



Spatial Advice

To: Faraneh Jabalameli **From:** Keegan

Company: DTB Architects Pty Ltd **Date:** 15/08/18

Email: keegan.edwards@ewfw.com.au

Project: Seniors Living 23 Meares Place & 33 Collins Street Kiama NSW **Reference:** 21458-001

Subject: Hydraulic Services Spatial Advice

Antoinette,

Please find attached hydraulic services spatial requirements.

Thanks and Regards,

Keegan Edwards
Hydraulic Designer






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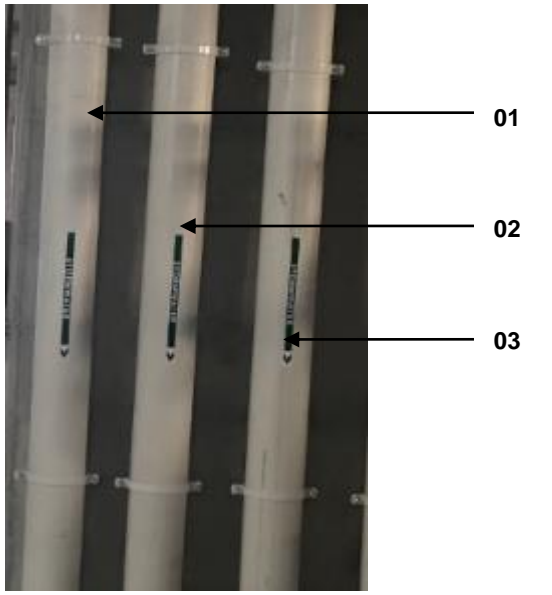
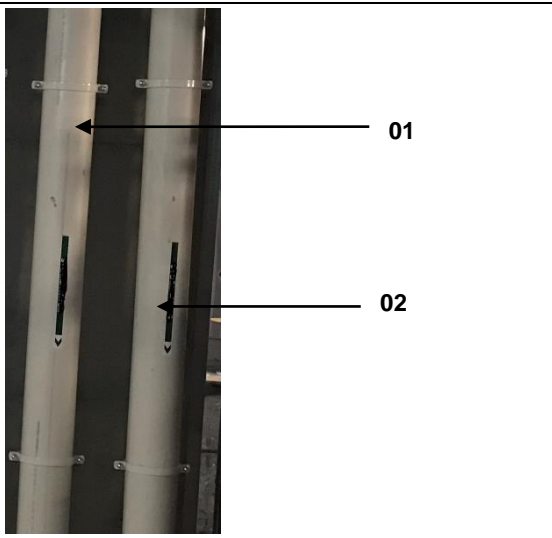
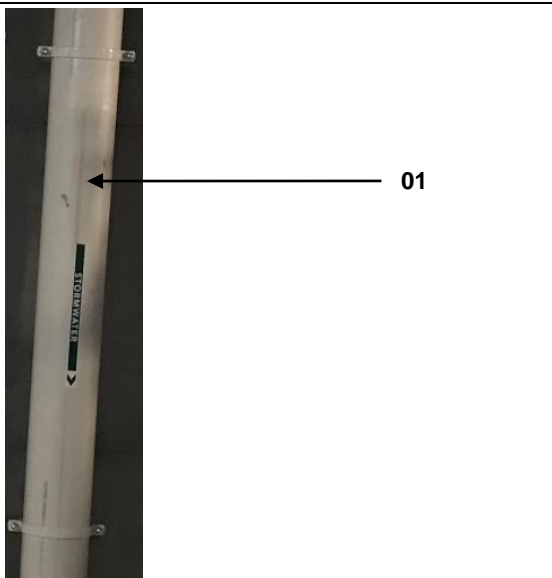
SECTION 1 RELATED HYDRAULIC & FIRE SERVICES SPATIAL DRAWINGS

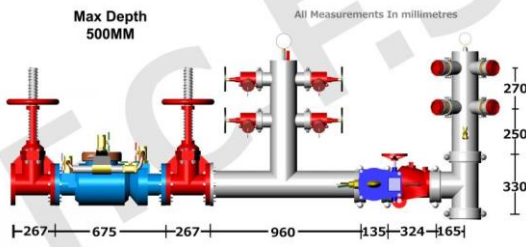
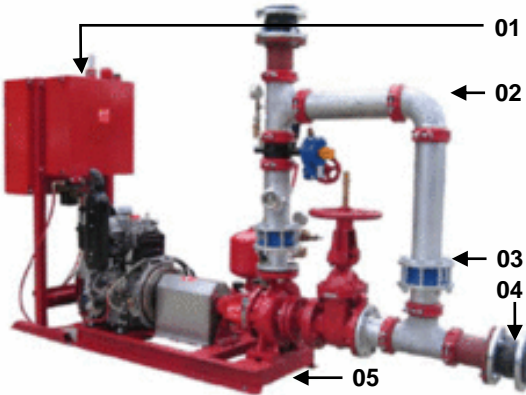

SPATIAL DRAWINGS – LEGEND


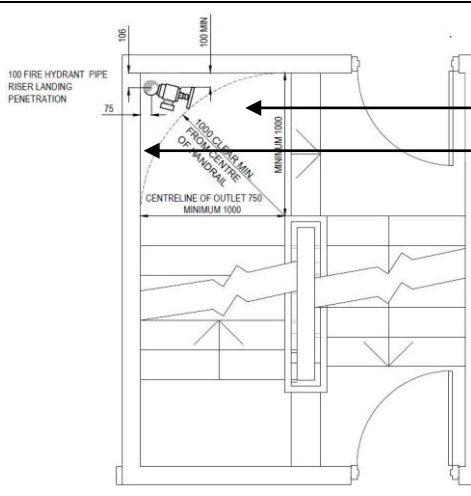

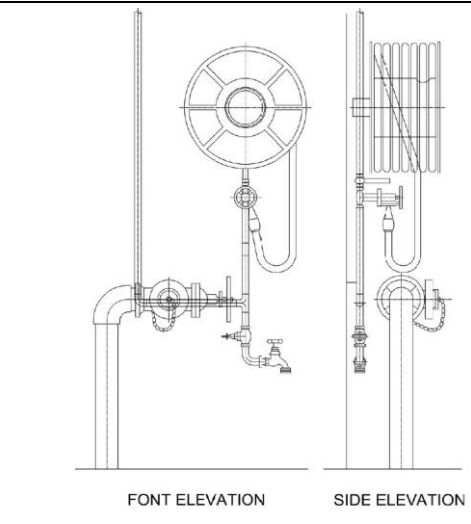
This document is for spatial requirement and planning purpose only. The manufacturers, materials and various components are for information only. Refer to final specification and planning.

SEWER DRAINAGE SYSTEM / STORMWATER DRAINAGE SYSTEM		
Item Ref	Description	Diagrams
S01	<p>Sewer Pump-Out Station In-Ground Located under lower basement slab</p> <ul style="list-style-type: none"> 01 600x600mm access cover and frame 02 600x600mm access cover and frame 03 Rising main 04 Submersible pumps (Grinder Type) 05 Base of pit (to be 45° sloped) 06 1800 Dia x 2.5m Deep located under lower basement slab 	
S02	<p>Stormwater Pump-Out Station In-Ground Located under lower basement slab</p> <ul style="list-style-type: none"> 01 600x600mm access cover and frame 02 600x600mm access cover and frame 03 Rising main 04 Submersible pumps 05 Base of pit (to be 45° sloped) 06 1800 Dia x 3.5m deep located under basement slab 	

<p>S03</p>	<p>Pump Control Panels Minimum 1 metre clearance in front of control panel. All control panels external to be waterproof support structure with padlock. Alarms to include: Power On Indicator Pump 1 Run Indicator Pump 2 Run Indicator Pump 1 Fail Indicator Pump 2 Fail Indicator Alarm Indicator Circuit breakers for pump overload. Alarm bell mounted on the cabinet Relay for alarm connection to Building Monitoring System. All wiring and contactors</p>	
<p>S04</p>	<p>Car Park Stormwater Drainage Coalescing Plate (Oil) Separator & Diaphragm Pump Located within designated car-wash bay at basement or lower basement level. Oil Separator Dimensions: 1500 mm Long 1000 mm Wide 1500 mm High</p>	
	<p>Bunded Car-Wash Bay</p> <p>01 900x900x900 (holding) suction pit 02 Bund to provide min 1 day capacity</p>	 <p style="text-align: right;">01 02</p>

<p>S05</p>	<p>Hydraulic duct consisting of x3 100mm pipes 01 [DP] Downpipe 02 [RV] Relief Vent 03 [ST] Stack To be 650mm wide and 300mm deep.</p>	
<p>S06</p>	<p>Hydraulic duct consisting of x2 100mm pipes 01 [DP] Downpipe 02 [ST] Stack To be 450mm wide and 300mm deep.</p>	
<p>S07</p>	<p>Hydraulic duct consisting of x1 100mm pipe 01. [DP] Downpipe OR [ST] Stack To be 300mm wide and 300mm deep.</p>	

FIRE SERVICES		
Item Ref	Description	Diagrams
F01	<p>FRNSW Fire Hydrant Booster Valve Assembly 150</p> <p>A 100NB fire hydrant booster assembly will be required for the project to comply with AS 2419.1 2005 and FRNSW requirements.</p> <p>Located at the principal point of entry (fire brigade entry) and visible to the main entry.</p> <p>To be within 10m of a handstand accessible by fire brigade.</p> <p>A 150NB detectable check valve will be required for backflow containment at the site boundary.</p> <p>01 Fire Hydrant suction point 02 Isolation valves and reflux valve 03 Fire hydrant booster 04 Typical storz coupling</p>	
F02	<p>Fire Hydrant Pump Room</p> <p>A fire hydrant pump assembly may be required if the existing Sydney Water supply main in Collins St will not meet the flow and pressure requirements of AS2419.1 2005. A fire flow pressure inquiry is required prior to Concept design.</p> <p>Located as close as practical to the booster valve assemblies, within 120/120/120 fire rated room with direct access to road and open space.</p> <p>Dimensions of room to be 5.5m x 4m min internal area.</p> <p>01 Control panel 02 Diesel exhaust 03 By pass 04 Flexible connection 05 Skid mounted</p>	
F03	<p>Fire Hydrant Landing Valves (In Fire Isolated Stair)</p> <p>Internal fire hydrant landing valves will be required for compliance with AS 2419.1 2005 and the NCC 2016.</p> <p>Clear dimensions outside of egress clearances. Refer to detail drawings below.</p>	

	<p>Fire Isolated Stair</p> <p>01 Fire hydrant 750mm above slab level 02 Fire hydrant to be at same level as the floor it serves (not on the intermediate level) 03 Clearance within the stairs to comply with NCC for clearance of fire hydrant</p>	
		
<p>F04</p>	<p>Fire Hose Reels</p> <p>Fire hose reels will be required within the basement levels and the commercial unit</p> <ul style="list-style-type: none"> • 600mm diameter fire hose reel • 100mm clearance around fire hose reel • 1500mm from surface level to centre line of fire hose reel • All fire hose reel to be within 4m of a required exit 	
		 <p style="text-align: center;">FONT ELEVATION SIDE ELEVATION</p>

COLD AND HOT WATER SERVICES

Item Ref **Description**

W01 **Domestic Cold Water Pump Room**
 A cold water pump assembly may be required if the existing Sydney Water supply main in Collins St will not meet the min flow and pressure requirements of AS/NZ 3500.1 at the most disadvantaged outlet. The minimum pressure required is 25m at the most disadvantaged outlet at the roof level. A min flow rate for the site is 7.62 l/s. A fire flow pressure inquiry is required prior to Concept design. Area required is 5m x 3m. We have submitted a pressure and flow enquiry and will update you when we receive this information.



W02 **Cold Water Complete with RPZD**

Meter size DN	A Gate valve PNT6	B Dirt box	C Distance piece inlet	D Meter	E Distance piece outlet	F Gate valve	G Total length	H Meter space
50 mm heavy	175 mm	208 mm	372 mm	300 mm	150 mm	175 mm	1,380 mm	1,030 mm
80 mm	203 mm	252 mm	396 mm	413 mm	240 mm	203 mm	1,707 mm	1,301 mm
100 mm	229 mm	280 mm	476 mm	483 mm	300 mm	229 mm	1,977 mm	1,519 mm
150 mm	267 mm	406 mm	762 mm	500 mm	450 mm	267 mm	2,652 mm	2,116 mm
200 mm	292 mm	428 mm	1,000 mm	520 mm	600 mm	292 mm	3,132 mm	2,548 mm
250 mm	330 mm	522 mm	1,250 mm	450 mm	750 mm	330 mm	3,632 mm	2,972 mm
300 mm	366 mm	580 mm	1,500 mm	500 mm	900 mm	356 mm	4,192 mm	3,480 mm

Reduced Pressure Backflow Preventer

40-200 SERIES

REDUCED PRESSURE PRINCIPLE
 The Apollo Series 40-200 Reduced Pressure Backflow Preventer consists of two independently acting, spring-loaded center stem guided check valves with a differential pressure relief valve located between the check valves. The all bronze relief valve module is easily removed from the ductile iron check valve body. Pressure sensing passages are built into the bronze relief valve module to prevent possible damage from mishandling or vandalism.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Reversible/Removable seat discs
- Replaceable bronze seats
- Internal sensing passages
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Maximum pressure 1,200kPa
- Horizontal installation approvals
- Operating temp. range 1°C - 60°C
- AS/NZS1 approved
- UL Classified
- FIM approved
- Designed, manufactured, assembled and tested in South Carolina, USA
- 3 year domestic warranty

Sizes 65mm - 250mm

DIMENSIONS

Valve Code	40200E1	40200E1	40200E1	40200E1	40200E1	40200E1
Complete Code	40219E2L8	40219E2L8	40219E2L8	40219E2L8	40219E2L8	40219E2L8
Size	65mm	80mm	100mm	150mm	200mm	250mm
A (RPZ device length)	560	560	750	1067	1320	1577
B (height)	476	548	700	718	920	1058
C (length w/ both valves)	923	947	1186	1651	2111	2375
E (length w/ gate valves)	1213	1261	1540	2071	2535	2897
Width of assembly	244	264	302	371	452	489
WEIGHTS						
Net Wt. (Device Only)	54	55	80	195	324	655

Heavy Duty meter assembly

Legend

- Sydney Water supplies
- Customer
- A: Gate valve
- B: Dirt box
- C: Distance piece inlet
- D: Meter
- E: Distance piece outlet
- F: Gate valve
- G: Total length
- H: Meter space
- Note: All fittings made at Kiama
- Note: Connection bolts and glands to be supplied by plumber.

W03 **Pump Control Panels**
 Minimum 1 metre clearance in front of control panel.
 All control panels external to be waterproof support structure with padlock.
 Alarms to include:
 Power On Indicator
 Pump 1 Run Indicator
 Pump 2 Run Indicator
 Pump 1 Fail Indicator
 Pump 2 Fail Indicator
 Alarm Indicator
 Circuit breakers for pump overload.
 Alarm bell mounted on the cabinet
 Relay for alarm connection to Building Monitoring System.
 All wiring and contactors



W04	Water Meter Minimum 1 metre clearance in front of control panel. All control panels external to be waterproof support structure with padlock.	
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SITE INFRASTRUCTURE

	#	Service	Street name	Load	Size
SEWER CONNECTION	01	Sewer	Existing manhole within property	700 FU (Approx.)	150mm
COLD WATER CONNECTIONS	02	Potable Cold Water	Collins Street	7.62L/s (Approx.)	100mm
FIRE SERVICES CONNECTIONS	03	Fire Supply	Collins Street	Per AS2419.1	100mm
NATURAL GAS SERVICES CONNECTIONS	04	Natural Gas	Collins Street	T.B.C.	50mm NY Main (300Kpa high pressure)





Spatial Advice

SECTION 2 FLOORPLAN SPATIAL LAYOUTS