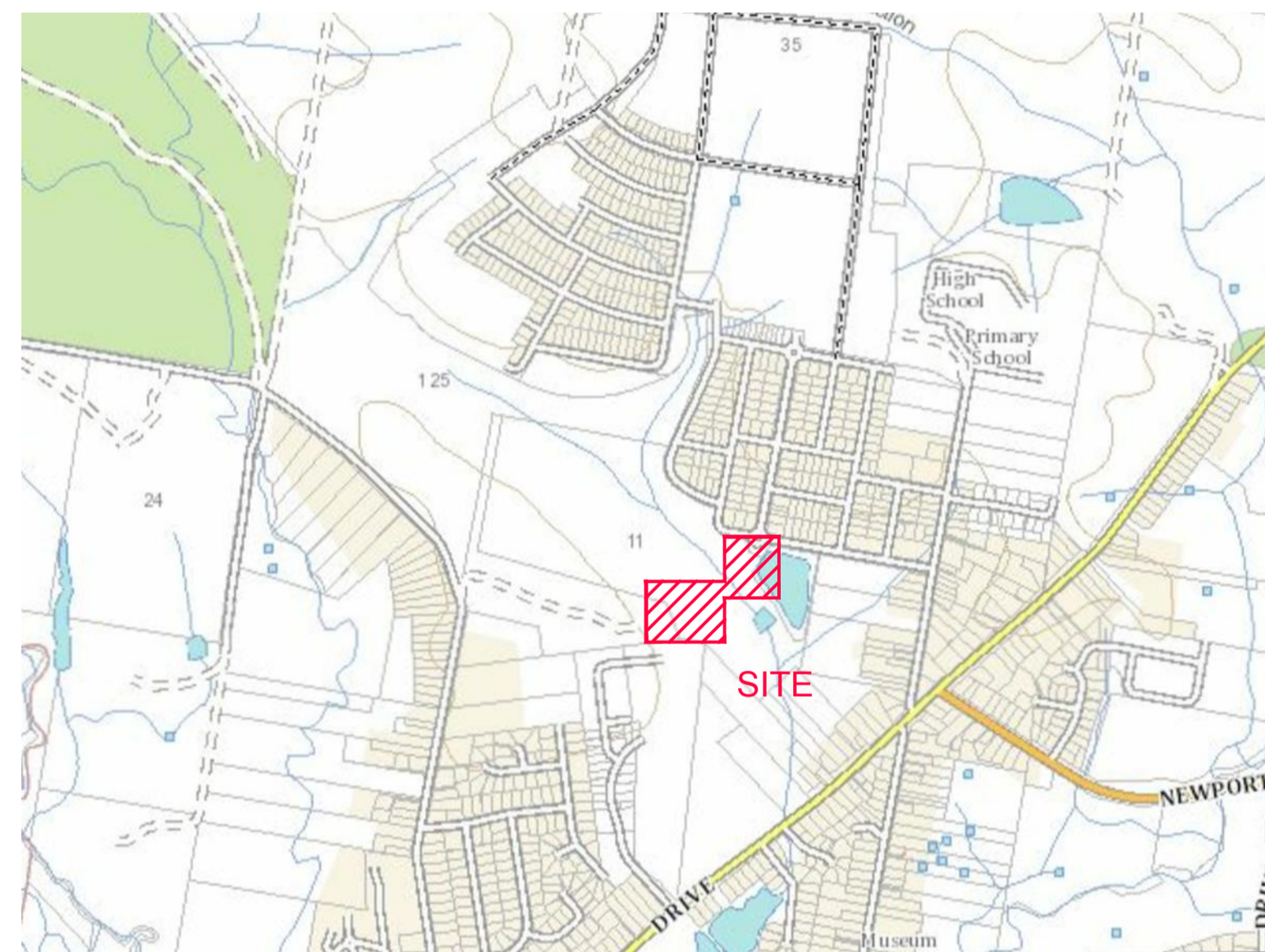




PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK



LOCALITY SKETCH
NOT TO SCALE

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239078(40)-WAT-001(2)	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
239078(40)-WAT-002(2)	GENERAL NOTES
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239078(40)-WAT-006(2)	TYPICAL PIPEWORK TRENCHING DETAILS
239078(40)-WAT-007(2)	TYPICAL PROPERTY CONNECTION - SHEET 1
239078(40)-WAT-008(2)	SEWER SERVICE CONNECTION DETAILS
239078(40)-WAT-009(2)	THRUST BLOCK DETAILS

WORK AS CONSTRUCTED

THESE DRAWINGS ARE AN ACCURATE REPRESENTATION AS AT 11/10/2021 OF THE WORK-AS-CONSTRUCTED, BUT THE POSITION OF THE WORK RELATIVE TO OTHER STRUCTURES OR BOUNDARIES IS APPROXIMATE ONLY AND HAS NOT BEEN VERIFIED BY PRECISE SURVEY.

COMPANY NAME	DARACON	COMPANY NAME
SIGNED	DATE	SIGNED
REGISTERED SURVEYOR		CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	
A	16.04.2021	PRELIMINARY ISSUE	T.S.	J.N.	T.S.	C.B.		Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	
B	22.04.2021	CLIENT COMMENTS	T.S.	R.J.	T.S.	R.J.				JOHNSON PROPERTY GROUP	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
C	26.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.					
0	27.04.2021	CONSTRUCTION ISSUE	T.S.	R.J.	T.S.	R.J.					
1	28.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.					
2	01.05.2021	REMOVE DN400 POTABLE WATER MAIN DETAILS	G.S.	R.J.	T.S.	R.J.					
3	18.08.2021	AMENDED FOR SITE SETOUT	T.S.	R.J.	T.S.	R.J.					
4	03.11.2021	WORK AS CONSTRUCTED	I.B.	M.P.C.	T.S.	R.J.					

PRESSURE SEWER NOTES:

- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS, ALTOGETHER SUPPLEMENTARY MANUAL TO WSAA, PRESSURE SEWERAGE CODE OF AUSTRALIA - WSA 07-2007 VERSION 1.1 AND POLYETHYLENE PIPELINE CODE WSA 01-2004.
- ALL EQUIPMENT, MATERIALS AND ACCESSORIES USED IN THIS CONTRACT SHALL BE NEW AND SHALL COMPLY WITH ALTOGETHER REQUIREMENTS. BUTT FUSION FITTINGS DENOTED HEREWITH HAVE BEEN DERIVED FROM THE GEORG FISCHER PIPING SYSTEMS BUTT FUSION PRODUCT RANGE. ELECTROFUSION FITTINGS DENOTED HEREWITH HAVE BEEN DERIVED FROM THE PLASSON "POLYETHYLENE PIPING SYSTEMS" PRODUCT RANGE.
- ALL SERVICES SHOWN ARE INDICATIVE ONLY. A CURRENT SERVICES SEARCH AND SITE CHECK OF ALL EXISTING SERVICES WILL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORKS.
THE CONSTRUCTOR IS TO DETERMINE LEVELS AND LOCATIONS OF ALL EXISTING SERVICES IN THE VICINITY OF THE CONSTRUCTION SITE AND ANY CONSTRUCTED STRUCTURES FOR PROPOSED SERVICES, SUCH AS DUCTING FOR WATER OR ELECTRICITY WITHIN THE SUBDIVISION. THE CONTRACTOR MUST ENSURE ALL SERVICES ARE LOCATED BY THE RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
- PRESSURE SEWER MAINS SHALL BE BLACK POLYETHYLENE (PE100 PN16) WITH A CREAM STRIPE AS PER WSA 02-2007 AND ALTOGETHER SUPPLEMENTARY MANUAL TO WSAA.
- ALL POLYETHYLENE MAINS ≤ DN200 SHALL BE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
ALL POLYETHYLENE MAINS ≥ DN200 SHALL BE JOINED USING BUTTWELD JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
- MAIN TO BE LAID GENERALLY AS INDICATED IN SERVICE ALLOCATION DIAGRAMS.
INSTRUCTION NOTES SHALL TAKE PRECEDENCE OVER DIAGRAMS WHERE PROVIDED.
600mm HORIZONTAL CLEARANCE TO BE MAINTAINED BETWEEN ALL SEWER AND WATER MAINS.
MINIMUM PIPE COVER SHALL BE 800mm IN FOOTWAYS AND 1000mm IN ROADWAYS.
MAXIMUM PIPE COVER SHALL GENERALLY BE 1500mm, WHERE COVER FOR A TRENCHED INSTALLATION EXCEEDS 1500mm BUT LESS THAN 2500mm THE MAIN AS A MINIMUM SHALL BE EMBEDDED IN STABILISED SAND.
THE CONTRACTOR SHALL ENSURE THAT ALL PRESSURE SEWER AND RECYCLED WATER MAINS HAVE SUFFICIENT VERTICAL SEPARATION AS PER THE CLEARANCE TABLE ADJACENT.
- MAINS CROSSING UNDER EXISTING DRIVEWAYS (SEALED, PAVED OR DECORATIVE) SHALL BE CONDUCTED BY UNDER BORING ONLY UNLESS PERMISSION IS GRANTED BY THE AFFECTED PROPERTY OWNER.
- MAINS WITHIN 2.0m OF ELECTRICITY OR POWER POLES SHALL BE CONDUCTED BY BORING TECHNOLOGY (UNLESS AGREED TO BY THE HUNTLEE WATER REPRESENTATIVE).
- ALL PIPE BEDDING MATERIAL SHALL COMPLY WITH WSAA PRODUCT SPECIFICATION WSA-P350 AND WSA-P351.
- ALL BENDS SHALL BE ELECTROFUSION OR BUTT WELD SWEEP BENDS. FABRICATED BENDS SHALL NOT BE USED IN LIEU. KNUCKLE ELBOWS ARE NOT PERMITTED.
- MINIMUM BENDING RADIUS FOR PN16 PE100 (SDR11) SHALL BE 20 x DN. (i.e. DN400 : R8.0m, DN250 : R5.0m, DN200 : R4.0m, DN160 : R3.2m, DN125 : R2.5m, DN90 : R1.8m, DN75 : R1.5m, DN63 : R1.3m, DN50 : R1.0m, DN40 : R0.8m).
- ALL HOUSE SERVICE LATERALS SHALL BE DN40 (PE100 PN16).
- FLUSHING PITS SHALL CONFORM WITH ALTOGETHER STANDARD DRAWINGS. REFER TO ALTOGETHER WEBSITE FOR CURRENT VERSION.
SMALL MAINS (≤ DN110)
http://information.altogethergroup.com.au/governance/Land_Housing/PSS-1077A-FS.pdf
LARGE MAINS (> DN110)
http://information.altogethergroup.com.au/governance/Land_Housing/PSS-1077B-FS.pdf
- LOCALISED DEEPENING OF MAINS MAY BE REQUIRED TO FACILITATE AIR VALVE INSTALLATION.
THE CONTRACTOR SHALL ENSURE THAT THE AIR VALVE OFFTAKE IS LOCATED AT A HIGH POINT (NATURAL OR ARTIFICIAL) IN THE MAIN (i.e. MAIN SHALL GRADE DOWNWARDS EITHER SIDE OF THE AIR VALVE).
- DETECTABLE MARKING TAPE SHALL BE LAID ON TOP OF THE PIPE EMBEDMENT MATERIAL BEFORE BACKFILLING AND CONNECTED TO SURFACE FITTINGS.
- ALL SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS (i.e. ROADWAYS, PATHS etc.) SHALL HAVE HEAVY DUTY SURROUNDS INSTALLED.
- DURING CONSTRUCTION, ALL OPEN ENDS OF PIPE SHALL BE CAPPED OFF TO PREVENT ENTRY OF FOREIGN MATTER.
- ALL VALVES SHALL BE RESILIENT SEATED SLUICE VALVES (CLOCKWISE CLOSING), SHALL BE RESTRAINED IN ACCORDANCE WITH WAT-1207 AND SHALL COMPLY WITH ALTOGETHER STANDARD DRAWING PSS-1015-FS.
- ALL MAINS SHALL BE TESTED IN ACCORDANCE WITH WSA 07-2007 VERSION 1.1.
- FOR LOTS WITH TANKS IN THE REAR.
1 x #25mm INSTRUMENTATION CONDUIT (ORANGE) AND 1 x #25mm ELECTRICAL CONDUIT (ORANGE) WITH DRAW WIRES) SHALL BE INSTALLED FROM THE COLLECTION TANK TO WATER METERS. THE CONDUITS SHALL BE LAID IN A COMMON TRENCH WITH THE SEWERAGE AND MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 400mm. (REFER TO ALTOGETHER STANDARD DRAWINGS FOR SETOUT DIMENSIONS).
- THE CONSTRUCTOR SHALL PROVIDE HUNTLEE WATER WITH MINIMUM OF 7 DAYS NOTICE IN WRITING OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE. CONNECTIONS ARE NOT PERMITTED UNTIL COMPLIANT TEST RESULTS HAVE BEEN PROVIDED AND CONFIRMATION IS PROVIDED BY THE HUNTLEE WATER REPRESENTATIVE.
- UPON COMPLETION OF WORKS, ALL SURFACES MUST BE RESTORED AS CLOSE AS POSSIBLE, TO THE CONDITION HAT EXISTED PRIOR TO COMMENCEMENT OF WORKS.
- PERMISSION OF ENTRY MUST BE OBTAINED BY THE CONTRACTOR FROM THE OWNER/OCCUPIER PRIOR TO COMMENCEMENT OF WORK IN PRIVATE PROPERTY.
- BURIED FITTINGS ARE NOT TO BE BACKFILLED UNTIL W.A.C. DETAILS HAVE BEEN OBTAINED AND APPROVAL FOR BACKFILLING GIVEN BY THE HUNTLEE WATER REPRESENTATIVE.
THE CONTRACTOR SHALL PROVIDE M.G.A. COORDINATED WORK-AS-CONSTRUCTED INFORMATION REGARDING THE INSTALLATION OF ALL BURIED FITTINGS.
- THE MINIMUM NUMBER OF COMPACTION TESTS REQUIRED TO SATISFY THE PRESSURE SEWER CODE OF AUSTRALIA (CLAUSE 213.4) ARE:
TRAFFICABLE
PIPE EMBEDMENT ZONE: NIL TRENCH FILL ZONE: 1 TEST/300mm LAYER OF FILL AT EACH ROAD CROSSING.
NON-TRAFFICABLE
PIPE EMBEDMENT ZONE: NIL TRENCH FILL ZONE: 1 TEST/900mm OF FILL AND EACH 100 LINEAL METRES OF PIPE.
- BOUNDARY KITS (COMPLETE) SHALL BE NOV SUPPLIED (NOV PSS-BK4).
e one COLLECTION TANK (ESD 20-0032/ESD 20-0033) SHALL BE INSTALLED WITH BOUNDARY KIT (REFER ALTOGETHER STANDARD DRAWINGS PSS-1112-FS AND PSS-1113-FS). PUMP TO BE INSTALLED BY OTHERS.
- ALL MAINS (UP TO THE BOUNDARY KIT) SHALL BE PRESSURE TESTED TO 1600 kPa.
ALL LINES FROM THE WASTEWATER COLLECTION TANK TO THE MANUAL ISOLATION VALVE WITHIN THE BOUNDARY KIT TO BE PRESSURE TESTED TO 1000kPa.
- ALL MAINS SHALL BE FLUSHED WITH WATER TO REMOVE ANY DEBRIS PRIOR TO COMMISSIONING.
- SURFACE IDENTIFICATION MARKERS ARE TO BE PROVIDED TO HUNTLEE WATER REQUIREMENTS.
- ROPE OFF ALL PRESSURE SEWER UNITS AND FLUSHING POINTS TO LIMIT DAMAGE DURING CONSTRUCTION.
- PRESSURE TRANSMITTER TO BE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM PER AL TOGETHER REQUIREMENTS.
- WORK-AS-CONSTRUCTED DOCUMENTATION SHALL BE PROVIDED BY THE CONTRACTOR STRICTLY IN ACCORDANCE WITH THE ALTOGETHER Q.A. SUBMISSION CHECKLIST.

POTABLE WATER AND RECYCLED WATER NOTES:

- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS, ALTOGETHER SUPPLEMENTARY MANUAL TO WSAA AND WSA 03-2011-3.1 (SYDNEY WATER EDITION 2014).
 - POTABLE WATER SHALL BE UTILISED FOR FIRE FIGHTING PURPOSES.
 - ALL EQUIPMENT, MATERIALS AND ACCESSORIES USED IN THIS CONTRACT SHALL BE NEW, SHALL CONFORM TO THE APPROPRIATE CURRENT AUSTRALIAN STANDARDS AND SHALL COMPLY WITH ALTOGETHER REQUIREMENTS.
 - ALL SERVICES SHOWN ARE INDICATIVE ONLY. A CURRENT SERVICES SEARCH AND SITE CHECK OF ALL EXISTING SERVICES WILL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORKS.
THE CONSTRUCTOR IS TO DETERMINE LEVELS AND LOCATIONS OF ALL EXISTING SERVICES IN THE VICINITY OF THE CONSTRUCTION SITE AND ANY CONSTRUCTED STRUCTURES FOR PROPOSED SERVICES, SUCH AS DUCTING FOR WATER OR ELECTRICITY WITHIN THE SUBDIVISION. THE CONTRACTOR MUST ENSURE ALL SERVICES ARE LOCATED BY THE RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
 - THE CONSTRUCTOR SHALL VERIFY WITH THE SITE SUPERVISOR THE POSITION AND LEVEL OF ALL EXISTING AND PROPOSED BOUNDARIES PERTINENT TO THE INFRASTRUCTURE INSTALLATIONS.
 - MAIN TO BE LAID GENERALLY AS INDICATED IN SERVICE ALLOCATION DIAGRAMS.
INSTRUCTION NOTES SHALL TAKE PRECEDENCE OVER DIAGRAMS WHERE PROVIDED.
600mm HORIZONTAL CLEARANCE TO BE MAINTAINED BETWEEN ALL SEWER AND WATER MAINS.
MINIMUM PIPE COVER SHALL BE 600mm IN FOOTWAYS (TYPE B EMBEDMENT: WAT-1202-V) AND 800mm IN ROADWAYS (TYPE L EMBEDMENT: WAT-1204-V).
MAXIMUM PIPE COVER SHALL GENERALLY BE 1500mm, WHERE COVER FOR A TRENCHED INSTALLATION EXCEEDS 1500mm BUT LESS THAN 2500mm THE MAIN AS A MINIMUM SHALL BE EMBEDDED IN STABILISED SAND.
THE CONTRACTOR SHALL ENSURE THAT ALL RECYCLED WATER MAINS AND PRESSURE SEWER MAINS HAVE SUFFICIENT VERTICAL SEPARATION AS PER THE CLEARANCE TABLE ADJACENT.
 - ALL POTABLE WATERMAINS TO BE BLUE PVC-M (PN16).
ALL RECYCLED WATERMAINS SHALL BE LILAC PVC-M (PN16).
DIFFERENTIATION OF POTABLE AND RECYCLED WATER SYSTEMS SHALL BE AS PER TABLE 4.1 WSA03-2011 WITH BOTH SERVICES BEING CLASSIFIED AS WATER MAINS.
RECYCLED WATER MAINS SHALL ALWAYS BE LOWER THAN POTABLE WATER MAINS.
150mm VERTICAL CLEARANCE BETWEEN POTABLE WATER AND RECYCLED WATER MAINS SHALL BE PROVIDED.
 - MAXIMUM JOINT DEFLECTIONS TO BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 - LOCALLY LOWER PIPEWORK IN VICINITY OF STOP VALVES TO ENSURE SUFFICIENT COVER IS MAINTAINED OVER VALVES. LOWERING OF PIPEWORK SHALL BE ACHIEVED OVER A NUMBER OF PIPE LENGTHS EITHER SIDE OF VALVES TO ELIMINATE ANY SHARP DEFLECTIONS.
 - ALL PIPE BEDDING MATERIAL SHALL COMPLY WITH WSAA PRODUCT SPECIFICATION PS-350, 368 AND 369.
GEOTECHNICAL CONDITIONS SHOULD BE ASSESSED DURING CONSTRUCTION BY THE CONTRACTOR IN ASSOCIATION WITH THE HUNTLEE WATER REPRESENTATIVE TO DETERMINE THE NEED TO MODIFY EMBEDMENT/TRENCHFILL TYPE AND THE NEED FOR TRENCH DRAINAGE/BULKHEADS.
 - DURING CONSTRUCTION, ALL OPEN ENDS OF PIPES SHALL BE CAPPED OFF TO PREVENT ENTRY OF FOREIGN MATTER.
 - HYDRANTS, STOP VALVES AND ALL OTHER FITTINGS TO BE THE SAME SIZE AS THE THROUGH WATER MAIN AND ANTI CLOCKWISE CLOSING.
 - HYDRANTS MUST NOT BE INSTALLED IN POTENTIAL DRIVEWAY LOCATIONS. HYDRANTS AND WATER SERVICES SHALL BE NOMINALLY AT LEAST 5.0m FROM EACH BOUNDARY OR ON BOUNDARIES. WHERE POSSIBLE, FITTINGS SHALL BE LOCATED BEHIND KERB INLET PITS.
 - THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH WAT-1205.
 - ALL PROPERTY (MAIN TO METER) SERVICE CONNECTIONS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH ALTOGETHER REQUIREMENTS. REFER TO ALTOGETHER WEBSITE FOR CURRENT VERSION.
SINGLE SERVICE: http://information.altogethergroup.com.au/governance/Land_Housing/WAT-1854-FS.pdf
DUAL SERVICE: http://information.altogethergroup.com.au/governance/Land_Housing/WAT-1855-FS.pdf
 - PROPERTY SERVICE CONNECTION IS SHALL BE FLUSHED AND LOCKED (BY THE HUNTLEE WATER REPRESENTATIVE) FOLLOWING SUCCESSFUL PRESSURE TESTING.
 - SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS (i.e. ROADWAYS, PATHS etc.) SHALL HAVE HEAVY DUTY SURROUNDS INSTALLED.
 - ALL MAINS SHALL BE PRESSURE TESTED TO 1500kPa IN ACCORDANCE WITH CLAUSE 19.4 OF WSA03-2011 (SYDNEY WATER EDITION 2014).
 - ALL MAINS SHALL BE FLUSHED WITH WATER TO REMOVE ANY DEBRIS PRIOR TO COMMISSIONING.
 - WATER QUALITY TESTING SHALL BE IN ACCORDANCE WITH WSA 03-2011-3.1(SYDNEY WATER EDITION-2014, CLAUSE 19.7).
 - THE CONSTRUCTOR SHALL PROVIDE HUNTLEE WATER WITH MINIMUM OF 7 DAYS NOTICE IN WRITING OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE. CONNECTIONS ARE NOT PERMITTED UNTIL COMPLIANT TEST RESULTS HAVE BEEN PROVIDED AND CONFIRMATION IS PROVIDED BY THE HUNTLEE WATER REPRESENTATIVE.
 - UPON COMPLETION OF WORKS, ALL SURFACES MUST BE RESTORED AS CLOSE AS POSSIBLE, TO THE CONDITION HAT EXISTED PRIOR TO COMMENCEMENT OF WORKS.
 - PERMISSION OF ENTRY MUST BE OBTAINED BY THE CONTRACTOR FROM THE OWNER/OCCUPIER PRIOR TO COMMENCEMENT OF WORK IN PRIVATE PROPERTY.
 - BURIED FITTINGS ARE NOT TO BE BACKFILLED UNTIL W.A.C. DETAILS HAVE BEEN OBTAINED AND APPROVAL FOR BACKFILLING GIVEN BY THE HUNTLEE WATER REPRESENTATIVE.
THE CONTRACTOR SHALL PROVIDE M.G.A. COORDINATED WORK-AS-CONSTRUCTED INFORMATION REGARDING THE INSTALLATION OF ALL BURIED FITTINGS.
 - MINIMUM NUMBER OF COMPACTION TESTS REQUIRED TO SATISFY WSA03-2011 (SYDNEY WATER EDITION 2014) (CLAUSE 19.3.5) :
TRAFFICABLE
PIPE EMBEDMENT ZONE: NIL TRENCH FILL ZONE: 1 TEST/300mm LAYER OF FILL AT EACH ROAD CROSSING.
NON-TRAFFICABLE
PIPE EMBEDMENT ZONE: NIL TRENCH FILL ZONE: 1 TEST/900MM OF FILL AND EACH 100 LINEAL METERS OF PIPE.
PROPERTY SERVICES
TEST 1 OF EVERY 5 PROPERTY SERVICE TRENCHES.
TESTING SHALL BE IN ACCORDANCE WITH TABLE 16.1 AND 17.1 OF THE WATER SUPPLY CODE OF AUSTRALIA.
 - SURFACE IDENTIFICATION MARKERS ARE TO BE PROVIDED TO HUNTLEE WATER REQUIREMENTS.
 - PRESSURE TRANSMITTER TO BE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM PER AL TOGETHER REQUIREMENTS.
 - WORK-AS-CONSTRUCTED DOCUMENTATION SHALL BE PROVIDED BY THE CONTRACTOR STRICTLY IN ACCORDANCE WITH THE ALTOGETHER Q.A. SUBMISSION CHECKLIST.
 - WHERE THE PIPE GRADE EXCEEDS 5% , TRENCHSTOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WAT-1209 AND WAT-1210 AT THE SPACING OF 100/M GRADE%.
WHERE PIPE GRADES EXCEED 15%, CONCRETE BULKHEADS WILL BE CONSTRUCTED AT SPACING AS PER TABLE 7.5 OF WSA03-2001 SYDNEY WATER EDITION 2014.
- ALTOGETHER STANDARD DRAWINGS CAN BE FOUND AT THE FOLLOWING ADDRESS:
<https://askus.altogethergroup.com.au/hc/en-us/articles/900004827263-Standard-drawings-for-land-developers->

GENERAL NOTES:

- THIS DRAWING SET SHALL BE READ IN CONJUNCTION WITH CESSNOCK CITY COUNCIL STANDARDS, ALTOGETHER SUPPLEMENTARY MANUAL TO WSAA AND OTHER ASSOCIATED DRAWINGS AND TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORK AND SHALL REPAIR ANY DAMAGE CAUSED TO SUCH SERVICES DURING THE COURSE OF WORKS. ANY SERVICE LOCATIONS SHOWN IN THIS DRAWING SET ARE INDICATIVE ONLY.
- MAKE SMOOTH TRANSITION TO EXISTING WORKS (i.e. ROAD PAVEMENT AND FOOTPATHS) TO P.C.A. AND SUPERINTENDENT'S REQUIREMENTS.
- SUITABLE PROTECTION TO EXISTING ROAD PAVEMENT, KERB AND GUTTER, FOOTPATHS AND ANY EXISTING FEATURES SHALL BE PROVIDED UNTIL THE CONSTRUCTION WORKS ARE COMPLETED.

CLEARANCES BETWEEN PIPELINES AND UNDERGROUND SERVICES

UTILITY (EXISTING OR PROPOSED SERVICE)	MINIMUM HORIZONTAL CLEARANCE (mm)		MINIMUM VERTICAL CLEARANCE (mm)
	NEW MAIN SIZE		
	≤ DN200	≥ DN200	
WATER MAINS > DN375	600	60	300
WATER MAINS < DN375	300 ^a	600	150
GAS MAINS	300 ^a	600	150
TELECOMMUNICATION CONDUITS AND CABLES	300 ^a	600	150
ELECTRICITY CONDUITS AND CONDUITS	200	1000	225 ^a
STORMWATER DRAINS	300 ^a	600	150 ^a
SEWERS (GRAVITY)	1000 ^a / 600	1000 ^a / 600	500 ^a
SEWERS (PRESSURE AND VACUUM)	600	600	300 ^a
KERBS	150	600 ^b	150 (WHERE POSSIBLE)

NOTES:

- VERTICAL CLEARANCES APPLY WHERE PIPELINES CROSS OTHER UTILITY SERVICES, EXCEPT IN THE CASE OF WATER/SEWER MAINS WHEN A VERTICAL SEPARATION SHALL ALWAYS BE MAINTAINED, EVEN WHEN THE PRESSURE SEWER AND WATER MAIN ARE PARALLEL. THE PRESSURE SEWER SHOULD ALWAYS BE LOCATED BELOW THE WATER MAIN TO MINIMISE THE POSSIBILITY OF BACKFLOW CONTAMINATION IN THE EVENT OF A PRESSURE MAIN BREAK.
- WATER MAINS INCLUDES MAINS SUPPLYING BOTH POTABLE AND RECYCLED WATER.
- FOR AREAS WITH EXISTING WATER RETICULATION, CLEARANCES CAN BE FURTHER REDUCED TO 600mm WITH THE APPROVAL OF THE WATER AUTHORITY.
- CLEARANCES CAN BE FURTHER REDUCED TO 150mm FOR DISTANCES UP TO 2.0m WHEN PASSING INSTALLATIONS SUCH AS POLES, PITS, AND SMALL STRUCTURES, PROVIDED THE STRUCTURE IS NOT BE-STABILISED IN THE PROCESS.
- CLEARANCES FROM KERBS SHALL BE MEASURED FROM THE NEAREST POINT OF THE KERB. FOR WATER/SEWER - DN 375, CLEARANCES FROM KERBS CAN BE PROGRESSIVELY REDUCED UNTIL THE MINIMUM OF 150mm IS REACHED FOR WATER/SEWER - DN200.
- WHERE A PARALLEL SEWER IS AT MINIMUM VERTICAL CLEARANCE LOWER THAN THE WATER MAIN (500mm), MAINTAIN A MINIMUM HORIZONTAL OF 1000mm. THIS MINIMUM CLEARANCE CAN BE PROGRESSIVELY REDUCED TO 600mm AS THE VERTICAL CLEARANCE IS INCREASED TO 750mm.
- FOR PRESSURE SEWER LATERALS, MINIMUM VERTICAL CLEARANCES MAY BE REDUCED TO 150mm PROVIDED THERE IS NO JOINT IN THE LATERAL WITHIN 500mm OF EITHER SIDE OF THE SERVICE BEING CROSSED.
- AN ADDITIONAL CLEARANCE FROM HIGH VOLTAGE ELECTRICAL INSTALLATIONS SHOULD BE MAINTAINED ABOVE THE CONDUITS OR CABLES TO ALLOW FOR A PROTECTIVE BARRIER AND MARKING TO BE PROVIDED.
- WATER MAINS SHOULD ALWAYS CROSS OVER SEWERS AND STORMWATER DRAINS. FOR CASES WHERE THERE IS NO ALTERNATIVE AND THE MAIN MUST CROSS UNDER THE SEWER, THE DESIGN SHALL NOMINATE AN APPROPRIATE PROTECTION TREATMENT (JOINT-FREE IN THE VICINITY OF THE SEWER).

SHOULD THE RECOMMENDED CLEARANCES NOT BE ACHIEVED, NOTIFICATION SHALL BE CONVEYED TO THE HUNTLEE WATER REPRESENTATIVE IN WRITING.

WORK AS CONSTRUCTED

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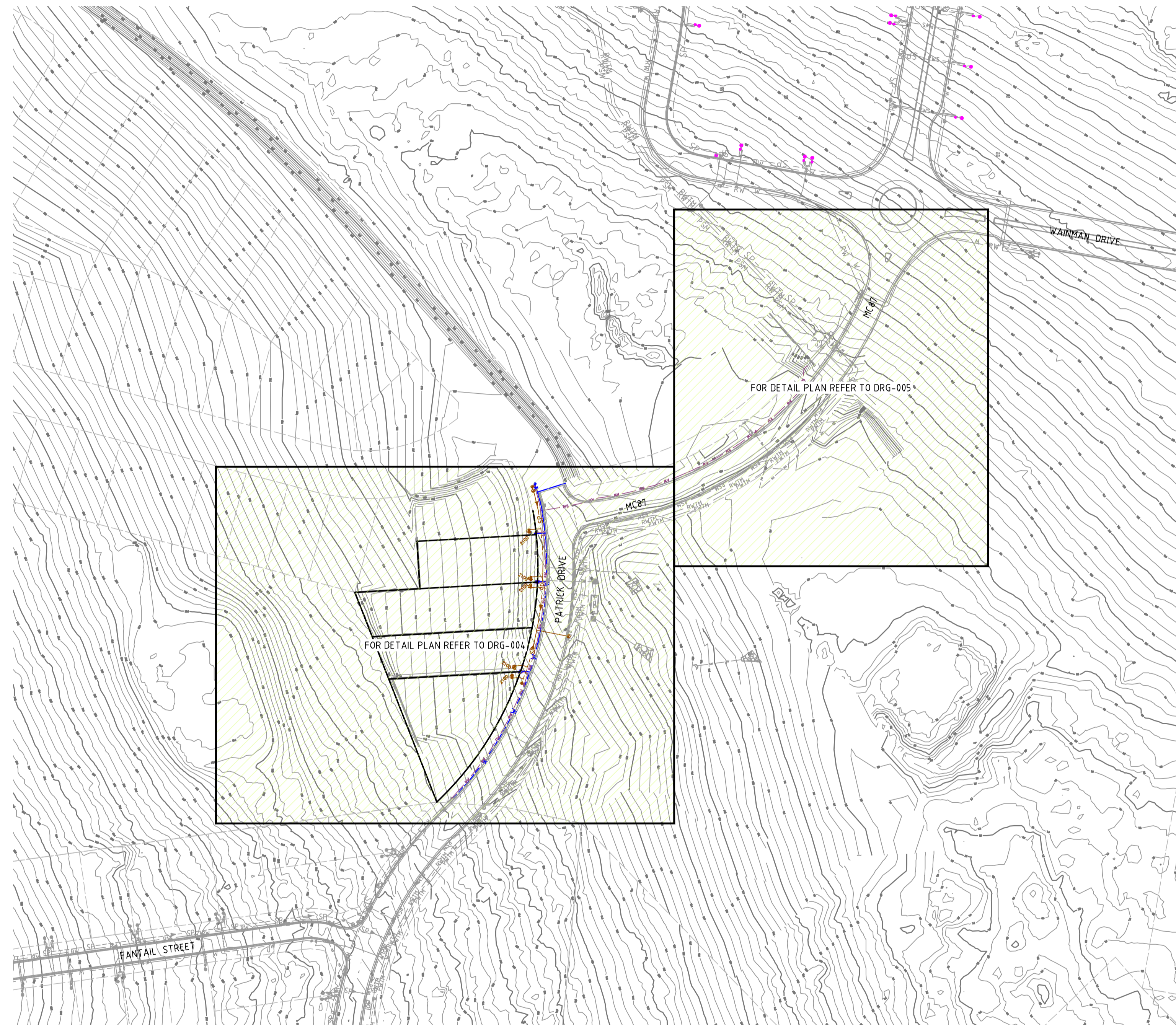
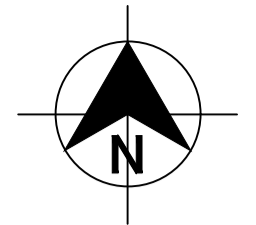
COMPANY	DARACON	COMPANY	
NAME		NAME	
SIGNED	DATE	SIGNED	DATE
	REGISTERED SURVEYOR		CONSTRUCTION MANAGER

AS CONSTRUCTED

Unsaved Drawing1

100mm AT FULL SIZE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.
A	16.04.2021	PRELIMINARY ISSUE	T.S.	J.N.	T.S.	C.B.		 <p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>	PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	GENERAL NOTES	239078(40)	- WAT -	002	4
B	22.04.2021	CLIENT COMMENTS	T.S.	R.J.	T.S.	R.J.									
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DESIGN FILE N:\								ALL DIMENSIONS ARE IN METRES. DO NOT SCALE							



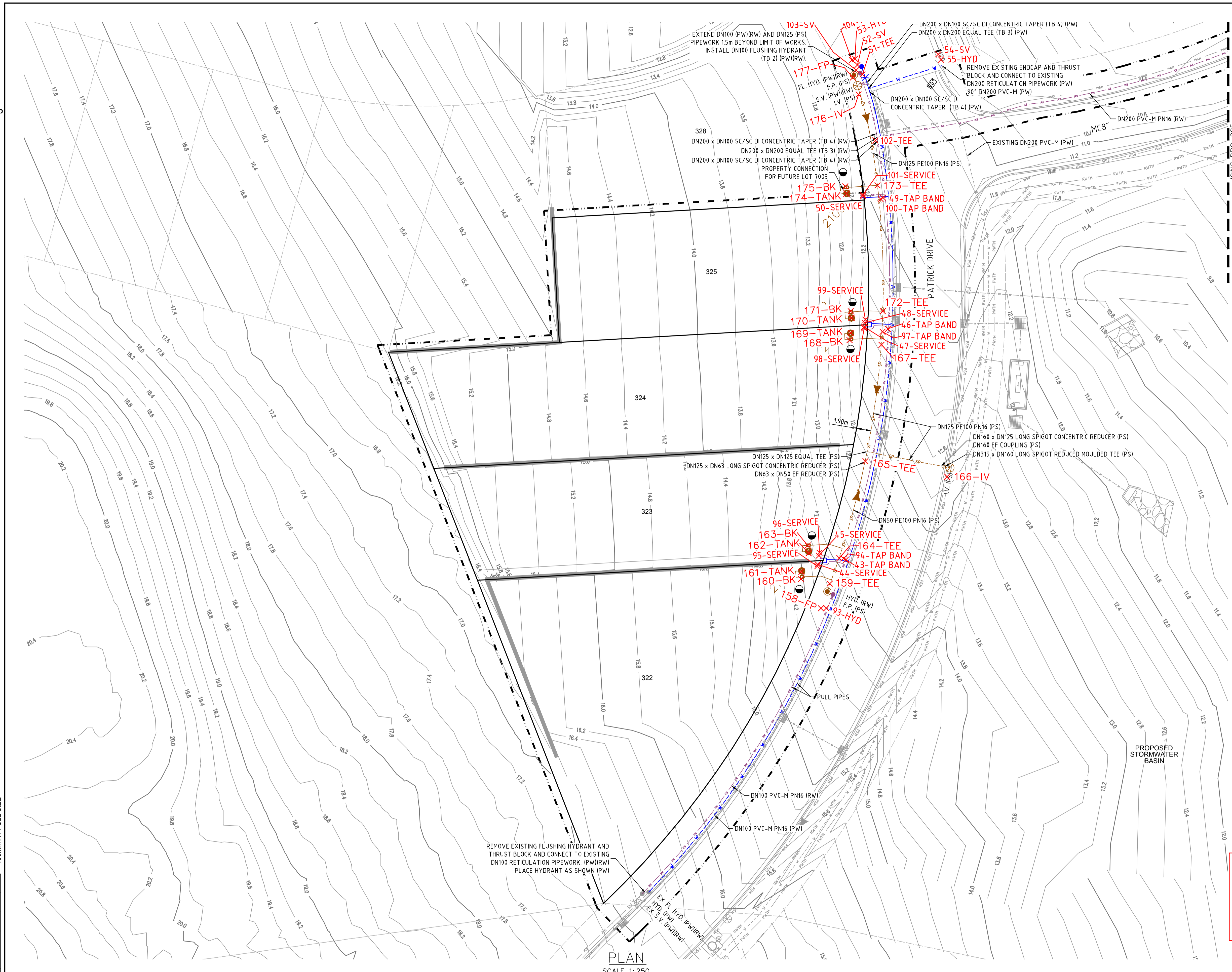
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COMPANY DARAON	COMPANY
NAME	NAME
SIGNED	SIGNED
DATE	DATE
REGISTERED SURVEYOR	CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE			
A	16.04.2021	PRELIMINARY ISSUE	T.S.	J.N.	T.S.	C.B.		<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>	PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	OVERALL SITE PLAN			
B	22.04.2021	CLIENT COMMENTS	T.S.	R.J.	T.S.	R.J.								
C	26.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.								
0	27.04.2021	CONSTRUCTION ISSUE	T.S.	R.J.	T.S.	R.J.								
1	28.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.								
2	01.05.2021	REMOVE DN400 POTABLE WATER MAIN DETAILS	G.S.	R.J.	T.S.	R.J.	ALL DIMENSIONS ARE IN METRES. DO NOT SCALE		ADW Johnson	A.H.D.	PROJECT No. 239078(40)	DISCIPLINE - WAT -	NUMBER 003	REV. 4
3	18.08.2021	AMENDED FOR SITE SETOUT	T.S.	R.J.	T.S.	R.J.								
4	03.11.2021	WORK AS CONSTRUCTED	I.B.	M.P.C.	T.S.	R.J.								



- LEGEND**
- PVC-M POTABLE WATER RETICULATION
 - POTABLE WATER PROPERTY SERVICE
 - PVC-M RECYCLED WATER RETICULATION
 - RECYCLED WATER PROPERTY SERVICE
 - PE PRESSURE SEWER RETICULATION
 - PE PRESSURE SEWER PROPERTY SERVICE
 - DN400 PE POTABLE WATER LINK MAIN (EXISTING)
 - EXISTING POTABLE WATER RETICULATION
 - EXISTING RECYCLED WATER RETICULATION
 - EXISTING PRESSURE SEWER RETICULATION
 - STORMWATER PIPEWORK
 - PROPOSED EASEMENT
 - SUBDIVISION STAGE BOUNDARY
 - 90° 90° HORIZONTAL BEND - REFER TO THRUST BLOCK TABLE
 - 45° 45° HORIZONTAL BEND - REFER TO THRUST BLOCK TABLE
 - ✖ STOP VALVE
 - SV. HYDRANT
 - HYD. FLUSHING HYDRANT
 - ⊕ FL. HYD. ISOLATION VALVE
 - ⊕ IV. FLUSHING POINT
 - ⊕ FP. WASTEWATER COLLECTION TANK AND BOUNDARY KIT
 - PRESSURE SEWER FLOW DIRECTION (INTERMEDIATE)
 - ⊙ LAY PRESSURE SEWER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
 - ⊙ PROPERTY SERVICE CONNECTION
 - ⊙ LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H

- POTABLE WATER & RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 5 CONNECTIONS (INCLUDING 1 FUTURE PROPERTY)
 - SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 1 x SHORT SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 2 x SHORT SIDE
- PRESSURE SEWER PROPERTY SERVICE CONNECTIONS**
- TOTAL 5 CONNECTIONS
 - SINGLE SERVICES
 - 5 x SHORT SIDE

POTABLE WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN100	PVC-M PN16	118
DN200	PVC-M PN16	11

RECYCLED WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN100	PVC-M PN16	117
DN200	PVC-M PN16	111

PRESSURE SEWER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN50	PE100 SDR11	20
DN125	PE100 SDR11	62

- NOTES:**
1. REFER TO SHEET 008 FOR STREET PRESSURE MAIN TYPICAL DETAIL.
 2. SCOUR VALVE:
 - TO BE GRAVITY SCOUR DISCHARGING TO LOCAL WATER COURSE AT CULVERT CROSSING AND IN ACCORDANCE WITH WAT-1307-V.
 - GRAVITY SCOUR BRANCH AND ISOLATION VALVE TO BE DN100 IN ACCORDANCE WITH T8.4 WSA 03-2011.
 - HEADWALL AND SCOUR PROTECTION TO BE PROVIDED AT DISCHARGE.
 3. FOR STAGES BUILT CONCURRENTLY, ADJOINING FLUSHING HYDRANTS THAT ARE TO BE REMOVED ARE NOT REQUIRED TO BE INSTALLED

WORK AS CONSTRUCTED

THESE DRAWINGS ARE AN ACCURATE REPRESENTATION AS AT 11/10/2021 OF THE WORK-AS-CONSTRUCTED, BUT THE POSITION OF THE WORK RELATIVE TO OTHER STRUCTURES OR BOUNDARIES IS APPROXIMATE ONLY AND HAS NOT BEEN VERIFIED BY PRECISE SURVEY.

COMPANY DARACON	COMPANY
NAME	NAME
SIGNED	SIGNED
DATE	DATE
REGISTERED SURVEYOR	CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	16.04.2021	PRELIMINARY ISSUE	T.S.	J.N.	T.S.	C.B.	
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2	01.05.2021	REMOVE DN400 POTABLE WATER MAIN DETAILS	T.S.	R.J.	T.S.	R.J.	
3	18.08.2021	AMENDED FOR SITE SETOUT	T.S.	R.J.	T.S.	R.J.	
4	03.11.2021	WORK AS CONSTRUCTED	I.B.	M.P.C.	T.S.	R.J.	

PLAN
SCALE 1:250

Hunter Office
 Unit 7/335 Hillsborough Rd
 Warners Bay N.S.W. 2282
 Phone: (02) 4978 5100
 Fax: (02) 4978 5199
 email: hunter@adwjohnson.com.au
 www.adwjohnson.com.au
 ABN 62 129 445 398

CLIENT

**JOHNSON
PROPERTY
GROUP**

PROPERTY DESCRIPTION	
PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK	
SURVEYED	DATUM
ADW Johnson	A.H.D.

PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION			
PLAN TITLE			
DETAIL PLAN - SHEET 1			
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(40)	- WAT -	004	4



PLAN
SCALE 1:250

WAC WATER TABLE

POINT	EASTING	NORTHING	FITTING
43	356120.703	6340075.776	TAP BAND
44	356116.993	6340075.199	SERVICE
45	356117.155	6340076.341	SERVICE
46	356126.218	6340106.138	TAP BAND
47	356123.105	6340106.419	SERVICE
48	356123.19	6340106.955	SERVICE
49	356125.571	6340123.394	TAP BAND
50	356122.967	6340123.566	SERVICE
51	356122.881	6340139.603	TEE
52	356122.208	634014.0.821	SV
53	356121.909	634014.1.662	HYD
54	356132.826	634014.2.222	SV
55	356133.206	634014.15.47	HYD

WAC REC-WATER TABLE

POINT	EASTING	NORTHING	FITTING
93	356118.116	6340069.422	HYD
94	356120.395	6340075.942	TAP BAND
95	356116.944	6340074.949	SERVICE
96	356117.235	6340076.708	SERVICE
97	356125.523	6340105.759	TAP BAND
98	356123.119	6340106.229	SERVICE
99	356123.264	6340107.341	SERVICE
100	356125.259	6340123.211	TAP BAND
101	356122.955	6340123.767	SERVICE
102	356124.58	6340130.905	TEE
103	356122.057	634014.0.153	SV
104	356121.505	634014.1.46	HYD
105	356178.651	634014.6.143	HYD

WAC SEWER TABLE

POINT	EASTING	NORTHING	FITTING
158	356117.427	6340069.404	FP
159	356118.588	6340072.653	TEE
160	356114.807	6340073.258	BK
161	356114.846	6340074.213	TANK
162	356115.808	6340076.649	TANK
163	356115.691	6340077.658	BK
164	356119.828	6340076.001	TEE
165	356123.264	6340088.744	TEE
166	356134.001	6340086.701	IV
167	356125.382	6340104.044	TEE
168	356121.186	6340104.649	BK
169	356121.332	6340105.601	TANK
170	356121.441	6340107.595	TANK
171	356121.328	6340108.476	BK
172	356125.563	6340108.469	TEE
173	356124.854	6340125.006	TEE
174	356120.775	6340123.923	TANK
175	356120.64	6340124.874	BK
176	356122.374	6340136.947	IV
177	356121.621	6340139.181	FP

LEGEND

- W - PVC-M POTABLE WATER RETICULATION
- PWS - POTABLE WATER PROPERTY SERVICE
- RW - PVC-M RECYCLED WATER RETICULATION
- RWS - RECYCLED WATER PROPERTY SERVICE
- SP - PE PRESSURE SEWER RETICULATION
- PPS - PE PRESSURE SEWER PROPERTY SERVICE
- PWLH - DN400 PE POTABLE WATER LINK MAIN (EXISTING)
- EX PW - EXISTING POTABLE WATER RETICULATION
- EX RW - EXISTING RECYCLED WATER RETICULATION
- EX PS - EXISTING PRESSURE SEWER RETICULATION
- SW - STORMWATER PIPEWORK
- Proposed Easement
- Subdivision Stage Boundary
- 90° HORIZONTAL BEND - REFER TO THRUST BLOCK TABLE
- 45° HORIZONTAL BEND - REFER TO THRUST BLOCK TABLE
- STOP VALVE
- SV - HYDRANT
- HYD - FLUSHING HYDRANT
- FL HYD - ISOLATION VALVE
- IV - FLUSHING POINT
- FP - WASTEWATER COLLECTION TANK AND BOUNDARY KIT
- Pressure Sewer Flow Direction (Intermediate)
- Lay Pressure Sewer Main Under Stormwater Pipe (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- Property Service Connection
- Lay Water Main Over Stormwater Pipe (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H

- POTABLE WATER & RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
 TOTAL 5 CONNECTIONS (INCLUDING 1 FUTURE PROPERTY)
 • SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 -1 x SHORT SIDE
 • SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 -2 x SHORT SIDE
- PRESSURE SEWER PROPERTY SERVICE CONNECTIONS**
 TOTAL 5 CONNECTIONS
 • SINGLE SERVICES
 -5 x SHORT SIDE

POTABLE WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN100	PVC-M PN16	118
DN200	PVC-M PN16	11

RECYCLED WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN100	PVC-M PN16	117
DN200	PVC-M PN16	111

PRESSURE SEWER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN150	PE100 SDR11	20
DN125	PE100 SDR11	62

- NOTES:**
- REFER TO SHEET 008 FOR STREET PRESSURE MAIN TYPICAL DETAIL.
 - SCOUR VALVE:
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 - GRAVITY SCOUR BRANCH AND ISOLATION VALVE TO BE DN100 IN ACCORDANCE WITH T8 & WSA 03-2011.
 - HEADWALL AND SCOUR PROTECTION TO BE PROVIDED AT DISCHARGE.
 - FOR STAGES BUILT CONCURRENTLY, ADJOINING FLUSHING HYDRANTS THAT ARE TO BE REMOVED ARE NOT REQUIRED TO BE INSTALLED

WORK AS CONSTRUCTED

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COMPANY	DARACON	COMPANY	
NAME		NAME	
SIGNED	DATE	SIGNED	DATE
	REGISTERED SURVEYOR		CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
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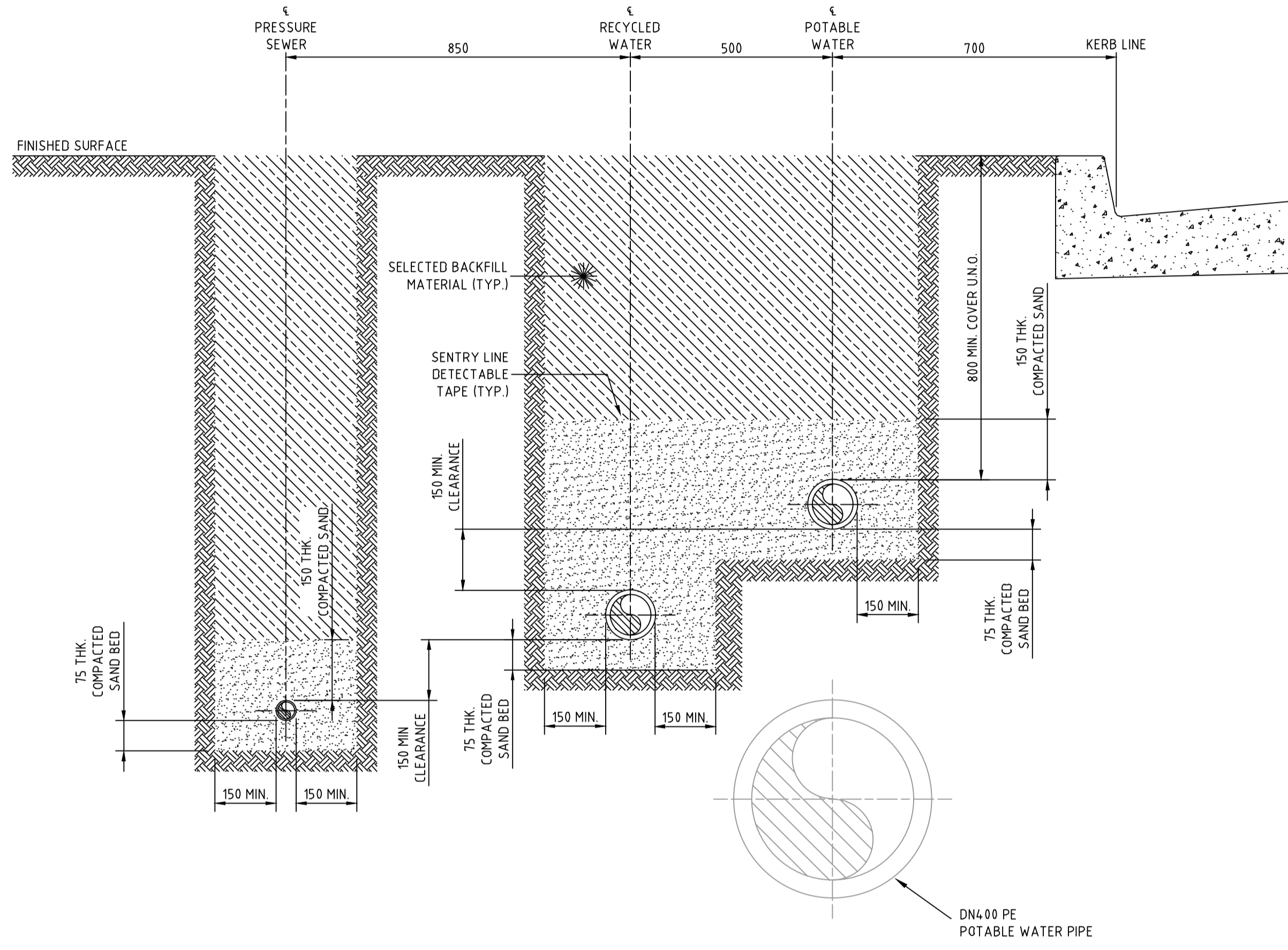
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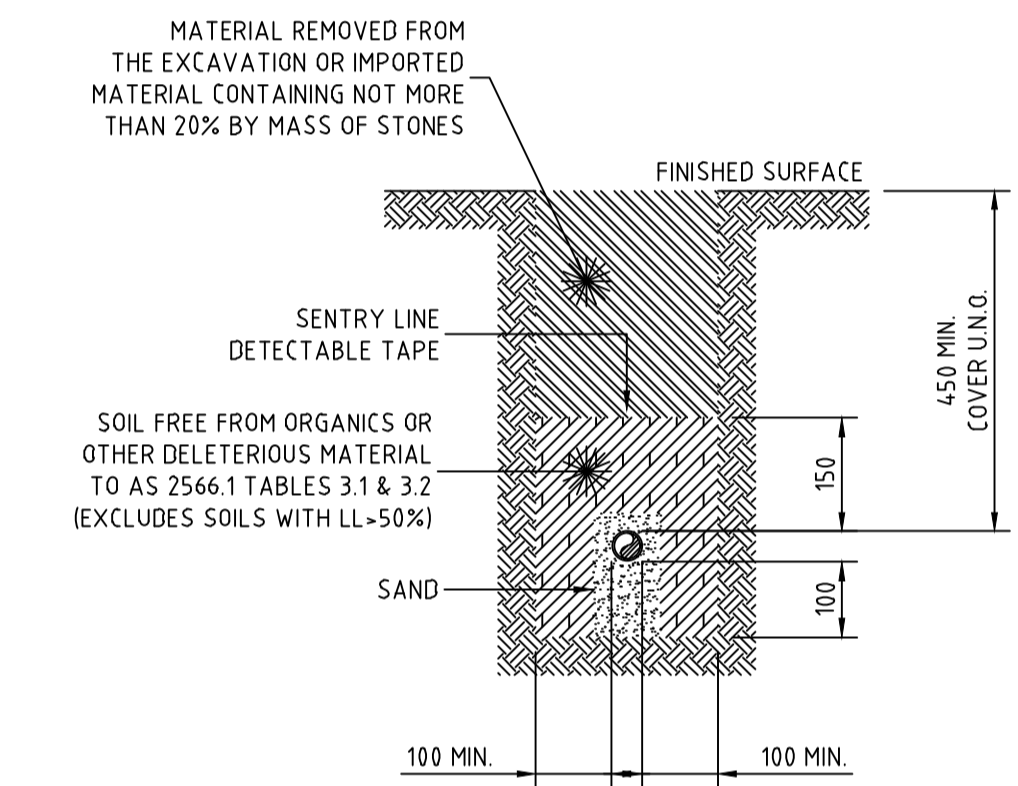
JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION	PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK
SURVEYED	ADW Johnson
DATUM	A.H.D.

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	DETAIL PLAN - SHEET 2		
PROJECT No.	239078(40)	DISCIPLINE	WAT
NUMBER	005	REV.	4



STREET PRESSURE MAIN
TYPICAL DETAIL
SCALE 1:10



PRIVATE PROPERTY PRESSURE MAIN
TYPICAL DETAIL
SCALE 1:10

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 COMPANY DARACON COMPANY
 NAME NAME
 SIGNED SIGNED DATE DATE
 REGISTERED SURVEYOR CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
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4	03.11.2021	WORK AS CONSTRUCTED	I.B.	M.P.C.	T.S.	R.J.

SCALE
0 0.4 0.8 A1 / A3 1.20 / 1:40

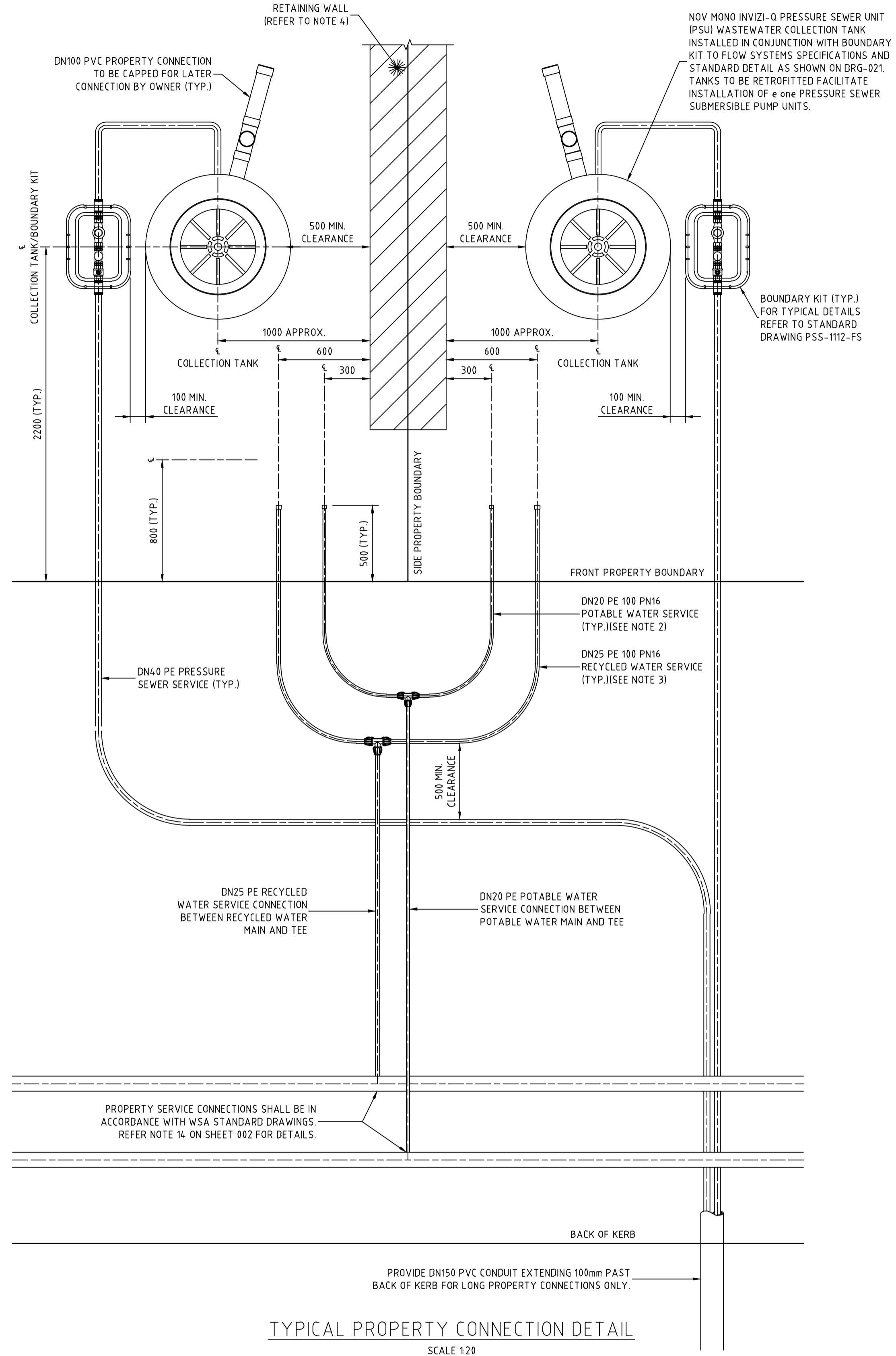
adw Johnson
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 ABN 62 129 445 398

CLIENT
JOHNSON PROPERTY GROUP

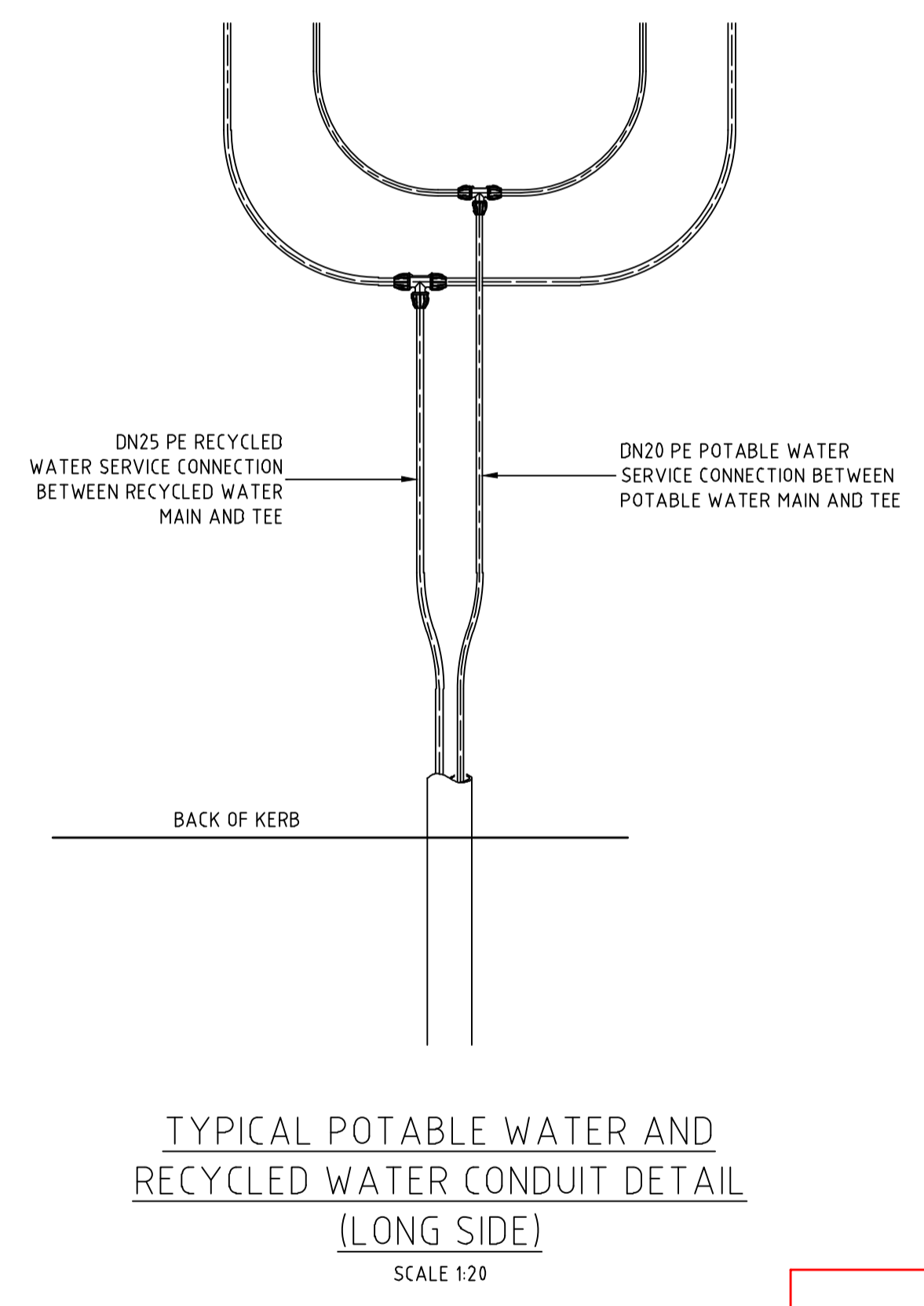
PROPERTY DESCRIPTION
PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK

PROJECT	PLAN TITLE
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	TYPICAL PIPEWORK TRENCHING DETAILS

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
ADW Johnson	A.H.D.	239078(40)	- WAT -	006	4



- NOTES:**
- PROPERTY SERVICE CONNECTIONS SHALL BE IN ACCORDANCE WITH WSA STANDARD DRAWINGS FOR DUAL WATER SUPPLY SYSTEMS (SYDNEY WATER VERSION) (SUPPLEMENT TO WSA 03-2011).
 - DN20 PE100 PN16 POTABLE WATER SERVICE TO EXTEND 500mm BEYOND PROPERTY BOUNDARY AND BE CAPPED FOR LATER CONNECTION BY PROPERTY OWNER.
 - DN25 PE100 PN16 RECYCLED WATER SERVICE TO EXTEND 500mm BEYOND PROPERTY BOUNDARY AND BE CAPPED FOR LATER CONNECTION BY PROPERTY OWNER.
 - FOR PROPERTY CONNECTIONS WHERE A RETAINING WALL IS NOT PRESENT, SERVICES ARE TO BE OFFSET FROM THE PROPERTY BOUNDARY.
 - WHERE SERVICE CONNECTIONS ARE LOCATED ADJACENT TO TELSTRA PITS/ELECTRICAL PILLARS, A MINIMUM CLEARANCE OF 200mm BETWEEN PITS AND SERVICE PIPEWORK IS TO BE MAINTAINED.
 - MINIMUM BENDING RADIUS FOR PE PIPEWORK IS TO BE 20 x PIPE DIAMETER.
 - ALL POLYETHYLENE FITTINGS SHALL BE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ROTATE BENDS AS NECESSARY.
 - PRESSURE SEWER UNIT (PSU) IS TO HAVE 2150mm CLEARANCE FROM BUILDING STRUCTURES.
 - Ø25 ELECTRICAL CONDUIT IS TO EXTEND FROM CONNECTION WITH PRESSURE SEWER UNIT (PSU) TO NOM. 500mm INSIDE FRONT PROPERTY BOUNDARY AND BE CAPPED. ELECTRICAL CONDUIT IS TO BE HEAVY DUTY ORANGE. ALL CONDUIT BENDS ARE TO BE LARGE RADIUS SWEEP BENDS.
 - FOR MORE INFORMATION REFER TO FLOW SYSTEMS STANDARD DRAWING FSI-1000-FS.
 - FOR ALTERNATE TANK AND BOUNDARY CONFIGURATIONS, AND DETAILS FOR TANKS INSTALLED ON PROPERTIES WITH BATTERS AND RETAINING WALLS, REFER TO FLOW SYSTEMS STANDARD DRAWINGS FSI-SK03A-FS AND FSI-SK03B-FS.



WORK AS CONSTRUCTED
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 COMPANY DARACON COMPANY
 NAME NAME
 SIGNED DATE SIGNED DATE
 REGISTERED SURVEYOR CONSTRUCTION MANAGER

AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
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SCALE
0 0.4 0.8 A1 / A3 1:20 / 1:40

adw Johnson
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CLIENT

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK

PROJECT	PLAN TITLE
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	TYPICAL PROPERTY CONNECTION - SHEET 1

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
ADW Johnson	A.H.D.	239078(40)	- WAT -	007	4

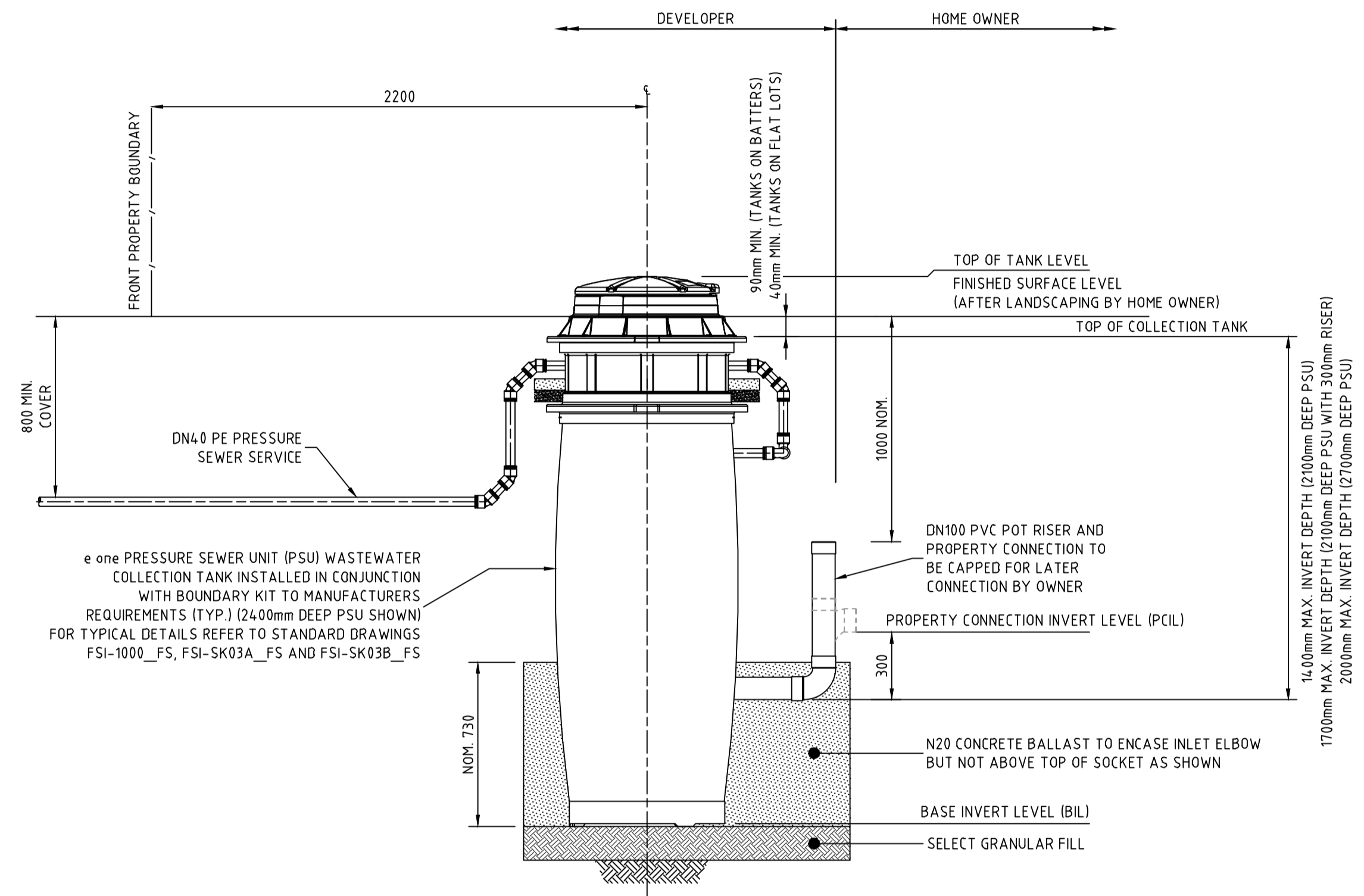


WASTEWATER COLLECTION TANK DETAILS

LOT NUMBER	TOP OF TANK	BASE IL	PROPERTY CONNECTION IL	TANK HEIGHT	TANK LOCATION	EASTING	NORTHING
322	14.16	12.03	12.93	2100	FRONT	356114.904	6340074.330
323	13.72	11.59	12.49	2100	FRONT	356115.797	6340076.885
324	12.47	10.34	11.24	2100	FRONT	356121.320	6340105.565
325	12.46	10.33	11.23	2100	FRONT	356121.416	6340107.574
328	12.59	10.46	11.36	2100	FRONT	356120.824	6340123.950

WAC TANK DETAILS

LOT No.	WAC RL	WAC IL	Δ IL	Design IL
322	14.34	14.16	0.09	12.93
323	13.91	13.72	0.10	12.49
324	12.65	12.47	0.09	11.24
325	12.63	12.46	0.08	11.23
328	12.74	12.59	0.06	11.36



PRESSURE SEWER SERVICE CONNECTION
TYPICAL SECTIONAL ELEVATION
SCALE 1:20

WORK AS CONSTRUCTED
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COMPANY	DARACON	COMPANY	
NAME		NAME	
SIGNED	DATE	SIGNED	DATE
	REGISTERED SURVEYOR		CONSTRUCTION MANAGER

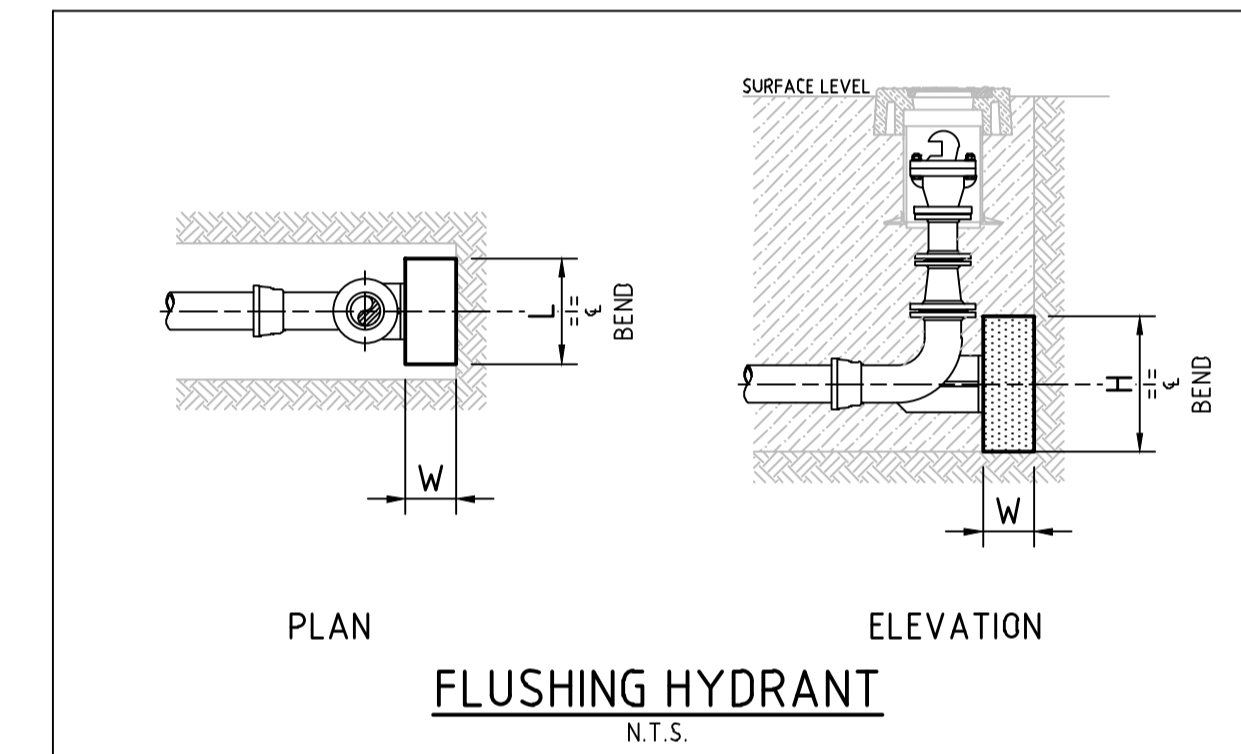
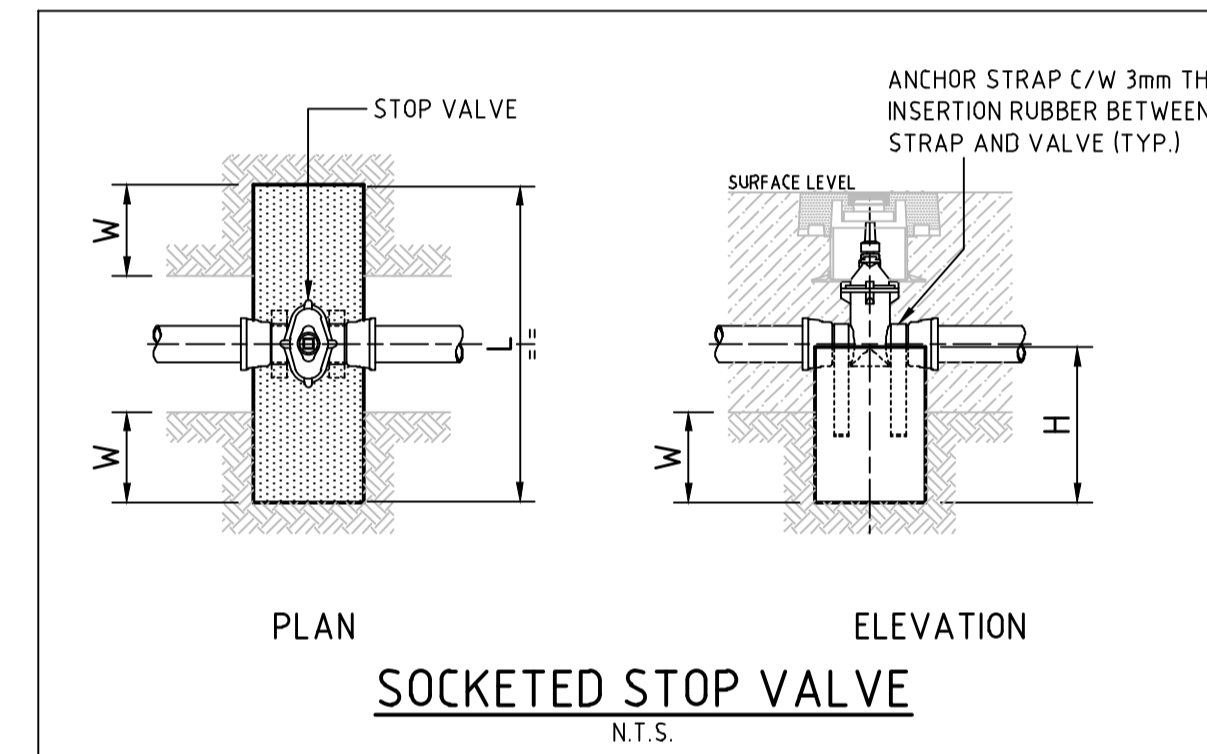
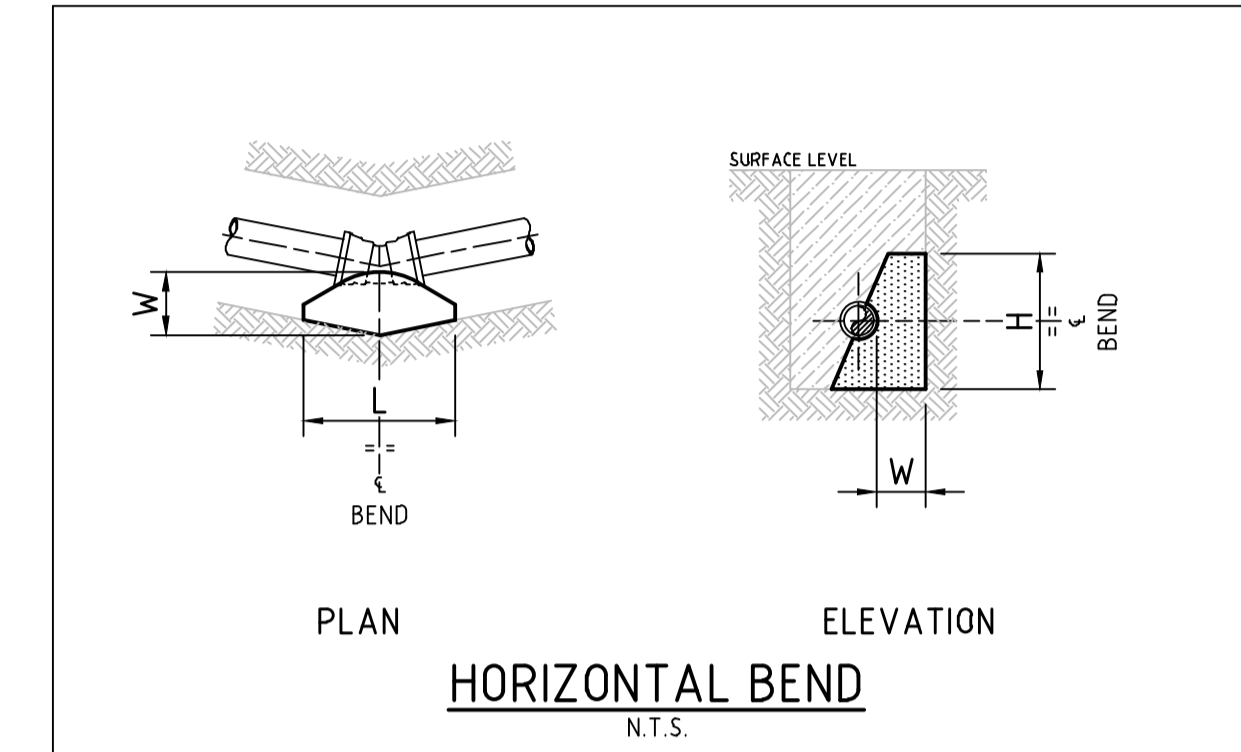
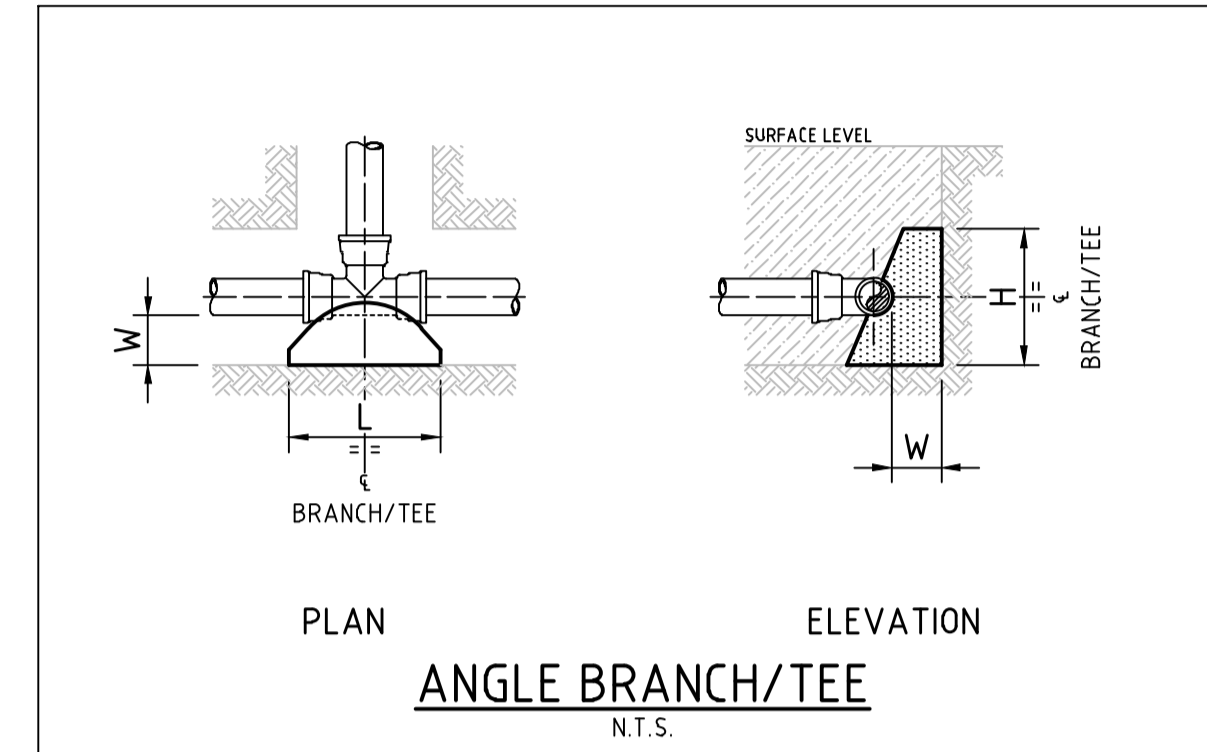
AS CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.
A	16.04.2021	PRELIMINARY ISSUE	T.S.	J.N.	T.S.	C.B.		Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	SEWER SERVICE CONNECTION DETAILS	239078(40)	- WAT -	008	4
B	22.04.2021	CLIENT COMMENTS	T.S.	R.J.	T.S.	R.J.									
C	26.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.									
0	27.04.2021	CONSTRUCTION ISSUE	T.S.	R.J.	T.S.	R.J.									
1	28.04.2021	ALTOGETHER COMMENTS	T.S.	R.J.	T.S.	R.J.									
2	01.05.2021	REMOVE DN400 POTABLE WATER MAIN DETAILS	G.S.	R.J.	T.S.	R.J.									
3	18.08.2021	AMENDED FOR SITE SETOUT	T.S.	R.J.	T.S.	R.J.									
4	03.11.2021	WORK AS CONSTRUCTED	I.B.	M.P.C.	T.S.	R.J.									

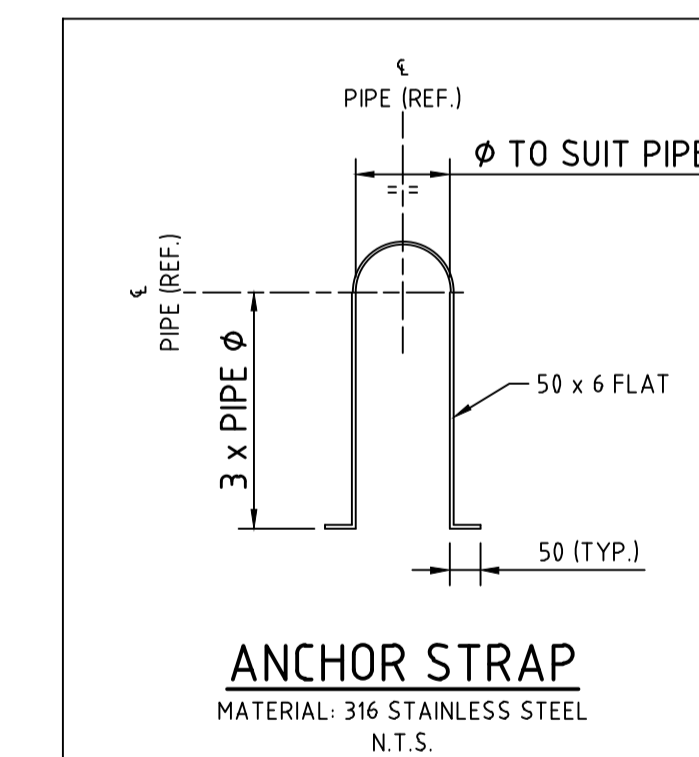


THRUST BLOCK NOTES:

- "N" DENOTES NOMINAL THRUST AREA TO BE ACHIEVED BY POURING CONCRETE THE FULL LENGTH OF THE FITTING AND EXTENDING FROM THE FLOOR OF THE TRENCH TO NOM. 100mm ABOVE THE FITTING.
- CONCRETE THRUST BLOCKS ARE TO BE PROVIDED FOR ALL FITTINGS IN ACCORDANCE WITH TABLE.
- THRUST BLOCK DIMENSIONS ARE BASED ON THE MINIMUM ALLOWABLE HORIZONTAL BEARING PRESSURES OF THE SOIL AS SHOWN. IF GROUND CONDITIONS ENCOUNTERED INDICATE THAT THESE BEARING PRESSURES MAY NOT BE ACHIEVED, THRUST BLOCK DESIGN IS TO BE REVISED.
- THRUST BLOCKS ARE TO BE CONSTRUCTED SUCH THAT THEY TRANSFER THE THRUST ONTO UNDISTURBED GROUND. THRUST BLOCKS ARE NOT TO INTERFERE WITH OTHER SERVICES.
- FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASUREMENT TO BE 180°.
- CONCRETE FOR THE THRUST BLOCKS TO BE GRADE S25 USING CEMENT TYPE "SR" TO AS3972. CONCRETE TO BE MECHANICALLY VIBRATED.
- CONCRETE THRUST BLOCKS ARE TO BE CURED FOR A MINIMUM OF 7 DAYS BEFORE BEING SUBJECTED TO ANY THRUST LOAD.
- REFER TO WAT-1205-V FOR GENERAL FITTING THRUST BLOCK ARRANGEMENTS.
- REFER TO WAT-1207-V FOR GENERAL VALVE AND VERTICAL BEND THRUST BLOCK ARRANGEMENTS.
- THRUST BLOCK TO EXTEND 300mm MINIMUM INTO BASE AND SIDE WALLS OF TRENCH.
- PROVIDE 3mm THK. INSERTION RUBBER BETWEEN ANCHOR STRAP AND PIPE BARREL.



TYPE	FITTING	SOIL AHP (kPa)	DESIGN STP (kPa)	THRUST	TA (m ²)	LENGTH (L)	HEIGHT (H)	WIDTH (W)
1	DN100 SOCKETED STOP VALVE	100	1500	18.00	0.18	1.05	0.44	0.30
2	DN100 FLUSHING HYDRANT	100	1500	18.00	0.18	0.45	0.40	0.30
3	DN200 x DN200 EQUAL TEE	100	1500	64.50	0.65	0.85	0.76	0.30
4	DN200 x DN100 TAPER	100	1500	46.50	0.47	1.20	0.78	0.30
5	DN200 x 90° HORIZONTAL BEND	100	1500	90.00	0.90	0.95	0.95	0.30
6	DN200 x 45° HORIZONTAL BEND	100	1500	49.50	0.50	0.75	0.66	0.30
7	DN200 SOCKETED STOP VALVE	100	1500	64.50	0.65	1.40	0.62	0.30
8	DN200 FLUSHING HYDRANT	100	1500	64.50	0.65	0.85	0.77	0.30



WORK AS CONSTRUCTED

THESE DRAWINGS ARE AN ACCURATE REPRESENTATION AS AT 11/10/2021 OF THE WORK-AS-CONSTRUCTED, BUT THE POSITION OF THE WORK RELATIVE TO OTHER STRUCTURES OR BOUNDARIES IS APPROXIMATE ONLY AND HAS NOT BEEN VERIFIED BY PRECISE SURVEY.

COMPANY NAME	DARACON	COMPANY NAME	
SIGNED	DATE	SIGNED	DATE
	REGISTERED SURVEYOR		CONSTRUCTION MANAGER

AS CONSTRUCTED

100mm AT FULL SIZE

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DESIGN FILE N:\	ALL DIMENSIONS ARE IN METRES. DO NOT SCALE		Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398
CLIENT			
PROPERTY DESCRIPTION PROPOSED SUBDIVISION PATRICK DRIVE LOTS WATAGAN PARK		PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION PLAN TITLE THRUST BLOCK DETAILS	
SURVEYED ADW Johnson	DATUM A.H.D.	PROJECT No. 239078(40)	DISCIPLINE - WAT -
		NUMBER 009	REV. 4