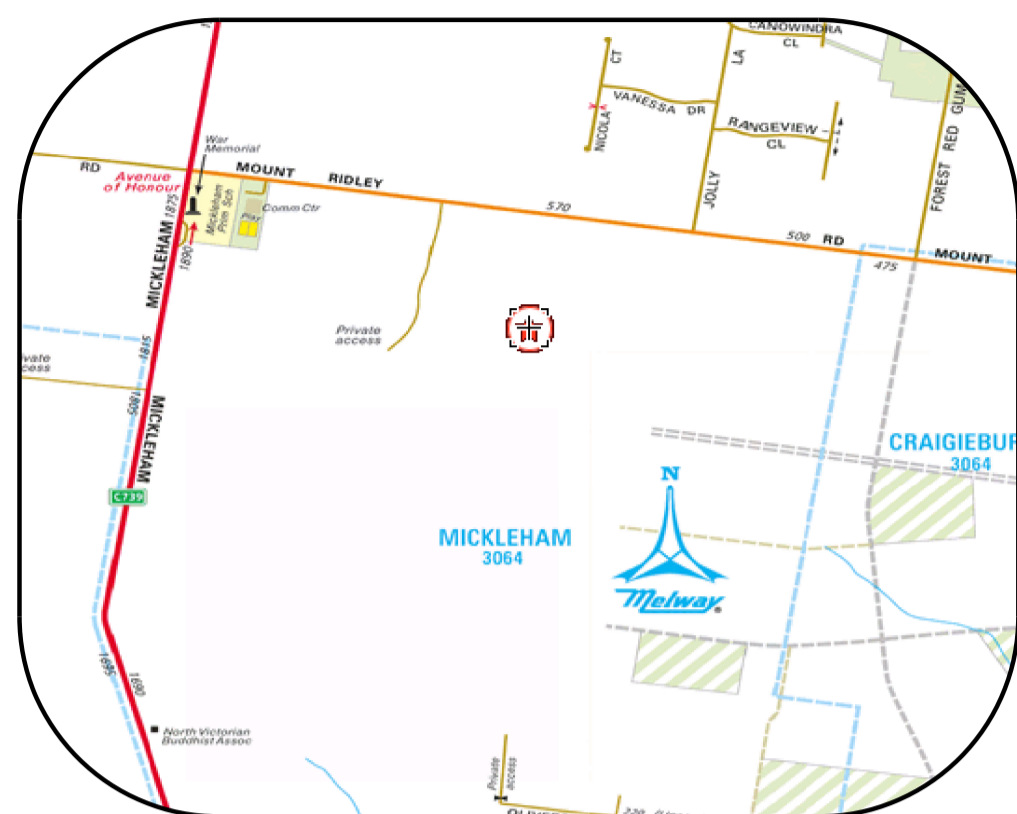
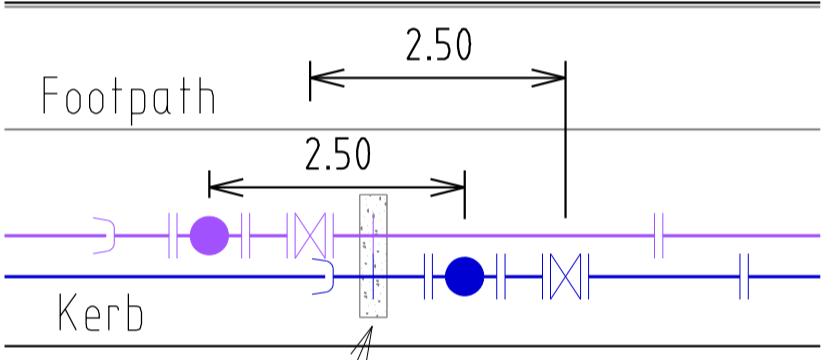


DESIGN HEAD: TBAm  
 ZONE: RESIDENTIAL  
 TEST PRESSURE: TBA kPa



**LOCALITY PLAN**  
 MELWAYS: 386 A1

**Typical Valve Cluster Arrangement (U.N.O.)**



In Line Thrust Block.  
 Refer MRWA-W-205B.

**General Notes:**

- Only products approved and catalogued by the Water Agency shall be used.
- Works must be constructed according to WSA 03- 2011 MRWA edition. The Contractor shall ensure that they are conversant with all current revisions, amendments and updates that the relevant Water Agency has made to their standards.
- DW and NDW assets shall only be constructed after deeper assets affecting the water mains have been constructed (eg: sewerage & drainage assets).
- This design is to be read in conjunction with road and drainage plans.
- The Contractor shall obtain a road opening permit for any works within the road reserve and comply with all requirements of the road owner.
- For interpretation of the symbols used in this design, refer to drawing MRWA-W-100.

**Survey, Set Out and Asset Recording**

- Temporary Bench Marks (TBM) for the set out of works to the Australian Height Datum (AHD) are provided in the design drawings.
- All levels are in metres to AHD.
- All co-ordinates are in metres to the Map Grid of Australia (MGA 55- 94) unless noted otherwise.
- The Contractor is directly responsible for ensuring the project set out is consistent with the design. Should actual site conditions conflict in any way with that documented, the Contractor shall contact the Superintendent for clarification before proceeding.
- The Contractor is to engage a suitably qualified and experienced Surveyor to undertake asset recording of the work. All surveyor works and data recording shall be undertaken in accordance with the MRWA survey manual.
- All specific pipe materials (eg: PVC-O) shall be indicated in the As Constructed information

**Products and Materials**

- DW and NDW system components shall be differentiated as per section 4.2 of WSA03-2011 MRWA edition.
- For the Pipe Schedule, refer to TABLE .1.
- For the Pipe Material Schedule, refer to TABLE .2.

**Appurtenances (Fittings)**

- All valves and hydrants shall be marked according to drawings MRWA-W-300 and MRWA-W-301.
- Valve surrounds, covers and spindles shall be constructed in accordance with drawing MRWA-W-302.
- Hydrant surface arrangements shall be constructed in accordance with drawings MRWA-W-303.
- Flange and flange bolts shall be constructed in accordance with drawings MRWA-W-306A and MRWA-W-306B.
- For the Hydrant and Washout Schedule, refer to TABLE .3.
- All valves shall be located directly out from the apex of the splay corner (unless otherwise indicated).

**Water Main Alignment, Trenching & Cover**

- Trench, pipe placement, embedment and backfill dimensions as per standard drawing MRWA-W-202.
- Water and Gas to be in shared trench.
- Offsets of mains from property boundaries shall be; min 600mm (mains < DN100) and min 1m (mains >=DN100).

- All water mains shall pass over drains and sewers unless shown otherwise in the design drawings.
- Mains shall be aligned in accordance with the Services Alignment Schedule (Refer to TABLE .5).

**Embedment**

- For trafficable and non-trafficable embedment refer MRWA-W-201.
- Embedment shall be placed as per drawings MRWA-W-201 and MRWA-W-202.

**Backfill**

- For trafficable and non-trafficable backfill refer MRWA-W-201. Any other backfill material to be approved by road authority.
- Compaction trials and compaction testing shall be undertaken in accordance with the MRWA Backfill Specifications.

**Thrust Restraint**

- For the Thrust Restraint Schedule, refer to TABLE .6.
- Construct concrete thrust restraints as per drawings MRWA-W- 204, 205A and 205B.
- Timber / Recycled plastic blocks as per drawings MRWA-W-204 and MRWA-W-206.
- Thrust restraints have been designed on the basis of the AHBP (ground strength) nominated in TABLE 6. The Contractor shall confirm the actual ground conditions (using standard drawing MRWA-W-200 as a guide) and discuss with the Superintendent any ground conditions which are found to be different to that nominated.

**Property Services**

- Property Services to the end of service shall be constructed as per drawings MRWA-W-110 and MRWA-W-111.
- NDW property services shall always be located on the left of the DW property service as you look from the road to the front of the property.

**Connections (All types)**

- Connection of >= DN100 offtakes to existing mains shall be as indicated in the design drawings and as per drawing MRWA-W-106.
- Connection of DN40, 50 & 63 PE offtakes shall be as per drawing MRWA-W-107.
- Property Service Connections as per drawing MRWA-W-111.
- All property service connections to new residential non PE reticulation mains are to be completed using pretapped connectors.

**Other Services**

- To receive the most up to date information prior to construction, "Dial before you Dig" shall be undertaken to aid in the location of other services. Other services shall be carefully located prior to full excavation at the contractor's cost. Any clashes of proposed new works with other assets shall be reported to the Superintendent immediately for clarification.

- Offsets to other services shall be as per TABLE 5 or otherwise as per table 5.5 of WSA03-2011 MRWA edition. These clearances shall apply to surface covers as well as underground assets.
- Vertical Clearances from other services shall be as per TABLE .7

**Testing, Asset Acceptance and Live Connections**

- Post construction activities (of both DW & NDW) such as swabbing, water quality testing, pressure testing and chlorination shall be carried out in accordance with WSA03-2011 MRWA edition and the MRWA Water Quality Compliance Specification. All test results shall be documented and reported to the Superintendent.
- The Contractor &/or Consultant shall provide 5 days notice to the Superintendent prior to testing being undertaken.
- Unless otherwise informed, all NDW main to meter connections shall be inspected by the Water Agency, with the Water Agency being notified at least 5 days prior to connection .  
All main to meter service connections are to remain exposed until inspected by the Water Agency compliance officer.
- With each NDW connection, the Contractor must supply a signed pre-inspection checklist.
- The Contractor shall provide at least 5 days notice to the Superintendent prior to connecting new works to the existing network. Shut down work shall be scheduled for 9am weekdays and be completed within 480 minutes.
- Valves connecting new assets to the Water Agency's live system shall not be operated by the Contractor.
- Pressure test pipeline systems using the method and duration specified in Table MRWA19.2.

TABLE 1. New Pipe Schedule

New Work			Drinking Main	Non-Drinking Main
Size (DN)	Type	Class	Length	Length
225	PVC-O	16	-	-
150	PVC-O	16	-	-
100	PVC-O	16	380m	376m
63	PE80	12.5	-	-
50	PE80	12.5	-	-
40	PE80	12.5	-	-
25	PE80	12.5	Property Services	Property Services

TABLE 2. Pipe Material Schedule

MATERIAL	Reference	MATERIAL	Reference
PVC-O	WSA-PS-210	PE (retic & submain)	WSA-PS-207
		PE (property services)	WSA-PS-215

TABLE 3. Hydrant & Washout Schedule (All DW hydrants & Washouts are Water Agency owned)

Main Size	Fitting Type	Ownership	Location	Street	Location
100	HYDRANT	NDW - YVW	In Line	TROIDINI PASS	5.50m N of SBL Lot 1608
100	HYDRANT	DW - YVW	In Line	TROIDINI PASS	3.00m N of SBL Lot 1608
100	HYDRANT	NDW - YVW	In Line	GOSSAMER WAY	6.50m N of SBL Lot 1630
100	HYDRANT	DW - YVW	In Line	GOSSAMER WAY	9.00m N of SBL Lot 1630
100	WASHOUT	NDW - YVW	End of Line	TROIDINI PASS	NBL Lot 1601
100	WASHOUT	DW - YVW	End of Line	TROIDINI PASS	2.5m N of NBL Lot 1601
100	WASHOUT	NDW - YVW	End of Line	TURION DRIVE	8.658m W of EBL Lot 1608
100	WASHOUT	DW - YVW	End of Line	TURION DRIVE	6.158m W of EBL Lot 1608
100	WASHOUT	NDW - YVW	End of Line	LANTANA STREET	3.668m W of EBL Lot 1653
100	WASHOUT	DW - YVW	End of Line	LANTANA STREET	6.168m W of EBL Lot 1653
100	WASHOUT	NDW - YVW	End of Line	LANTANA STREET	EBL Lot 1658
100	WASHOUT	DW - YVW	End of Line	LANTANA STREET	2.5m E of EBL Lot 1658

TABLE 5. Service Alignment Schedule (offsets in m)

Location	Water	ND-Water	Gas	NBN	Elec	Poles	BOK
TROIDINI PASS	3.05 W	2.55 W	2.05 W	1.775 E	2.60 E	-	4.20 W
ABLOOM VIEW	3.05 N	2.55 N	2.05 N	1.775 S	2.60 S	-	4.20 N
TURION DRIVE	3.05 N	2.55 N	2.05 N	1.775 S	2.60 S	-	4.20 N
GOSSAMER WAY	3.05 W	2.55 W	2.05 W	1.775 E	2.60 E	-	4.20 W
LANTANA STREET	3.05 S	2.55 S	2.05 S	1.775 N	2.60 N	-	4.20 S

TABLE 6. Thrust Restraint Schedule

Location	Type	Area (m <sup>2</sup> )	Depth (m)	Width (m)	Quantity	Fitting	AHBP (kPa) USED
A	Detail F, MRWA-W-205B	TBA	N/A	N/A	3	100 x 100 TEE	50
B	Detail J, MRWA-W-205A	TBA	N/A	N/A	3	100 VALVE	50
C	Detail K, MRWA-W-205A	TBA	N/A	N/A	2	100 VALVE/HYD	50
D	Detail E, MRWA-W-205A	TBA	N/A	N/A	4	100 WASHOUT	50

TABLE 7. Vertical Clearances

Existing or proposed Service	Minimum vertical clearance (mm)	Existing or proposed Service	Minimum vertical clearance (mm)
Water mains ≤ DN375	150	Electricity conduits and cables	225
Water mains >DN375	300	Stormwater drains & pits	150
Gas mains	150	Sewers - gravity	500
Teleco conduits and cables	150	Sewers - pressure & vacuum	300

- Vertical clearance between water mains shall depend on the larger main diameter.
- Water mains shall cross over sewers and drains unless shown otherwise.
- Maintain additional clearance from High Voltage electrical cables to allow for a protective barrier and marking.

**WARNING**  
 BEWARE OF UNDERGROUND SERVICES  
 THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

**WARNING**  
 BEWARE OF ASBESTOS  
 SOME UNDERGROUND SERVICES MAYBE CONSTRUCTED FROM ASBESTOS CONTAINING MATERIAL. CONTACT THE SUPERINTENDENT FOR INSTRUCTIONS ON HOW TO MANAGE ANY POTENTIAL ASBESTOS HAZARD

**ISSUED FOR CONSTRUCTION**



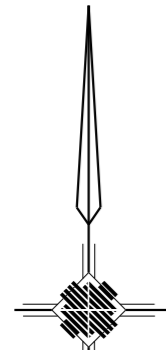
FOR THE DURATION OF PROCLAIMED WATER RESTRICTIONS, THE CONTRACTOR SHALL CONFORM WITH THE RESTRICTIONS AND ANY OTHER WATER CONSERVATION REQUIREMENTS IMPOSED BY THE WATER AGENCY.

DESIGNED	S.E.A.	WATSONS REFERENCE	36182 / 16A	 CIVIL ENGINEERS - PROJECT MANAGERS - SURVEYORS TOWN PLANNERS - URBAN DESIGNERS MORNINGTON 5 Main Street, P.O. Box 171 3931 Phone: (03) 5975 4644 Fax: (03) 5975 3916 DX 93118 Mornington MELBOURNE The Melbourne, Suite 2 250 St. Kilda Rd. Phone:(03) 9697 8000 Fax:(03) 9697 8099	 YARRA VALLEY WATER ACN 066 902 501 WATER MAIN PLAN TRILLIUM ESTATE - STAGE 16A 535 MOUNT RIDLEY ROAD, MICKLEHAM HUME CITY COUNCIL	SCALE AS SHOWN
CHECKED	A.S.C.	MELWAY REFERENCE	386 A1			SHEET 01 of 02
AUTHORISED BY	A.S.C.	YARRA VALLEY WATER REFERENCE	TBA			DRAWING No.
REV	DESCRIPTION	DATE	APPROVED			TBA W01

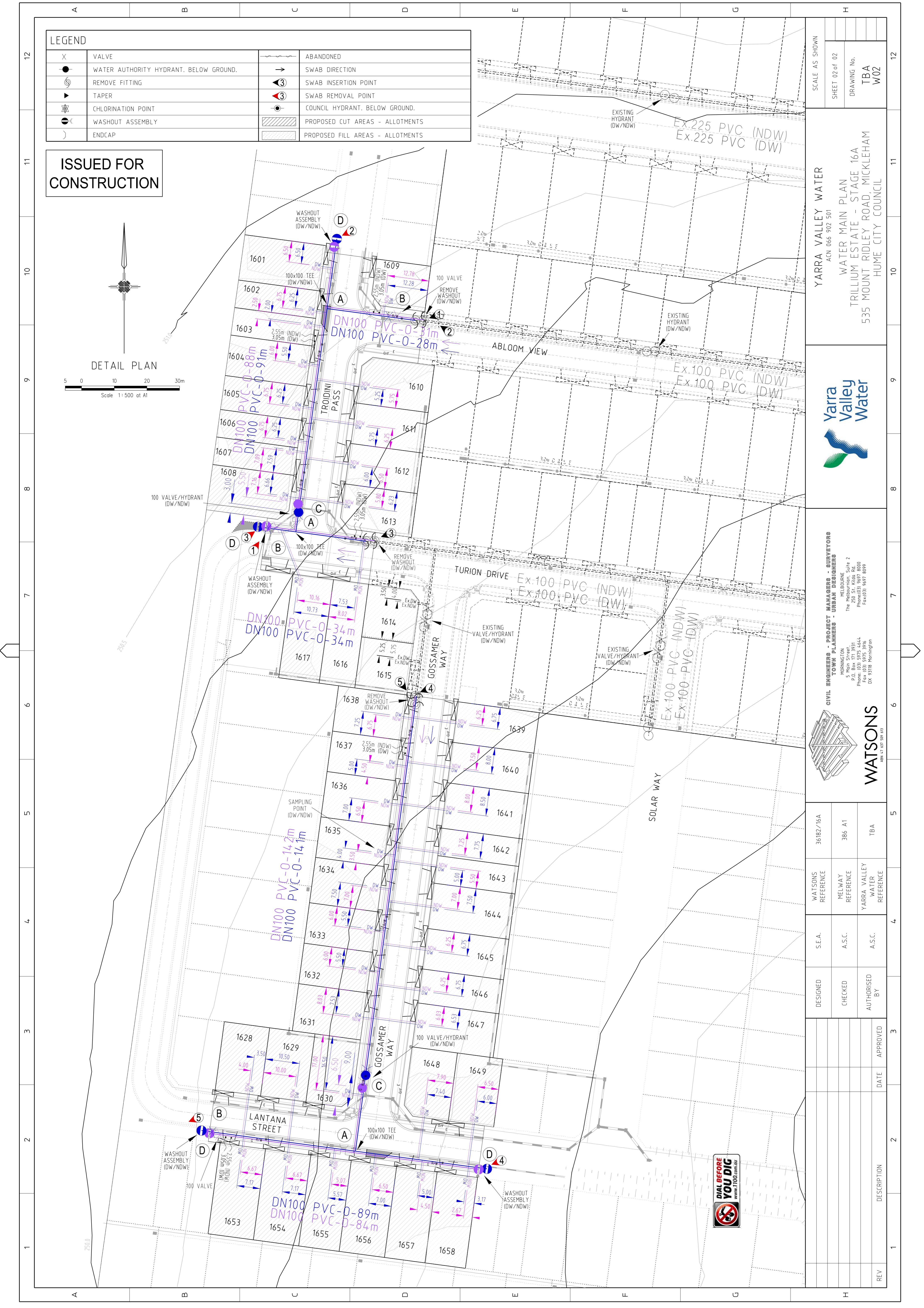
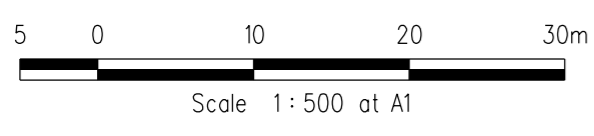
**LEGEND**

X	VALVE		ABANDONED
	WATER AUTHORITY HYDRANT. BELOW GROUND.		SWAB DIRECTION
	REMOVE FITTING		SWAB INSERTION POINT
	TAPER		SWAB REMOVAL POINT
	CHLORINATION POINT		COUNCIL HYDRANT. BELOW GROUND.
	WASHOUT ASSEMBLY		PROPOSED CUT AREAS - ALLOTMENTS
	ENDCAP		PROPOSED FILL AREAS - ALLOTMENTS

**ISSUED FOR CONSTRUCTION**



**DETAIL PLAN**

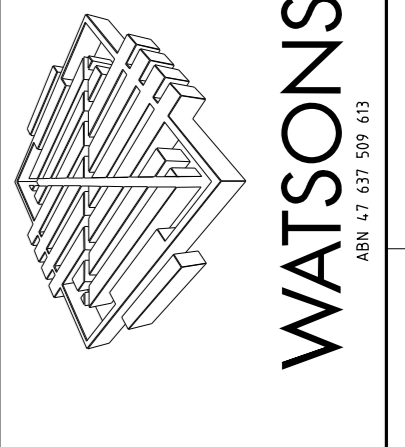


SCALE AS SHOWN	SHEET 02 of 02
YARRA VALLEY WATER ACN 066 902 501	DRAWING No. TBA W02

**YARRA VALLEY WATER**  
WATER MAIN PLAN  
TRILLIUM ESTATE - STAGE 16A  
535 MOUNT RIDLEY ROAD, MICKLEHAM  
HUME CITY COUNCIL



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A98-47 887 895 853



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REV	DESCRIPTION	DATE	APPROVED

