100

FOR CONSTRUCTION

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	RS	SD	12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
SITE PLAN

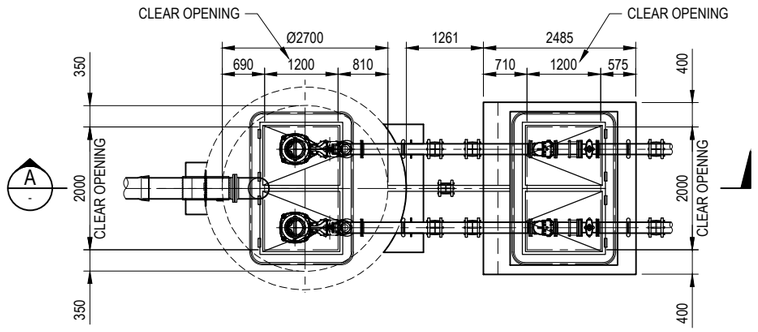
PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2001

DESIGN COMPANY. LOGAN WATER

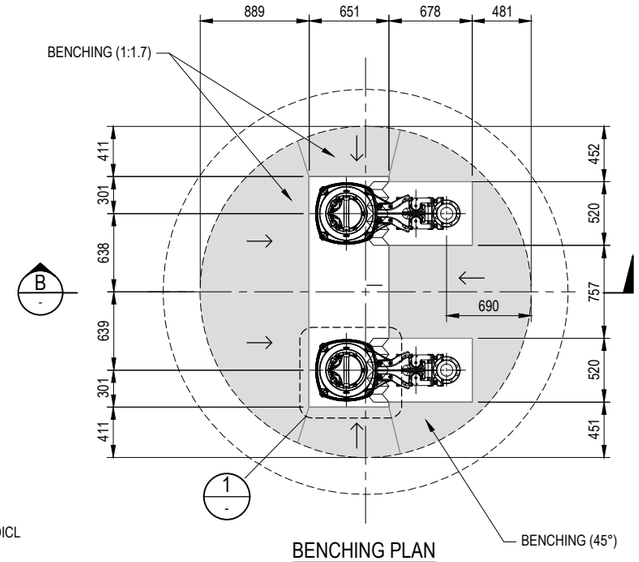
REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2001.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 1:53pm



PLAN
SCALE 1:50



BENCHING PLAN
SCALE 1:25

PUMP STATION CONTROL LEVELS			
ITEM	DESCRIPTION	LEVEL (m) (A.H.D.)	HEIGHT FROM BASE (m)
A	TOP OF SLAB	24.85	8.81
B	INLET IL.	18.35	2.31
C	P1 START LEVEL / P2 STOP LEVEL	17.65	1.61
D	PUMP P1 STOP	16.75	0.71
E	FLOOR SLAB	16.04	
F	PUMP STATION DEPTH		8.81
H	GROUND LEVEL	24.75	8.71
I	P2 START LEVEL	17.95	1.91
J	HIGH LEVEL ALARM	18.25	2.21
K	OVERFLOW LEVEL	23.50	7.46
L	PRE-OVERFLOW ALARM	23.00	6.96
M	Q100 STORM SURGE LEVEL	24.46	8.42
PUMP OPERATING LEVELS AND DEFAULT SETTINGS SHALL BE AS PER THE SEQ-SP FUNCTIONAL DESCRIPTION			

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

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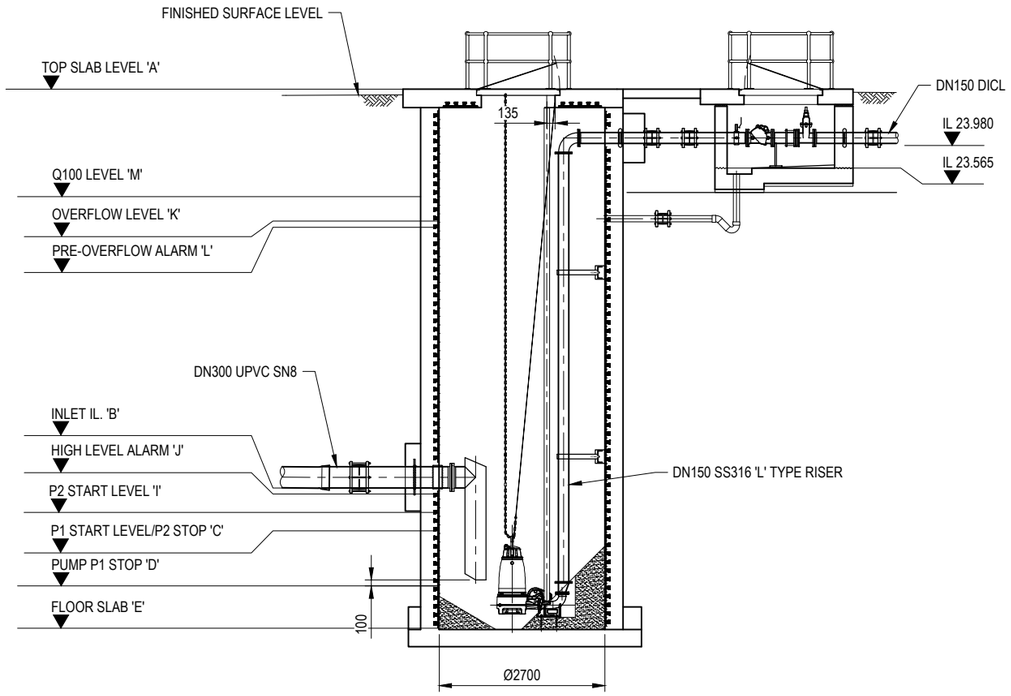
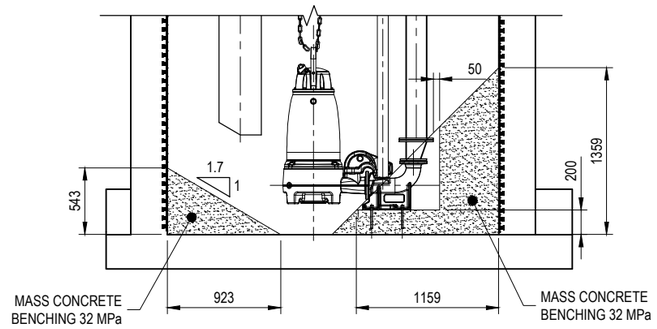
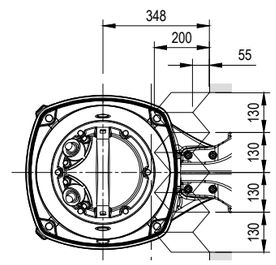
Queensland Government



SECTION A
SCALE 1:50



SECTION B
SCALE 1:25



DETAIL 1
SCALE 1:10

ZIG-ZAG PATTERN

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWGS PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. POLYETHYLENE LINING TOP SLAB AND WALL DETAILS IN ACCORDANCE WITH SEQ DWG SEQ-SPS-1407-1.
3. INSTRUMENT HOOK AND CABLE SUPPORT BRACKET DIMENSIONS TO BE VERIFIED BY SUBCONTRACTOR PRIOR TO PROCUREMENT AND CONSTRUCTION.
4. SUPPORT BRACKETS SHALL BE INSTALLED WITH 12 THICK NEOPRENE GASKETS IN ACCORDANCE WITH 'WALL BRACKET ATTACHMENT' DETAIL, SEQ CODE DWG SEQ-SPS-1407-1.
5. SUBCONTRACTOR TO ENSURE LOCATION OF SUPPORT BRACKETS DO NOT OBSTRUCT PUMP REMOVAL.
6. REFER TO STD DWG PM001-01-S-DWG-CI-2013 FOR HOOKS, LEVEL CONTROL AND INSTRUMENTATION INSTALLATION DETAILS.
7. REFER TO STRUCTURAL DRAWINGS FOR WET WELL AND VALVE PIT DETAILS.

0 500 1000 2000 3000mm
A1 - 1:50

0 250 500 1000 1500mm
A1 - 1:25

0 100 200 400 600mm
A1 - 1:10

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	VV		12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
PUMP STATION SECTIONS AND
BENCHING DETAILS

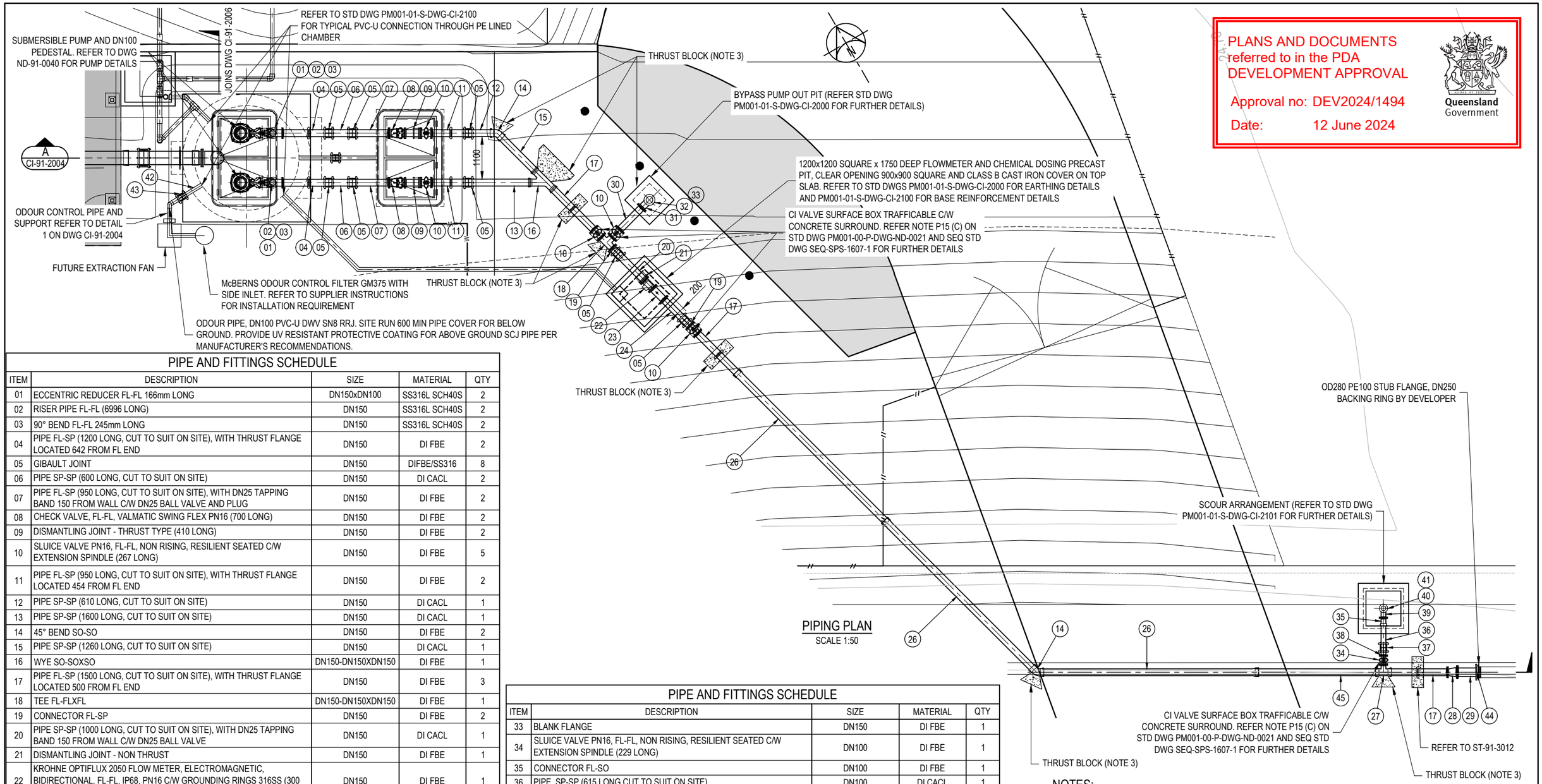
PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2002

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2002.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 3:34pm



PIPING PLAN
SCALE 1:50

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2024/1494
Date: 12 June 2024

Queensland Government

PIPE AND FITTINGS SCHEDULE

ITEM	DESCRIPTION	SIZE	MATERIAL	QTY
01	ECCENTRIC REDUCER FL-FL 166mm LONG	DN150xDN100	SS316L SCH40S	2
02	RISER PIPE FL-FL (6996 LONG)	DN150	SS316L SCH40S	2
03	90° BEND FL-FL 245mm LONG	DN150	SS316L SCH40S	2
04	PIPE FL-SP (1200 LONG, CUT TO SUIT ON SITE), WITH THRUST FLANGE LOCATED 642 FROM FL END	DN150	DI FBE	2
05	GIBAULT JOINT	DN150	DIFBE/SS316	8
06	PIPE SP-SP (600 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	2
07	PIPE FL-SP (950 LONG, CUT TO SUIT ON SITE), WITH DN25 TAPPING BAND 150 FROM WALL C/W DN25 BALL VALVE AND PLUG	DN150	DI FBE	2
08	CHECK VALVE, FL-FL, VALMATIC SWING FLEX PN16 (700 LONG)	DN150	DI FBE	2
09	DISMANTLING JOINT - THRUST TYPE (410 LONG)	DN150	DI FBE	2
10	SLUICE VALVE PN16, FL-FL, NON RISING, RESILIENT SEATED C/W EXTENSION SPINDLE (267 LONG)	DN150	DI FBE	5
11	PIPE FL-SP (950 LONG, CUT TO SUIT ON SITE), WITH THRUST FLANGE LOCATED 454 FROM FL END	DN150	DI FBE	2
12	PIPE SP-SP (610 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	1
13	PIPE SP-SP (1600 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	1
14	45° BEND SO-SO	DN150	DI FBE	2
15	PIPE SP-SP (1260 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	1
16	WYE SO-SOXSO	DN150-DN150XDN150	DI FBE	1
17	PIPE FL-SP (1500 LONG, CUT TO SUIT ON SITE), WITH THRUST FLANGE LOCATED 500 FROM FL END	DN150	DI FBE	3
18	TEE FL-FLXFL	DN150-DN150XDN150	DI FBE	1
19	CONNECTOR FL-SP	DN150	DI FBE	2
20	PIPE SP-SP (1000 LONG, CUT TO SUIT ON SITE), WITH DN25 TAPPING BAND 150 FROM WALL C/W DN25 BALL VALVE	DN150	DI CACL	1
21	DISMANTLING JOINT - NON THRUST	DN150	DI FBE	1
22	KROHNE OPTIFLUX 2050 FLOW METER, ELECTROMAGNETIC, BIDIRECTIONAL, FL-FL, IP68, PN16 C/W GROUNDING RINGS 316SS (300 LONG)	DN150	DI FBE	1
23	PIPE FL-FL (400 LONG) C/W DOSING QUILL FITTING 300 FROM FLANGE END (SIZE OF DOSING QUILL TO BE CONFIRMED BY VENDOR FOR CHEMICAL DOSING FACILITY)	DN150	DI FBE FLANGE CLASS	1
24	PIPE FL-SP (750 LONG, CUT TO SUIT ON SITE)	DN150	DI FBE	1
26	PIPE SO-SP (5500 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	3
27	SCOUR TEE SO-SOXFL	DN150-DN150XDN100	DI FBE	1
28	ECCENTRIC REDUCER FL-FL	DN150-DN200	DI FBE	1
29	PIPE DN200 R/F FL - DN250 F/F FL (500 LONG) (SPECIAL ITEM 002, REFER DWG CI-91-2009)	OD 219 X 5mm THK	MS FBPE COATED AND LINED	1
30	PIPE FL-FL (800 LONG)	DN150	DI FBE	1
31	90° BEND FL-FL C/W THRUST BLOCK (NOTE 3)	DN150	DI FBE	1
32	PIPE FL-FL (550 LONG)	DN150	DI FBE	1

PIPE AND FITTINGS SCHEDULE

ITEM	DESCRIPTION	SIZE	MATERIAL	QTY
33	BLANK FLANGE	DN150	DI FBE	1
34	SLUICE VALVE PN16, FL-FL, NON RISING, RESILIENT SEATED C/W EXTENSION SPINDLE (229 LONG)	DN100	DI FBE	1
35	CONNECTOR FL-SO	DN100	DI FBE	1
36	PIPE, SP-SP (615 LONG CUT TO SUIT ON SITE)	DN100	DI CACL	1
37	GIBAULT JOINT	DN100	DI FBE/SS316	1
38	CONNECTOR FL-SP	DN100	DI FBE	1
39	90° BEND FL-FL C/W THRUST BLOCK (NOTE 3)	DN100	DI FBE	1
40	PIPE FL-FL (835 LONG)	DN100	DI FBE	1
41	BAUER COUPLING, FLANGED FEMALE, INCLUDING DUST CAP, CAP TO BE DRILLED WITH Ø5 HOLE TO RELIEVE PRESSURE, (TOTAL RUBBER LTD FEMALE TO FLANGE BAUER FDFD400 4" OR APPROVED EQUIVALENT)	DN100	GALV, STEEL	1
42	PIPE SP-SP (600 LONG, CUT TO SUIT ON SITE)	DN100	PVC-U DWV SN8	1
43	VARIGIB JOINT TO SUIT PIPE END ODs	DN100	DI FBE/SS316	1
44	BLANK FLANGE (TO BE REMOVED WHEN CONNECTING FROM SRM)	DN250	DI FBE	1
45	PIPE SP-SP (3200 LONG, CUT TO SUIT ON SITE)	DN150	DI CACL	1

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. FOR TRENCH DETAILS REFER TO STD DWGS PM001-00-P-DWG-ND-0050 AND ND-0051.
3. FOR THRUST AND ANCHOR BLOCK NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0022.
4. HYDROPHILIC RUBBER SEALS SHALL BE A MINIMUM OF 25x7mm WITH SEFL-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 SEAL WITH GUN GRADE HYDROPHILIC WATERSTOP MASTIC BEAD.

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

0 100 200 400 600mm — A1 - 1:10
0 500 1000 2000 3000mm — A1 - 1:50

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	VV		12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

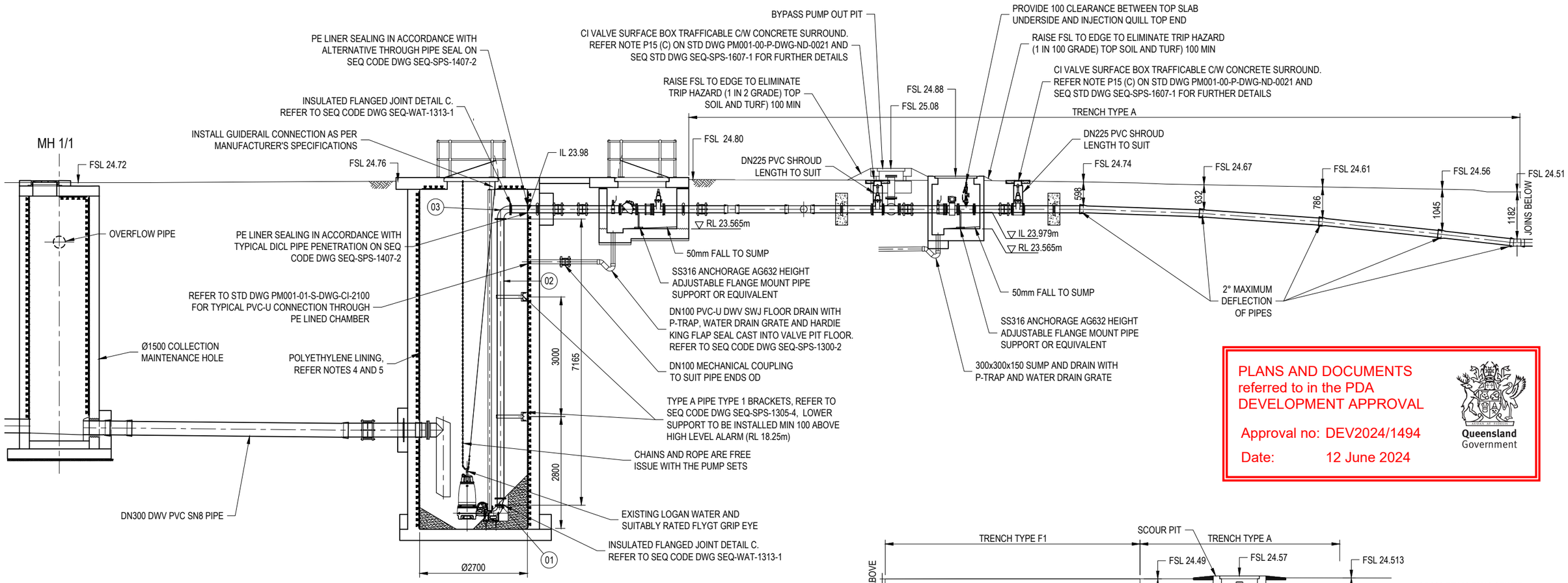
LOGAN WATER — CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
WET WELL AND PIPING PLAN,
PIPE AND FITTINGS SCHEDULE

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2003
DESIGN COMPANY. LOGAN WATER
REV. 0
ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2003.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 3:46pm



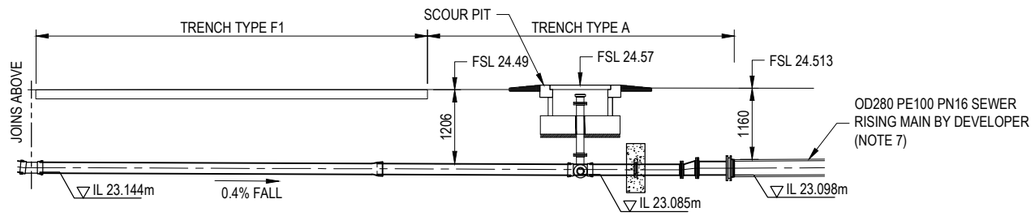
PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

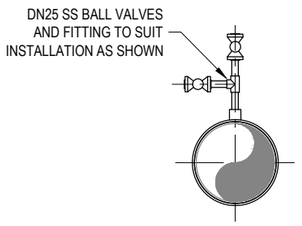
Approval no: DEV2024/1494

Date: 12 June 2024

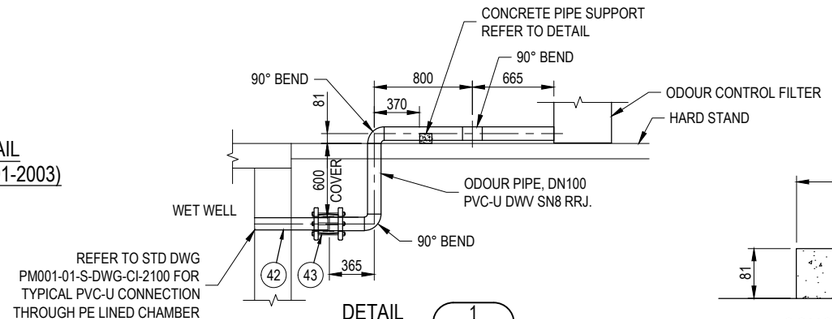
Queensland Government

SECTION A (CI-91-2003)
SCALE 1:25

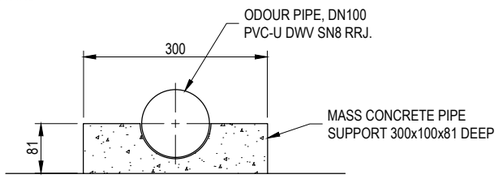




TAPPING BAND DETAIL
(ITEMS 07 AND 20 ON CI-91-2003)
N.T.S.



DETAIL 1 (CI-91-2003)
SCALE 1:25



CONCRETE PIPE SUPPORT
SCALE 1:5

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. REFER TO DWG CI-91-2003 FOR PIPE AND FITTINGS SCHEDULE.
3. FOR THRUST AND ANCHOR BLOCK NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0022.
4. POLYETHYLENE LINING TOP SLAB AND WALL DETAILS IN ACCORDANCE WITH SEQ CODE DWG SEQ-SPS-1407-1.
5. THE PROTECTIVE COATING SYSTEM SHALL BE SEALED AT BENCHING EDGES, ALL ENTRIES THROUGH THE CONCRETE STRUCTURE AND AT ALL FITMENT HOLES WITH MEGAPOXY P1 OR APPROVED EQUIVALENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO STD DWG PM001-01-S-DWG-CI-2003 FOR DETAILS.
6. FOR TRENCH DETAILS REFER TO STD DWGS PM001-00-P-DWG-ND-0050 AND ND-0051.
7. SUBCONTRACTOR TO CONFIRM LOCATION OF PE RISING MAIN PRIOR TO CONSTRUCTION OF DICL RISING MAIN.

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

0 50 100 200 300mm — A1 - 1:5

0 250 500 1000 1500mm — A1 - 1:25

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	VV		12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER — CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
PIPING SECTIONS

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2004

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2004.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 4:51pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

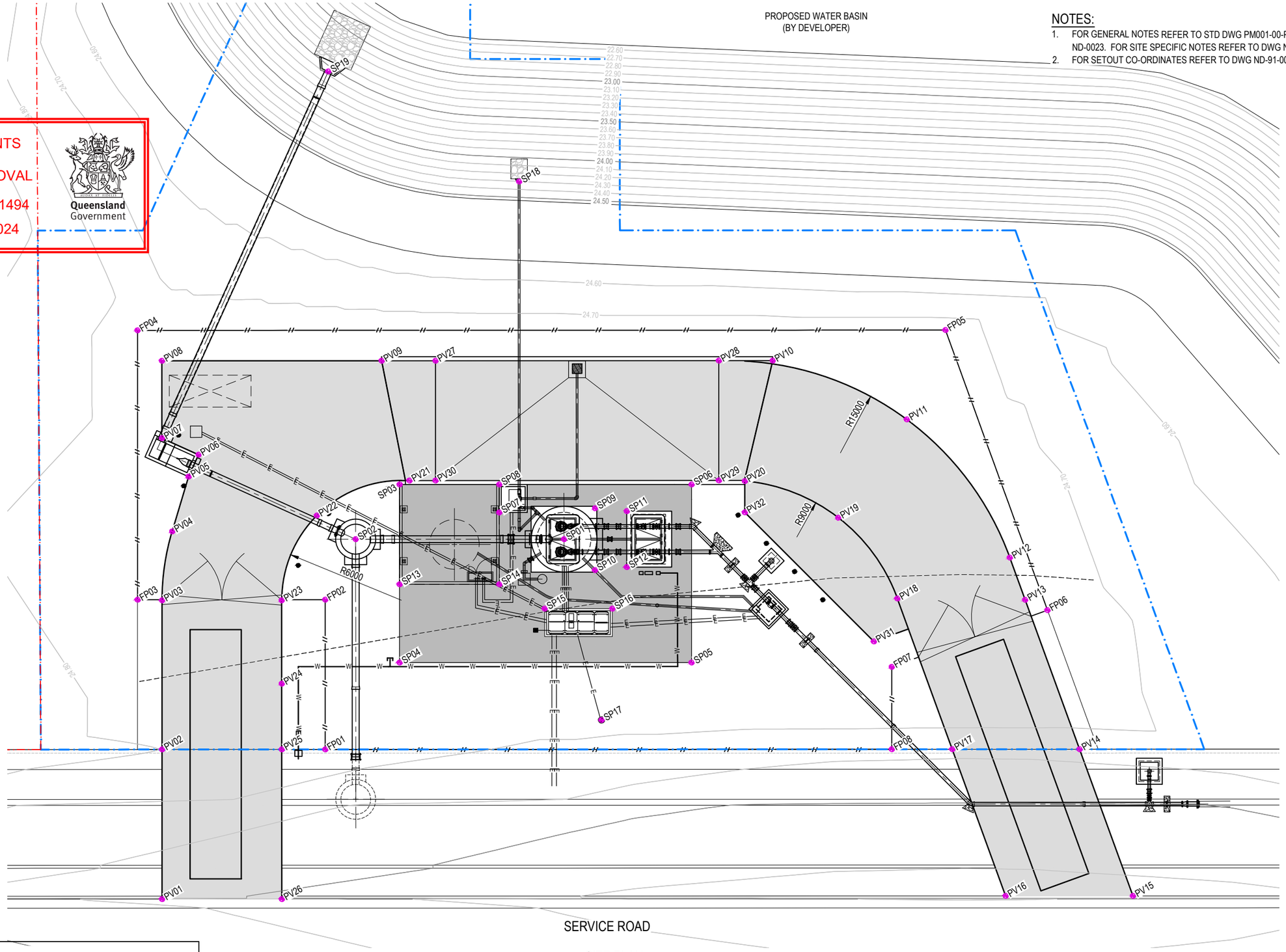
Date: 12 June 2024

Queensland Government

PROPOSED WATER BASIN
(BY DEVELOPER)

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. FOR SETOUT CO-ORDINATES REFER TO DWG ND-91-0060



SERVICE ROAD

SITE PLAN
SCALE 1:100

0 1 2 4 6m
A1 - 1:100

FOR CONSTRUCTION

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	SG	SD	12/06/2023

DESIGNED BY S. GOHAR	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
SITE SETOUT PLAN

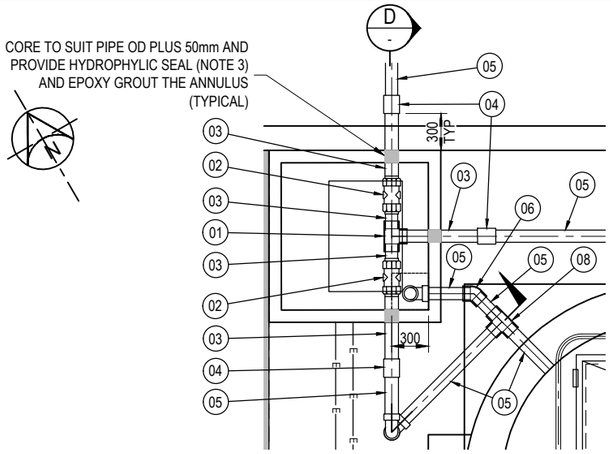
PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2020

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2020.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 2:35pm



DETAIL 1
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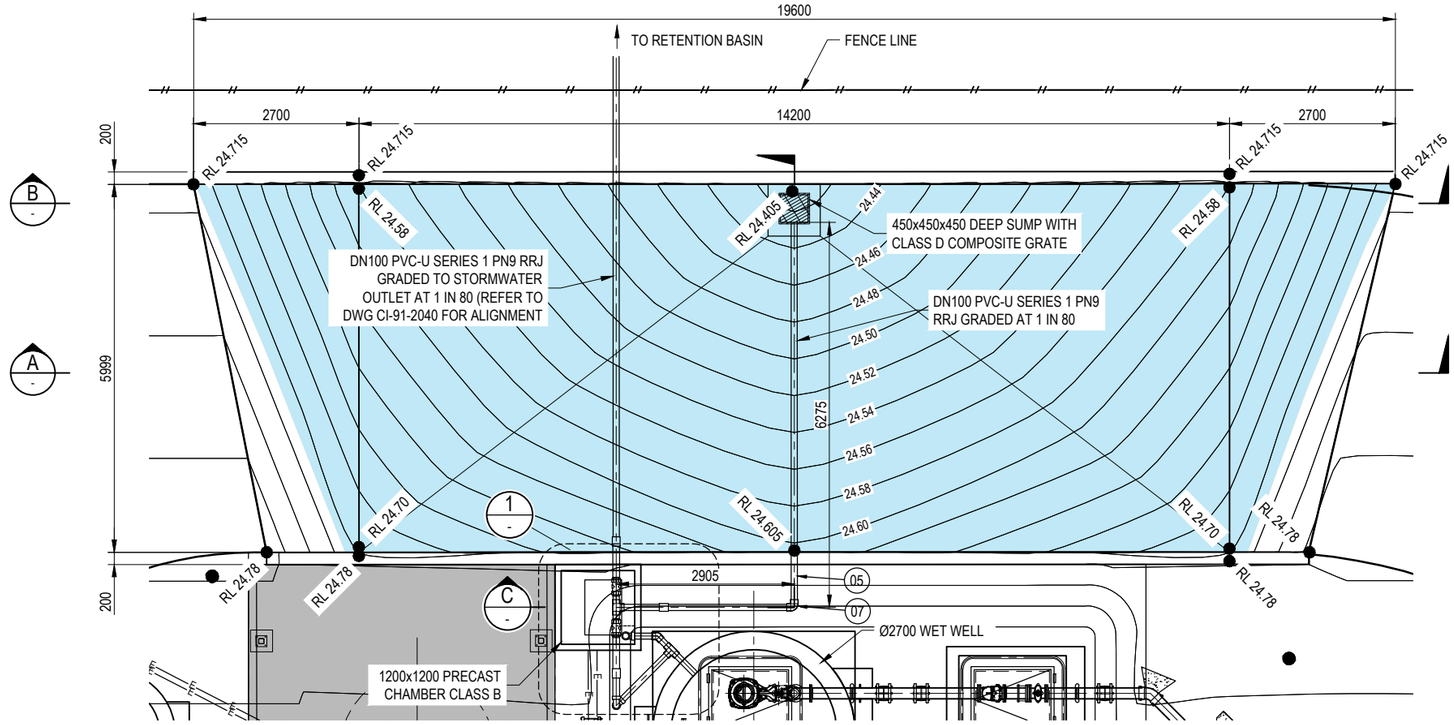
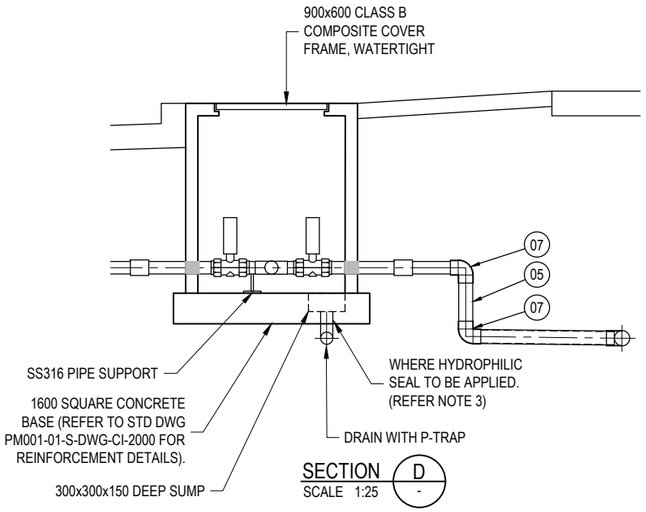
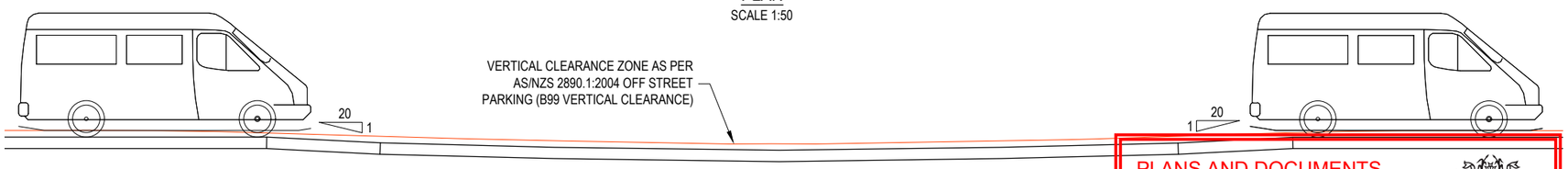


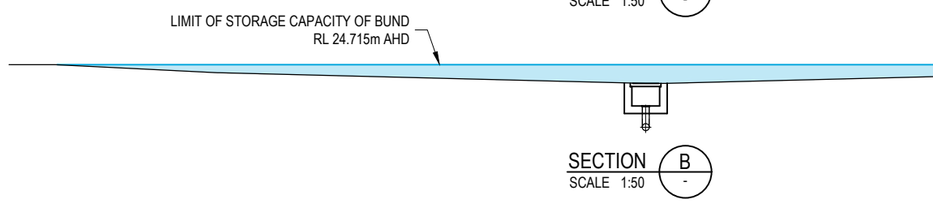
PLAN
SCALE 1:50



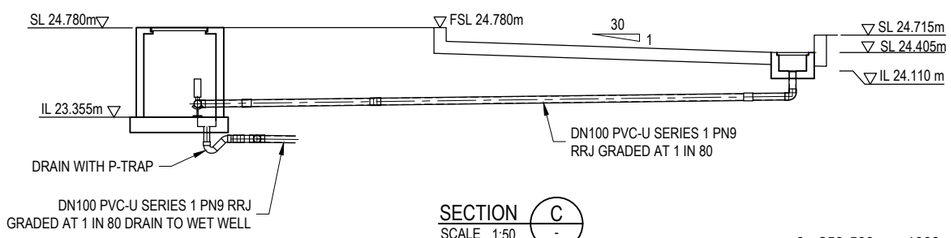
SECTION D
SCALE 1:25



SECTION A
SCALE 1:50



SECTION B
SCALE 1:50



SECTION C
SCALE 1:50

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

PIPE AND FITTINGS SCHEDULE

ITEM	DESCRIPTION	SIZE	MATERIAL	QTY
01	TEE, SCJ	DN100xDN100	UPVC SCH80	1
02	IP67 24VDC ELECTRIC ACTUATED TRUE UNION BALL VALVE, 10 BAR, SOLVENT WELD TO SUIT SCH80 PIPES	DN100	UPVC POWDERED COATED ALUMINIUM (ELECTRIC ACTUATOR)	2
03	PIPE, SCJ, SP-SP (CUT TO SUIT)	DN100	UPVC SCH80	5
04	FERNCO FLEXSEAL DRAIN COUPLING	DN100	EPDM/SS316	3
05	PIPE SWJ SP-SP, (CUT TO SUIT)	DN100	PVC-U SERIES 1 PN9	8
06	45° ELBOW, SWJ	DN100	PVC-U SERIES 1	1
07	90° ELBOW, SWJ	DN100	PVC-U SERIES 1	3
08	TEE, SWJ	DN100xDN100	PVC-U SERIES 1	1

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. CHEMICAL DELIVERY BUND DESIGNED TO ACHIEVE AT LEAST 110% OF 12,000L TANKER. TOTAL HOLDING CAPACITY OF BUND AT RL 24.715m AHD = 13,400L.
3. HYDROPHILIC RUBBER SEALS SHALL BE A MINIMUM OF 6x25 AND SHALL FULLY ENCIRCLE PIPE WITH A NEAT BUTT JOINT USING ANOACRYLATE GLUE AND A BEAD OF LEAKMASTER ACROSS ANY SPLICE.

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

0 250 500 1000 1500mm
A1 - 1:25

0 500 1000 2000 3000mm
A1 - 1:50

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	BS		12/06/2023

DESIGNED BY V. VERGARA	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

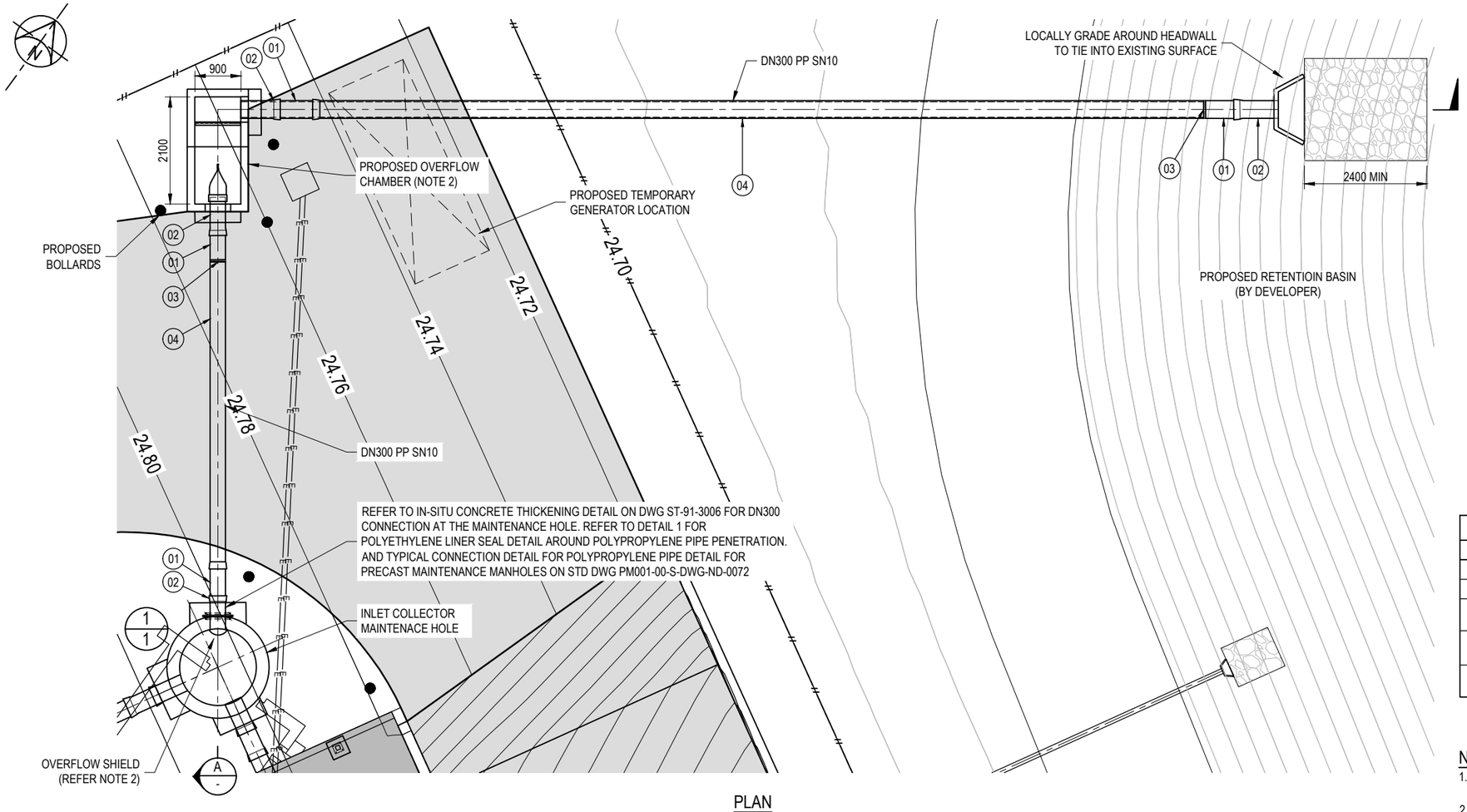
LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

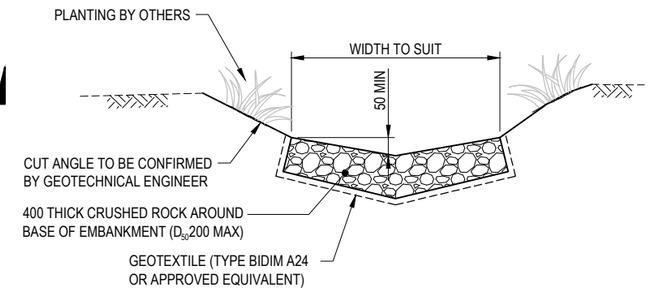
DRAWING TITLE:
SPS178 WASTEWATER PUMP STATION
CHEMICAL DELIVERY BUND
PLAN, SECTIONS AND DETAILS

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2025
DESIGN COMPANY. LOGAN WATER
REV. 0
ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2025.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 2:40pm



PLAN
SCALE 1:50

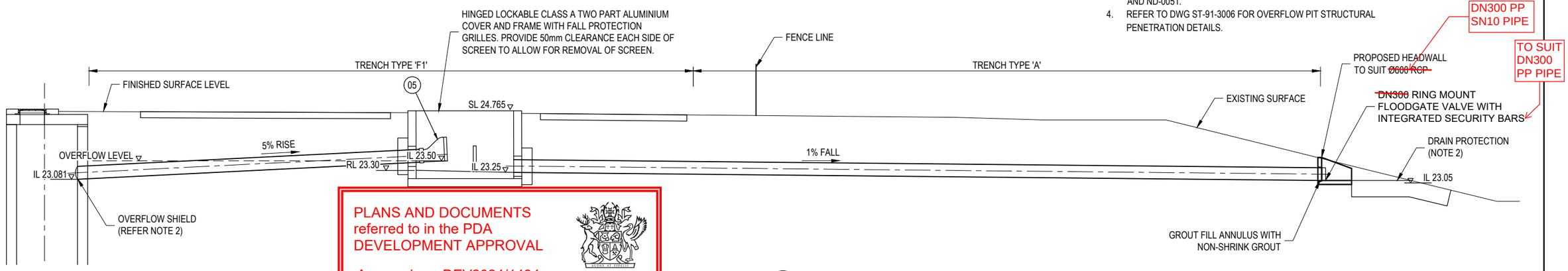


TYPICAL DRAIN PROTECTION DETAIL
N.T.S

PIPE AND FITTINGS SCHEDULE				
ITEM	DESCRIPTION	SIZE	MATERIAL	QTY
01	SP-SP PIPE, (600 LONG)	DN300	PP SN10	4
02	PIPE, SO-SP (750 LONG CUT TO SUIT ON SITE)	DN300	PP SN10	4
03	SS JOINER CLAMP FOR PP PIPE SPIGOT END JOINT	DN300	316SS	2
04	PIPE, SO-SP PIPE (3000 NOMINAL LENGTH CUT TO SUIT ON SITE)	DN300	PP SN10	21m
05	TIDEFLEX TF-1 CHECK VALVE C/W SS316 MOUNTABLE BAND	DN300	EPDM	1

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. REFER TO STD DWG PM001-01-S-DWG-2001 FOR OVERFLOW CHAMBER ARRANGEMENT AND OTHER DETAILS.
3. FOR TRENCH DETAILS REFER TO STD DWGS PM001-00-P-DWG-ND-0050 AND ND-0051.
4. REFER TO DWG ST-91-3006 FOR OVERFLOW PIT STRUCTURAL PENETRATION DETAILS.



SECTION A
SCALE 1:50

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A1 - 1:50

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2024/1494
Date: 12 June 2024
Queensland Government

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	BS	SD	12/06/2023

DESIGNED BY B. SINGH	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
OVERFLOW DETAILS

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2031
DESIGN COMPANY. LOGAN WATER
REV. 0
ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2031.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 2:41pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

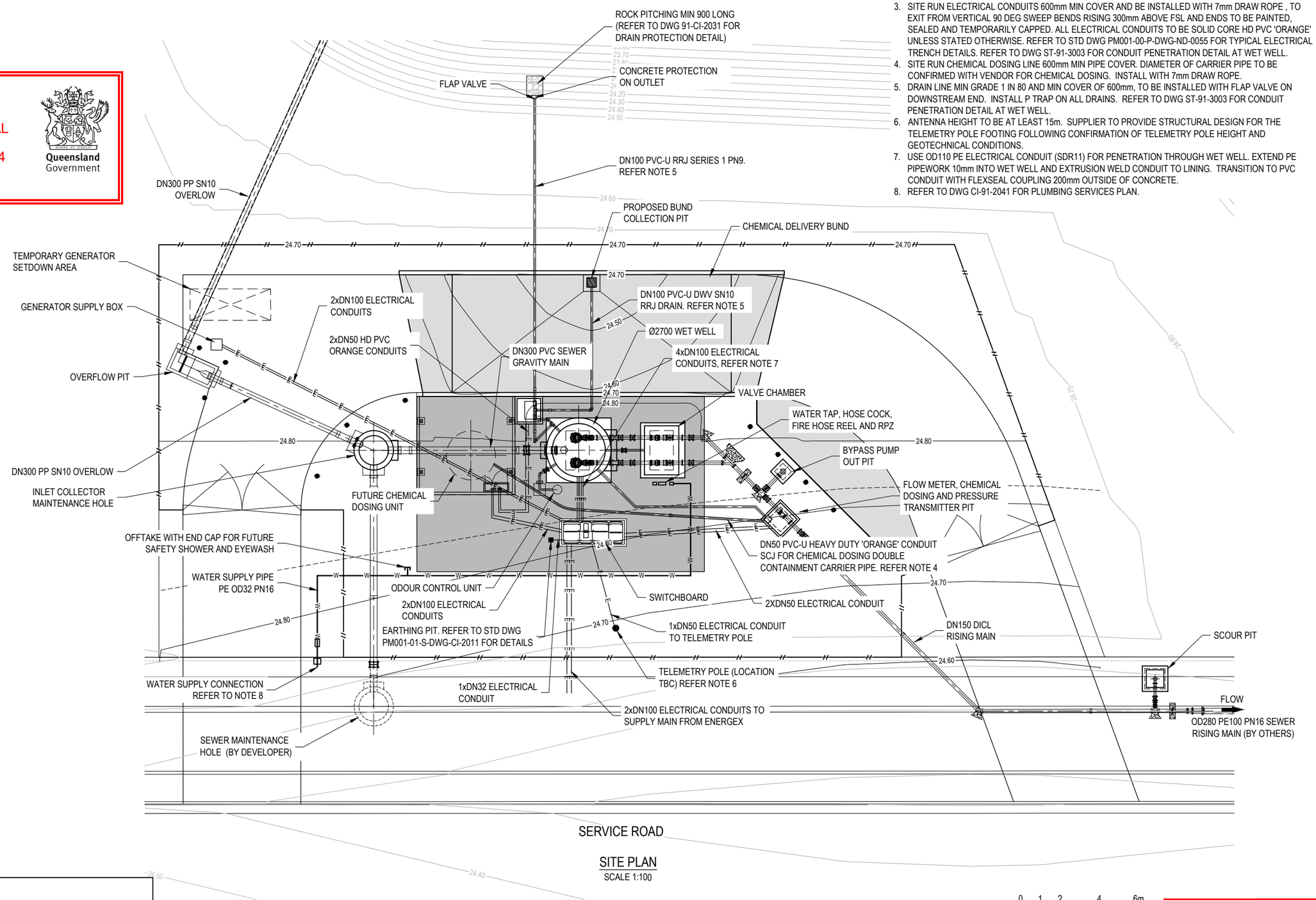
Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. SERVICES FROM/TO CHEMICAL STORAGE AND DOSING FACILITY PENDING FINAL VENDOR LAYOUTS.
3. SITE RUN ELECTRICAL CONDUITS 600mm MIN COVER AND BE INSTALLED WITH 7mm DRAW ROPE , TO EXIT FROM VERTICAL 90 DEG SWEEP BENDS RISING 300mm ABOVE FSL AND ENDS TO BE PAINTED, SEALED AND TEMPORARILY CAPPED. ALL ELECTRICAL CONDUITS TO BE SOLID CORE HD PVC 'ORANGE' UNLESS STATED OTHERWISE. REFER TO STD DWG PM001-00-P-DWG-ND-0055 FOR TYPICAL ELECTRICAL TRENCH DETAILS. REFER TO DWG ST-91-3003 FOR CONDUIT PENETRATION DETAIL AT WET WELL.
4. SITE RUN CHEMICAL DOSING LINE 600mm MIN PIPE COVER. DIAMETER OF CARRIER PIPE TO BE CONFIRMED WITH VENDOR FOR CHEMICAL DOSING. INSTALL WITH 7mm DRAW ROPE.
5. DRAIN LINE MIN GRADE 1 IN 80 AND MIN COVER OF 600mm, TO BE INSTALLED WITH FLAP VALVE ON DOWNSTREAM END. INSTALL P TRAP ON ALL DRAINS. REFER TO DWG ST-91-3003 FOR CONDUIT PENETRATION DETAIL AT WET WELL.
6. ANTENNA HEIGHT TO BE AT LEAST 15m. SUPPLIER TO PROVIDE STRUCTURAL DESIGN FOR THE TELEMETRY POLE FOOTING FOLLOWING CONFIRMATION OF TELEMETRY POLE HEIGHT AND GEOTECHNICAL CONDITIONS.
7. USE OD110 PE ELECTRICAL CONDUIT (SDR11) FOR PENETRATION THROUGH WET WELL. EXTEND PE PIPEWORK 10mm INTO WET WELL AND EXTRUSION WELD CONDUIT TO LINING. TRANSITION TO PVC CONDUIT WITH FLEXSEAL COUPLING 200mm OUTSIDE OF CONCRETE.
8. REFER TO DWG CI-91-2041 FOR PLUMBING SERVICES PLAN.



SITE PLAN
SCALE 1:100

0 1 2 4 6m
A1 - 1:100

FOR CONSTRUCTION

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	BS	SD	12/06/2023

DESIGNED BY B. SINGH	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
SITE SERVICES PLAN

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2040

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2040.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 3:07pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

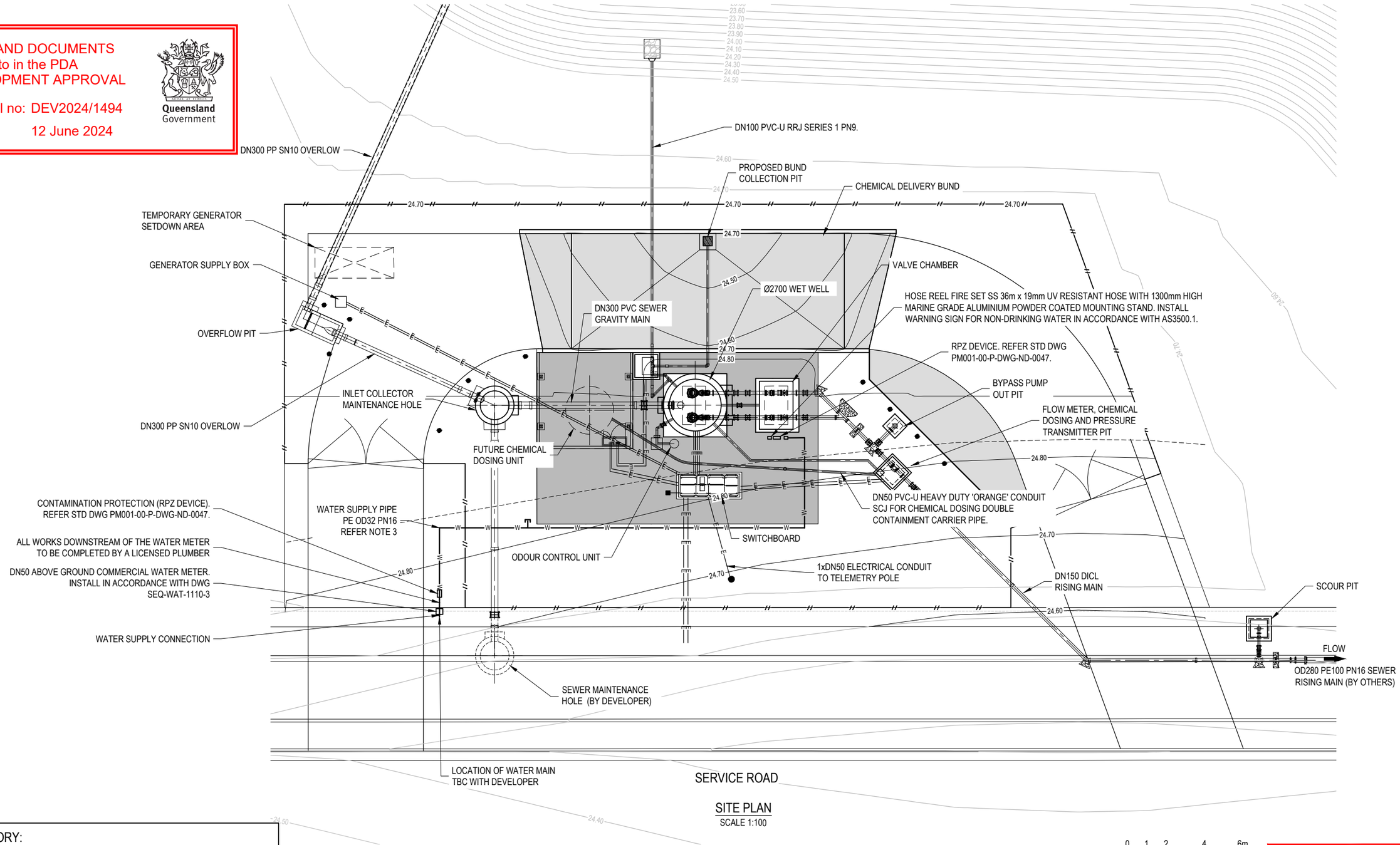
Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

NOTES:

1. FOR GENERAL NOTES REFER TO STD DWG PM001-00-P-DWG-ND-0020 TO ND-0023. FOR SITE SPECIFIC NOTES REFER TO DWG ND-91-0000.
2. SERVICES FROM/TO CHEMICAL STORAGE AND DOSING FACILITY PENDING FINAL VENDOR LAYOUTS.
3. SITE RUN WATER SUPPLY LINE 600 MIN PIPE COVER. TIE IN TO EXISTING WATER MAIN AND WATER METER TO BE SUPPLIED AND INSTALLED BY LCC PLUMBING SERVICES.
4. REFER TO STD DWG PM001-00-P-DWG-PR-1002 FOR STANDARD P & ID LEGEND.



SITE PLAN

SCALE 1:100

0 1 2 4 6m

A1 - 1:100

PROJECT HISTORY:
DESIGN DOCUMENTATION WAS UNDERTAKEN UNDER DD8001-02.

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	CG	BS	SD	12/06/2023

DESIGNED BY B. SINGH	DESIGN CHECKED BY S. DICKER
DRAFTED BY C. GAY	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER

CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION PLUMBING SERVICES PLAN

PROJECT DRAWING No. DT8003-02-S-DWG-CI-91-2041

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-CI-91-2041.dwg

GAY, CHRISTOPHER

DATE PLOTTED: 12 June, 2023 - 3:09pm

DD8001 NORTH MACLEAN WASTEWATER PUMP STATION LANDSCAPE SPECIFICATION

GENERAL

THIS LANDSCAPE PLAN HAS BEEN PREPARED BY THE LOGAN WATER ON BEHALF OF LOGAN CITY COUNCIL (LCC). THE FLORA SPECIES HAVE BEEN SELECTED TO SCREEN THE PUMP STATION OR ARE REGIONAL ECOSYSTEM SPECIES FOR THE BASIN BATTER STABILISATION. THE OUTSIDE OF THE FENCE TO BE STABILSIED WITH TURF FOR FUTURE PLANTING BY THE DEVELOPER.

EXISTING VEGETATION

EXISTING VEGETATION TO BE RETAINED AND PROTECTED IN LINE WITH THE PROJECT SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN (PSEMP) [PM0001-00-P-MPL-PM-9022] AND PROJECT SPECIFIC ARBORIST REPORT. UNLESS THE VEGETATION IS INDICATED FOR REMOVAL; AND IS APPROVED TO BE REMOVED UNDER THE CONTRACT.

WEED MANAGEMENT

WEED MANAGEMENT FOR THE LANDSCAPE AREAS MUST BE IN LINE WITH THE REMOVAL OF ALL RESTRICTED MATTER UNDER THE BIOSECURITY ACT 2014; LAND PROTECTION (PEST AND STOCK ROUTE MANAGEMENT) ACT 2002, SOUTH-EAST QUEENSLAND ECOLOGICAL RESTORATION FRAMEWORK (2012), AND IN LINE WITH ANY ENVIRONMENTAL WEEDS LISTED ON THE LCC WEBSITE. ALL WEED TREATMENT PERSONNEL ARE TO BE APPROPRIATELY TRAINED AND TICKETED. THE PROJECT MUST HAVE A SUPERVISOR WITH A MINIMUM OF 7 YEARS WEED TREATMENT EXPERIENCE TO MONITOR THE WORKS. FURTHER INFORMATION ON APPROPRIATE CONTROL METHODS FOR RESTRICTED PLANT MATTER CAN BE ACCESSED FROM THE BIOSECURITY QUEENSLAND WEBSITE.

ALL WEEDS ARE TO BE TREATED (E.G. TREATED WITH HERBICIDE, DEAD WOODY KNOCKED DOWN, FRILLED, REMOVED FROM SITE, ETC.) REMOVED FROM LANDSCAPING AREAS PRIOR TO PLANTING. ALL NATIVE SPECIES TO BE PROTECTED FROM “OFF TARGET” DAMAGE. IN THE INSTANCE THAT NATIVES ARE DAMAGED/KILLED DURING THE WORKS. IT IS AT THE LOGAN WATER DISCRETION TO DIRECT THE SUB-CONTRACTOR TO REPLACE THE DAMAGED/KILLED NATIVES, AT THE SUB-CONTRACTORS COST.

CULTIVATION

CULTIVATION TO A DEPTH OF 150MM TO THE PLANTING BED AREAS AND THE ALL TURF / HYDROMULCHED AREAS, PRIOR TO THE INSTALLATION OF TOPSOIL. **COORDINATION OF SERVICES LOCATIONS WITH THE LOGAN WATER SITE TEAM, PRIOR TO CULTIVATING.**

NO CULTIVATION TO AREAS WITHIN THE SWALE INVERT OR TO BATTERS GREATER THAN >1:3.

IN THE INSTANCE THAT CULTIVATION DRAWS GRAVEL/ROCKS UP TO THE SURFACE, THE SUB-CONTRACTOR MUST STOP IMMEDIATELY, AND CONFIRM WITH THE LOGAN WATER SITE TEAM, IF THE AMOUNT OF ROCKS IS ACCEPTABLE. IN THE INSTANCE THAT THE SUB-CONTRACTOR DOES NOT HALT WORKS AND CONFIRM WITH THE LOGAN WATER SITE TEAM. ANY RECTIFICATION WORKS WILL BE AT THE COST OF THE SUB-CONTRACTOR (E.G. ROCK COLLECTION/REMOVAL, REGRADING, ETC.).

IMPORTED TOPSOIL TO THE PUMP STATION AND LARGE TREE STOCK HOLES

TURFING AREA EXTENTS WILL BE STRIPPED OF ALL CONSTRUCTION SPOIL AND RUBBISH AND REMOVED FROM SITE, BY THE SUB-CONTRACTOR OUTLINED IN THE AGREED CONTRACT. ALL IMPORTED TOPSOIL MUST COMPLY WITH AUSTRALIAN STANDARD AS4419: *SOILS FOR LANDSCAPING AND GARDEN USE*. ENSURE THAT ALL IMPORTED TOPSOIL IS LIGHTLY COMPACTED, TO MEET THE DESIGN FINISH GRADE, PRIOR TO PLANTING AND HAS A SMOOTH TRANSITION TO ALL ADJACENT SURFACES. IMPORTED TOPSOIL TO TURF AREAS MUST BE 30MM LOWER THAN ADJACENT SURFACES TO ALLOW FOR THE TURFIMPORTED TOPSOIL TO THE PLANTING BEDS MUST BE 100MM LESS THE FINISH DESIGN FINISH LEVELS TO ALLOW FOR MULCH TO MEET FLUSH WITH TURF LEVELS AND OR ADJACENT CONCRETE ELEMENTS.

IMPORTED TOPSOIL TO BE INSTALLED:

- TO A DEPTH OF 100MM TO TURF AREAS.
- TO A DEPTH OF 150MM TO BASIN BATTERS.
- TO A DEPTH OF 300MM TO FEATURE PLANTING TO THE PUMPSTATION.
- BACK FILLED TO THE FULL EXTENTS OF THE EXCAVATED TREE PIT HOLE

ONCE PLANTING IS INSTALLED ALL BACKFILLED TOPSOIL MUST BE WELLED AROUND THE EDGE OF THE ROOTBALL. NO TOPSOIL TO BE TOUCHING THE BASE OF ANY PLANT.

IMPORTED TOPDRESSING TOPSOIL TO THE PUMP STATION

TURFING AREAS THAT HAS GAPS OR AN UNDULATING SURFACE, MUST BE TOP DRESSED USING A LOAMY SAND TOP DRESSING MATERIAL WHICH MUST COMPLY WITH AUSTRALIAN STANDARD AS4419: *SOILS FOR LANDSCAPING AND GARDEN USE*. TOP DRESSING MATERIAL TO BE HAND SCREEDED (“RUBBED-IN WITH TOPSOIL SPREADER”) OVER THE SURFACE OF THE TURF, TO FILL ALL GAPS. IMPORTED TOPDRESSING SOIL TO TURF AREAS MUST BE 30MM LOWER THAN ADJACENT SURFACES TO ALLOW FOR THE TURF.

IMPORTED TOPDRESSING TOPSOIL TO BE INSTALLED:

- MAXIMUM DEPTH OF 30MM
- TO FILL IN GAPS BETWEEN TURF STRIPS
- AND TO THE TURF EDGES ADJACENT EXISTING GRASS, WHERE THE GAP BETWEEN THE TWO SURFACES IS <150MM

MULCH TO THE PUMP STATION

IMPORTED 'FOREST BLEND' MULCH (OR SIMILAR APPROVED) WHICH MUST COMPLY WITH AUSTRALIAN STANDARD AS 4454: *COMPOSTS, SOIL CONDITIONERS AND MULCHES.*

MULCH TO BE INSTALLED:

- TO A DEPTH OF 100MM TO AREAS INDICATED ON THE DRAWINGS WITHOUT TECMAT.
- TO A DEPTH OF 50MM TO AREAS THAT INDICATE THE USE OF TECMAT.

ALL IMPORTED MULCH IS TO BE APPLIED EVENLY. SITE / IMPORTED MULCH TO BE FLUSH TO ADJACENT SURFACES AND MUST BE PULLED AWAY BY 50MM FROM THE BASE OF THE PROPOSED PLANTS TRUNKS/BASE TO AVOID COLLAR ROT. MULCH MATERIAL MUST BE FREE OF WEEDS, SOIL, STICKS AND ROCKS. ANY UNDESIRED MATERIAL MUST BE REMOVED FROM SITE AND DISPOSED OF IN A APPROPRIATE REFUSE CENTRE.

GEOFABRIC

GEOFABRIC TO BE INSTALLED UNDER THE SWALE ROCK TO BE BIDIM GREEN A24-G, OR SIMILAR APPROVED. THE GEOFABRIC MUST BE INSTALLED UPSTREAM OVER DOWNSTREAM LEADING TOWARDS THE CREEK DIRECTION OF FLOW. GEOFABRIC TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATION (INCLUDING A MIN. 150MM OVERLAP), USING 300MM U-PINS. IN THE INSTANCE THAT GEOFABRIC IS ADJACENT ANOTHER MAT/MESH TREATMENT. THE GEOFABRIC PERIMETER EDGE MUST BE EXTENDED 500MM PAST THE SPECIFIC TREATMENT, TO ALLOW FOR TIE IN.

WHERE A CREEK CROSSING IS BEING CONSTRUCTED, THE LANDSCAPE TREATMENT MUST BE COORDINATED WITH THE CIVIL ROCK/GEOFABRIC TREATMENT. ALL GEOFABRIC MUST BE EXTENDED 300-500MM HIGHER THE CREEK WATER LEVEL.

LANDSCAPE ROCK TYPE 2

SUPPLY AND INSTALL 20MM DRAINAGE GRAVEL AS INDICATED ON THE LANDSCAPE PLANS. ENSURE THAT THE ROCK IS A MINIMUM OF 30MM BELOW ANY HARD-ADJACENT SURFACES. ROCK TO A MINIMUM DEPTH OF 50MM. **ROCK MUST BE INSTALLED ON TOP OF GEOFABRIC, REFER TO THE GEOFABRIC SECTION FOR REQUIREMENTS.**

TIMBER EDGE

SUPPLY AND INSTALL TIMBER EDGING USING 100MM X 50MM CCA TREATED PINE TIMBER GARDEN EDGE. REFER **LCC STANDARD DRAWING 8-00421** FOR FURTHER DETAILS. **THE TIMBER EDGE MUST BE ON THE INSIDE OF THE PUMP STATION**. THE UPPER EDGE MUST BE FLUSH WITH THE FINAL SURFACE LEVEL. WHERE A JOINT IS REQUIRED, THE CLEAT MUST BE FIXED WITH A MINIMUM OF 3X GALVANISED 50MM SCREWS TO EACH SIDE OF THE JOIN. THE UPPER EDGE OF THE CLEAT MUST BE 30MM BELOW THE TOP EDGE. ALL CURVES MUST BE A SMOOTH SWEEPING CURVE, WITH NO GREATER UNDULATION OF -/+5MM. ALL STAKES MUST BE INSTALLED AT MAX. OF 2M CENTER'S, AND THE STAKE MUST FINISH 30MM BELOW THE TOP EDGE OF THE EDGE. ALL FIXINGS MUST BE GALVANIZED SCREWS.

TECMAT

SUPPLY AND INSTALL TECMAT COIR 9 (OR SIMILAR APPROVED) TO BE INSTALLED AS INDICATED ON THE LANDSCAPE DRAWINGS.

THE TECMAT MUST BE INSTALLED UPSTREAM OVER DOWNSTREAM LEADING TOWARDS THE FIELD GULLY, AND PARALLEL TO THE SLOPE. JUTE MAT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATION (INCLUDING A MIN. 150MM OVERLAP), USING 300MM U-PINS. THE JUTE MAT MUST BE A MINIMUM OF 1000MM PAST THE TOP OF A BATTER, AND ALL PERIMETERS TO BE TRENCHED INTO THE SOIL (REFER MANUFACTURERS SPECIFICATION).

TO BE INSTALLED IN CONJUNCTION WITH 50MM MULCH, AS INDICATED ON THE LANDSCAPE DRAWINGS.

WHERE A CREEK CROSSING IS BEING CONSTRUCTED, THE LANDSCAPE TREATMENT MUST BE COORDINATED WITH THE CIVIL ROCK/GEOFABRIC TREATMENT. ALL GEOFABRIC MUST BE EXTENDED 300-500MM HIGHER THE CREEK WATER LEVEL.

TURF

IN AREAS OF PROPOSED TURF TO BE 'A' GRADE 'WINTERGREEN', TURF TO BE LAID IN A STRETCHER BOND FORMATION. RUNNING ACROSS THE SLOPE OF THE LAND. REFER TO LCC STANDARD DRAWING 8-00420 FOR DETAILS. TURF MUST BE INSTALLED FLUSH, OR <30MM TO THE ADJACENT SURFACE, SO TO ALLOW FOR OVERLAND WATER FLOW.

WHERE EXISTING TURF IS TO BE RETAINED, THE AREAS THAT HAVE BEEN DISTURBED WILL BE REINSTATED BY EITHER “TOP-DRESSING” SOIL, WHICH IS COMPLIANT TO AS4419-2003 TO PRODUCE AN EVEN GRADE. OR BY PATCHING THE DAMAGED AREAS WITH 'A' GRADE 'WINTERGREEN', INCLUDING TOPPING UP TURF EDGES WITH TOPSOIL, TO PRODUCE AN EVEN GRADE.

TURF MUST BE INSTALLED PERPENDICULAR TO THE SWALE FLOW DIRECTION, TO REDUCE THE EROSION OCCURRING PRIOR TO THE TURF ESTABLISHING.

PATCHING TO OCCUR TO MAXIMUM OF 200MM FROM ANY EXISTING TURF. THE GAP BETWEEN THE NEW TURF AND THE EXISTING TURF, MUST BE INFILLED USING “TOP-DRESSING” SOIL, TO CREATE A UNIFORMED, LEVEL SURFACE BETWEEN THE EXISTING AND NEW TURF.

TURF CANNOT BE INSTALLED TO BATTERS THAT ARE STEEPER THAN 1:4, IN THE INSTANCE AN AREA IS INDICATED ON THE DRAWINGS AS TURF, AND THAT AREA IS STEEPER THAN 1:4. IT IS THE SUB-CONTRACTORS RESPONSIBILITY TO RAISE THE AREA IS NON-CONFORMING BATTER TO THE LOGAN WATER REPRESENTATIVE, FOR FURTHER COORDINATION.

TURF AVAILABILITY CAN VARY SEASONALLY. THE CONTRACTOR MUST ENSURE THAT ONCE AWARDED THE PROJECT, THEY CAN SOURCE THE TURF VARIETY AND QUANTITY OF THE TURF SPECIFIED WITHIN THE CONTRACT.

PLANTING BED EDGE TREATMENT TO THE BASIN

PLANTING BED EDGE TO THE BASIN ADJACENT TO TURF AREAS, WILL BE MAINTAINED WITH A CHEMICAL EDGE (HERBICIDE TREATMENT TO THE EDGE) THROUGHOUT THE ESTABLISHMENT/ MAINTENANCE PERIOD.

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	MS	MS	SG	12/06/2023

DESIGNED BY M. SWALES	DESIGN CHECKED BY S. BORLAND
DRAFTED BY M. SWALES	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER

CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION
LANDSCAPING PLAN - PUMP STATION
LANDSCAPE SPECIFICATION

PROJECT DRAWING No. DT8003-02-S-DWG-EN-91-7100

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

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GAY, CHRISTOPHER

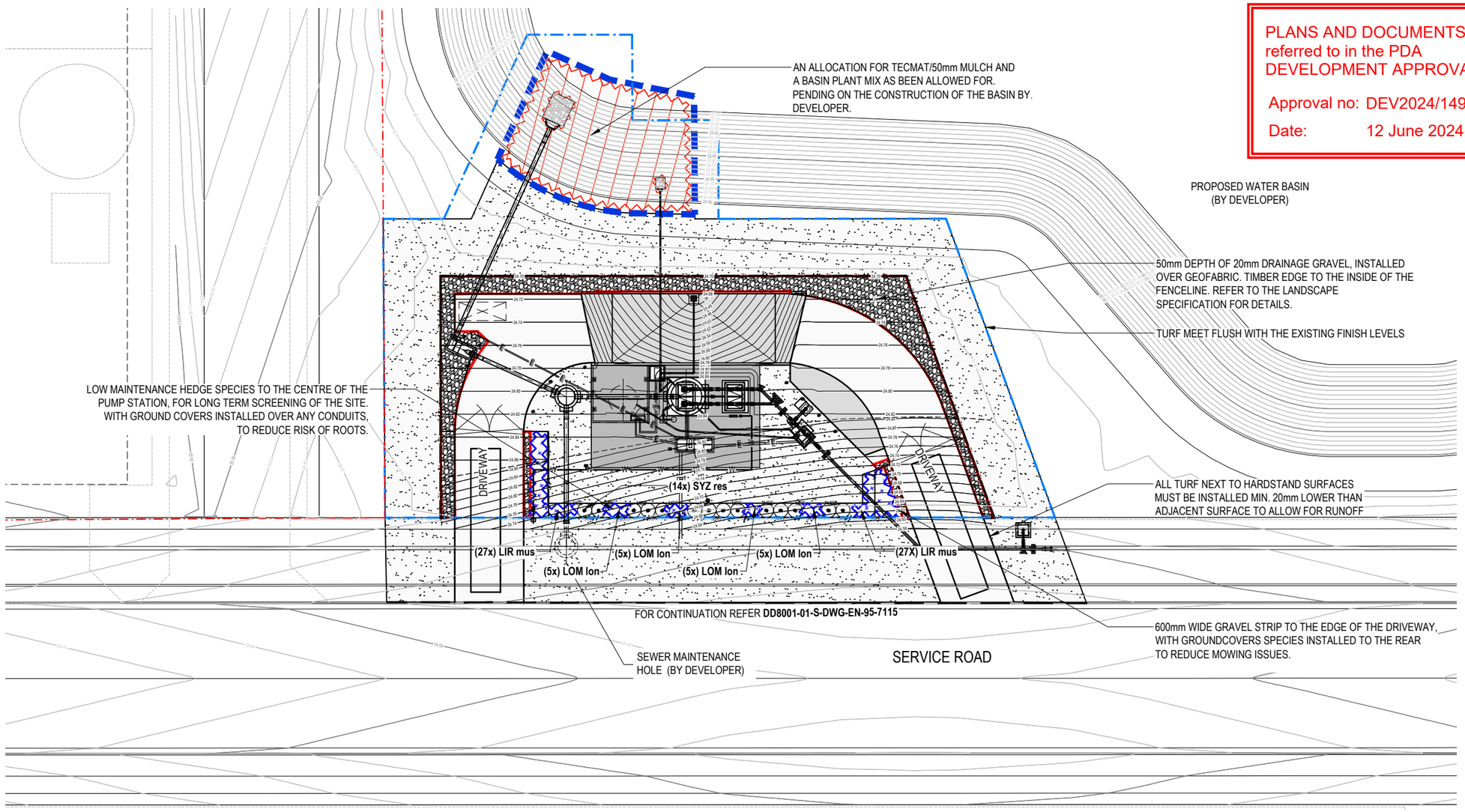
DATE PLOTTED: 12 June, 2023 - 4:57pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government



SITE PLAN

SCALE 1:200

LEGEND

- RIGHT OF WAY
- BELOW 1 IN 100 YEAR ARI FLOOD LINE — 1 IN 100 YEAR ARI FLOOD LINE (LCC PLANNING SCHEME GIS)
- TE — PROPOSED EDGE - **TIMBER**
- MBE — PROPOSED MULCH BOUNDARY EXTENTS
- PROPOSED INDIVIDUAL SHRUB (HEDGE) (300mm BAG)
- **REVEG-01** - REFER TO PLANT SCHEDULE. (GROUNDCOVER MIX)
- **REVEG-02** - REFER TO PLANT SCHEDULE (BASIN MIX)
- TURF EXTENT
- PROPOSED GEOFABRIC EXTENTS (Under LRT-1)
- LANDSCAPE ROCK **TYPE (LRT)-2**
- PROPOSED TEC MAT OVER 50mm MULCH EXTENTS

LANDSCAPE NOTES

1. FOR GENERAL NOTES (INCLUDING EARTHWORKS AND SET OUT NOTES) REFER TO STD DWG'S **PM001-00-P-DWG-ND-0020 TO ND-0023**.
2. FOR SITE SPECIFIC NOTES REFER TO DWG **ND-91-0000**.
3. FOR DETAILS OF LANDSCAPE MATERIALS REFER TO DWG **EN-9-7100 & EN-91-7101** FOR THE LANDSCAPE SPECIFICATION.
4. FOR ALL PLANT SPECIES REFER TO DWG **EN-91-7101**
5. LANDSCAPE PLANS AND SPECIFICATION TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFIC E.M.P.
6. ALL MASS PLANTING TO BE USING 50mm TUBESTOCK & 90mm SPACE SAVER POTS, AND ALL SINGLE SHRUBS WILL BE 25L BAGS.
7. ALL ADJACENT SURFACES MUST BE FLUSH WITH RESTORATION WORKS, UNLESS OTHERWISE NOTED.

0 2 4 8 12m

A1 - 1:200

FOR CONSTRUCTION

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0	FOR CONSTRUCTION	MS	MS		12/06/2023

DESIGNED BY M. SWALES	DESIGN CHECKED BY S. BORLAND
DRAFTED BY M. SWALES	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES

PROJECT No. DT8003-02

LW FACILITY ID SPS178

SHEET SIZE A1

DO NOT SCALE

DATUM : AHD

GDA2020 ZONE 56

LOGAN WATER

CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE: SPS178 WASTEWATER PUMP STATION LANDSCAPING PLAN - PUMP STATION LAYOUT

PROJECT DRAWING No. DT8003-02-S-DWG-EN-91-7110

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-EN-91-7110.dwg

GAY, CHRISTOPHER

DATE PLOTTED: 12 June, 2023 - 5:02pm

LANDSCAPE SPECIFICATION CONTIUNED

PLANTING

REFER **EN-91-7101** FOR ALL PLANT SCHEDULES, INCLUDING POT SIZES AND GENERAL NOTES. ALL PLANTS TO BE INSTALLED INTO A HOLE TWO TIMES THE SIZE OF THE POT/BAG. ENSURING THE TOP OF THE ROOT BALL IS FLUSH WITH THE FINISHED SOIL LAYER. FORM A SMALL WELL TO THE EXTENT OF THE PLANTS ROOTBALL TO ALLOW FOR CAPTURING OF WATER. ADD TERRAFORM PLANT ESTABLISHER (OR SIMILAR APPROVED) TO EACH PLANT BASED ON THE MANUFACTURER'S SPECIFICATION FOR THE INDIVIDUAL POT SIZE. TREES AND PLANTS MUST BE COMPLIANT TO AS2303: *TREE STOCK FOR LANDSCAPE USE*.

GENERALLY CONTAINERISED PLANT STOCK SHALL BE INSTALLED IN COMPLIANCE WITH AS2503. OTHERWISE, THE FOLLOWING MUST BE ADHERED TO:

- MINOR ROOT OR CANOPY PRUNE WHERE REQUIRED.
- EXCAVATE SUFFICIENT SIZE PLANTING HOLES AND BACKFILL WITH SUITABLE IMPORTED TOPSOIL.
- POSITION PLANT TO ENSURE UPON SETTLEMENT TOP OF ROOT BALL IS LEVEL WITH FINAL GRADE.
- STAKE PLANTS AS SPECIFIED OR WHERE REQUIRED. STAKES ARE NOT TO IMPEDE THE ROOTBALL. ALLOW FOR REMOVAL PRIOR TO COMPLETION OF MAINTENANCE PERIOD.
- FERTILISE AND MAINTAIN SO AS TO PROMOTE VIGOROUS GROWTH.
- ENSURE THAT THE PLANTS LEADER IS NOT CUT OR DAMAGED, TO ENSURE THE TRUE GROWTH OF THE PLANT/TREE. IF THE LEADER IS CUT/DAMAGED THE SUB-CONTRACTOR MUST REPLACE THE PLANT AT THEIR OWN COST.
- IF THE SUB-CONTRACTOR INSTALLS THE PLANTING IN THE INCORRECT LOCATION (NOT AS PER THE DRAWINGS), THE SUB-CONTRACTOR MAY RELOCATE THE PLANTS TO THE CORRECT LOCATION. HOWEVER, IF THE PLANTS ARE STRESSED AFTER RELOCATING, THE SUB-CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING THE PLANTS AT THEIR OWN COST.
- LARGE 300MM POT PITS TO BE EXCAVATED TO A DEPTH OF 0.5M AND 0.6M SQUARE. ALL SPOIL TO BE REMOVED FROM SITE. COORDINATION OF ALL SERVICES MUST OCCUR WITH THE LOGAN WATER SITE TEAM PRIOR TO EXCAVATION. HOLE TO BE BACK FILLED WITH IMPORTED TOPSOIL AND TAMPED PRIOR PRODUCE A SOLID BASE UNDER THE ROOTBALL. A WELL MUST BE FORMED TO THE OUTSIDE OF THE ROOT BALL EXTENTS PRIOR TO INSTALLING THE MULCH.

WATERING DURING ESTABLISHMENT & THE MAINTENANCE PERIOD

WATERING OF THE **PLANTING/TURF** WORKS WILL BE UNDERTAKEN TO ENSURE THAT AN ADEQUATE SURVIVAL AND ESTABLISHMENT RATE IS ACHIEVED. TO ASSIST IN THIS PROCESS PRODUCT HYDRAFLO II IS ADDED TO THE WATER DELIVERY SYSTEM, (AS PER THE MANUFACTURER'S SPECIFICATION) AT THE TIME OF THE INITIAL WATERING.

THE FREQUENCY OF WATERING TO ACHIEVE PLANT ESTABLISHMENT WILL DEPEND ON THE PREVAILING CLIMATIC CONDITIONS AT THE TIME OF PLANTING AND THEREAFTER. WATERING WILL GENERALLY BE CARRIED OUT IN THE COOLER HOURS OF THE DAY, NAMELY MORNING OR EVENING, AND WILL BE FREQUENT ENOUGH TO PREVENT WILTING OF PLANTS. THE FOLLOWING WATERING PROGRAM IS RECOMMENDED (AS A MINIMUM):

WEEK 1 - 2: 3 VISITS/WEEK; **WEEK 3 - 6:** 2 VISITS/WEEK; **WEEK 7 - 12:** 1 VISIT/ WEEK

THE NECESSITY FOR WATERING DURING THE ABOVE PROGRAM WILL BE DEPENDENT UPON RAINFALL. THE FREQUENCY OF WATERING WILL BE GRADUALLY REDUCED AS THE PLANTINGS MATURE AND IT IS ANTICIPATED THAT AFTER A PERIOD OF 3 MONTHS THE PLANTING WILL BE SUFFICIENTLY ESTABLISHED SUCH THAT SUPPLEMENTARY WATERING WILL NOT BE REQUIRED. IT IS THE SUB-CONTRACTOR'S RESPONSIBILITY TO MONITOR PLANTS AND APPLY SUPPLEMENTARY WATER WHERE REQUIRED. IT IS THE SUB-CONTRACTORS RESPONSIBILITY TO ENSURE THE WATERING ENSURES THE HEALTH OF THE PLANTS/TREES/TURF/SEEDING (ETC.), AND IT WILL BE THE SUB-CONTRACTORS COST IF REPLACEMENTS ARE REQUIRED DUE TO LACK OF WATER.

IT IS THE SUB-CONTRACTORS RESPONSIBILITY TO ALLOW FOR WATERING DURING THE MAINTENANCE PERIOD, TO ENSURE THAT ALL TREES/PLANTS/HYDROMULCH ARE THRIVING AND HEALTHY. OFF MAINTENANCE WILL NOT BE ACHIEVED IF THE VEGETATION IS IN POOR HEALTH. IN THIS INSTANCE, THE MAINTENANCE PERIOD WILL BE EXTENDED, SO THE CONTRACTOR CAN MEET THE DESIGNATED PERFORMANCE INDICATORS AT THEIR OWN COST.

MONITORING AND MAINTENANCE OF THE LANDSCAPE WORKS

A REGULAR PROGRAM MUST BE PROVIDED TO SUCCESSFULLY MANAGE THE LANDSCAPE WORKS IN LINE WITH BEST HORTICULTURAL PRACTICE DURING THE ESTABLISHMENT / MAINTENANCE PERIODS.

ESTABLISHMENT PERIOD

UPON REACHING PRACTICAL COMPLETION OF THE LANDSCAPE WORKS, A **12 WEEK ESTABLISHMENT** PERIOD MUST COMMENCE. THE SUB-CONTRACTOR MUST RECEIVE CONFIRMATION IN WRITING FROM THE LOGAN WATER, STATING THAT PRACTICAL COMPLETION HAS BEEN REACHED PRIOR TO COMMENCING "ON ESTABLISHMENT".

ESTABLISHMENT REQUIREMENTS AND PERFORMANCE INDICATORS

THE IMPLEMENTATION OF THE LANDSCAPING PROGRAM, GENERALLY IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS, MUST ACHIEVE THE FOLLOWING PERFORMANCE INDICATORS:

- ALL RUBBISH, WEEDS MUST BE REMOVED FROM SITE
- ALL BEST PRACTICE HORTICULTURAL MAINTENANCE TECHNIQUES ARE TO OCCUR DURING THE 12 WEEK PERIOD TO ENSURE THAT THE LANDSCAPE IS HEALTHY AND THRIVING (I.E. FERTILIZER, TRIMMING OF DIE-BACK, TREATING OF PESTS AND DISEASES)
- NO INAPPROPRIATE PLANT SPECIES (I.E. SPECIES NOT LISTED LCC ENVIRONMENTAL WEEDS OR THE STATES RESTRICTED MATTER) ARE TO BE USED IN THE LANDSCAPING PROGRAM
- PLANTING DENSITIES AND MIXTURES ESTABLISHED IN EACH COMMUNITY ARE TO CORRESPOND TO THE SPECIFICATION PROVIDED HEREIN
- ALL PLANTING BEDS MUST BE "TOPPED UP" TO MATCH THE ORIGINAL MULCH DEPTHS SPECIFIED ON THE DRAWINGS
- ALL SURFACE EROSION IS MONITORED AND RECTIFIED AT EACH MAINTENANCE EVENT
- A MINIMUM OF 95% SURVIVAL RATE OF PLANT STOCK IS TO BE MAINTAINED FOR THE 3 MONTH PERIOD; AND
- A MINIMUM OF 100% SURVIVAL OF ALL INSTALLED TURF MUST BE ACQUIRED AFTER THE 3 MONTH ESTABLISHMENT PERIOD
- IF THE TURF DOES NOT REACH A SATISFACTORY ESTABLISHMENT, THE SUB-CONTRACTOR WILL BE REQUIRED TO MANAGE THE TURF AREA FOR ANOTHER SPECIFIED PERIOD, AT THEIR OWN COST
- MOWING OF TURF AREAS TO A MINIMUM HEIGHT OF 40MM AS REQUIRED, ALL CLIPPINGS MUST BE REMOVED FROM SITE AND TAKEN TO AN APPROPRIATE REFUSE CENTRE
- PROTECTION/DELINEATION FENCING TO BE COORDINATED WITH THE OVERARCHING RIGHT OF WAY FENCE ALLOCATION, FOR THE DURATION OF THE ESTABLISHMENT PERIOD

MAINTENANCE PERIOD

MAINTENANCE PERIOD FOR THE LANDSCAPE AREAS (EXCLUDING TURF AREAS) IS **9 MONTHS** ONCE COMPLETING THE 12 WEEK ESTABLISHMENT PERIOD. MAINTENANCE CANNOT COMMENCE UNTIL THE SUB-CONTRACTOR HAS RECEIVED IN WRITING FROM LOGAN WATER THAT "ON MAINTENANCE" HAS COMMENCED.

MAINTENANCE REQUIREMENTS AND PERFORMANCE INDICATORS

THE IMPLEMENTATION OF THE LANDSCAPING PROGRAM, GENERALLY IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS, MUST ACHIEVE THE FOLLOWING PERFORMANCE INDICATORS:

- ALL RUBBISH, WEEDS MUST BE REMOVED FROM SITE
- EACH MONTHLY MAINTENANCE ALLOCATION MUST INCLUDE WATERING TO ENSURE THE PLANTS ARE THRIVING AND HEALTHY AT OFF MAINTENANCE
- ALL TREE STAKES AND OR TREE GUARDS ARE TO BE REMOVED FROM SITE AFTER REACHING A MINIMUM OF 6 MONTHS FROM PRACTICABLE COMPLETION
- ALL BEST PRACTICE HORTICULTURE MAINTENANCE TECHNIQUES ARE TO OCCUR DURING THE 9 MONTH PERIOD TO ENSURE THAT THE LANDSCAPE IS HEALTHY AND THRIVING (I.E. FERTILIZER, TRIMMING OF DIE-BACK, TREATING OF PESTS AND DISEASES)
- NO INAPPROPRIATE PLANT SPECIES (I.E. SPECIES NOT LISTED LCC ENVIRONMENTAL WEEDS OR THE STATES RESTRICTED MATTER) ARE TO BE USED IN THE LANDSCAPING PROGRAM
- ALL TREE SPECIES MUST HAVE A TRUE 'LEADER' (APICAL BUD) IN LINE WITH THE AS2303 - *TREE STOCK FOR LANDSCAPE USE,* AND OR AS4373: *PRUNING OF AMENITY TREES*, OTHERWISE THE SUB-CONTRACTOR MUST REPLACE THE TREE, AT THEIR COST. THE REPLACEMENT TREE MUST BE ESTABLISHED WITH WATERING FOR A MINIMUM OF 6 WEEKS, PRIOR TO ACCEPTING OFF MAINTENANCE
- TREE STAKES MUST BE REMOVED FROM THE TREE (AND FROM SITE) AFTER 6 MONTHS, IF THE TRUNK STANDS STRAIGHT WITHOUT SUPPORT
- THE SUB-CONTRACTOR IS EXPECTED TO INSPECT THE LANDSCAPE WORKS 3.5 MONTHS PRIOR TO OFF MAINTENANCE, WITH A LOGAN WATER REPRESENTATIVE, TO DETERMINE IF ANY RECTIFICATIONS ARE REQUIRED, PRIOR TO OBTAINING OFF MAINTENANCE
- PLANTING DENSITIES AND MIXTURES ESTABLISHED IN EACH COMMUNITY ARE TO CORRESPOND TO THE SPECIFICATION PROVIDED HEREIN
- REPLACEMENT OF PLANTINGS THAT HAVE DIED WITH PLANTS OF EQUIVALENT SIZE AND SPECIES DETAILED IN THE PLANTING SCHEDULE. REPLACEMENT OF PLANTS MUST INCLUDE WATERING
- ALL SURFACE EROSION IS MONITORED AND RECTIFIED AT EACH MAINTENANCE EVENT
- A MINIMUM OF 80% SURVIVAL RATE OF PLANT STOCK IS TO BE MAINTAINED AND PROVIDED OFF MAINTENANCE
- END OF MAINTENANCE LESS THAN 5% ENVIRONMENTAL WEEDS TO BE ON SITE AND NO DECLARED PEST PLANTS;
- MOWING OF GRASSED AREAS TO A MINIMUM HEIGHT OF 40MM AS REQUIRED, ALL CLIPPINGS MUST BE REMOVED FROM SITE AND TAKEN TO AN APPROPRIATE REFUSE CENTRE
- MANAGEMENT OF THE HYDROMULCH AREAS, INCLUSIVE OF EROSION MANAGEMENT, ADDITIONAL SEEDING, AND PATCH INFILL WITH TURF INSTALLATION WHEN REQUIRED
- ALL LANDSCAPED AREAS ARE TO BE MANAGED FOR WEEDS REGULARLY (FOR A PERIOD OF 9 MONTHS) FOLLOWING THE CONSTRUCTION PERIOD, TO ENSURE INFESTATIONS OF WEED SPECIES DO NOT BECOME ESTABLISHED. ALL WEEDS ARE TO BE REMOVED AND/OR CONTROLLED IN ACCORDANCE WITH THE MANAGEMENT MEASURES OUTLINED IN THE AFOREMENTIONED ACTS, LCC REFERENCES AND BEST PRACTICE METHODS.

EROSION AND SEDIMENT CONTROL DEVICE REMOVAL

THE SUBCONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL REMAINING PROJECT EROSION AND SEDIMENT CONTROL DEVICES. ALL DEVICES, INCLUDING STAKES, MUST BE REMOVED FROM SITE AND DISPOSED INTO AN APPROPRIATE REFUSE CENTRE. ONCE THE DEVICES ARE REMOVED, ALL SURFACE LEVELS MUST BE TAMPED AND LEVELED, TO MATCH THE ADJACENT SURFACES. IN THE INSTANCE THERE IS EXPOSED TOPSOIL, THE TOPSOIL MUST BE REMEDIATED IN LINE WITH THE TOPDRESSING SECTION OF THIS LANDSCAPE SPECIFICATION.

PLANT SCHEDULE

1. IT IS THE SUBCONTRACTORS RESPONSIBILITY TO INFORM LOGAN WATER THAT SPECIES ARE NOT AVALIABLE AT THE TIME OF THE CONSTRUCTION PERIOD. PRIOR TO ORDERING AND HAVING THE PLANTS DELIVERED.
2. IF THERE ARE ANY PLANT NUMBER DESCREPANCIES BETWEEN THE PLANTING SCHEDULE AND THE PLANS, THE SUBCONTRACTOR MUST INFORM LOGAN WATER PRIOR TO ORDERING THE PLANTS.

CODE	Botanical Name	Common Name	Height & Spread	Pot Size	No. Of
REVEG-01 - Groundcovers & hedge				**Density per m**	
Hedge					
SYZ ER	*Syzygium australe*	cv. Elite Red	3m & 1.5m	25L bag	14
				Total	
Ground Cover					
LIR mus	*Liriope muscari*	cv. "Evergreen Giant"	<0.9m	90mm space saver	54
LOM Lon	*Lomandra longifolia*	Mat Rush	<1.5m	50mm Tubestock	20
				Total	

CODE	Botanical Name	Common Name	Height & Spread	Pot Size	Cover %	No. Of
REVEG-02- Basin Mix				**Density per m**	**3**	
Based on RE12.9-10.12				**Area**	**146**	
				Total No. of Plants	**438**	
Ground Cover						
CAR app	*Carex appressa*	Carex	<1m	50mm Tubestock	20%	88
GAH sie	*Gahnia sieberiana*	Red Saw Sedge	<1m	50mm Tubestock	20%	88
JUN con	*Juncus continuus*	Tall Rush	<1.5m	50mm Tubestock	20%	88
JUN usi	*Juncus usitatus*	Common Rush	<1m	50mm Tubestock	20%	88
LOM Lon	*Lomandra hystrix*	River Mat Rush	<1.5m	50mm Tubestock	20%	88
				Total	*100%*	

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

FOR CONSTRUCTION

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
0	FOR CONSTRUCTION	MS	MS	SD	12/06/2023

DESIGNED BY M. SWALES	DESIGN CHECKED BY S. BORLAND
DRAFTED BY M. SWALES	DRAFTING CHECKED BY F. JESPERSEN
RPEQ APPROVED BY S. DICKER	RPEQ 18473 DATE 12/06/2023
DESIGN MANAGER S. GOHAR	DATE 12/06/2023

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER · CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE:
SPS178 WASTEWATER PUMP STATION
LANDSCAPING PLAN - PUMP STATION
LANDSCAPE SPECIFICATION AND PLANT SCHEDULE

PROJECT DRAWING No. DT8003-02-S-DWG-EN-91-7101

DESIGN COMPANY. LOGAN WATER

REV. 0

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-DWG-EN-91-7101.dwg
GAY, CHRISTOPHER
DATE PLOTTED: 12 June, 2023 - 4:59pm

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2024/1494

Date: 12 June 2024

Queensland Government

PLAN
SCALE 1:500

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REV. No.	DESCRIPTION	DRAWN	DESIGNER	APPR.	DATE
B	FOR INFORMATION	DM	CC		
A	FOR INFORMATION	LC	CC		

DESIGNED BY C.CAMPBELL	DESIGN CHECKED BY
DRAFTED BY L.CHRISTIE	DRAFTING CHECKED BY
RPEQ APPROVED BY	RPEQ
	DATE
DESIGN MANAGER	DATE

REFERENCES
PROJECT No. DT8003-02
LW FACILITY ID SPS178
SHEET SIZE A1
DO NOT SCALE
DATUM : AHD
GDA2020 ZONE 56

LOGAN WATER
CITY OF LOGAN

PROJECT: SPS178 CROWSON LANE WASTEWATER PUMP STATION AND CONVEYANCE

DRAWING TITLE:
SPS178 WASTEWATER PUMP STATION
PROPOSOSED ROW, LAYDOWN ARE AND ACCESS TRACK

PROJECT DRAWING No. DT8003-02-S-SKE-CI-91-8500

DESIGN COMPANY. LOGAN WATER

REV. B

ALTERNATE DRAWING NUMBER.

CAD FILE: DT8003-02-S-SKE-CI-91-8500.dwg

DATE PLOTTED: 14 February, 2024 - 2:37pm MONTOYA, DAVID