**DESIGN HEAD:** 95.9 m (DW) 114.9 m (NDW) ZONE: RESIDENTIAL **TEST PRESSURE:** 1200 kPa





## 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.

**BEWARE OF ASBESTOS** 

CONSTRUCTED FROM ASBESTOS CONTAINING INSTRUCTIONS ON HOW TO MANAGE ANY

### General Notes:

- 1. Only contractors accredited by City West Water to WC1 shall be eligible to construct these works.
- 2. Only products approved and catalogued by the Water Agency shall be used.
- 3. 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).
- 5. This design is to be read in conjunction with road and drainage plans.
- 6. The Contractor shall obtain a road opening permit for any works within the road reserve and comply with all requirements of the road owner.

## Survey, Set Out and Asset Recording

- 7. Temporary Bench Marks (TBM) for the set out of works to the Australian Height Datum (AHD) are provided in the design drawings.
- 8. All levels are in metres to AHD.
- 9. All co-ordinates are in metres to the Map Grid of Australia (MGA 55-94).
- 10. 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.
- 11. 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.
- 12. All specific pipe materials (eg: PVC-O) shall be indicated in the As Constructed information

## Products and Materials (Refer Table 1 & 2):

13. DW and NDW system components shall be differentiated as per section 4.2 of WSA03-2011, MRWA edition.

## Appurtenances (Fittings- Refer Table 3):

- 14. All valves and hydrants shall be marked according to drawings MRWA-W-300 and MRWA-W-301.
- 15. Valve surrounds, covers and spindles shall be constructed in accordance with drawing MRWA-W-302.
- 16. Hydrant surface arrangements shall be constructed in accordance with drawings MRWA-W-303.
- 17. Flange and flange bolts shall be constructed in accordance with drawings MRWA-W-306A and MRWA-W-306B.
- 18. For the hydrant and washout schedule, refer to Table 3.
- 19. All valves shall be located directly out from the apex of the splay comer (unless otherwise indicated).

## Water Main Alignment, Trenching & Cover (Refer Table 5):

- 19. Offsets of mains from property boundaries shall be; min 600mm (mains < DN100) and min 1m (mains ≥DN100).
- 20. All water mains shall pass over drains and sewers unless shown otherwise in the design drawings.

22. Embedment shall be placed as per drawings MRWA-W-201 and MRWA-W-202. Embedment material shall be sand and comply with WSA PS 360.

- 23. Watermains under roads, footpaths and vehicle crossings, extending 1.0m each side of paving, shall be backfilled with 20mm class 3 crushed rock in 150mm layers to 95% modified
- 24. Non trafficable backfill shall be completed as per

DESCRIPTION

MRWA-W-201 and 04-03.2 of the MRWA Backfill Specification.

## Thrust Restraint (Refer Table 6):

25. 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 and discuss with the Superintendent any ground conditions which are found to be different to that nominated

## **Property Services:**

26. 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):

27. All property service connections to new residential RRJ reticulation mains are to be completed using pretapped connectors.

## Other Services (Ref-Table 5 & 7):

- 28. 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.
- 29. Clearances to other services shall be as per Table 7 and Table 5.5 of WSA03- 2011 MRWA edition. These clearances shall apply to surface covers as well as underground assets.

## **Earthworks and Retaining Walls:**

30. In areas subject to earthworks, construction of water assets shall not commence until earthworks and retaining walls has been completed unless written approval has been given by the Water Authority.

## **Testing, Asset Acceptance and Live Connections:**

- 31. 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. 32. The Water Agency shall be notified in writing 2 full working days in advance of testing being undertaken.
- 33. Both ends of DW and NDW main to meter property services shall be inspected by the Water Agency. The Water Agency shall be notified in writing 2 full working days in advance of this inspection being carried out. Both ends of DW-NDW main to meter property services are to remain exposed until inspected by the Water Agency compliance officer.
- 34. The Contractor's ITP shall include provision for each NDW connection to be signed off as correctly installed.
- 35. The Water Agency shall be notified in writing 5 full working days in advance of connection to the live network being undertaken.
- Shut down work shall be as short as practical and scheduled to commence at 9am on working days with completion to occur no later than 4pm.
- In industrial and commercial areas, the impact on business shall be considered and it may be necessary to carry out the work outside normal working hours.

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36. Valves connecting new assets to the Water Agency's live system shall not be operated by the Contractor.

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FOR CONSTRUCTION

# **CITY WEST WATER** WYNDHAM CITY COUNCIL PARKLANE GARDENS - STAGE 2

WATER RETICULATION EXTN. No. LND/18/01017 GENERAL NOTES, LOCALITY PLAN

	SCALE:	@A3
	SHEET: 1 OF 3	
,	DRAWING No.:	REV
	LND/18/01017W1	С

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Cardno

DATE APPROVED A. KANE 01.02.2019 N. GLASSON

# WARNING

SOME UNDERGROUND SERVICES MAYBE MATERIAL. CONTACT THE SUPERINTENDENT FOR POTENTIAL ASBESTOS HAZARD

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.

01.02.2019

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09.11.2018

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DATE APPROVED REV

CONSTRUCTION ISSUE

DESCRIPTION

B ROAD NAMES CHANGED

A EXTERNAL ISSUE

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## TABLE 1. New Pipe Schedule

	New Work	Drinking Main	Non-Drinking Main				
Size (DN)	Туре	Type Class		Length			
100	PVC-M or PVC-O	16	42m	42m			
150	PVC-M or PVC-O	16	237m	237m			
125	PE100	16	129m	129m			
25	PE100	16	Property Connections				

TABLE 2. Pipe Material Schedule								
Material	Reference		Material	Reference				
PVC-M	WSA-PS-209		PE (Retic and Submain)	WSA-PS-207				
PVC-O	WSA-PS-210		PM (Property Services)	WSA-PS-215				

## TABLE 3. Hydrant & Washout Schedule

Main Size	Fitting Type	Ownership	Location	Street	Location
150	Washout	DW - CWW	End of Line	Atisha Street	Adjacent Lot 209
150	Washout	NDW - CWW	End of Line	Atisha Street	Adjacent Lot 209
150	Washout	DW - CWW	End of Line	Bursa Drive	Future Stage 3
150	Washout	NDW - CWW	End of Line	Bursa Drive	Future Stage 3
150	Hydrant	DW - CWW	In Line	Atisha Street	Adjacent Lot 201
150	Hydrant	NDW - Council	In Line	Atisha Street	Adjacent Lot 201
125	Hydrant	DW - CWW	In Line	Tara Crescent	Adjacent Lot 226
125	Hydrant	NDW - Council	In Line	Tara Crescent	Adjacent Lot 216
125	Hydrant	DW - CWW	In Line	Bursa Dr / Tara Cres	Adjacent Lot 219
125	Hydrant	NDW - CWW	In Line	Bursa Dr / Tara Cres	Adjacent Lot 219

## TABLE 4. Curved Pipe & Deflection Schedule

Location	Method	Offset/Radius	Total Pipe Length (m)	Pipe Lengths (m)
Bursa Drive	Cut Pipes (DW & NDW)	209.9m Radius (DW) 210.4m Radius (NDW)	45	15 x 3m PVC

## TABLE 5. Service Alignment Schedule (offsets in m)

11.222 of Service (algebraic Consense in in)									
Location	Water	ND-Water	Gas	NBN	Elec	Poles	BOK		
Bursa Drive	6.90W	6.20W	5.60W	1.85E	2.45E	1.00BOK	8.35W		
Bursa Drive	3.05W	2.55W	2.10W	1.85E	2.60E	1.00BOK	6.70W		
Atisha Street	3.05N	2.55N	2.10N	1.85S	2.60S	1.00BOK	4.35N		
Tara Crescent	3.05W	2.55W	2.10W	1.85E	2.60E	1.00BOK	4.35W		
Tara Crescent	3.05N	2.55N	2.10N	1.85S	2.60S	1.00BOK	4.35N		
Ex Borden Drive	-	-	-	Ex. 3.25S	-	1.00BOK	-		
Oshawa Lane	-	-	-	-	1.10S	-	-		

## TABLE 6. Thrust Restraint Schedule

Location	Туре	Thrust	AHBP (kPa) USED	Area (m²), or W(m) x Y(m)	No. Locations
A	End of Line	2 x 150 TEE (DW & NDW)	50	1.16 (Tot)	1
В	In Line	2 x 150 Valve (DW & NDW)	50	1.16 (Tot)	1
С	In Line	2 x 125 PE Shrinkage (DW & NDW)	50	0.72 (Tot)	2
D	End of Line	2 x 100 TEE (DW & NDW)	50	0.56 (Tot)	1
E	In Line	2 x 150 Taper (DW & NDW)	50	0.60 (Tot)	1
F	End of Line	2 x 150 x 22.5° BEND (DW & NDW)	50	0.46 (Tot)	2
G	End of Line	2 x 150 End of Line (DW & NDW)	50	1.16 (Tot)	2

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 and pits	150
Gas mains	150	Sewers - gravity	500
Teleco conduits and cables	150	Sewers - pressure and vacuum	300

- Vertical clearance between water mains shall depend on the larger main diameter.

Phone

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136 707

9632 6389

131 691

132 446

- 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.

## TABLE 8. Service Contacts

Service Authority

Powercor

Ausnet (GAS)

Telstra

City West Water

Melbourne Water

TADIE	n	Minimum	Carran
LABLE.	9	Minimiim	Cover

Location	Minimum Cover					
NON TRAFFICABLE AREAS	≤ DN225					
Footway	600					
Open	600					
TRAFFICABLE AREAS	≤ DN225					
Local streets	600					
Major roads	750					
Freeway/arterial roads	1200					
Note: Maximum cover is 1.5m except where crossing						
services						

Note: Gas mains to be installed at 600mm min cover

STATUS FOR CONSTRUCTION

Shaping the Puture	
Cardno Victoria Pty Ltd   ABN 47 106 610 91	3
Level 4, 501 Swanston Street	
Melbourne VIC 3000	
Tel: 03 8415 7777 Fax: 03 8415 7788	
Web: www.cardno.com.au	
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CITY WEST WATER

WYNDHAM CITY COUNCIL

PARKLANE GARDENS - STAGE 2

WATER RETICULATION EXTN. No. LND/18/01017 SCHEDULES

SCALE: SHEET: 2 OF 3 DRAWING No.:

LND/18/01017W2 C

								DESIGNED	B.ZHENG DATE: 05.10.2	CARDNO REFERENCE	V171855-2-CI-3001	
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Level 4, 501 Swanst

Melbourne VIC:
Tel: 03 8415 7777 Fax: (
Web: www.cardno.

