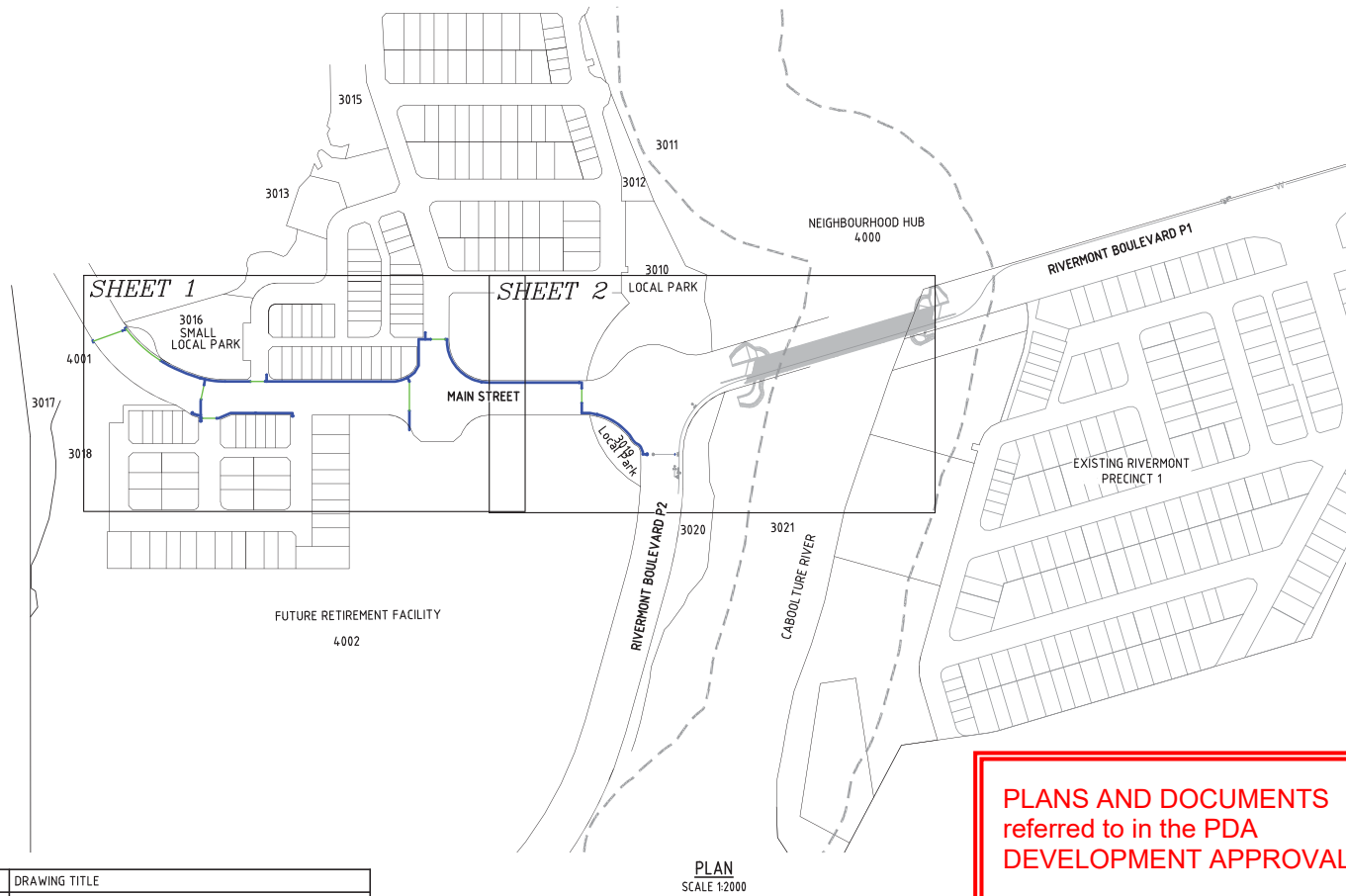




RIVERMONT PRECINCT 2
WATER MAIN -MAIN STREET
UNITYWATER REF : APP-22653



DRAWING INDEX

KN DRAWING NO.	UW DRAWING NO.	DRAWING TITLE
24-283-100	-	LOCALITY PLAN KEY PLAN AND DRAWING INDEX
24-283-101	-	WATER RETICULATION - LAYOUT PLAN - SHEET 1
24-283-102	-	WATER RETICULATION - LAYOUT PLAN - SHEET 2
24-283-103	-	WATER RETICULATION - LOCALITY PLAN
24-283-104	-	WATER RETICULATION - LIVE CONNECTION DETAIL
24-283-105	-	WATER RETICULATION - SAFETY IN DESIGN

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888
Date: 29/06/2026



SCALE 1:2000 (A1 UNREDUCED)

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LOCALITY PLAN

WORKS

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	12.01.2026	RP
B	FOR APPROVAL	14.04.2026	DF

Client

Stockland

Project

RIVERMONT
PRECINCT 2
MAIN STREET
WATER MAIN

kn group

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www.knigroup.com.au | 07 3017 1900

Approved Director - RPEQ 17544
Digitally signed by Mark Shaw RPEQ 17544
Date: 2026.04.14 17:57:35+1000

Drawing Title

LOCALITY PLAN
KEY PLAN AND
DRAWING INDEX

Drawn	Designed	Checked	Date
RP	AL	MAS	APR 26

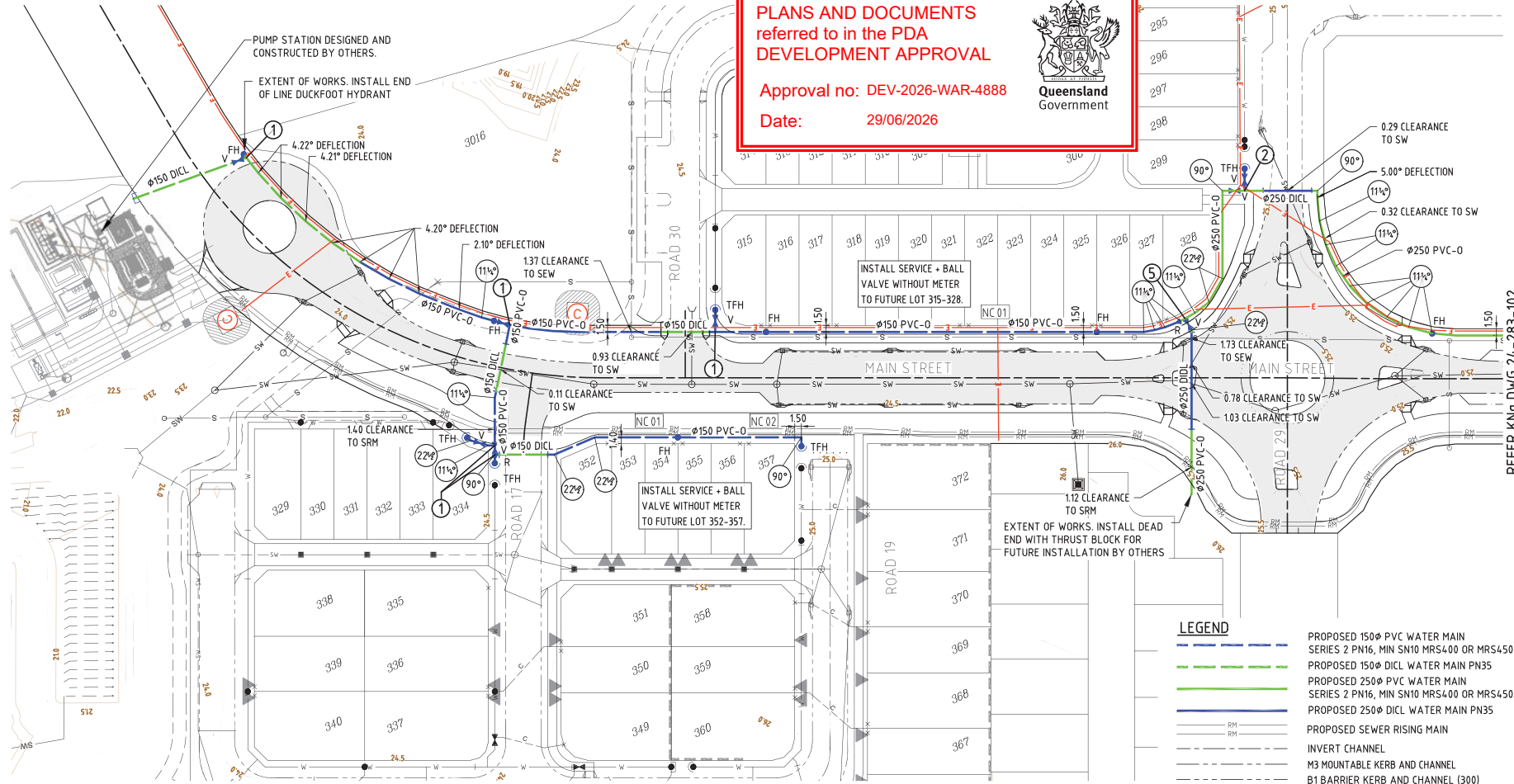
Scale	Drawing No	Revision
AS SHOWN	24-283-100	01 of 06

Unitywater Application No.	Unitywater Drawing No.
-	-

A1	B
24-283-100	B

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888
Date: 29/06/2026



TRUNK WATER MAIN LAYOUT PLAN
SCALE 1:500

PIPE SIZE	LENGTH(m)	VALVE	FIRE HYDRANT	TEMP FIRE HYDRANT	11° BEND	22° BEND	45° BEND	90° BEND
150 PVC-O	277.219	5	4	5	6	3	-	2
150-DICL	95.774	1	1	-	-	-	-	-
250 PVC-O	257.798	2	3	1	19	5	-	5
250-DICL	44.000	-	-	-	-	-	-	-

SCHEDULE OF FITTINGS

1	150 x 150 x 150 TEE	5 REQUIRED
2	250 x 250 x 150 TEE	1 REQUIRED
3	150 PVC TO 100 PVC REDUCER	1 REQUIRED
4	250 PVC TO 150 PVC REDUCER	1 REQUIRED
5	250 x 250 x 250 TEE	1 REQUIRED

NOTE

- ALL CONNECTIONS TO LIVE WATER MAINS TO BE UNDERTAKEN BY UNITYWATER AT DEVELOPER'S COST. THIS INCLUDES METER INSTALLATION TO LIVE SERVICES.
- IF AN APPROVAL IS HELD FOR EACH STAGE, FOR STAGED WORKS CONSTRUCTED CONCURRENTLY, FOLLOWING THE NECESSARY PRE-START MEETING(S), THE CONTRACTOR MAY INSTALL METERS ON NON-LIVE SERVICES.

NOTE

- WATER MAIN CROSSING UNDER ROAD TO BE LOCATED UNDER ROAD PAVEMENT CONSTRUCTION
- ALL FIRE HYDRANT TEES AND RISERS TO BE DN100, WITH PE FIRE HYDRANT RISERS DN125

NOTE

ALL WORKS ON EXISTING WATER MAINS TO BE CARRIED OUT BY UNITYWATER AT THE DEVELOPERS EXPENSE.

UNITYWATER LIVE WATER CONNECTION TABLE

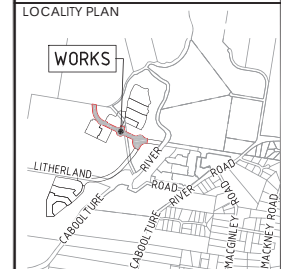
LOCATION	DIAMETER
RIVERMONT BOULEVARD P2 ROAD	150

LEGEND

- PROPOSED 150mm PVC WATER MAIN SERIES 2 PN16, MIN SN10 MRS400 OR MRS450
- PROPOSED 150mm DICL WATER MAIN PN35
- PROPOSED 250mm PVC WATER MAIN SERIES 2 PN16, MIN SN10 MRS400 OR MRS450
- PROPOSED 250mm DICL WATER MAIN PN35
- PROPOSED SEWER RISING MAIN
- INVERT CHANNEL
- M3 MOUNTABLE KERB AND CHANNEL
- B1 BARRIER KERB AND CHANNEL (300)
- B2 BARRIER KERB ONLY
- SEMI-MOUNTABLE KERB ONLY (TYPE SM3)
- SEMI-MOUNTABLE KERB (TYPE SM5)
- FIRE HYDRANT
- TEMPORARY FIRE HYDRANT
- REDUCER
- VALVE
- DEAD END CAP
- CONNECTION REQUIRED BY UNITYWATER
- RETAINING WALL
- FUTURE RETAINING WALL
- STORMWATER MAIN
- SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORMWATER MAIN
- EXISTING SEWER MAIN
- PROPOSED ELECTRICAL (BY OTHERS)
- DRIVEWAY POSITION
- ELECTRICITY SERVICE POINT
- DN100

SCALE 1:500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	12.01.2026	RP
B	FOR APPROVAL	14.04.2026	DF

Client



Project

RIVERMONT
PRECINCT 2
MAIN STREET
WATER MAIN



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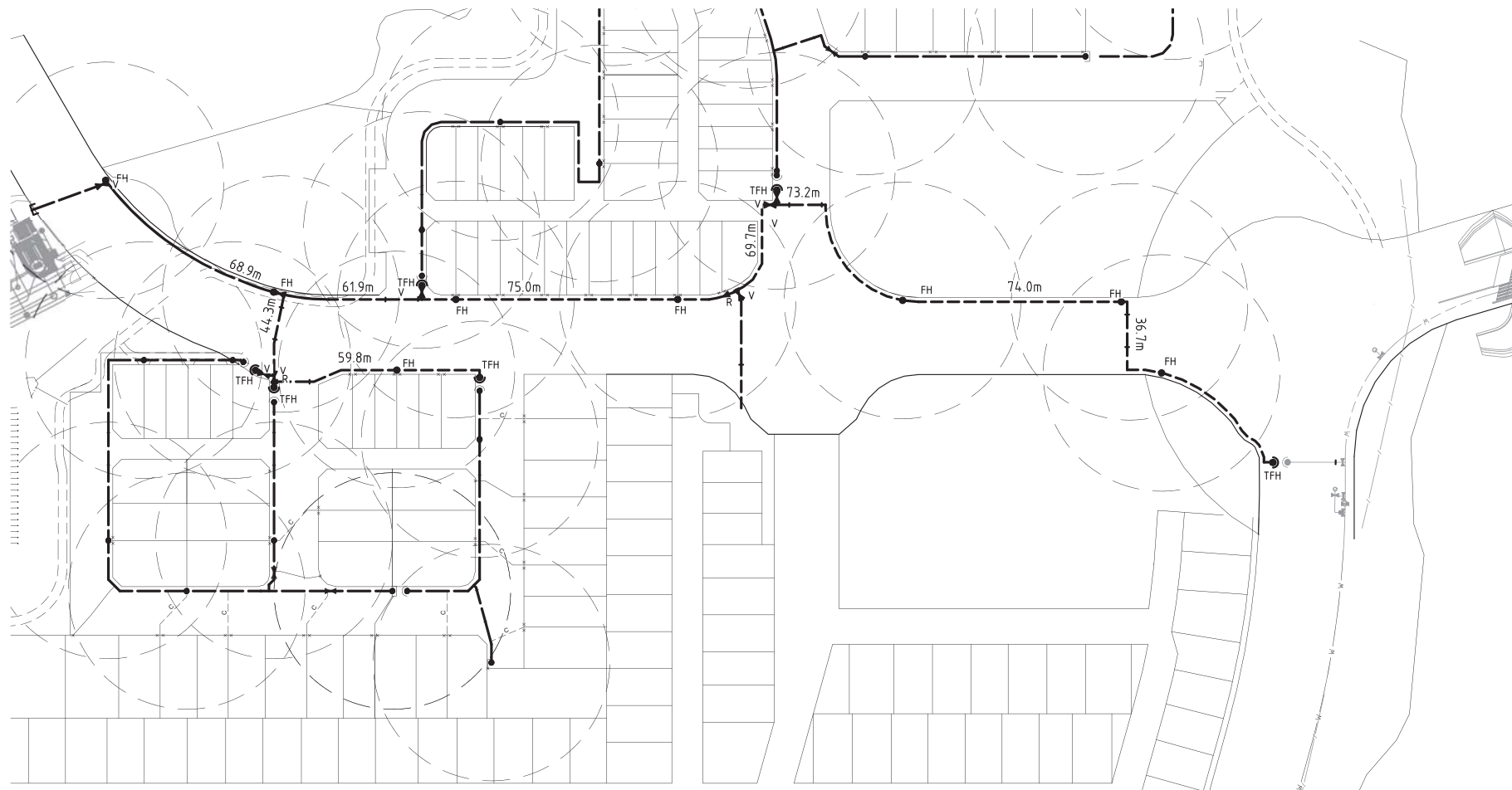
Approved Director - RP00 17544
Digitally signed by Mark Shaw RPEQ 17544
Date: 2026.04.14 17:57:36+1000

Drawing title
WATER RETICULATION
LAYOUT PLAN
SHEET 1

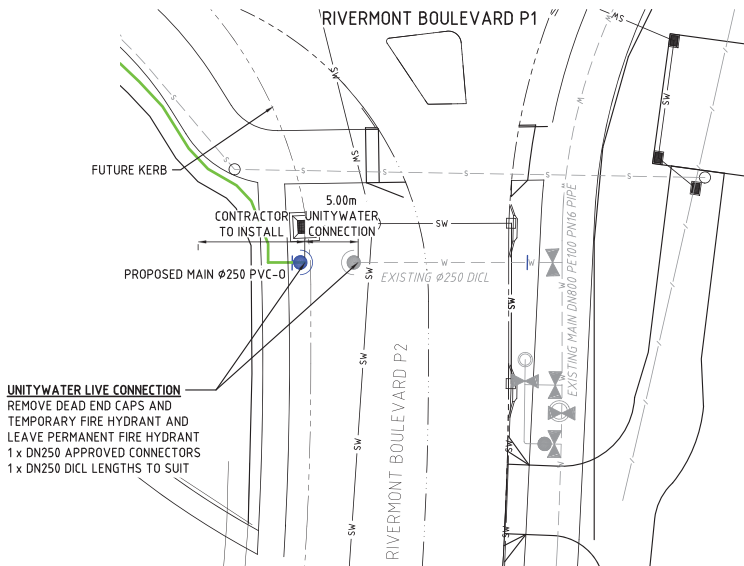
Drawn	Designed	Checked	Date
RP	AL	MAS	APR 26
Scale	AS SHOWN	Sheet	Revision
A1	24-283-101	02 of 06	B



PROPOSED WORKS ARE NEAR EXISTING SERVICES. CONTRACTOR TO COMPLETE DBYD AND LOCATE ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION.
POST SERVICE LOCATION, CONTRACTOR TO SUPPLY SURVEY INFORMATION TO SUPERINTENDENT'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.



TRUNK WATER MAIN LAYOUT PLAN
SCALE 1:750



Project: CABOOLTURE WEST PRECINCT 2 & 3 TRUNK WATER MAIN
Prepared By: Mark Shaw Date: 6th January 2026
Reviewed By: Robert Mander Date: 6th January 2026

Safety in Design Analysis

• Complete Safety in Design Analysis by populating the table where applicable with all of the relevant safety issues for the project. For example: ☒ Positioning of new services adjacent to existing live services ☒ Construction adjacent to existing road carriageways ☒ Pedestrians ☒ Civil Construction Workers ☒ Maintenance Workers ☒ Work Place Health and Safety Constraints ☐ Unusual material handling ☒ Falls from heights ☒ Underground Services (existing) ☒ Electrical Service Installation ☐ Gas Service Installation ☒ Communication Installation ☐ Traffic Signal Installation ☒ Landscape Workers ☒ Line marking Workers ☒ Excavation – open cut trenching - Trench excavation depths ☐ Tunnel Boring ☒ Confined Spaces ☐ Lifting of loads ☐ Unloading of materials and storage ☒ Storage of hazardous materials ☒ Geotechnical investigation – works ☒ Bulk Earthworks	☒ Slope Stability ☒ Dust Control ☒ Erosion and Sediment Control/Management ☒ Sediment Basin Construction ☐ Wetland Construction ☒ Working under traffic Project Specific Design Elements:
☐ List all relevant safety studies	

The following table summarises the safety in design issues considered.

RISK ASSESSMENT AND CONTROL

Risk Assessment			
Select one category from each of the columns below that best represents the likely outcome if the potential hazard actually did occur. For each consequence consider the most likely outcome and not the 'absolute worst' case.			
Consequence		Likelihood	
A	Death – major environmental damage	1	Certain
B	Permanent Disability – severe environmental damage	2	Probable
C	Lost Time Injury – moderate environmental damage	3	Possible
D	Medical Treatment Injury – minor environmental damage	4	Unlikely
E	First Aid Treatment	5	Very Unlikely

RISK RATING

Permanent Disability – means a disability, such as loss of a limb or eyesight, loss of hearing, chronic skin disorder, chronic back disorder, emphysema, and the like

Issued 6th January 2026 Rev - A

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

Date: 29/06/2026



Section of Works	Identify any Potential Incident or Hazard	Consequence	Likelihood	Risk Rating	Risk Control Measures	Consequence	Likelihood	Residual Risk Rating (after design applied)	Risk Manager
Earthworks Material Investigation	Geotechnical Investigation	C	3	S	SWMS required by Contractor	D	3	M	Contractor
Road Works	Pedestrians Injury	D	3	M	TMP to be provided by Contractor to exclude pedestrians from work site	E	3	L	Contractor
	Civil Construction Workers – Injury	A	4	H	TMP and SWMS required for all activities	C	2	S	Contractor
	Maintenance Workers	A	4	H	TMP and SWMS required for all activities	C	3	S	Contractor
	Underground Services (Existing)	A	3	H	DBVD information to be sort prior to design. Existing to be located by survey if applicable to design. All existing services to be located and depths confirmed prior to commencement. SWMS to be provided by Contractor	C	2	S	Designer/ Contractor
Working adjacent to existing infrastructure	Conflict between construction equipment / personnel and live infrastructure in particular Power lines	B	4	S	All existing services highlighted in the documentation. Contractor to complete DBVD search before commencing works. SWMS to be provided by Contractor	C	4	M	Designer/ Contractor
Service trench/ pipe installation	Location of all trenches to provide clearance to all other services and all structures or battered embankments	A	4	H	Mains located with safe working clearance to existing pressure mains, structures and battered embankments	C	4	M	Designer
	Trench depth	A	4	M	Depth of trenches minimised for both safety and cost efficiency	C	4	M	Designer
Works within Confined Spaces	Construction of manholes structures	A	4	M	Contractor to ensure works undertaken in a manner complying with safe work method statements	D	5	L	Contractor
Silt and Erosion Control	Public access to water retaining temporary sediment basins	A	5	S	Protection measures – that is fencing of all water retaining structures with side slopes greater than 1 in 5 as described in International Erosion Control Association (Australian) Table 10	C	4	M	Designer/ Contractor

H: High Risk

S: Significant Risk

M: Moderate Risk

L: Low Risk

Read the Risk Rating from the matrix below:

Risk Assessment Matrix	A	B	C	D	E
1	H	H	H	S	S
2	H	H	S	S	M
3	H	H	S	M	L
4	H	S	M	L	L
5	S	S	M	L	L

Probable – means an event or situation that occurs or is likely to occur about ten times or more per year
Possible – means an event or situation that occurs or is likely to occur about once per year
Unlikely – means an event or situation that occurs or is likely to occur less frequently than once every ten years

DO NOT SCALE THIS DRAWING
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LOCALITY PLAN



REVISIONS

[illegible]

Client



Project

RIVERMONT
PRECINCT 2
MAIN STREET
WATER MAIN



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Approved Director - RPEQ 17544
M. Shaw
 Digitally signed by Mark Shaw RPEQ 17544
 Date: 2026.04.14 17:57:37+10'00'

Drawing Title

**WATER RETICULATION
SAFETY IN DESIGN**

Drawn RP	Designed AL	Checked MAS	Date APR '26
Scale AS SHOWN			Sheet 06 of 0

Unitywater Application No.	Unitywater Drawing No.	Revision
-	105	A



RIVERMONT PRECINCT 2 STAGE 1 - 17 LOTS



PLAN
SCALE 1:1000

DRAWING INDEX

DRAWING NO.	DRAWING TITLE
24-271-51	GENERAL - LOCALITY PLAN, DRAWING INDEX AND NOTES
24-271-52	SEWER RETICULATION - LAYOUT PLAN
24-271-53	SEWER RETICULATION - NOTES - SHEET 1
24-271-54	SEWER RETICULATION - NOTES - SHEET 2
24-271-55	SEWER RETICULATION - TYPICAL TYPE A CROSS ROAD - PROPERTY CONNECTION
24-271-56	SEWER RETICULATION - TYPICAL TYPE B CROSS ROAD - PROPERTY CONNECTION
24-271-57	SEWER RETICULATION - TYPICAL TYPE C CROSS ROAD - PROPERTY CONNECTION
24-271-58	SEWER RETICULATION - MANHOLE TWIN CONNECTION - & NON-COMFORMANCE TABLE
24-271-59	SEWER RETICULATION - LONGITUDINAL SECTIONS - SHEET 1
24-271-60	SEWER RETICULATION - LONGITUDINAL SECTIONS SHEET 2
24-271-61	WATER RETICULATION - LAYOUT PLAN
24-271-62	WATER RETICULATION - LOCALITY PLAN
24-271-63	WATER RETICULATION - LIVE CONNECTION DETAIL - AND NOTES

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

Date: 29/06/2026



UNITYWATER NETWORK WORKS STANDARD DESIGN

DRAWING NOTES

WATER SUPPLY NETWORK WORKS

- ALL DESIGN OF WATER SUPPLY NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA, SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION VERSION 1.4 (MARCH 2024), PART 1: PLANNING AND DESIGN AND PART 3: DRAWINGS.
- ALL CONSTRUCTION OF WATER SUPPLY NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA, SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION VERSION 1.4 (MARCH 2024), PART 2: CONSTRUCTION AND PART 3: DRAWINGS.
- ALL PRODUCTS AND MATERIALS USED IN CONSTRUCTION OF WATER SUPPLY NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE SOUTH EAST QUEENSLAND CODE ACCEPTED CIVIL INFRASTRUCTURE PRODUCTS AND MATERIAL LIST, AND THE MOST RECENT VERSION OF THE LIST IN EFFECT AT THE DATE OF THE CONSTRUCTION PRE-START MEETING.
- CONSTRUCTION WORKS SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO UNITYWATER'S WATER SUPPLY NETWORK.
- ALL LIVE WORKS ASSOCIATED WITH THE WATER SUPPLY NETWORK SHALL BE CARRIED OUT AT THE DEVELOPER'S COST BY QUOTATION REQUEST TO UNITYWATER PRIVATE WORKS ONLY.
- THE CONSTRUCTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT ASSET OWNERS AND AUTHORITIES BEFORE COMMENCING WORKS.
- PRIOR TO COMMENCEMENT OF ANY VARIATION WORKS, THE CONSTRUCTOR MUST FIRST OBTAIN APPROVAL FROM THE REGISTERED MAJOR CONNECTIONS CERTIFIER.

GRAVITY SEWERAGE NETWORK WORKS

- ALL DESIGN OF GRAVITY SEWERAGE NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE GRAVITY SEWERAGE CODE OF AUSTRALIA, SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION VERSION 2.1 (SEPT 2021), PART 1: PLANNING AND DESIGN AND PART 3: DRAWINGS.
- ALL CONSTRUCTION OF GRAVITY SEWERAGE NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE GRAVITY SEWERAGE CODE OF AUSTRALIA, SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION VERSION 2.1 (SEPT 2021), PART 2: CONSTRUCTION AND PART 3: DRAWINGS.
- ALL PRODUCTS AND MATERIALS USED IN CONSTRUCTION OF GRAVITY SEWERAGE NETWORK WORKS SHALL BE IN ACCORDANCE WITH THE SOUTH EAST QUEENSLAND CODE ACCEPTED CIVIL INFRASTRUCTURE PRODUCTS AND MATERIAL LIST, AND THE MOST RECENT VERSION OF THE LIST IN EFFECT AT THE DATE OF THE CONSTRUCTION PRE-START MEETING.
- ALL LIVE WORKS ASSOCIATED WITH THE SEWERAGE NETWORK SHALL BE CARRIED OUT AT THE DEVELOPER'S COST, EITHER:
 - BY THE CONSTRUCTOR, FOR 'MINOR' SEWERAGE CONNECTION WORKS, DEFINED IN THE A&C MANUAL UNDER SECTION PRE-START MEETING, UNDER THE INSPECTION OF THE CONSTRUCTION CERTIFIER WHO SHALL FOLLOW THE PLANNED NETWORK INTERVENTION PROCESS, OR
 - BY QUOTATION REQUEST TO UNITYWATER PRIVATE WORKS, FOR SEWERAGE CONNECTION WORKS NOT MEETING THE CRITERIA FOR CLASSIFICATION AS 'MINOR'.
- THE CONSTRUCTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT ASSET OWNERS AND AUTHORITIES BEFORE COMMENCING WORKS.
- PRIOR TO COMMENCEMENT OF ANY VARIATION WORKS, THE CONSTRUCTOR MUST FIRST OBTAIN APPROVAL FROM THE REGISTERED MAJOR CONNECTIONS CERTIFIER.

DATUM A.H.D.
P.S.M. No 103504
E 497116.520
N 6998102.825
RL 19.282

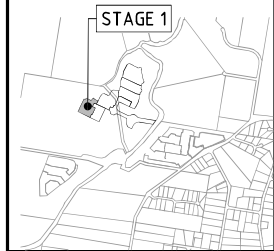
SCALE
10 5 0 20 30 40 50 60 70 80 90 100m
1: 1000 (A1 UNREDUCED)

UNITYWATER STAGED CONNECTION	-
CMB DA REF No.	DA/2025/5733

DO NOT SCALE THIS DRAWING
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LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	15.01.2026	DF
B	FOR APPROVAL	13.05.2026	AL



RIVERMONT
PRECINCT 2
STAGE 1



L1, 62 Astor Terrace, Spring Hill, QLD 4000
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Approved Drawings - EPP10 Digitally signed by
Mark Shaw RPEQ
17544
Date: 2026.06.13
13:41:47+10'00'

Drawing Title:
GENERAL
LOCALITY PLAN,
DRAWING INDEX AND NOTES

Drawn	Designed	Checked	Date
DF	VS	MAS	Apr '26
Scale	Sheet	Revision	
AS SHOWN	1 of 13		
A1	24-271-51	B	

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPQD REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE SEQ SERVICE PROVIDER AT THE DEVELOPER'S COST.
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCT AND MATERIALS" LIST.
6. EACH ALLOTMENT SHALL BE SERVED BY A DN110 PE (OR DN100 PVC) PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE (OR DN150 PVC) PROPERTY CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND MAXIMUM OF 750mm. UNITYWATER REQUIRES MINIMUM EXTENSION OF 500mm INTO PROPERTY.
9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES, APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
12. SEWERS SHALL BE DISUSED /ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ SEWER CODE.
13. BENCH MARK AND LEVELS TO AHD.

- A. ALL ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

- A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4' OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 18" BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- C. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

1. DESIGN AND CONSTRUCTION OF ALL SEWERAGE INFRASTRUCTURE SHALL BE RPEQ CERTIFIED
2. TOP SLABS HAVE BEEN DESIGNED FOR THE FOLLOWING LOADS AND LOCATIONS.

LOCATION	LIVE LOAD	ACCESS COVERS TO AS 3996
RESERVES, RESIDENTIAL ALLOTMENTS, FOOTPATHS AND VERGES	25 kN	CLASS RATING B
ROADWAYS AND DRIVEWAYS, COMMERCIAL, INDUSTRIAL AND NON-RESIDENTIAL ALLOTMENTS	80 kN	CLASS RATING D

- DESIGN LIFE 100 YEARS
- DEAD LOAD AS DETERMINED FROM SEQ SEWER CODE STANDARD DRAWINGS.
- LIVE LOADS TO AS 1170.1 AND AS 5100-2.

STRUCTURE	COVER LOCATION	EXPOSURE CLASSIFICATION AS 3600, AS 3735	REINFORCEMENT COVER (mm)
SLABS	TOP	B2 TO AS 3600	40
	BOTTOM	B2 TO AS 3735	50 INCLUDING PE LINER THICKNESS

4. SEQ CODE SEWER MH STANDARD DRAWINGS THAT ARE APPLICABLE TO UU AND UNITYWATER HAVE ASSUMED THAT A MINIMUM SOIL BEARING PRESSURE OF 50 kPa CAN BE ACHIEVED.

1. THESE NOTES RELATE TO ALL TOP SLABS AND CAST-IN-SITU MAINTENANCE HOLES FOR UU AND UNITYWATER.
2. MAINTENANCE HOLE TOP SLABS SHALL BE PRECAST ELEMENTS.
3. DIMENSIONS IN MILLIMETRES.
4. DIMENSIONS NOT TO BE SCALED FROM DRAWINGS.
5. VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK ON SITE.
6. MATERIALS AND WORKSMANSHIP TO COMPLY WITH THE CURRENT STANDARDS AUSTRALIA CODES, BUILDING CODE OF AUSTRALIA, WSAA PRODUCT SPECIFICATIONS, BY-LAWS AND ORDANCES OF RELEVANT BUILDING AUTHORITIES.
7. EXISTING STRUCTURES TO BE MAINTAINED IN A STABLE CONDITION AND NO PART TO BE OVER-STRESSED DURING CONSTRUCTION.

1. MAINTENANCE HOLES SHALL BE LOCATED CENTRALLY OVER SEWERS UNLESS SPECIFIED OTHERWISE. REFER DRAWINGS SEQ-SEW-1304-1 AND SEQ-SEW-1305-1.
2. OBVERT LEVEL OF THE UPSTREAM SEWER PIPE SHALL ALWAYS BE ABOVE THE OBVERT LEVEL OF THE DOWNSTREAM SEWER PIPE UNLESS APPROVED OTHERWISE.
3. ALL CONSTRUCTION JOINTS SHALL INCLUDE HYDROPHILIC SEALS INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
4. MAINTENANCE HOLE CONNECTORS, INCLUDING HYDROPHILIC SEALS AND PUDDLE FLANGES SHALL BE THE PRE-FABRICATED TYPE UNLESS APPROVED OTHERWISE.
5. ENDS OF SEWER PIPES SHALL FINISH FLUSH WITH THE INSIDE FACE OF MAINTENANCE HOLE WALL.
6. FINISHED BENCHING SHALL PROVIDE A SMOOTH NON-TURBULENT FLOW.
7. PROPERTY CONNECTION JUNCTIONS SHALL NOT BE CONSTRUCTED ON SHORT PIPES AT MAINTENANCE HOLES OR BULKHEADS.
8. FOR CONSTRUCTION OF MAINTENANCE HOLE AND OR MAINTENANCE SHAFT OVER EXISTING SEWER REFER TO SEQ-SEW-1502-1

1. CIRCULAR ACCESS COVERS AND FRAMES SHALL BE RATED TO CLASS RATING B OR CLASS RATING D TO AS 3996.
2. PRODUCT CERTIFICATION TO AS 3996 SHALL BE SUPPLIED FOR EACH COVER ASSEMBLY.
3. COVERS, FRAMES AND RISER RINGS, WHERE REQUIRED, SHALL BE SUPPLIED ASSEMBLED.
4. COVERS SHALL BE SOLID TOP.
5. COVERS SHALL HAVE IDENTIFICATION TAGS DETAILING: SEWER / VACUUM SEWER / CLASS RATING B, D, OR COVER PATTERN DETAIL, SEQ. - SIZE / WEIGHT.
6. BOLT DOWN COVERS SHALL BE PROVIDED IN FLOOD PRONE AREAS, STORM SURGE AREAS, SURCHARGING SEWERS AND WHERE SPECIFIED IN THE DESIGN.
7. BOLT DOWN COVER FRAMES TO BE FIXED TO THE TOP SLAB WITH 4 M16 STAINLESS STEEL CHEMICAL ANCHORS. EMBEDMENT LENGTH SHALL BE MINIMUM 100mm UNLESS APPROVED OTHERWISE.

1. THE SAFETY IN DESIGN, DESIGN AND RISK MITIGATION MEASURES FOR THESE DRAWINGS DO NOT NECESSARILY ACCOUNT FOR ALL DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE AND DEMOLITION ASSESSMENTS. IT DOES NOT REDUCE OR LIMIT THE OBLIGATIONS OF THE CONSTRUCTOR USER, OPERATOR, MAINTAINER AND DEMOLISHER TO PERFORM THEIR OWN SAFETY IN DESIGN RISK ASSESSMENT.
2. DEVELOP CONSTRUCTION AND INSTALLATION SAFE WORK METHOD STATEMENTS TO ELIMINATE AND MINIMISE INSTALLATION RISKS.

1. CONCRETE WORKMANSHIP AND MATERIALS TO COMPLY WITH AS 3600 AND AS 3610.
2. CONCRETE TO COMPLY WITH AS 1379, AS 1478.1, AS 1478.2, AS 3582.1 AS 3582.2, AS 3582.3 AND AS 3592.
3. 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.
4. WATER NOT TO BE ADDED TO CONCRETE AFTER TRUCK HAS LEFT BATCHING PLANT UNLESS APPROVED OTHERWISE.
5. TEST SLUMP OF EACH BATCH OF CONCRETE DELIVERED.
6. DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK BY CONTRACTOR.
7. CONCRETE CONSTRUCTION TOLERANCES TO AS 3610.
8. CONCRETE SIZES DO NOT INCLUDE FINISHES. SIZES NOT TO BE REDUCED OR PENETRATIONS ADDED.
9. CONDUITS, PIPES, ETC. NOT TO BE PLACED IN CONCRETE COVER TO THE REINFORCEMENT.
10. EXPOSED EDGES AND RE-ENTRANT CORNERS TO HAVE 25mm CHAMFERS OR FILLETS UNLESS NOTED OTHERWISE.
11. CONSTRUCTION JOINTS AS DETAILED AND LOCATED ON DESIGN DRAWINGS.
12. CONCRETE SURFACE FINISHES TO AS 3610.
 - FORMED EXPOSED SURFACES CLASS 2
13. 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

14. CONCRETE CURING TO AS3600 AS SOON AS POSSIBLE AFTER PLACING AND FINISHING.
15. CONCRETE GRADE S40.

TYPE OF AGGREGATE	CALCAREOUS
COMPRESSIVE STRENGTH AT 28 DAYS	40 MPa
MINIMUM CEMENT CONTENT	380 kg/m ³
MAXIMUM CEMENTITIOUS MATERIAL	25%
MAXIMUM WATER/CEMENT RATIO	0.5
NOMINAL SLUMP	80mm±15
DRYING SHRINKAGE AT 21 DAYS	500 x 10 ⁻⁶
MAXIMUM AGGREGATE SIZE	20mm
MINIMUM AGGREGATE SIZE	10mm

16. CONCRETE SHALL BE SPECIAL CLASS TO WSA-PS 358 WITH CALCAREOUS AGGREGATE.
17. BENCHING FINISH SHALL CONSIST OF EQUAL PARTS OF CEMENT AND SAND.

1. REINFORCEMENT FOR THE TOP SLABS SHALL BE A PRE-FABRICATED ELEMENT.
2. REINFORCEMENT TO COMPLY WITH AS 4671.
3. SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE:
 - R - STRUCTURAL GRADE 250 PLAIN ROUND BARS
 - N - HOT ROLLED GRADE 500 DEFORMED BAR, DUCTILITY CLASS N
 - L - HOT ROLLED GRADE 500 DEFORMED BAR, DUCTILITY CLASS L
 - SL - HARD DRAWN WIRE GRADE 500 MESH, DUCTILITY CLASS L
 - RL - HARD DRAWN WIRE GRADE 500 MESH, DUCTILITY CLASS L
 - W - STEEL REINFORING WIRE GRADE 500
4. REINFORCEMENT DESIGNATION AS FOLLOWS (E.G. 14N16-250 EF)
 - 14 - NUMBER OF BARS
 - N - BAR GRADE AND DUCTILITY CLASS
 - 16 - BAR DIAMETER IN mm
 - 250 - SPACING OF BARS IN mm
 - EF - LOCATION
5. ABBREVIATIONS TO REINFORCEMENT LOCATION.
 - EW - EACH WAY
 - EF - EACH FACE
 - B - BOTTOM
 - T - TOP
 - CP - CENTRALLY PLACED
6. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ONLY AND NOT NECESSARILY IN TRUE PROJECTION.
7. REINFORCEMENT TO BE FIXED SECURELY AND SUPPORTED ON PROPRIETY CONCRETE, METAL OR PLASTIC SUPPORTS.
8. REINFORCEMENT TO BE SPLICED AS SHOWN ON PROJECT DRAWINGS. LAP LENGTHS TO COMPLY WITH AS 3600 AND TABLE BELOW U.N.O.

BAR SIZE	LAP LENGTH (mm)
N12	350
N16	500
N20	600
N24	700
N28	850
N32	950

9. REINFORCEMENT NOT TO BE WELDED UNLESS SHOWN ON PROJECT DRAWINGS OR APPROVED OTHERWISE.
10. REINFORCEMENT NOT TO BE BENT, CUT OR HEATED ON SITE UNLESS APPROVED OTHERWISE.
11. REINFORCEMENT TO BE CLEAN, FREE OF MILL SCALE, RUST, OIL, GREASE ETC.
12. DOWEL LOCATION TOLERANCE SHALL BE +/- HALF THE DIAMETER OF THE DOWEL. THE ALIGNMENT TOLERANCE SHALL BE 2mm IN 300mm.

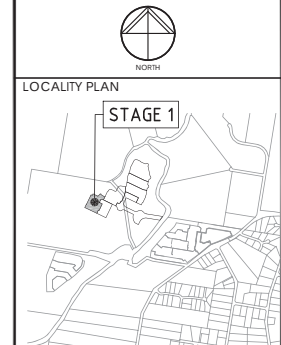
PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

Date: 29/06/2026



DO NOT SCALE THIS DRAWING
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Project	
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RIVERMONT
PRECINCT 2
STAGE 1



Approved Director - RPEQ 17544

M. Shaw

Digitally signed by
Mark Shaw RPEQ
17544
Date: 2026.04.14
17:56:41+10'00'

Drawing Title

SEWER RETICULATION

SEWER RETICULATION
NOTES

NOTES

SHEET 1

SHEET 1		
From	Project	Client

Drawn	Designed	Checked
DE	VS	MAS

DF	VS	MAS
2.4	1.0	1.0

Scale
AS SHOWN

AS SHOWN	

Drawing No. 01-051-50

A1	24-271-53
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2. PRECAST CONCRETE MEMBERS TO COMPLY WITH AS 3850.1 AND AS 3850.2
3. PRECAST MEMBERS ARE DESIGNED FOR THE FINAL INSTALLED CONDITIONS ONLY. PRECAST MANUFACTURER TO DESIGN THE PRECAST MEMBERS INCLUDING CONNECTIONS, FIXING DETAILS, JOINTS, FIRE RESISTANCE, ETC. FOR STABILITY, SERVICEABILITY AND STRENGTH REQUIREMENTS REQUIRED DURING MANUFACTURE, TRANSPORT, LIFTING, ERECTION AND INSTALLATION.
3. PRECAST MANUFACTURER TO PROVIDE THEIR SHOP DRAWINGS AND REPO CERTIFICATION FOR CONSTRUCTION OF THE PRECAST SLAB TO THE DESIGNS PROVIDED IN MAINTENANCE HOLE DRAWINGS INCLUDING DESIGN AND CONSTRUCTION CERTIFICATION FOR CONNECTIONS AND FIXING REQUIRED FOR MANUFACTURE, TRANSPORT, ERECTION AND INSTALLATION. (FORM 15 AND 16)
4. PRECAST CONCRETE MEMBERS TO BE SUPPLIED AND CONSTRUCTED BY A PRECAST CONCRETE CONSTRUCTOR.
5. ADEQUATELY DESIGNED TEMPORARY BRACING, AS REQUIRED, TO BE PROVIDED DURING ERECTION AND INSTALLATION.
6. MINIMUM CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE AT REMOVAL FROM MOULDS SHALL BE 15MPa.
7. ALL INSERTS IN PRECAST CONCRETE MEMBERS TO BE STAINLESS STEEL.
8. ALL STRUCTURAL STEELWORK CONNECTIONS TO PRECAST CONCRETE MEMBERS TO BE HOT DIP GALVANISED TO AS 4680 SYSTEM DESIGNATION HDG600.
9. PROVIDE 15mm CHAMFERS OR FILLETS AT EDGES AND CORNERS OF PRECAST MEMBERS EXCEPT AT UNDERSIDE OF MID SLAB ACCESS OPENING UNLESS APPROVED OTHERWISE.
10. PRECAST CONCRETE MEMBERS ARE TO BE CURED ON REINFORCED CONCRETE STRUCTURES UNTIL THE REINFORCED CONCRETE STRUCTURES HAVE BEEN CURED TO ACHIEVE 28 DAYS STRENGTH.
11. WEIGHT OF TOP SLAB TO BE STAMPED ON THE SLAB.
12. CONCRETE TO BE SPECIAL CLASS TO WSA P5-358 WITH CALCARIOUS AGGREGATE.
13. APPROVED LIFTING PLAN IS TO BE AVAILABLE ON REQUEST.

1. STAINLESS STEEL TO COMPLY TO ASTM A240/A240M AND ASTM A480/A480M.
2. FABRICATION BY MANUFACTURERS ASSDA ACCREDITED OR APPROVED EQUIVALENT.
3. STAINLESS STEEL TO BE GRADE 316 OR 316L UNO.
4. STORAGE, FABRICATION AND WELDING TO BE IN APPROVED DEDICATED AREAS.
5. WELDING, CLEANING, PICKLING AND PASSIVATION TO COMPLY TO AS 1554.6 AND WTIA TECHNICAL
6. NOTE 16 WELDING OR STAINLESS STEEL.
7. SURFACE FINISH TO BE 28 OR BETTER TO ASTM A480.
8. MEMBERS TO BE ACID PASSIVATED AFTER FABRICATION.
9. ANTI GALLING COMPOUND "DURALAC" OR SEQ-SP APPROVED EQUIVALENT REQUIRED ON ALL
10. FASTENERS UNLESS APPROVED OTHERWISE.

1. 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.
2. THE PE SHEETS SHALL:
 - HAVE A MINIMUM THICKNESS OF 2.5 mm.
 - 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.
3. PREPARATION, APPLICATION AND INSTALLATION TO COMPLY WITH THE MANUFACTURER'S SPECIFICATION.
4. POURED CONCRETE TO BE AT A COOLER AMBIENT TEMPERATURE THAN THE TEMPERATURE WHEN THE PE SHEETS WERE ATTACHED TO THE FORMWORK.
5. EXTRUSION WELDING AND WELD TESTING AT SEAMS TO BE UNDERTAKEN BY THE APPROVED APPLICATOR TO THE MANUFACTURER'S SPECIFICATION.
6. 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.

2. STRUCTURAL STEEL WORKMANSHIP AND MATERIALS TO COMPLY WITH AS 4100 STEEL TO COMPLY WITH:
 - AS 1163 GRADE C350 FOR RECTANGULAR AND 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.
3. WELDS TO AS 1554.
 - WELD CATEGORY SP.
 - BUTT WELDS TO BE FULL PENETRATION WELDS.
 - WELDS TO BE 6mm CONTINUOUS FILLET WELDS ALL ROUND INTERFACES.
 - ELECTRODES TO AS 1554. CLASSIFICATION E48RX.
4. 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 10mm THICK CLEAT PLATE UNLESS NOTED OTHERWISE.
 - INSTALL WASHERS UNDER BOLT HEAD AND NUT. INSTALL TAPERED WASHERS AS REQUIRED.
 - MIN PROJECTION BEYOND NUT TO BE MINIMUM 2 THREADS AND MINIMUM 10mm.
5. HOLD DOWN BOLTS TO BE GRADE 4.6/S UNLESS NOTED OTHERWISE. HOLD DOWN BOLTS GROUPS TO BE RIGIDLY TIGHT FOR CORRECT SET-OUT AND LOCATION.
6. SEAL WELD HOLLOW SECTIONS WITH 3mm THICK CAP PLATE UNLESS NOTED OTHERWISE.
7. GROUT BASE PLATES WITH HIGH STRENGTH NON-SHRINK PRE-MIXED GROUT BEFORE COLUMNS ARE LOADED.

1. STEELWORK TO BE HOT DIP GALVANISED TO AS 4680 SYSTEM DESIGNATION HDG600 AND THREADED FASTENERS TO AS 1214.
2. 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.

- CORE HOLES ON EACH CORNER OF AREA TO BE CUT.
- SAW CUT CONCRETE, PERPENDICULAR TO CONCRETE SURFACE, 15mm DEEP AROUND PERIMETER OF THE OPENING.
- BREAKOUT REMAINING CONCRETE AROUND THE OPENING WITHOUT DAMAGING REINFORCEMENT.
- CUT EXPOSED REINFORCEMENT SO THAT IS 30 mm CLEAR OF THE PIPE.
- CLEAN CONCRETE SURFACE AND REMOVE ALL LOOSE MATERIAL.
- AGGRESSIVE BLAST CLEAN EXPOSED REINFORCEMENT IF IT IS CORRODED AND APPLY "INTOPRIME" ZINC RICH PRIMER UNLESS APPROVED OTHERWISE.
- THOROUGHLY SOAK SUBSTRATE WITH CLEAN WATER FOR A MINIMUM OF TWO HOURS.
- PLACE N12 CURBING TRIMMER ON BOTH SIDES OF THE PIPE FLANGE.
- INSTALL HYDROTITE C1-07-25 SEAL ON PIPE 50mm FROM CONCRETE SURFACE UNLESS APPROVED OTHERWISE.
- APPLY "NITOBOND HAR" PRIMER TO CONCRETE SURFACE UNLESS APPROVED OTHERWISE.
- POUR CONCRETE/GROUT UNDER PRESSURE TO FILL OPENING.
- FILL CONCRETE/GROUT TO SUPPLIER REQUIREMENTS.

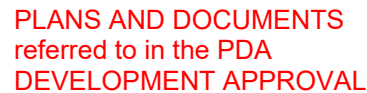
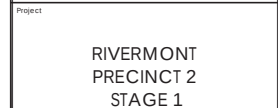
1. ALL EXPOSED REINFORCEMENT AND MILD STEEL ANCHORED TO BE REPAIRED AS FOLLOWS:
 - SAW CUT OR CHISEL CUT CONCRETE, PERPENDICULAR TO CONCRETE SURFACE, 15 mm DEEP AROUND REINFORCEMENT/ANCHOR
 - BRUSH/BLAST CONCRETE AROUND REINFORCEMENT/ANCHOR TO A DEPTH OF 60mm.
 - CUT EXPOSED REINFORCEMENT/ANCHOR AT A MINIMUM DEPTH OF 50mm FROM CONCRETE SURFACE.
 - CLEAN CONCRETE SURFACE AND REMOVE ALL LOOSE MATERIAL.
 - ABRASIVE BLAST CLEAN EXPOSED REINFORCEMENT/ANCHOR. APPLY "NITOPRIME" ZINC RICH PRIMER TO REINFORCEMENT/ANCHOR UNLESS APPROVED OTHERWISE. THOROUGHLY SOAK SUBSTRATE WITH CLEAN WATER.
 - APPLY "NITOBOND HARD" PRIMER TO CONCRETE UNLESS APPROVED OTHERWISE.
 - APPLY "RENDEROC HB40" TO FILL OPENING UNLESS APPROVED OTHERWISE.

2. BENCH MARK LEVELS ARE AS SHOWN ON KN DWG No 24-271-52.
3. THE CONTRACTOR SHALL VERIFY FINISH SURFACE LEVELS ON SITE BEFORE CONSTRUCTION OF SEWERS AND PROPERTY CONNECTION BRANCHES.
3. F.S.L. SHOWN ON THE LONGITUDINAL SECTIONS ARE INDICATIVE ONLY. MANHOLE COVERS TO BE CONSTRUCTED AS PER STD DWG No. SEQ-SEW-1308-1.
4. UNITYWATER HAS APPROVED THE USE OF 5mm GRAVEL SCREENING AROUND AND SUPPORTING THE BOTTOM AND SIDES OF PIPES, A NON-COHESIVE GRANULAR MATERIAL COMPLYING WITH THE GRADING, AS SETOUT IN UNITYWATER'S SPECIFICATIONS SHALL BE USED TO ENCLOSE THE HOUSE CONNECTION BRANCH.
5. VACUUM TESTING FOR ALL SEWER MANHOLES AND PIPELINES ARE REQUIRED TO THE SEQ WS&S D&C CODE - UNITYWATER - SPECIFICATION REQUIREMENTS.
6. PRIOR TO COMMENCING WORKS/CONSTRUCTIONS TO LIVE SEWERS KN IS TO BE NOTIFIED OF PROPOSED TIMING TO ALLOW NOTIFICATION TO UNITYWATER REPRESENTATIVES.
7. SEWER MAINTENANCE HOLES SHALL BE CONSTRUCTED WITHOUT STEP IRONS OR LADDERS.
8. DETECTABLE MARKER TAPE TO BE INSTALLED OVER ALL SEWER MAINS DIRECTLY ABOVE SCREENINGS.
9. PIPE EMBEDMENT SHALL BE CONSTRUCTED AS PER STD DWG No. SEQ-SEW-1201-1 TO SEQ-SEW-1205-1.
10. PROPERTY CONNECTION BRANCHES SHALL BE CONSTRUCTED AS PER STD DWG No. SEQ-SEW-1106-1 TO SEQ-SEW-1106-6.
11. CCTV FOOTAGE TO UNITYWATER SEQ D&C CODE REQUIREMENTS TO BE PROVIDED. KN TO REVIEW/REPORT FOOTAGE FOR EACH SEWER LINE. CCTV NOT REQUIRED ON DN160 CROSS ROAD PROPERTY CONNECTIONS.
12. TANGENT POINT SET-OUT INFORMATION FOR HORIZONTAL BENDS IS TO BE INCLUDED ON AS-CONSTRUCTED DRAWINGS.
13. ALL PE-CONNECTION SHALL BE WELDED. WELDING REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSA 02-2014-3.1 CLAUSE 4.7.1. CLASS PN10/SDR17 PE FITTINGS SHALL BE UTILISED THROUGHOUT.
14. ALL CONNECTIONS TO LIVE SEWER TO BE UNDERTAKEN BY CONTRACTOR UNDER SUPERVISION OF CONSTRUCTION CERTIFIER OR AS DIRECTED BY UNITYWATER, AND AT THE DEVELOPERS EXPENSE.
15. ALL LRB RADI SHALL BE 35 TIMES THE OUTSIDE DIAMETER OF AN SDR21 PE PIPE AND 25 TIMES THE OUTSIDE DIAMETER OF AN SDR17 PE100 PIPE. MOULDED PVC FITTING ARE NOT PERMITTED.
16. LEVELS FOR EXISTING SEWER HAVE BEEN OBTAINED FROM AS-CONSTRUCTED INFORMATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM EXISTING LEVELS ON SITE.
17. WHERE PROPERTY CONNECTION INSPECTION TEES TERMINATE BENEATH DRIVEWAY SLAB, EXTEND AN I.O. RISER TO SURFACE LEVEL AND FINISH WITH TRAFFICABLE BRASS CAP

NOTES:

1. EMBEDMENT MATERIAL TO BE SINGLE SIZE CRUSHED ROCK NOMINAL 5 TO 7mm SIZE OR AS NOMINATED IN THE SEQ ACCEPTED PRODUCTS AND MATERIALS LIST.
2. THE CONTRACTOR MUST CONFIRM THE TRENCH SUBGRADE INSITU MATERIAL CHARACTERISTICS EQUAL OR EXCEED A MINIMUM NATIVE SOIL MODULUS OF 0.9 MPa AND SUBMIT TO THE SUPERINTENDENT FOR APPROVAL, PRIOR TO PROGRESSING WITH CONSTRUCTION.

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Date: 29/06/2026

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Approved Director - RPEQ 17544
Digitally signed by
Mark Shaw RPEQ
17544
Date: 2026.04.14
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Drawing Title	
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SEWER RETICULATION

SEWER RETICULATION
NOTES

NOTES

SHEET 2

SHEET 2		
From	To	Start

Drawn	Designed	Checked
DE	VS	MAS

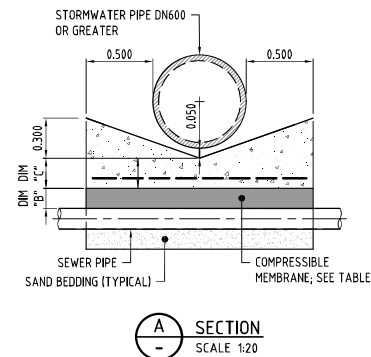
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Drawing No. 01-054-01

No.	SEQ CODE CLAUSE	DETAILS FOR PROPOSED VARIATION	REASON FOR PROPOSED VARIATION	RELEVANT SERVICE
NC01	SEQ WATER SUPPLY CODE CL 5.4.2.2 LOCATION IN FOOTWAY	WATER IN SHARED VERGE ALONG ROAD 19 AND 13.	CONSIDERED AN ACCEPTABLE OUTCOME GIVEN NO DEVELOPMENT IS PROPOSED ALONG OPPOSITE VERGE. MINIMUM HORIZONTAL CLEARANCES AS PER SEQ WATER SUPPLY CODE CL 5.12.5.2 ACHIEVED.	DRINKING WATER
NC02	STD DWG SEQ-WAT-1303-1C NOTE 8	PERMANENT FIRE HYDRANT LOCATED AT PROPERTY BOUNDARY TRUNCATION INSTEAD OF SIDE BOUNDARY.	FIRE HYDRANTS LOCATED AT BOUNDARY TRUNCATION ARE REQUIRED IN ORDER TO COMPLY WITH SEQ WATER SUPPLY CODE CL 8.8.8 HYDRANT SPACING	DRINKING WATER
NC03	STD DWG SEQ-WAT-1108-3	WATER METER LOCATED AT PROPERTY BOUNDARY TRUNCATION FOR LOT 341.	WATER METER LOCATED AT BOUNDARY TRUNCATION DUE TO ELECTRICAL PILLAR POSITIONING ON COMMON RP.	DRINKING WATER



CLEARANCE DIM "A"	DIM "B"	DIM "C"	MESH
0.300 -1.000	0.050	0.200 MIN	SL92



Drawn DF	Designed VS	Checked MAS	Date Apr '26
Scale AS SHOWN			Sheet 8 of 13
A1	Drawing No 24-271-58	Revision B	

MAINTENANCE HOLE/SHAFT No.

MH/MS COVER TYPE
MH/MS TYPE
BRANCH LINE No.
BRANCH DROP TYPE
HC TYPE
HC DEPTH
HC CH. TO DS MH/MS
HC INVERT LEVEL
HC LOT No.

LEGEND:

- G = CONCRETE 0.900# MH AS PER SEQ-SEW-1301-2 TO 1301-5 WITH MINIMUM 150mm WALL THICKNESS.
F = CONCRETE 1.200# MH AS PER SEQ-SEW-1301-8 TO 1301-11
X = CONCRETE 1.200# MH AS PER SEQ-SEW-1301-14 TO 1301-21 EXCLUDING SAFETY CHAINS AND LADDER AS PER UW Pr-11051 REV 1
@ = PE LINED SEQ-SPS-1407-1A, 1407-2B, AND SEQ-SEW-1301-26
+ = INTERNAL DROP PROPERTY CONNECTION REFER TO TYPICAL DETAIL ON NOTES PAGE
Ⓟ = CLASS B NON-TRAFFICABLE
Ⓛ = CLASS D TRAFFICABLE
NC 01 = REFER NONCONFORMANCE TABLE ON 24-271-58

NOTES:

- PROPERTY CONNECTION TYPE/DETAILS REFER SEQ-SEW-1106 DWG SERIES.
- CAST IN SITU MANHOLE TYPE/DETAILS REFER SEQ-SEW-1301-1 to 1301-21, 1301-26, 1302-1, 1301-1, 1304-1, 1305-1, 1306-1, 1307-1, 1308-1, 1308-5 to 1308-11, 1313-1.
- MAINTENANCE SHAFTS TYPE/DETAILS REFER SEQ-SEW-1315-1 AND 1316-1 STD DWG.
- WHERE CLASS "D" COVERS ARE SPECIFIED FOR MH OR MS, INCREASE TOP SLAB THICKNESS FROM 150mm TO 175mm.
- COMPLETE ALL END OF LINE WITH A ELECTROFUSION STOP END OR BUTT WELDED CAP.
- MH ≥6.0M DEEP TO BE INDIVIDUALLY DESIGNED FOR SPECIFIC INSTALLATION DEPTH. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.

DATUM RL

LOCATION
PIPE DIAMETER
GRADE
LENGTH
EMBEDMENT TYPE
JUNCTION
INVERT LEVEL
DEPTH OF INVERT BELOW FSL
INVERT LEVEL (IL)
FINISHED SURFACE LEVEL (FSL)
EXISTING SURFACE LEVEL (ESL)
CHAINAGE (CH)

LINE



DENOTES LIVE CONNECTION REQUIRED UNDER UNITYWATER SUPERVISION. REFER TO LIVE SEWER WORKS TABLE ON KNg DWG No. 24-271-54.

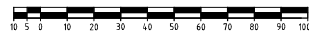


REFER TO TWIN PROPERTY CONNECTION DETAIL ON KNg DWG No. 24-271-58

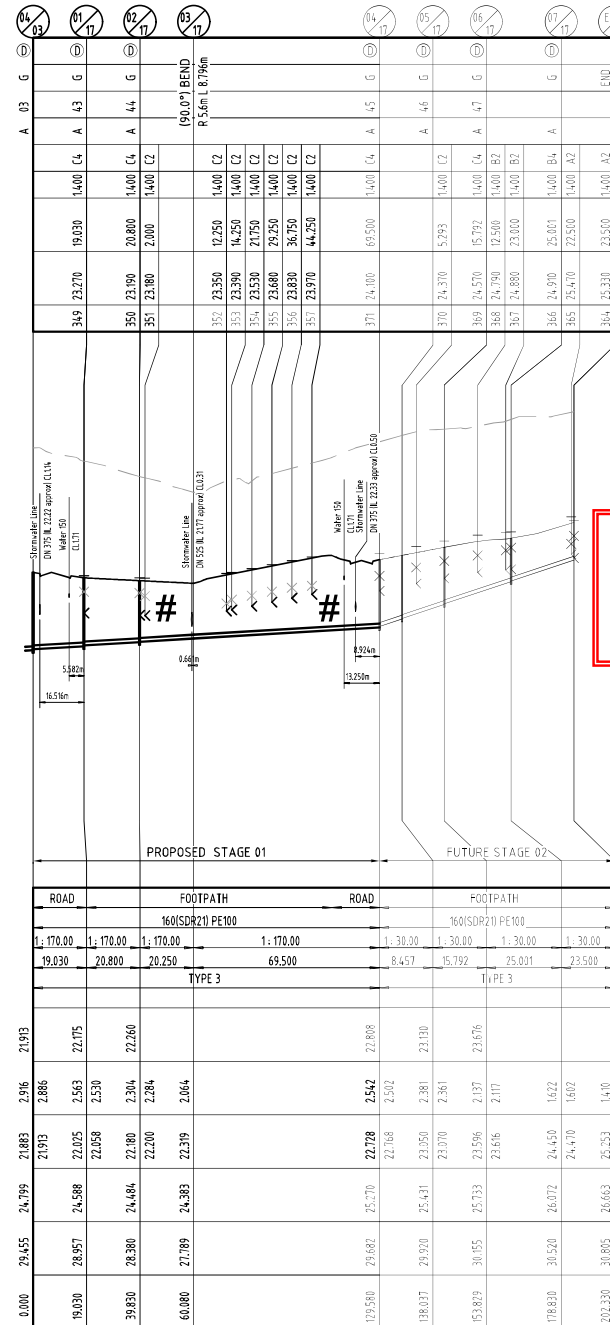
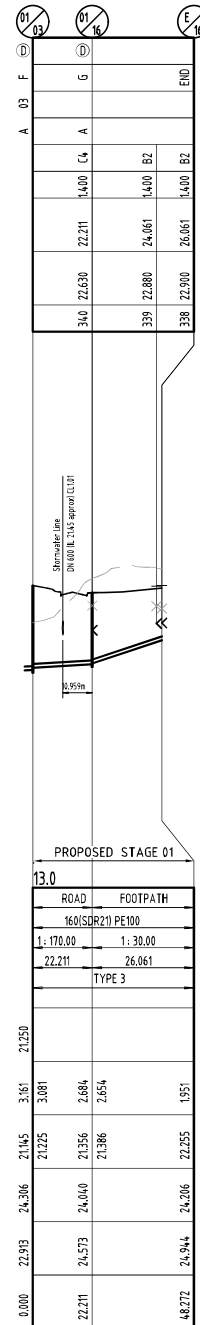
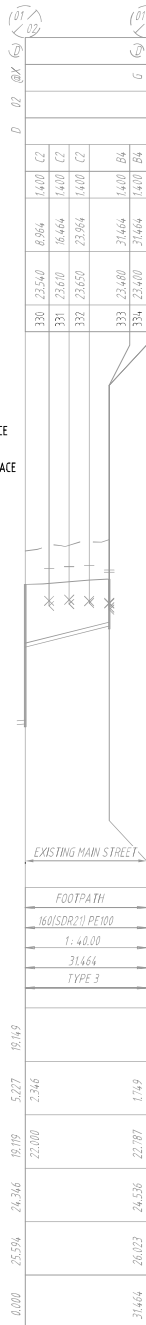
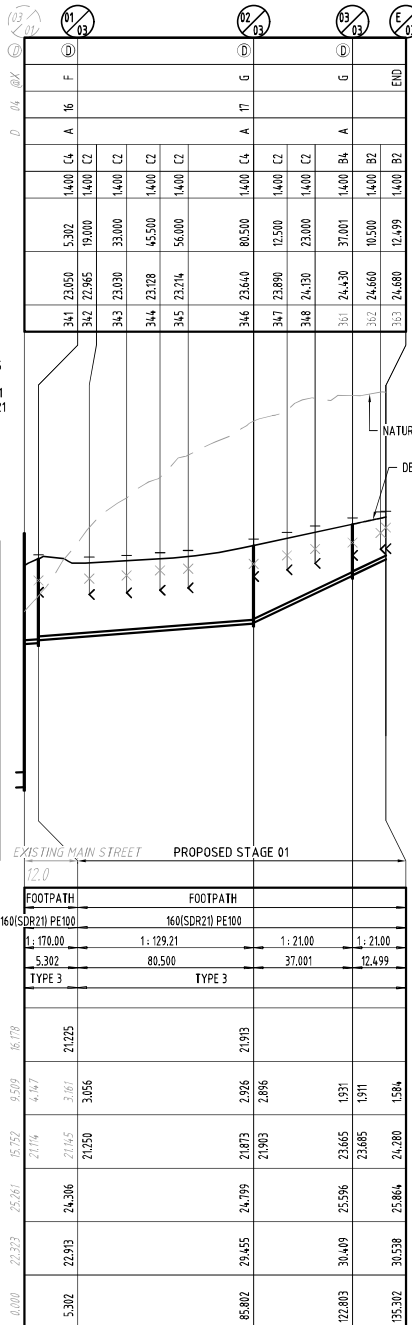


DENOTES BRIDGING STRUCTURE BETWEEN STORMWATER AND SEWER MAIN. REFER TO KNg DWG No. 24-271-58 FOR DETAILS.

SCALE A 1:1000 (Horiz.)



B 1:100 (Vert.)



DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!



LOCALITY PLAN

STAGE 1



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	15.01.2024	DF
B	FOR APPROVAL	01.04.2024	DF
C	FOR APPROVAL	13.05.2024	AL

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

Date: 29/06/2026



RIVERMONT
PRECINCT 2
STAGE 1



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Approved Draw for EPP by Digitally signed by Mark Shaw RPEQ 17544 Date: 2026.06.13 13:41:48+10'00'

Drawing Title:
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 1

Drawn	Designed	Checked	Date
DF	VS	MAS	Apr 26
Scale	Sheet	Revision	
AS SHOWN	9 of 13		
Drawing No	24-271-59	Revision	C

MAINTENANCE HOLE/SHAFT No.

MH/MS COVER TYPE
MH/MS TYPE
BRANCH LINE No.
BRANCH DROP TYPE
HC TYPE
HC DEPTH
HC CH. TO DS MH/MS
HC INVERT LEVEL
HC LOT No.

LEGEND:

- G = CONCRETE 0.900Ø MH AS PER SEQ-SEW-1301-2 TO 1301-5 WITH MINIMUM 150mm WALL THICKNESS.
F = CONCRETE 1200Ø MH AS PER SEQ-SEW-1301-8 TO 1301-11
X = CONCRETE 1200Ø MH AS PER SEQ-SEW-1301-14 TO 1301-21 EXCLUDING SAFETY CHAINS AND LADDER AS PER UW Pr11051 REV 1
@ = PE LINED SEQ-SPS-1407-1A, 1407-2B, AND SEQ-SEW-1301-26
+ = INTERNAL DROP PROPERTY CONNECTION REFER TO TYPICAL DETAIL ON NOTES PAGE
(B) = CLASS B NON-TRAFFICABLE
(D) = CLASS D TRAFFICABLE
[INC 01] = REFER NONCONFORMANCE TABLE ON 24-271-58

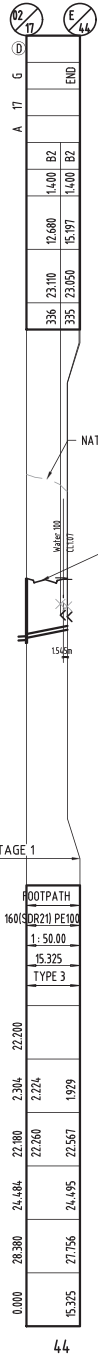
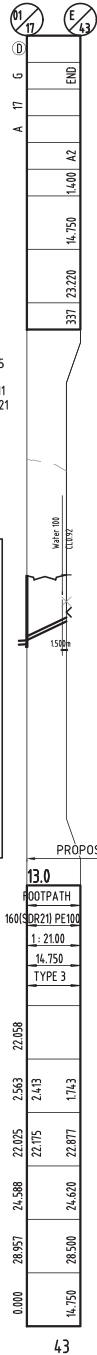
NOTES:

- PROPERTY CONNECTION TYPE/DETAILS REFER SEQ-SEW-1106 DWG SERIES.
- CAST IN SITU MANHOLE TYPE/DETAILS REFER SEQ-SEW-1301-1 to 1301-21, 1301-26, 1302-1, 1301-1, 1304-1, 1305-1, 1306-1, 1307-1, 1308-1, 1308-5 to 1308-11, 1313-1.
- MAINTENANCE SHAFTS TYPE/DETAILS REFER SEQ-SEW-1315-1 AND 1316-1 STD DWG.
- WHERE CLASS "D" COVERS ARE SPECIFIED FOR MH OR MS, INCREASE TOP SLAB THICKNESS FROM 150mm to 175mm.
- COMPLETE ALL END OF LINE WITH A ELECTROFUSION STOP END OR BUTT WELDED CAP.
- MH ≥6.0M DEEP TO BE INDIVIDUALLY DESIGNED FOR SPECIFIC INSTALLATION DEPTH. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.

DATUM RL

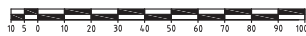
LOCATION
PIPE DIAMETER
GRADE
LENGTH
EMBEDMENT TYPE
JUNCTION
INVERT LEVEL
DEPTH OF INVERT BELOW FSL
INVERT LEVEL (IL)
FINISHED SURFACE LEVEL (FSL)
EXISTING SURFACE LEVEL (ESL)
CHAINAGE (CH)

LINE



DENOTES BRIDGING STRUCTURE BETWEEN STORMWATER AND SEWER MAIN. REFER TO KNg DWG No. 24-271-58 FOR DETAILS.

SCALE A 1:1000 (Horiz.)



B 1:100 (Vert.)



PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

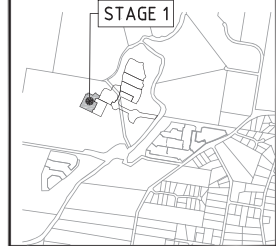
Date: 29/06/2026



DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!



LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	15.01.2026	DF



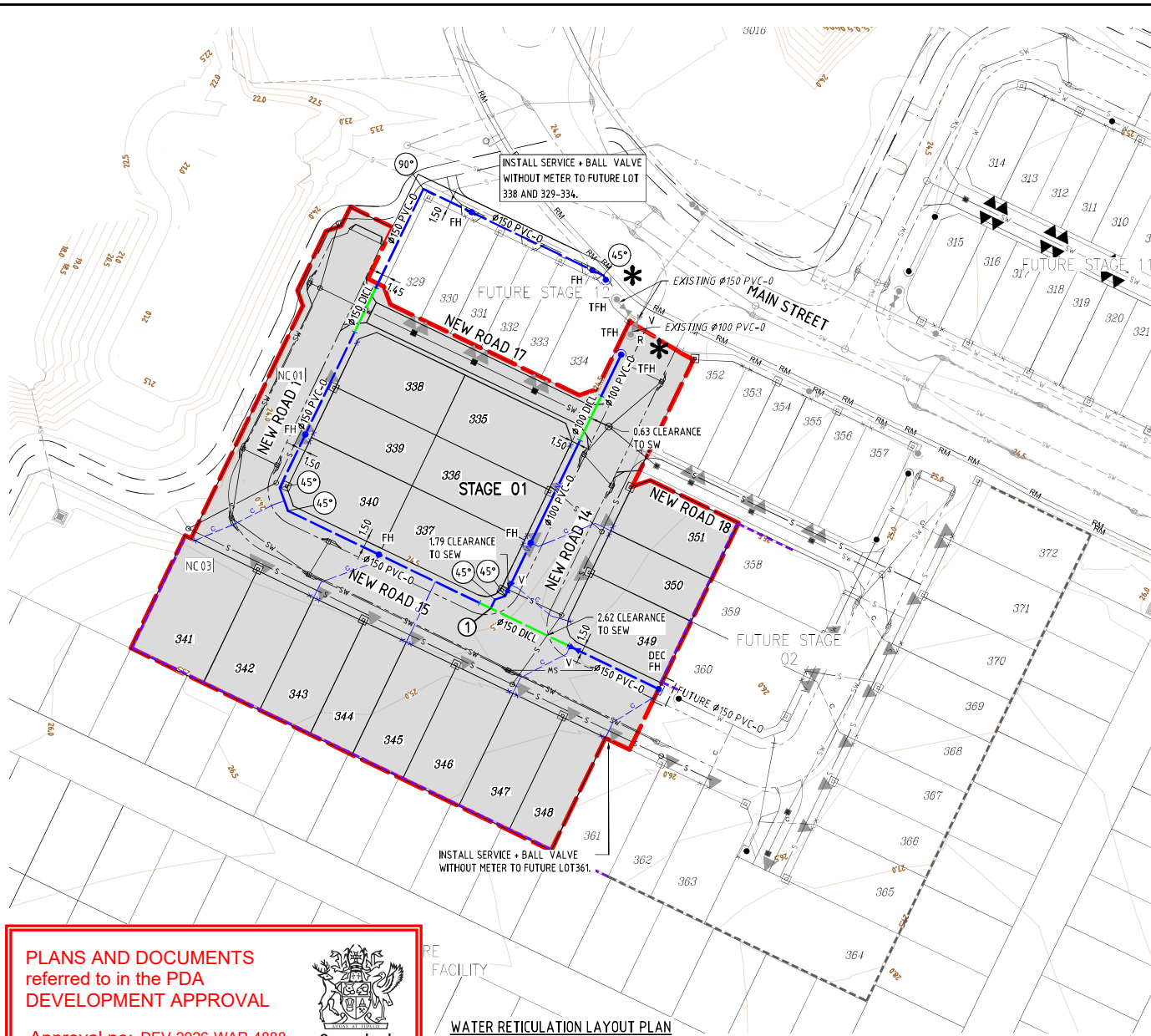
RIVERMONT
PRECINCT 2
STAGE 1



Approved Director - RPEQ 17544
Digitally signed by Mark Shaw RPEQ 17544
Date: 2026.04.14 17:56:43+10'00'

Drawing Title
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 2

Drawn	Designed	Checked	Date
DF	VS	MAS	Apr 26
Scale	Sheet	Revision	
AS SHOWN	10 of 13		
A1	24-271-60	A	



LEGEND

	WORKS BOUNDARY
	ROAD CENTRELINE
	M3 MOUNTABLE KERB AND CHANNEL
	B1 BARRIER KERB AND CHANNEL (300)
	B2 BARRIER KERB
	PROPOSED 100 PVC WATER MAIN SERIES 2 PN16, MIN SN10 MRS400 OR MRS450
	PROPOSED 150 PVC WATER MAIN SERIES 2 PN16, MIN SN10 MRS400 OR MRS450
	PROPOSED 150 DI CL WATER MAIN PN35
	PROPOSED CONDUIT
	WATER SERVICE LOCATION
	FIRE HYDRANT
	TEMPORARY FIRE HYDRANT
	REDUCER
	VALVE
	CONNECTION REQUIRED BY UNITYWATER
	SLEEPER RETAINING WALL
	EXISTING SLEEPER RETAINING WALL
	STORMWATER DRAINAGE
	SEWER MAIN
	EXISTING WATER MAIN
	EXISTING STORMWATER MAIN
	EXISTING SEWER MAIN
	UNITYWATER EASEMENT
	DRIVEWAY POSITION
	ELECTRICITY SERVICE POINT
	DENOTES NON-CONFORMING DESIGN ASPECT. REFER TO NON-CONFORMING DESIGN ASPECTS KN DWG 24-271-58 FOR DETAILS.

UNITYWATER LIVE WATER CONNECTION TABLE

LOCATION	DIAMETER
MAIN STREET ADJACENT TO LOT 334	Ø150
ROAD 17 ADJACENT TO LOT 334	Ø150

SCHEDULE OF FITTINGS

① Ø150 x Ø150 x Ø100 TEE 1 REQUIRED

NOTE

ALL WORKS ON EXISTING WATER MAINS TO BE
CARRIED OUT BY UNITYWATER AT THE DEVELOPERS
EXPENSE.

NOTE

- WATER MAIN CROSSING UNDER ROAD TO BE LOCATED UNDER
ROAD PAVEMENT CONSTRUCTION
- ALL FIRE HYDRANT TEES AND RISERS TO BE DN100, WITH PE
FIRE HYDRANT RISERS DN125

NOTE

- ALL CONNECTIONS TO LIVE WATER MAINS TO BE
UNDERTAKEN BY UNITYWATER AT DEVELOPER'S
COST. THIS INCLUDES METER INSTALLATION TO
LIVE SERVICES.
- IF AN APPROVAL IS HELD FOR EACH STAGE, FOR
STAGED WORKS CONSTRUCTED CONCURRENTLY,
FOLLOWING THE NECESSARY PRE-START
MEETING(S), THE CONTRACTOR MAY INSTALL
METERS ON NON-LIVE SERVICES.

SCALE 1:500 (A1 UNREDUCED)

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV-2026-WAR-4888

Date: 29/06/2026



PROPOSED WORKS ARE NEAR EXISTING SERVICES. CONTRACTOR TO COMPLETE DBYD AND
LOCATE ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION.
POST SERVICE LOCATION, CONTRACTOR TO SUPPLY SURVEY INFORMATION TO
SUPERINTENDENT'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.

SCHEDULE OF PIPES AND FITTINGS

PIPE SIZE	LENGTH(m)	VALVE	FIRE HYDRANT	TEMP FIRE HYDRANT	11° BEND	22° BEND	45° BEND	90° BEND
Ø100 PVC-O	53.587	-	1	1	-	-	2	-
Ø100 DI CL	11.000	-	-	-	-	-	-	-
Ø150 PVC-O	184.660	1	5	1	-	-	3	1
Ø150 DI CL	33.000	-	-	-	-	-	-	-

NOTE - DUCTILE IRON (DI CL) PIPEWORK UNDER ROAD CARRIAGEWAYS DENOTES DI CL CLASS PN35.
- PVC-O PIPEWORK DENOTES PVC-O SERIES 2 PN16
- PE PIPEWORK DENOTES PE100 PN16. SERVICE LENGTHS APPROXIMATE, TO BE CONFIRMED ON SITE.
- ALL TRENCH REINSTATEMENT TO BE IN ACCORDANCE WITH SEQ-WAT-1204-1.

DO NOT SCALE THIS DRAWING
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LOCALITY PLAN

STAGE 1



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	15.01.2026	DF
B	FOR APPROVAL	01.04.2026	DF
C	FOR APPROVAL	13.05.2026	AL



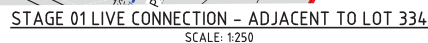
RIVERMONT
PRECINCT 2
STAGE 1



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Water Reticulation Layout Plan

Drawn	Designed	Checked	Date
DF	VS	MAS	Apr '26
Scale	Sheet	Revision	
AS SHOWN	11 of 13		
Drawing No	24-271-61	C	



Date: 29/06/2026



Drawn DF	Designed VS	Checked MAS	Date Apr '26
Scale AS SHOWN			Sheet 13 of 1
A1	Drawing No 24-271-63		Revision B