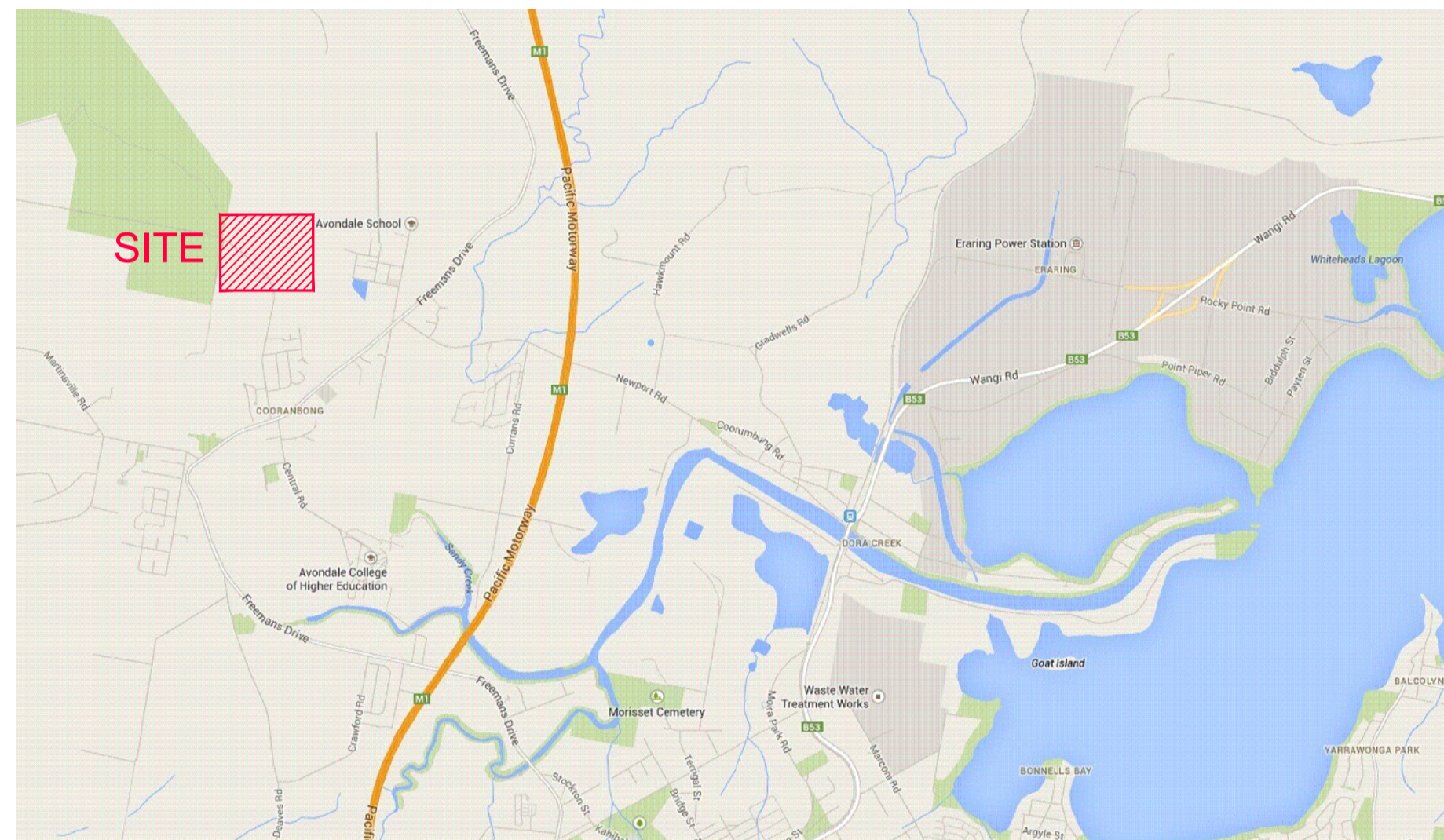
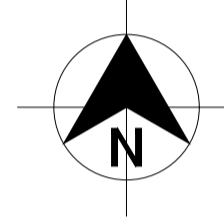




DIAL 1100
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POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION PROPOSED SUBDIVISION STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015



LOCALITY SKETCH
NOT TO SCALE

DRAWING INDEX	
DRAWING NUMBER	DRAWING TITLE
239078(2.3 & 2.5)-WAT-001	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
239078(2.3 & 2.5)-WAT-002	GENERAL NOTES
239078(2.3 & 2.5)-WAT-003	OVERALL SITE PLAN
239078(2.3 & 2.5)-WAT-004	POTABLE WATER DETAIL PLAN - SHEET 1
239078(2.3 & 2.5)-WAT-005	POTABLE WATER DETAIL PLAN - SHEET 2
239078(2.3 & 2.5)-WAT-006	POTABLE WATER DETAIL PLAN - SHEET 3
239078(2.3 & 2.5)-WAT-007	POTABLE WATER DETAIL PLAN - SHEET 4
239078(2.3 & 2.5)-WAT-008	POTABLE WATER DETAIL PLAN - SHEET 5
239078(2.3 & 2.5)-WAT-009	NOT USED
239078(2.3 & 2.5)-WAT-010	RECYCLED WATER DETAIL PLAN - SHEET 1
239078(2.3 & 2.5)-WAT-011	RECYCLED WATER DETAIL PLAN - SHEET 2
239078(2.3 & 2.5)-WAT-012	RECYCLED WATER DETAIL PLAN - SHEET 3
239078(2.3 & 2.5)-WAT-013	RECYCLED WATER DETAIL PLAN - SHEET 4
239078(2.3 & 2.5)-WAT-014	RECYCLED WATER DETAIL PLAN - SHEET 5
239078(2.3 & 2.5)-WAT-015	NOT USED
239078(2.3 & 2.5)-WAT-016	PRESSURE SEWER DETAIL PLAN - SHEET 1
239078(2.3 & 2.5)-WAT-017	PRESSURE SEWER DETAIL PLAN - SHEET 2
239078(2.3 & 2.5)-WAT-018	PRESSURE SEWER DETAIL PLAN - SHEET 3
239078(2.3 & 2.5)-WAT-019	PRESSURE SEWER DETAIL PLAN - SHEET 4
239078(2.3 & 2.5)-WAT-020	PRESSURE SEWER DETAIL PLAN - SHEET 5
239078(2.3 & 2.5)-WAT-021	NOT USED
239078(2.3 & 2.5)-WAT-022	TYPICAL PIPEWORK TRENCHING DETAILS
239078(2.3 & 2.5)-WAT-023	PIPEWORK CONNECTION DETAILS
239078(2.3 & 2.5)-WAT-024	TYPICAL SERVICE CONNECTION DETAILS
239078(2.3 & 2.5)-WAT-025	WASTEWATER COLLECTION TANK LEVEL DETAILS
239078(2.3 & 2.5)-WAT-026	ROAD CROSS SECTIONS - SHEET 1
239078(2.3 & 2.5)-WAT-027	ROAD CROSS SECTIONS - SHEET 2
239078(2.3 & 2.5)-WAT-028	ROAD CROSS SECTIONS - SHEET 3
239078(2.3 & 2.5)-WAT-029	ROAD CROSS SECTIONS - SHEET 4
239078(2.3 & 2.5)-WAT-030	THRUST BLOCK DETAILS

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.		 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 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX	
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.						
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.						
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.						
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.						
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.						
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.						
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.						



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GENERAL NOTES:

- THIS DRAWING SET WAS READ IN CONJUNCTION WITH LAKE MACQUARIE CITY COUNCIL STANDARDS AND OTHER ASSOCIATED DRAWINGS AND TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR LOCATED AND IDENTIFIED ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORK AND REPAIRED ANY DAMAGE CAUSED TO SUCH SERVICES DURING CONSTRUCTION.
- ALL PRODUCTS AND MATERIALS WERE NEW, AND COMPLIED WITH THE RELEVANT AUSTRALIAN STANDARDS AND WERE SELECTED FROM THE COORANBONG WATER APPROVED PRODUCTS AND MATERIALS REGISTER.
- DURING CONSTRUCTION ALL OPEN ENDS OF PIPES WERE CAPPED TO PREVENT ENTRY OF FOREIGN MATTER.
- ALL MAINS WERE FLUSHED WITH WATER TO REMOVE ANY DEBRIS PRIOR TO COMMISSIONING.
- SURFACE IDENTIFICATION MARKERS WERE PROVIDED TO COORANBONG WATER REQUIREMENTS.
- MAKE SMOOTH TRANSITION TO EXISTING INFRASTRUCTURE (ROAD PAVEMENT, KERBS, FOOTPATHS, ETC.) TO LAKE MACQUARIE CITY COUNCIL AND SUPERINTENDENT'S SATISFACTION.
- SUITABLE PROTECTION TO EXISTING INFRASTRUCTURE (ROAD PAVEMENT, KERBS, FOOTPATHS, ETC.) WAS PROVIDED DURING DURATION OF CONSTRUCTION.
- CLEAR VEHICULAR ACCESS TO ADJOINING PROPERTIES WAS MAINTAINED AT ALL TIMES FOR DURATION OF CONSTRUCTION. FOR ANY WORKS IN ADJOINING PROPERTIES, PERMISSION WAS OBTAINED PRIOR TO COMMENCEMENT.
- SERVICE CONDUITS WERE LAID AS DIRECTED BY THE SUPERINTENDENT/RELEVANT SERVICE AUTHORITY. LOCATE CLEAR OF VEHICULAR ACCESS LOCATIONS AND PROVIDE KERB MARKING AS PER COUNCIL REQUIREMENTS.
- WHERE LOT FILLING EXCEEDS 300mm, A SURVEY OF THE STRIPPED SURFACE AND FINAL FILLED SURFACE WAS UNDERTAKEN BY THE CONTRACTOR, WITH FILL DEPTHS NOTED ON W.A.C. PLANS.
- THE CONTRACTOR PROVIDED COORANBONG WATER WITH M.G.A. COORDINATED WORK AS CONSTRUCTED INFORMATION. BURIED FITTINGS WERE NOT BACKFILLED UNTIL WORK AS CONSTRUCTED DETAILS HAD BEEN OBTAINED AND APPROVAL FOR BACKFILLING WAS GIVEN BY THE COORANBONG WATER REPRESENTATIVE.
- ANY WORKS NOT COVERED BY THE SPECIFICATION OR THIS DRAWING SET WERE REFERRED TO THE SUPERINTENDENT.
- THE CONTRACTOR PROVIDED COORANBONG WATER AND HUNTER WATER WITH A MINIMUM OF 7 DAYS NOTICE (IN WRITING) OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE.
- ALL PIPE BEDDING MATERIAL COMPLIED WITH WSAA PRODUCT SPECIFICATION WSA-PS350 AND WSA PS351.

POTABLE WATER AND RECYCLED WATER NOTES:

- ALL WORKS ARE IN ACCORDANCE WITH BUT NOT LIMITED TO, WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1 (SYDNEY WATER EDITION 2012) AND FLOW SYSTEMS SUPPLEMENTARY MANUAL TO WSAA.
- WORKS WERE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS, CONSTRUCTION SPECIFICATION, WSA 03 PART 2 - CONSTRUCTION AND WSA 03 STANDARDS DRAWINGS AND WSA STANDARD DRAWINGS (SYDNEY WATER VERSION) OR AS MODIFIED BY FLOW SYSTEMS SUPPLEMENTARY MANUAL TO WSAA, CURRENT AT THE TIME OF CONSTRUCTION.
- CLEARANCES SHOWN TO OTHER PIPES HAVE BEEN CALCULATED FROM THE COLLAR.
- ALL PRODUCTS AND MATERIALS WERE SELECTED FROM THE COORANBONG WATER APPROVED PRODUCTS AND MATERIALS REGISTER.
- HYDRANTS, STOP VALVES AND ALL OTHER FITTINGS ARE THE SAME SIZE AS THE THROUGH WATER MAIN. ALL POTABLE & RECYCLED WATER VALVES ARE ANTI CLOCKWISE CLOSING.
- HYDRANTS WERE NOT POSITIONED IN DRIVEWAYS OR TAPPING POINTS. HYDRANTS NOMINALLY AT LEAST 5m FROM EACH BOUNDARY OR ON BOUNDARIES.
- ALL PIPES AND FITTINGS ARE AT HWC PREFERRED MINIMUM COVER (WAT-1201-V).
 - FOOTWAYS - 0.6m TYPE B EMBEDMENT WAT-1202.
 - ROADWAYS - 0.75m TYPE L EMBEDMENT WAT-1204-V.
- LAI D DETECTABLE MARKING TAPE OVER ALL MAINS AND PROPERTY SERVICE LINES AS PER WAT-1854-S AND WAT-1855-S ENSURING A CONTINUOUS ELECTRICAL PATHWAY ALONG THE TRACE WIRE ON EACH SERVICE FROM PROPERTY METERS TO AND ALONG THE RELEVANT MAIN TO HYDRANTS AND VALVES.
- GEOTECHNICAL CONDITIONS WERE ASSESSED DURING CONSTRUCTION BY THE CONTRACTOR IN ASSOCIATION WITH COORANBONG WATER SUPERINTENDENT TO DETERMINE MODIFICATIONS TO EMBEDMENT/TRENCH TYPE AND TRENCH DRAINAGE/BULKHEAD REQUIREMENTS.
- ALL POTABLE WATERMANS ARE PLAIN BLUE PVC-M (PN16).
- ALL RECYCLED WATERMANS ARE LILAC PVC-M (PN16).
- DIFFERENTIATION OF DRINKING (POTABLE) AND NON-DRINKING (RECYCLED) WATER SYSTEMS ARE AS PER WSA 03-2011, TABLE 4.1 WITH BOTH SERVICES BEING CLASSIFIED AS WATERMANS. RECYCLED WATERMAIN ARE LOWER THAN POTABLE WATERMAIN WITH MINIMUM 150mm VERTICAL CLEARANCE.
- THRUST BLOCK DETAILS REFER TO DRG-027.
- PROPERTY SERVICE CONNECTIONS WERE IN ACCORDANCE WITH WSA STANDARD DRAWINGS FOR DUAL WATER SUPPLY SYSTEMS(SYDNEY WATER VERSION)(SUPPLEMENT TO WSA 03-2011) AND FLOW SYSTEMS SUPPLEMENTARY MANUAL TO WSAA.
 - WAT-1853-S.
 - WAT-1854-FS.
 - WAT-1855-FS.
 - WAT-1856-S.
- PROPERTY SERVICE CONNECTIONS WERE INSTALLED BY A LICENSED PLUMBER AND COMPLY WITH N.S.W. CODE OF PRACTICE FOR PLUMBING AND DRAINAGE AND AS/NZ 3500.
- ALL MATERIALS USED IN PROPERTY SERVICES WERE IN ACCORDANCE WITH N.S.W. CODE OF PRACTICE FOR PLUMBING AND DRAINAGE AND AS/NZ 3500 (MINIMUM PN15), PE 80 B, PN16.
- ALL PROPERTY SERVICE PIPES FOR RECYCLED WATER ARE COLOURED BLACK WITH LILAC (P23) LONGITUDINAL STRIPE TO AS 2700. WHERE NOMINAL PIPE SIZE IS SPECIFIED, AN EQUIVALENT PIPE SIZE APPROPRIATE TO THE MATERIAL BEING USED AS SPECIFIED IN AS 3500, TABLE 1.1, PE 80 B, PN16. ALL PROPERTY SERVICE PIPES FOR POTABLE WATER ARE COLOURED BLACK WITH BLUE LONGITUDINAL STRIPE TO A.S.2700.
- MAXIMUM PIPE COVER WAS 1500mm UNLESS SPECIFIED ON THE DESIGN DRAWINGS OR APPROVAL WAS OBTAINED FROM THE COORANBONG WATER REPRESENTATIVE.
- ALL MAINS LAID IN TRAFFICABLE CARRIAGEWAYS WERE BACKFILLED WITH 16:1 STABILISED SAND CEMENT TO SUBGRADE LEVEL ONLY.
- THE MINIMUM NUMBER OF COMPACTION TESTS ARE AS FOLLOWS:

TRAFFICABLE

 - PIPE EMBEDMENT ZONE: 1 TEST/CROSSING.
 - TRENCHFILL ZONE: 1 TEST/CROSSING.

NON-TRAFFICABLE

 - PIPE EMBEDMENT ZONE: 1 TEST/100m.
 - TRENCHFILL ZONE: 1 TEST/100m.

TESTING WAS IN ACCORDANCE WITH WATER SUPPLY CODE OF AUSTRALIA TABLES 16.1 AND 17.1.
- POTABLE AND RECYCLED WATERMAIN FITTINGS ARE STAGGERED.
- MAXIMUM JOINT DEFLECTIONS WERE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- EACH PROPERTY SERVICE CONNECTION WERE FLUSHED AND LOCKED FOLLOWING PRESSURE TESTING.
- SCOUR VALVES WERE CONNECTED TO LOCAL STORMWATER SYSTEM.
- POTABLE WATER IS UTILISED FOR FIRE FIGHTING PURPOSES.
- PRESSURE TRANSMITTER TO BE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM AS PER COORANBONG WATER REQUIREMENTS.
- HYDRANT SURFACE BOXES ARE YELLOW (POTABLE WATER) AND LILAC (RECYCLED WATER).

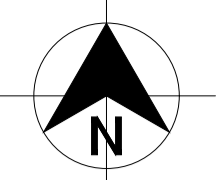
PRESSURE SEWER NOTES:

- ALL WORKS ARE IN ACCORDANCE WITH BUT NOT LIMITED TO PRESSURE SEWER CODE OF AUSTRALIA - WSA 07-2007, POLYETHYLENE PIPELINE CODE WSA 01-2004 AND FLOW SYSTEMS SUPPLEMENTARY MANUAL TO WSAA.
- WORKS WERE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND FLOW SYSTEMS STANDARD DRAWINGS REFERENCED IN FLOW SYSTEMS SUPPLEMENTARY MANUAL TO WSAA (TABLE 4.1)
 - FSI-1000-FS ON-LOT INFRASTRUCTURE INSTALLATION SET OUT DETAILS.
 - FSI-1001A-FS TYPICAL INFRASTRUCTURE STAGING DIAGRAM - TANK IN FRONT OF PROPERTY.
 - FSI-1001B-FS TYPICAL INFRASTRUCTURE STAGING DIAGRAM - TANK IN REAR OF PROPERTY.
 - FSI-1002-FS TYPICAL ON-LOT - WIRING DIAGRAM.
 - FSI-1003-FS TYPICAL WASTEWATER COLLECTION TANK CONTROL PANEL AND DMU ARRANGEMENT.
 - PSS-1004-FS WATER SERVICES DRAWING - EXAMPLE ONLY.
 - FSI-1005-FS INFRASTRUCTURE INSTALLATION RESPONSIBILITY.
 - PSS-1015-FS TYPICAL VALVE INSTALLATION ISOLATION.
 - PSS-1016A-FS STANDARD ABOVE GROUND AIR VALVE DETAILS.
 - PSS-1016B-FS STANDARD BELOW GROUND AIR VALVE DETAILS TO SUIT MAINS ≤ 90mm.
 - PSS-1017-FS FLUSHING POINTS.
 - PSS-1018-FS TYPICAL BRANCH CONNECTION DETAILS.
 - PSS-1111-FS TYPICAL ON PROPERTY LAYOUT AND SANITARY DRAINAGE DETAILS.
 - PSS-1112-FS PROPERTY BOUNDARY ASSEMBLY TYPICAL INSTALLATION.
 - PSS-1113-FS WASTEWATER COLLECTION TANK INSTALLATION REQUIREMENTS.
 - PSS-1114-FS POOL AND SPA DRAINAGE CONNECTION REQUIREMENTS.
 - WAT-1854-FS DUAL WATER RETICULATION SYSTEM SINGLE PROPERTY SERVICES PRE-LAID IN FOOTWAYS.
 - WAT-1855-FS DUAL WATER RETICULATION SYSTEM SPLIT PROPERTY SERVICES PRE-LAID IN FOOTWAYS.
- PRESSURE SEWER MAINS ARE BLACK POLYETHYLENE (PE100 PN16) WITH A CREAM STRIPE AS PER WSA 02-2007.
- ALL POLYETHYLENE MAINS WERE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
- ALL MAINS LAID IN TRAFFICABLE CARRIAGEWAYS WERE BACKFILLED WITH 16:1 STABILISED SAND CEMENT TO SUBGRADE LEVEL ONLY.
- ALL BENDS ARE ELECTROFUSION SWEEP BENDS.
- ALL HOUSE SERVICE LATERALS ARE DN40 PE 100 PN16.
- DETECTABLE MARKING TAPE WAS LAID ON TOP OF THE PIPE EMBEDMENT MATERIAL BEFORE BACKFILLING AND CONNECTED TO SURFACE FITTINGS.
- ALL SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS (ROADWAYS, PATHS) HAVE HEAVY DUTY SURROUNDS INSTALLED.
- ALL PRESSURE SEWER VALVES ARE RESILIENT SEATED SLUICE GATE VALVES (CLOCKWISE CLOSING) AND SHALL BE RESTRAINED IN ACCORDANCE WITH WAT-1207.
- ALL MAINS WERE TESTED (AS DIRECTED BY THE COORANBONG WATER REPRESENTATIVE) TO MEET CERTIFYING AUTHORITIES STANDARDS. ALL PRESSURE SEWER MAINS AND JOINTS WERE TESTED TO 1600kPa.
- FOR LOTS WITH TANKS IN THE REAR.
 - PROVIDED ø25 HEAVY DUTY ELECTRICAL CONDUIT (WITH DRAW WIRE) INSTALLED FROM THE COLLECTION TANK TO THE RECYCLED WATER METER.
 - PROVIDED ø25 HEAVY DUTY ELECTRICAL CONDUIT (WITH DRAW WIRE) INSTALLED FROM THE COLLECTION TANK TO THE POTABLE WATER METER.

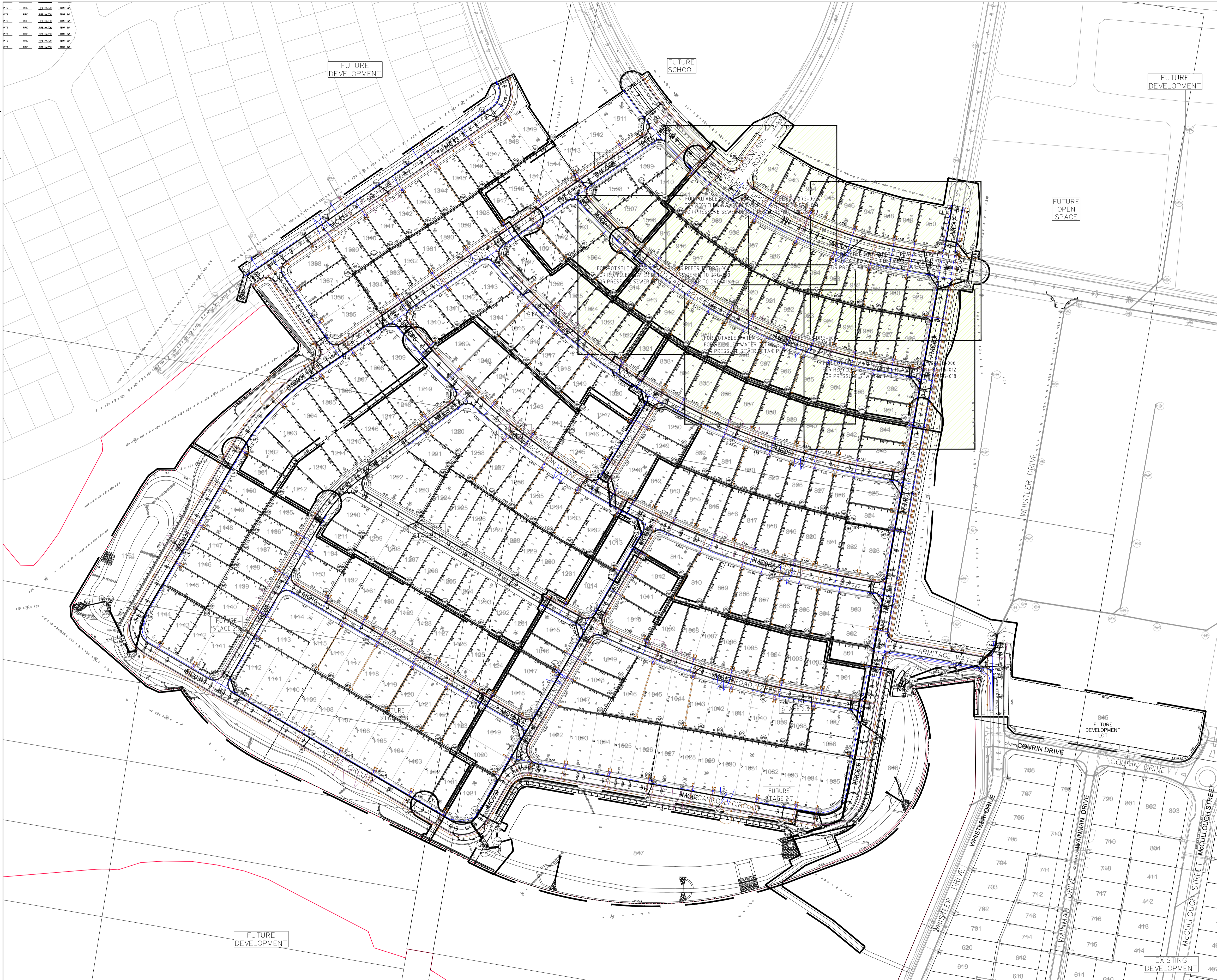
CONDUITS WERE LAID IN COMMON TRENCH WITH PRESSURE SEWER PIPEWORK. (REFER TO TYPICAL CONNECTION DETAIL, DRG-030).
- PRESSURE TRANSMITTER WAS INSTALLED AT SPECIFIC POINTS ARE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM AS PER COORANBONG WATER REQUIREMENTS.
- CONTRACTOR ENSURED THAT AIR VALVE OFFTAKE IS LOCATED AT A HIGH POINT IN THE MAIN. (I.E. THE MAIN GRADED DOWNWARDS EITHER SIDE OF THE AIR VALVE).
- FOR EMBEDMENT AND TRENCHFILL COMPACTION TEST REQUIREMENTS REFER TO THE PRESSURE SEWER CODE OF AUSTRALIA - SECTION 21.3. (REFER TO NOTE 9, POTABLE WATER AND RECYCLED WATER NOTES).
- NOT REQUIRED.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT		PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.	
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.		<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohanson.com.au www.adwjohanson.com.au ABN 62 129 445 398</p>		<p>PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015</p>	<p>POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION</p>	<p>GENERAL NOTES</p>	<p>239078(2.3 & 2.5)</p>	<p>- WAT -</p>	<p>002</p>	<p>WAC</p>	
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.											
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.											
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.											
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.											
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.											
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.											
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.											
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PLAN
SCALE 1:1500

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	
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O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

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O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

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CLIENT

JOHNSON
PROPERTY
GROUP

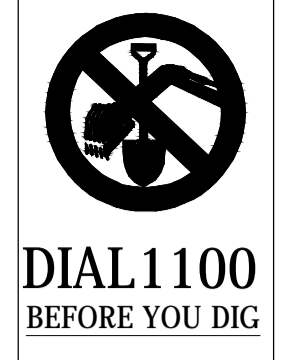
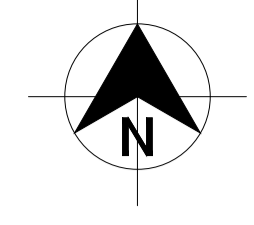
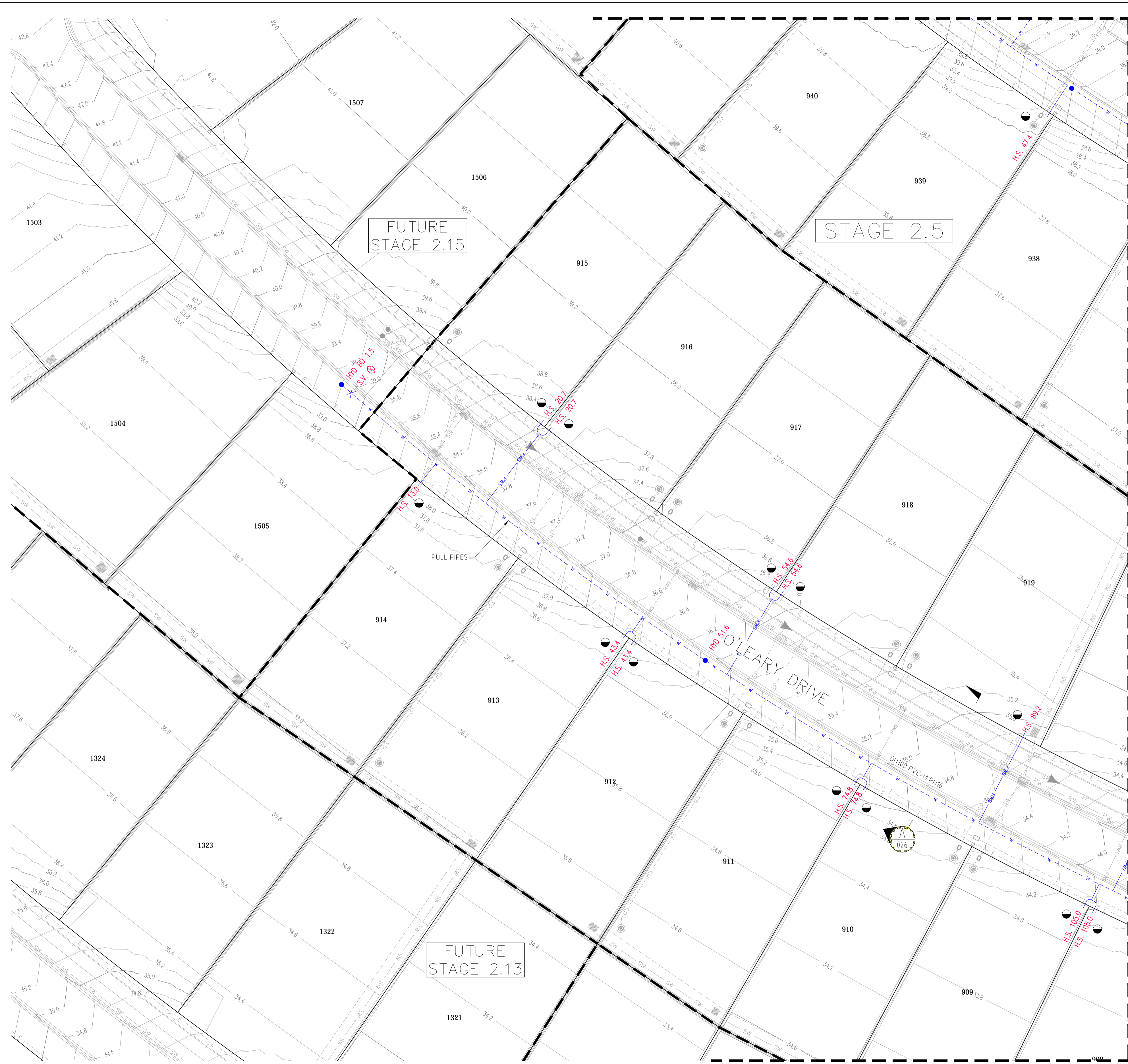
PROPERTY DESCRIPTION

PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED
ADW Johnson

DATUM
A.H.D.

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	OVERALL SITE PLAN		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	003	WAC



LEGEND

	PVC-M POTABLE WATER RETICULATION
	POTABLE WATER PROPERTY SERVICE
	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	PVC-M RECYCLED WATER RETICULATION
	RECYCLED WATER PROPERTY SERVICE
	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	PE PRESSURE SEWER RETICULATION
	PE PRESSURE SEWER MAIN
	TELSTRA
	UNDERGROUND POWER
	STORMWATER PIPEWORK
	STOP VALVE
	HYDRANT
	FLUSHING HYDRANT
	PROPERTY SERVICE CONNECTION
	EXISTING PROPERTY SERVICE CONNECTION
	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LIMIT OF SUBDIVISION WORKS

- POTABLE WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 50 CONNECTIONS
- SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 4 x SHORT SIDE
 - 4 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 11 x SHORT SIDE
 - 10 x LONG SIDE

POTABLE WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN200	PVC-M PN16	195.7
DN100	PVC-M PN16	674.5

- NOTES:**
- FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 TO 014.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN SCALE 1:250

WORK-AS-CONSTRUCTED

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B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALES
0 5 10 A1 / A3 1:250 / 1:500

adw Johnson

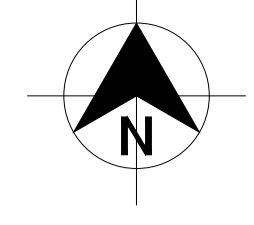
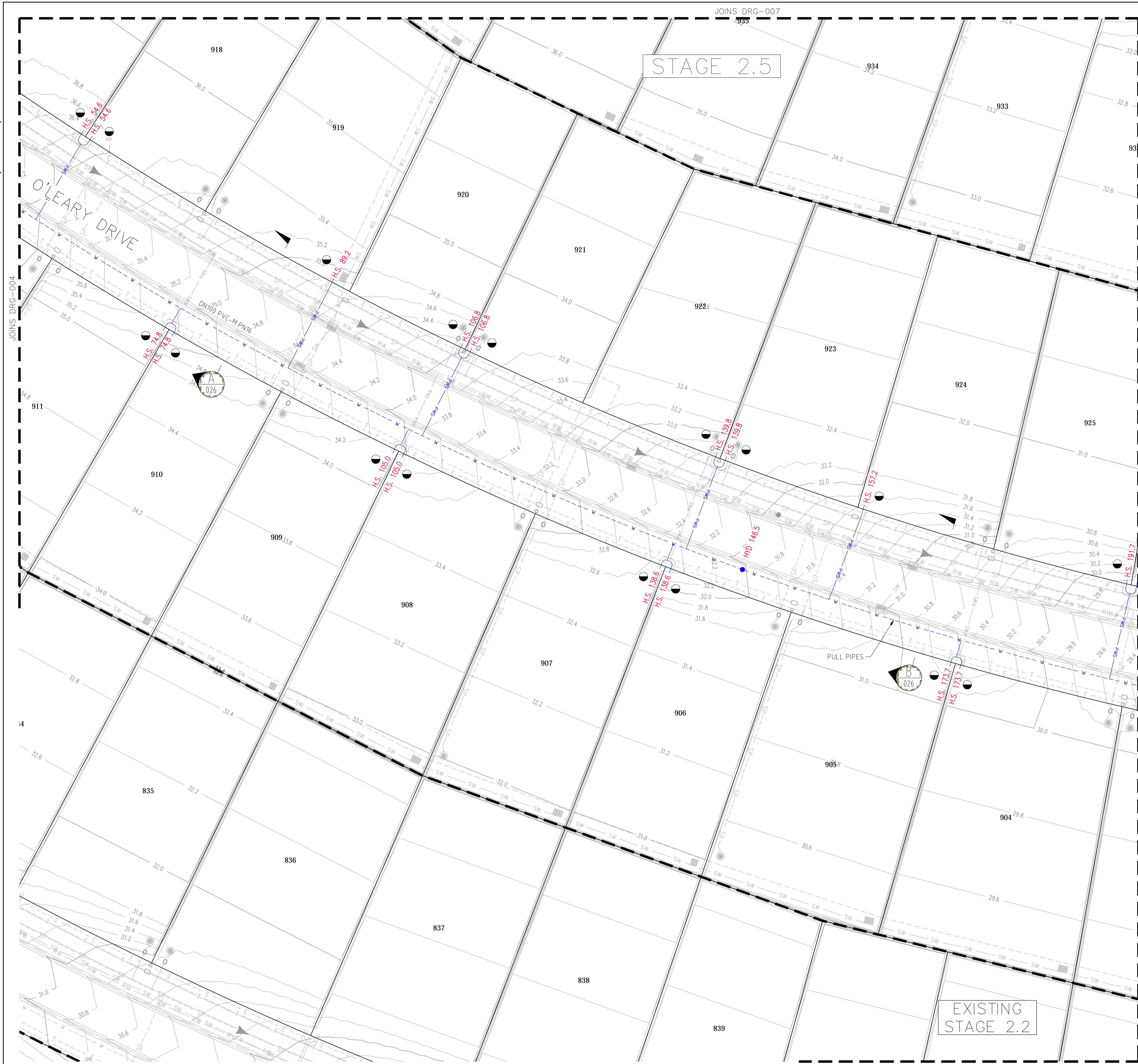
Hunter Office
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 Fax: (02) 4978 5199
 email: hunter@adwjohnson.com.au
 www.adwjohnson.com.au
 ABN 62 129 445 398

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	POTABLE WATER DETAIL PLAN - SHEET 1		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	004	WAC

239078(2.3 & 2.5)-WAT-004 WAC



LEGEND

W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
SP	PE PRESSURE SEWER RETICULATION
PSM	PE PRESSURE SEWER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
SV	STOP VALVE
HYD.	HYDRANT
FL HYD.	FLUSHING HYDRANT
○	PROPERTY SERVICE CONNECTION
⊗	EXISTING PROPERTY SERVICE CONNECTION
○	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
○	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- - -	LIMIT OF SUBDIVISION WORKS

- POTABLE WATER PROPERTY SERVICE CONNECTIONS**
 TOTAL 50 CONNECTIONS
 • SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 4 x SHORT SIDE
 - 4 x LONG SIDE
 • SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 11 x SHORT SIDE
 - 10 x LONG SIDE

POTABLE WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN200	PVC-M PN16	195.7
DN100	PVC-M PN16	674.5

- NOTES:**
 1. FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 TO 014.
 2. FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 3. FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN
 SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

DRAWN	CHECK	DESIGN	VERIFY	SCALES
J.N.	L.G.	J.N.	L.G.	0 5 10 A1 / A3 1:250 / 1:500

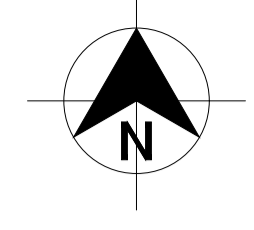
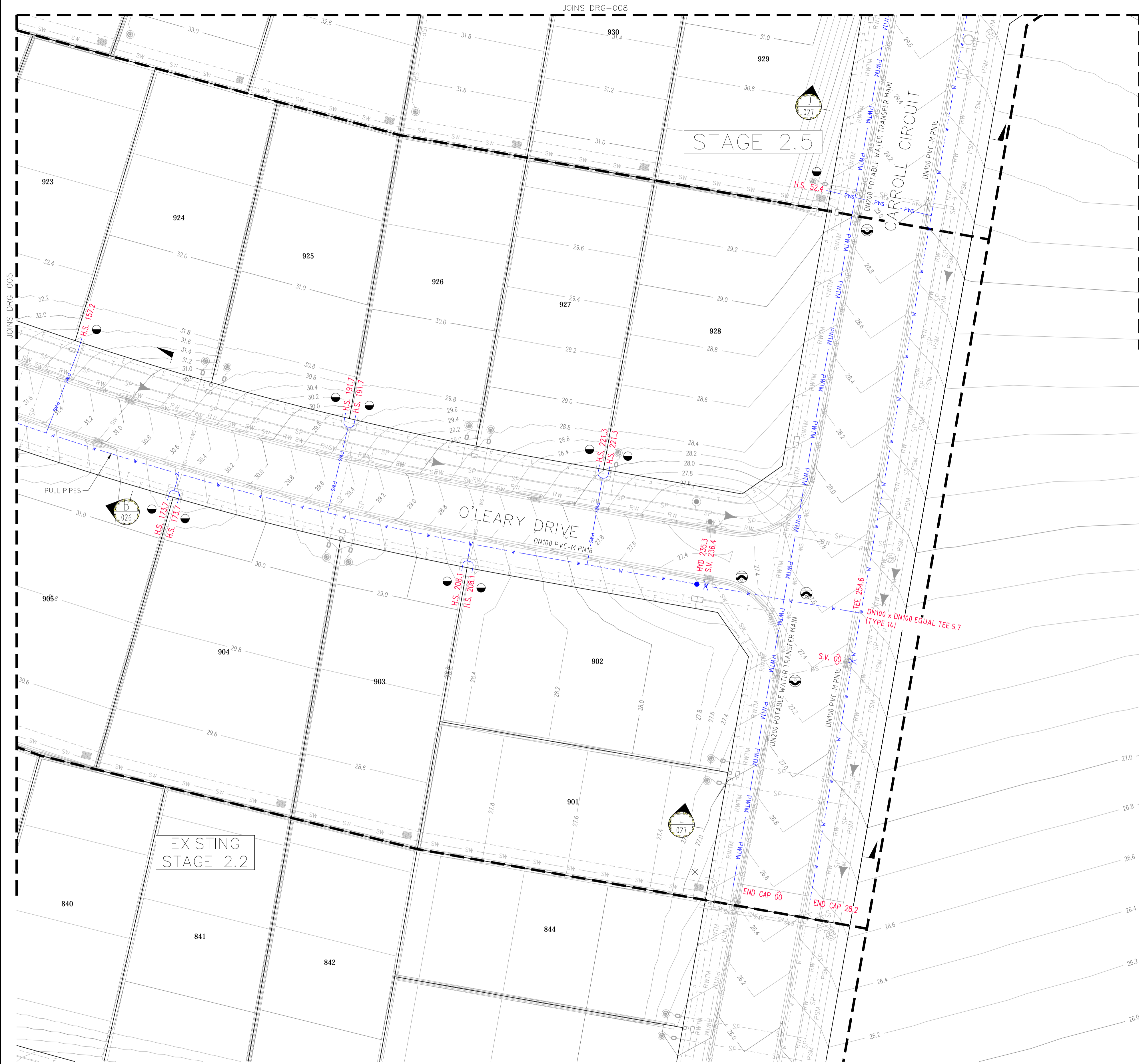
adw Johnson

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 ABN 62 129 445 398

JOHNSON PROPERTY GROUP

CLIENT
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROPERTY DESCRIPTION	PROJECT	DISCIPLINE	NUMBER	REV.
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	POTABLE WATER DETAIL PLAN - SHEET 2	WAT	005	WAC



DIAL 1100
BEFORE YOU DIG

LEGEND

	PVC-M POTABLE WATER RETICULATION
	POTABLE WATER PROPERTY SERVICE
	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	PVC-M RECYCLED WATER RETICULATION
	RECYCLED WATER PROPERTY SERVICE
	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	PE PRESSURE SEWER RETICULATION
	PE PRESSURE SEWER MAIN
	TELSTRA
	UNDERGROUND POWER
	STORMWATER PIPEWORK
	STOP VALVE
	HYDRANT
	FLUSHING HYDRANT
	PROPERTY SERVICE CONNECTION
	EXISTING PROPERTY SERVICE CONNECTION
	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LIMIT OF SUBDIVISION WORKS

- POTABLE WATER PROPERTY SERVICE CONNECTIONS**
TOTAL 50 CONNECTIONS
- SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 4 x SHORT SIDE
 - 4 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 11 x SHORT SIDE
 - 10 x LONG SIDE

POTABLE WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN200	PVC-M PN16	195.7
DN100	PVC-M PN16	674.5

- NOTES:**
- FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 TO 014.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN
SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

DRAWN	CHECK	DESIGN	VERIFY	SCALES
J.N.	L.G.	J.N.	L.G.	0 5 10 A1 / A3 1:250 / 1:500

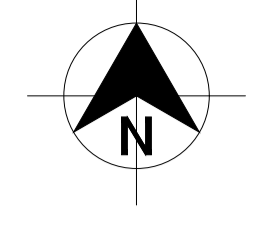
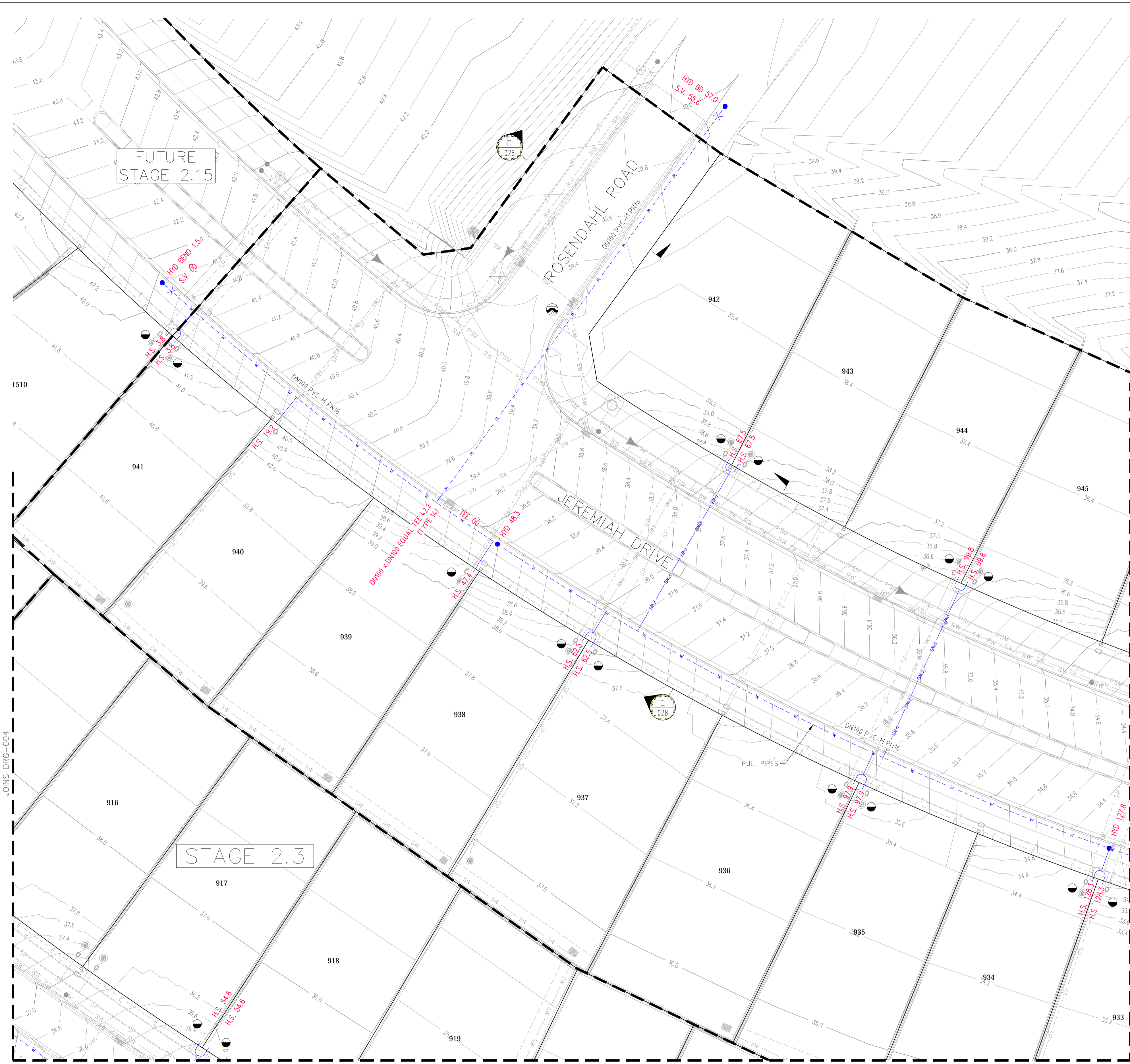
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www.adwjohanson.com.au
ABN 62 129 445 398

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION	
PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	
SURVEYED	DATUM
ADW Johnson	A.H.D.

PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION			
PLAN TITLE POTABLE WATER DETAIL PLAN - SHEET 3			
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	006	WAC



LEGEND

W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
SP	PE PRESSURE SEWER RETICULATION
PSM	PE PRESSURE SEWER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
SV	STOP VALVE
HYD.	HYDRANT
FL HYD.	FLUSHING HYDRANT
●	PROPERTY SERVICE CONNECTION
⊗	EXISTING PROPERTY SERVICE CONNECTION
○	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
○	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- - -	LIMIT OF SUBDIVISION WORKS

- POTABLE WATER PROPERTY SERVICE CONNECTIONS**
 TOTAL 50 CONNECTIONS
 • SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 4 x SHORT SIDE
 - 4 x LONG SIDE
 • SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 11 x SHORT SIDE
 - 10 x LONG SIDE

POTABLE WATER PIPE DATA

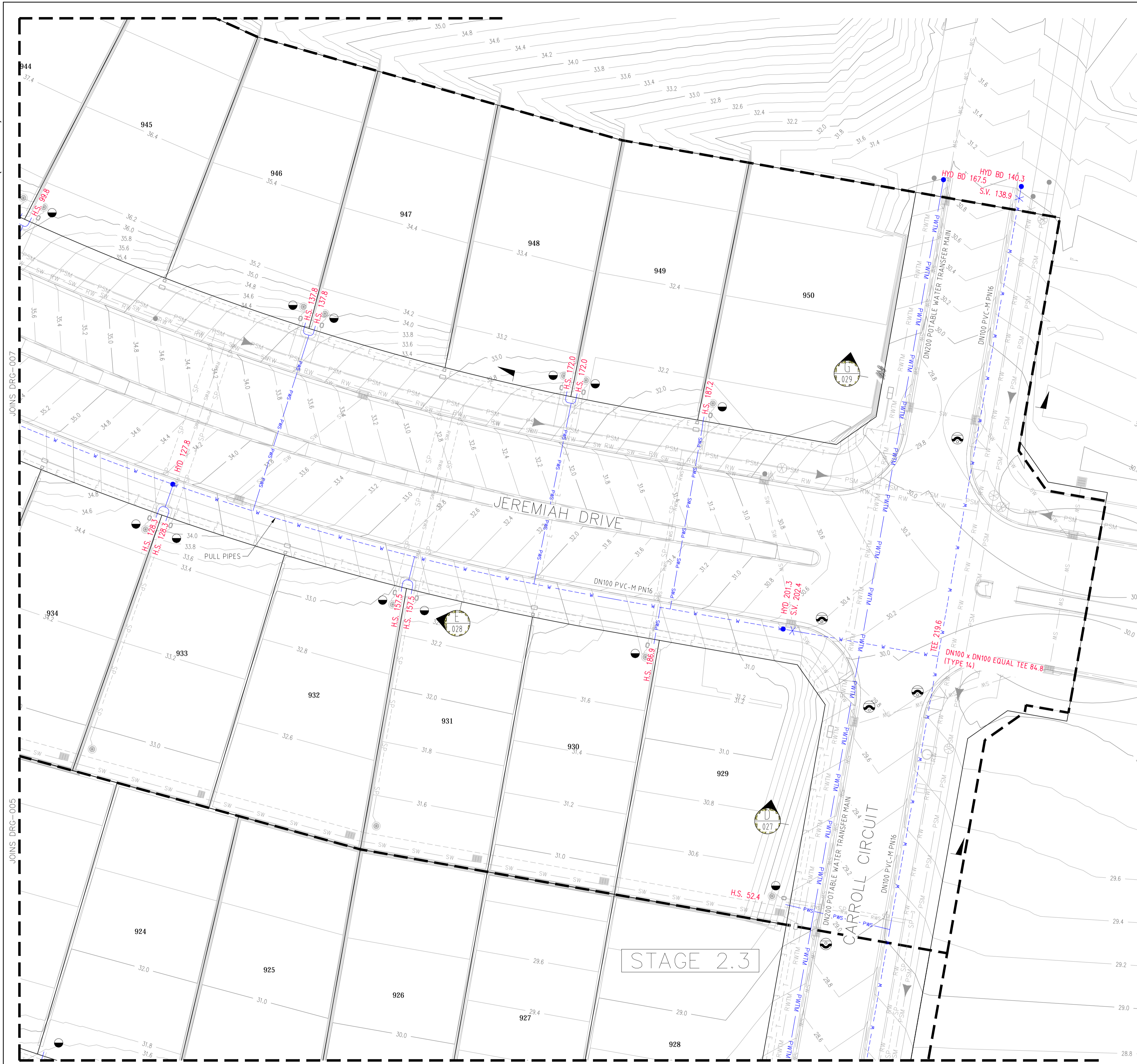
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN200	PVC-M PN16	195.7
DN100	PVC-M PN16	674.5

- NOTES:**
 1. FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 TO 014.
 2. FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 3. FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN SCALE 1:250

WORK-AS-CONSTRUCTED

<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>AMENDMENT</th> <th>DRAWN</th> <th>CHECK</th> <th>DESIGN</th> <th>VERIFY</th> <th>SCALES</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.05.2015</td> <td>PRELIMINARY ISSUE</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> <td rowspan="2"> A1 / A3 1:250 / 1:500 </td> </tr> <tr> <td>B</td> <td>31.07.2015</td> <td>AMENDED ISSUE</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>C</td> <td>19.08.2015</td> <td>AMENDED ISSUE - FLOW SYSTEMS COMMENTS</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>D</td> <td>25.09.2015</td> <td>AMENDED ISSUE - RETAINING WALLS RELOCATED</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>E</td> <td>30.10.2015</td> <td>AMENDED ISSUE - PROPERTY SERVICES RELOCATED</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>O</td> <td>18.11.2015</td> <td>CONSTRUCTION ISSUE</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>1</td> <td>08.02.2013</td> <td>AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED</td> <td>J.N.</td> <td>L.G.</td> <td>J.N.</td> <td>L.G.</td> </tr> <tr> <td>WAC</td> <td>13.09.2016</td> <td>WORK AS CONSTRUCTED - RAR</td> <td>A.S.A.</td> <td></td> <td></td> <td>B.K.</td> </tr> </tbody> </table>	REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	A1 / A3 1:250 / 1:500	B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	<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>	<p>CLIENT</p>	<p>PROPERTY DESCRIPTION</p> PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	<p>PROJECT</p> POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION
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WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.																																																															
<p>DESIGN FILE N: \</p>	<p>PLAN TITLE</p> POTABLE WATER DETAIL PLAN - SHEET 4	<p>PROJECT No.</p> 239078(2.3 & 2.5)	<p>DISCIPLINE</p> - WAT -	<p>NUMBER</p> 007	<p>REV.</p> WAC																																																																



PLAN
SCALE 1:250

LEGEND

W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
SP	PE PRESSURE SEWER RETICULATION
PSM	PE PRESSURE SEWER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
SV	STOP VALVE
HYD.	HYDRANT
FL HYD.	FLUSHING HYDRANT
●	PROPERTY SERVICE CONNECTION
⊗	EXISTING PROPERTY SERVICE CONNECTION
⊙	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
⊕	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- - -	LIMIT OF SUBDIVISION WORKS

- POTABLE WATER PROPERTY SERVICE CONNECTIONS**
 TOTAL 50 CONNECTIONS
 • SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 4 x SHORT SIDE
 - 4 x LONG SIDE
 • SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 11 x SHORT SIDE
 - 10 x LONG SIDE

POTABLE WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN200	PVC-M PN16	195.7
DN100	PVC-M PN16	674.5

- NOTES:**
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WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
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WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALE
0 5 10 A1 / A3 1:250 / 1:500

adw Johnson

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 ABN 62 129 445 398

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION	PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015
SURVEYED	ADW Johnson
DATUM	A.H.D.

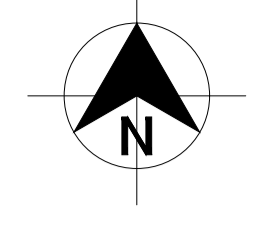
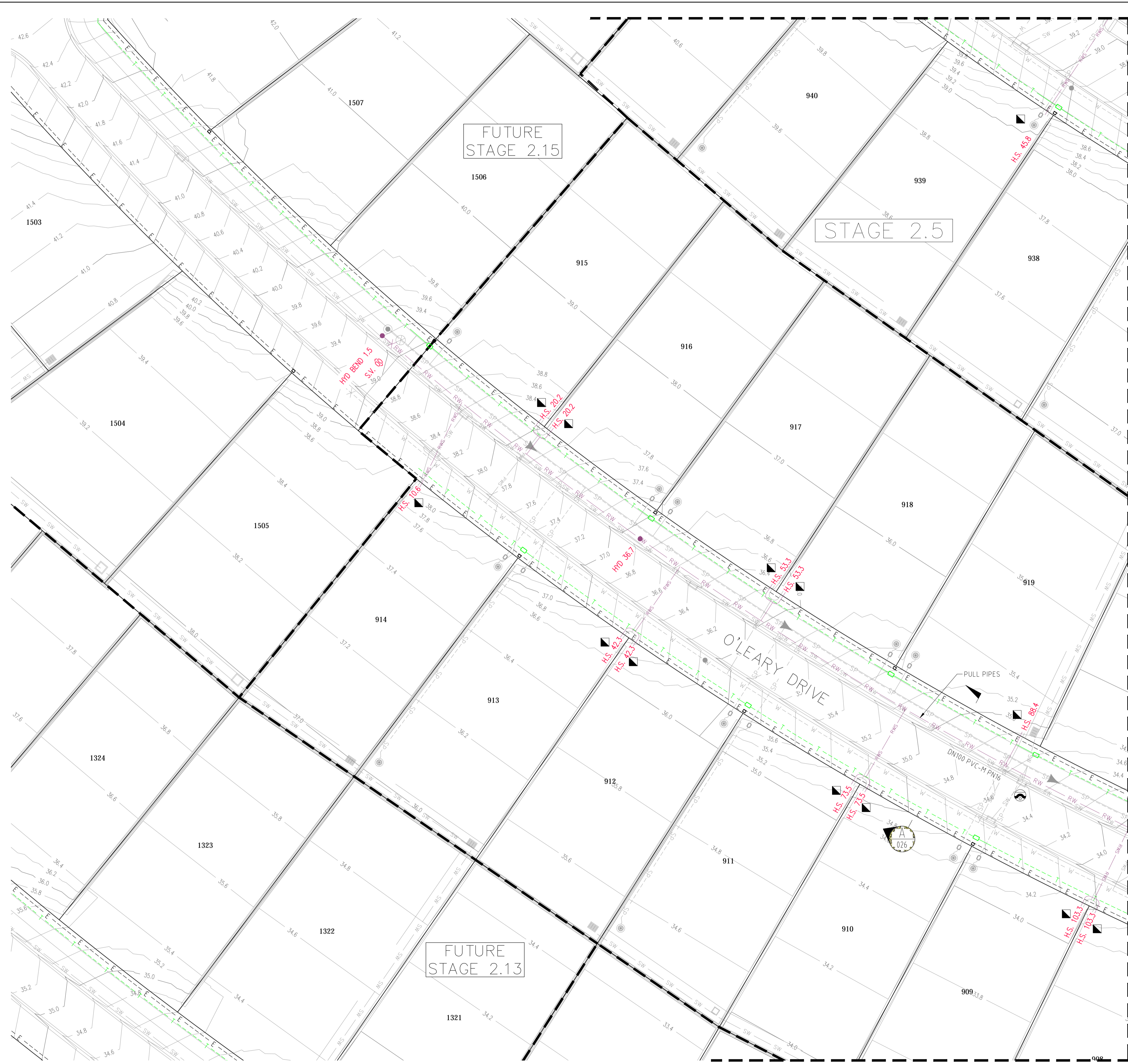
PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	POTABLE WATER DETAIL PLAN - SHEET 5		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	008	WAC



DIAL 1100
BEFORE YOU DIG

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT		PROPERTY DESCRIPTION	PROJECT	DISCIPLINE	NUMBER	REV.			
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.		 <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>	 <p>JOHNSON PROPERTY GROUP</p>	<p>PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015</p>	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION						
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.											
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.											
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1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.											
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.		J.N.	B.K.											
DESIGN FILE N:\								ALL DIMENSIONS ARE IN METRES. DO NOT SCALE		SURVEYED ADW Johnson		DATUM A.H.D.		PROJECT No. 239078(2.3 & 2.5)	DISCIPLINE - WAT -	NUMBER 009	REV. WAC



LEGEND

	RW	PVC-M RECYCLED WATER RETICULATION
	RWS	RECYCLED WATER PROPERTY SERVICE
	RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	W	PVC-M POTABLE WATER RETICULATION
	PWS	POTABLE WATER PROPERTY SERVICE
	PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	SP	PE PRESSURE SEWER RETICULATION
	PSM	PE SEWER PRESSURE MAIN
	T	TELSTRA
	E	UNDERGROUND POWER
	S/W	STORMWATER PIPEWORK
	SV	STOP VALVE
	HYD	HYDRANT
	FL HYD	FLUSHING HYDRANT
		PROPERTY SERVICE CONNECTION
		EXISTING PROPERTY SERVICE CONNECTION
		LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LIMIT OF SUBDIVISION WORKS

- RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 50 CONNECTIONS
 - SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 3 x SHORT SIDE
 - 5 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 10 x SHORT SIDE
 - 11 x LONG SIDE

RECYCLED WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PVC-M PN16	202.4
DN100	PVC-M PN16	679.3

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	A1 / A3 1:250 / 1:500
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

DRAWN	CHECK	DESIGN	VERIFY	SCALES
J.N.	L.G.	J.N.	L.G.	ALL DIMENSIONS ARE IN METRES. DO NOT SCALE
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	
J.N.	L.G.	J.N.	L.G.	

adw Johnson

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 ABN 62 129 445 398

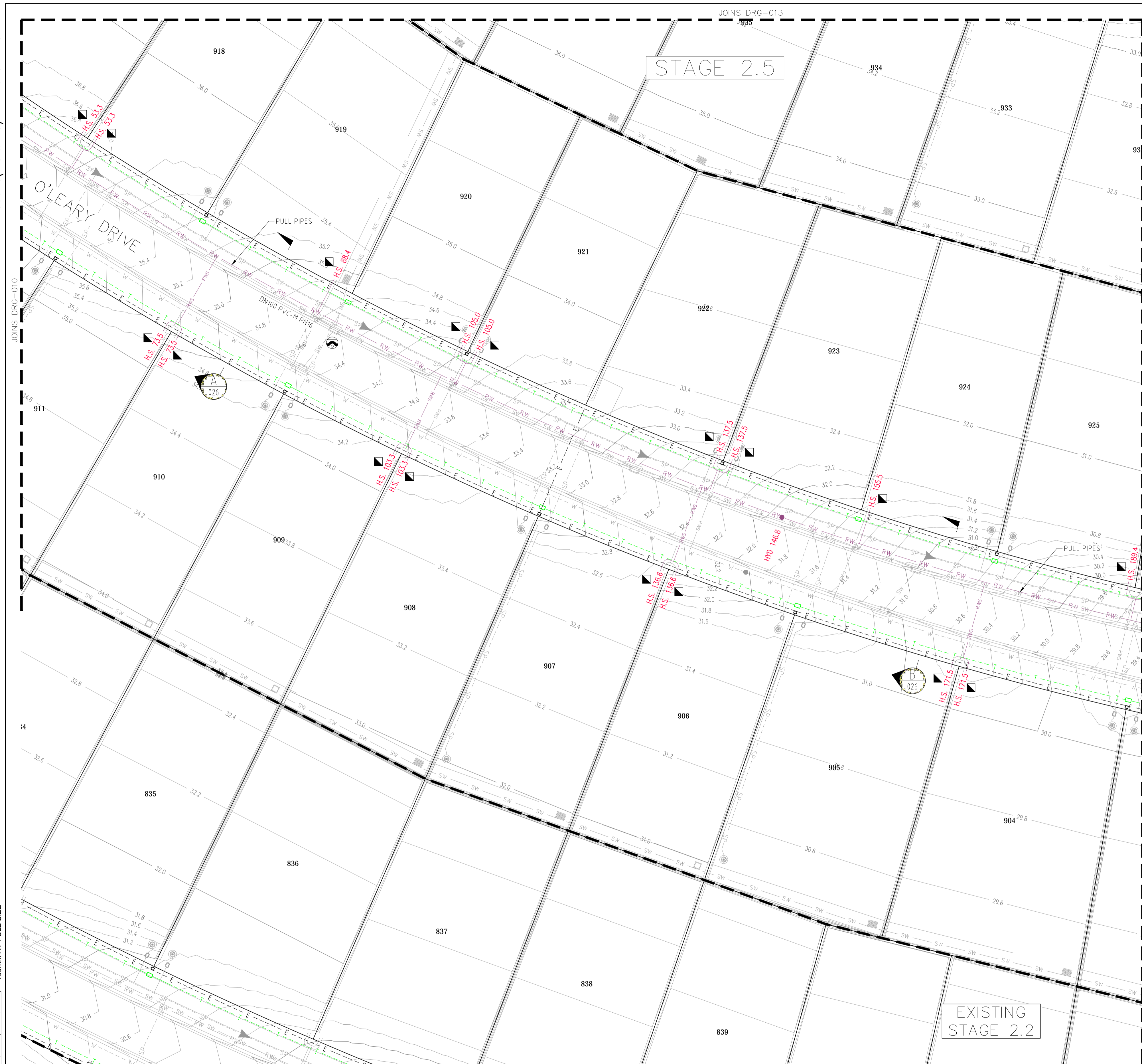
JOHNSON PROPERTY GROUP

CLIENT

PROPERTY DESCRIPTION
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	RECYCLED WATER DETAIL PLAN - SHEET 1	239078(2.3 & 2.5)	- WAT -	010	WAC

239078(2.3 & 2.5)-WAT-010 WAC



PLAN
SCALE 1:250

LEGEND

	PVC-M RECYCLED WATER RETICULATION
	RECYCLED WATER PROPERTY SERVICE
	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	PVC-M POTABLE WATER RETICULATION
	POTABLE WATER PROPERTY SERVICE
	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	PE PRESSURE SEWER RETICULATION
	PE SEWER PRESSURE MAIN
	TELSTRA
	UNDERGROUND POWER
	STORMWATER PIPEWORK
	STOP VALVE
	HYDRANT
	FLUSHING HYDRANT
	PROPERTY SERVICE CONNECTION
	EXISTING PROPERTY SERVICE CONNECTION
	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
	LIMIT OF SUBDIVISION WORKS

- RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
TOTAL 50 CONNECTIONS
- SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 3 x SHORT SIDE
 - 5 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 10 x SHORT SIDE
 - 11 x LONG SIDE

RECYCLED WATER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PVC-M PN16	202.4
DN100	PVC-M PN16	679.3

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRCS-004 TO 008.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRCS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

100mm AT FULL SIZE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

DRAWN	CHECK	DESIGN	VERIFY	SCALES
J.N.	L.G.	J.N.	L.G.	0 5 10 A1 / A3 1:250 / 1:500

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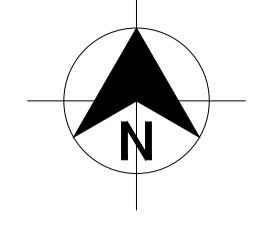
Hunter Office
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ABN 62 129 445 398

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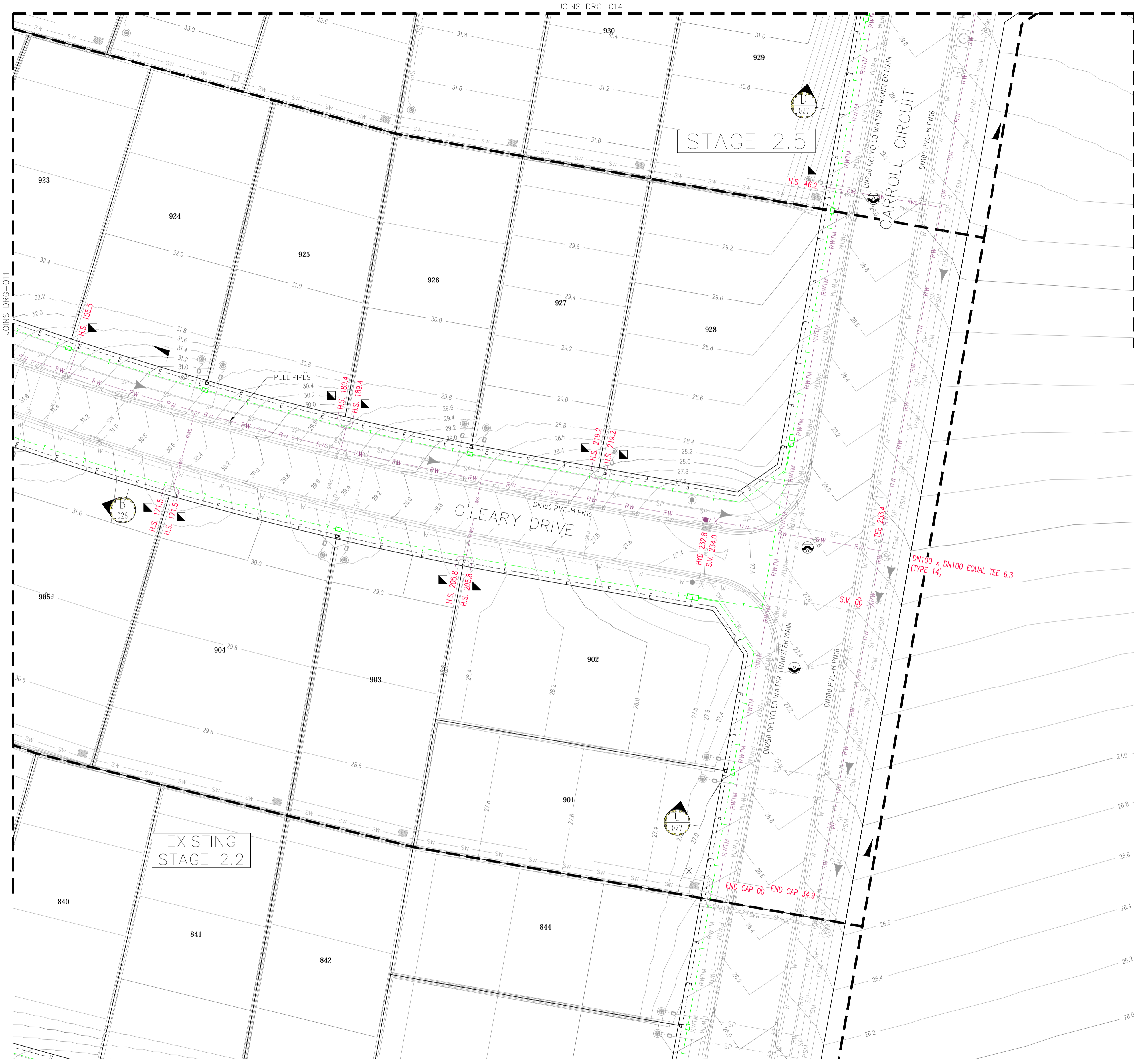
JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	RECYCLED WATER DETAIL PLAN - SHEET 2		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	011	WAC



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LEGEND

	RW	PVC-M RECYCLED WATER RETICULATION
	RWS	RECYCLED WATER PROPERTY SERVICE
	RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	W	PVC-M POTABLE WATER RETICULATION
	PWS	POTABLE WATER PROPERTY SERVICE
	PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	SP	PE PRESSURE SEWER RETICULATION
	PSM	PE SEWER PRESSURE MAIN
	T	TELSTRA
	E	UNDERGROUND POWER
	S/W	STORMWATER PIPEWORK
	SV	STOP VALVE
	HYD.	HYDRANT
	FL HYD.	FLUSHING HYDRANT
		PROPERTY SERVICE CONNECTION
		EXISTING PROPERTY SERVICE CONNECTION
		LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LIMIT OF SUBDIVISION WORKS

- RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 50 CONNECTIONS
- SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 3 x SHORT SIDE
 - 5 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 10 x SHORT SIDE
 - 11 x LONG SIDE

RECYCLED WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PVC-M PN16	202.4
DN100	PVC-M PN16	679.3

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN
SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

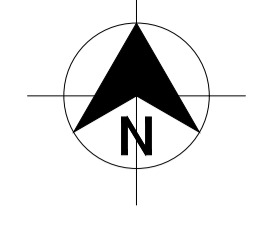
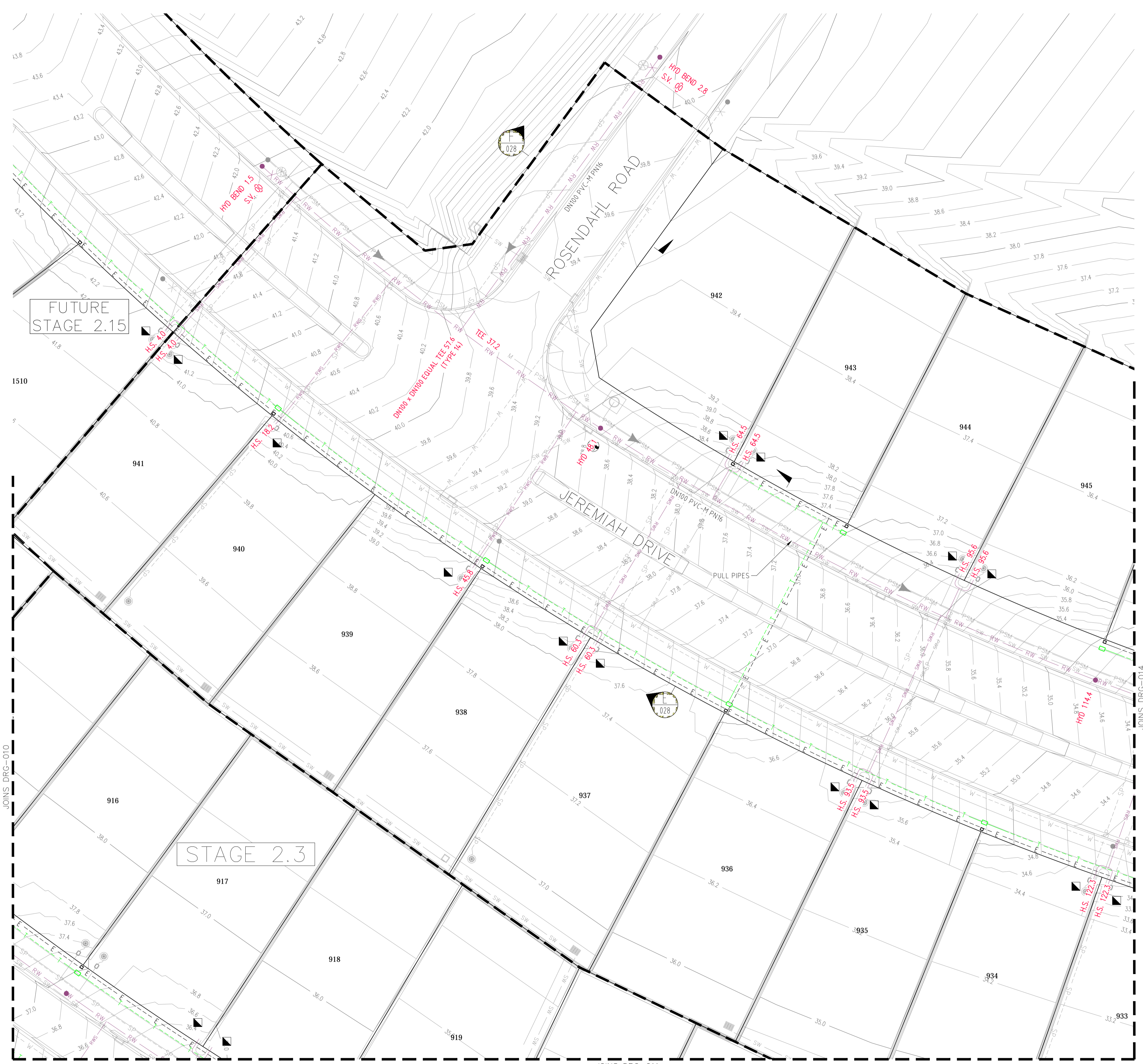
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ABN 62 129 445 398

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	RECYCLED WATER DETAIL PLAN - SHEET 3		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	012	WAC



LEGEND

	RW	PVC-M RECYCLED WATER RETICULATION
	RWS	RECYCLED WATER PROPERTY SERVICE
	RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	W	PVC-M POTABLE WATER RETICULATION
	PWS	POTABLE WATER PROPERTY SERVICE
	PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	SP	PE PRESSURE SEWER RETICULATION
	PSM	PE SEWER PRESSURE MAIN
	T	TELSTRA
	E	UNDERGROUND POWER
	S/W	STORMWATER PIPEWORK
	SV	STOP VALVE
	HYD.	HYDRANT
	FL HYD.	FLUSHING HYDRANT
		PROPERTY SERVICE CONNECTION
		EXISTING PROPERTY SERVICE CONNECTION
		LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LIMIT OF SUBDIVISION WORKS

- RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 50 CONNECTIONS
 - SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 3 x SHORT SIDE
 - 5 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 10 x SHORT SIDE
 - 11 x LONG SIDE

RECYCLED WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PVC-M PN16	202.4
DN100	PVC-M PN16	679.3

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRGS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

PLAN SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	A1 / A3 1:250 / 1:500
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

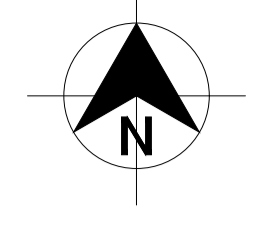
		Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398
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CLIENT 	PROPERTY DESCRIPTION PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015
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SURVEYED ADW Johnson	DATUM A.H.D.
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PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	PLAN TITLE RECYCLED WATER DETAIL PLAN - SHEET 4
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PROJECT No. 239078(2.3 & 2.5)	DISCIPLINE - WAT -	NUMBER 013	REV. WAC
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LEGEND

	RW	PVC-M RECYCLED WATER RETICULATION
	RWS	RECYCLED WATER PROPERTY SERVICE
	RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
	W	PVC-M POTABLE WATER RETICULATION
	PWS	POTABLE WATER PROPERTY SERVICE
	PWTM	DN200 PVC-M POTABLE WATER TRANSFER MAIN
	SP	PE PRESSURE SEWER RETICULATION
	PSM	PE SEWER PRESSURE MAIN
	T	TELSTRA
	E	UNDERGROUND POWER
	S/W	STORMWATER PIPEWORK
	SV	STOP VALVE
	HYD.	HYDRANT
	FL HYD.	FLUSHING HYDRANT
		PROPERTY SERVICE CONNECTION
		EXISTING PROPERTY SERVICE CONNECTION
		LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
		LIMIT OF SUBDIVISION WORKS

- RECYCLED WATER PROPERTY SERVICE CONNECTIONS**
- TOTAL 50 CONNECTIONS
- SINGLE SERVICES IN ACCORDANCE WITH WAT-1106-V
 - 3 x SHORT SIDE
 - 5 x LONG SIDE
 - SPLIT SERVICES IN ACCORDANCE WITH WAT-1107-V
 - 10 x SHORT SIDE
 - 11 x LONG SIDE

RECYCLED WATER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PVC-M PN16	202.4
DN100	PVC-M PN16	679.3

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRCS-004 TO 008.
 - FOR PRESSURE SEWER PIPEWORK DETAIL PLANS REFER TO DRCS-016 TO 020.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
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D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALE
0 5 10 A1 / A3 1:250 / 1:500

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ABN 62 129 445 398

JOHNSON PROPERTY GROUP

CLIENT

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

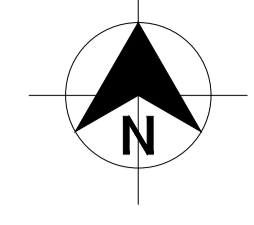
PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	RECYCLED WATER DETAIL PLAN - SHEET 5		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	014	WAC



DIAL 1100
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WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT		PROPERTY DESCRIPTION	PROJECT	DISCIPLINE	NUMBER	REV.			
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.		 <p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohanson.com.au www.adwjohanson.com.au ABN 62 129 445 398</p>	 <p>JOHNSON PROPERTY GROUP</p>	<p>PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015</p>	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION						
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.											
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.											
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.											
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.											
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.											
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.											
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.		J.N.	B.K.											
DESIGN FILE N:\								ALL DIMENSIONS ARE IN METRES. DO NOT SCALE		SURVEYED ADW Johnson		DATUM A.H.D.		PROJECT No. 239078(2.3 & 2.5) - WAT - 015		REV. WAC	



LEGEND

SP	PE PRESSURE SEWER RETICULATION
PSM	PE SEWER PRESSURE MAIN
W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN250 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
IV	ISOLATION VALVE
FP	FLUSHING POINT
WWT	WASTEWATER COLLECTION TANK AND BOUNDARY KIT
▲	PRESSURE SEWER FLOW DIRECTION
■	PROPERTY SERVICE CONNECTION
○	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
○	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- - - - -	LIMIT OF SUBDIVISION WORKS

■ PRESSURE SEWER PROPERTY SERVICE CONNECTIONS
 TOTAL 51 CONNECTIONS
 • SINGLE SERVICES
 - 23 x SHORT SIDE
 - 28 x LONG SIDE

PRESSURE SEWER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PE100 PN16	169.4
DN180	PE100 PN16	214
DN160	PE100 PN16	36
DN125	PE100 PN16	14
DN63	PE100 PN16	153
DN50	PE100 PN16	175

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 AND 014.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.
 - FOR FLUSHING POINT TYPICAL DETAILS REFER TO STANDARD DRAWING PSS-1017-FS.
 - CONTRACTOR MAY BEND POLYETHYLENE PIPEWORK IN PLACE OF USING STANDARD FITTINGS WITH A MIN. BENDING RADIUS OF 20 x PIPE DIAM.
 - ALL BENDS WERE ELECTROFUSION SWEEP BENDS DN250, DN180 AND DN160 PE PRESSURE SEWER MAIN LAID TO GRADE.
 - FOR WASTEWATER COLLECTION TANK LEVEL DETAILS REFER TO DRG-025.

PLAN SCALE 1:250

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
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B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

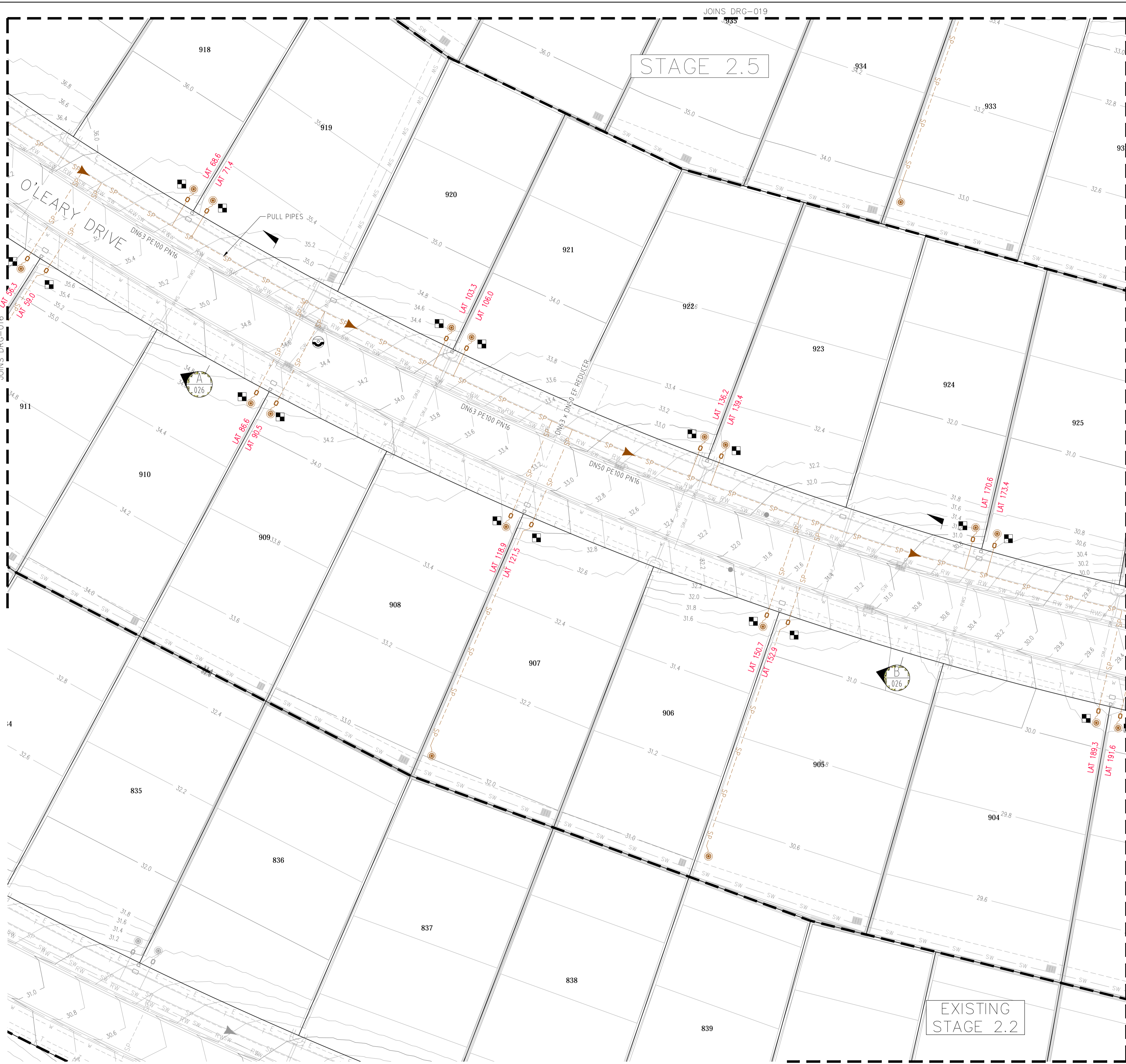
adw Johnson

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 ABN 62 129 445 398

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	PRESSURE SEWER DETAIL PLAN - SHEET 1		
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5) - WAT -		016	WAC



PLAN
SCALE 1:250

LEGEND

- SP --- PE PRESSURE SEWER RETICULATION
- PSM --- PE SEWER PRESSURE MAIN
- W --- PVC-M POTABLE WATER RETICULATION
- PWS --- POTABLE WATER PROPERTY SERVICE
- PWTM --- DN250 PVC-M POTABLE WATER TRANSFER MAIN
- RW --- PVC-M RECYCLED WATER RETICULATION
- RWS --- RECYCLED WATER PROPERTY SERVICE
- RWTM --- DN250 PVC-M RECYCLED WATER TRANSFER MAIN
- T --- TELSTRA
- E --- UNDERGROUND POWER
- S/W --- STORMWATER PIPEWORK
- IV --- ISOLATION VALVE
- FP --- FLUSHING POINT
- WWT --- WASTEWATER COLLECTION TANK AND BOUNDARY KIT
- ▲ --- PRESSURE SEWER FLOW DIRECTION
- --- PROPERTY SERVICE CONNECTION
- --- LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- --- LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- --- LIMIT OF SUBDIVISION WORKS

■ PRESSURE SEWER PROPERTY SERVICE CONNECTIONS
TOTAL 51 CONNECTIONS
• SINGLE SERVICES
- 23 x SHORT SIDE
- 28 x LONG SIDE

PRESSURE SEWER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PE100 PN16	169.4
DN180	PE100 PN16	214
DN160	PE100 PN16	36
DN125	PE100 PN16	14
DN63	PE100 PN16	153
DN50	PE100 PN16	175

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 AND 014.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.
 - FOR FLUSHING POINT TYPICAL DETAILS REFER TO STANDARD DRAWING PSS-1017-FS.
 - CONTRACTOR MAY BEND POLYETHYLENE PIPEWORK IN PLACE OF USING STANDARD FITTINGS WITH A MIN. BENDING RADIUS OF 20 x PIPE DIAM.
 - ALL BENDS WERE ELECTROFUSION SWEEP BENDS DN250, DN180 AND DN160 PE PRESSURE SEWER MAIN LAID TO GRADE.
 - FOR WASTEWATER COLLECTION TANK LEVEL DETAILS REFER TO DRG-025.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

0 5 10 A1 / A3
1:250 / 1:500

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ABN 62 129 445 398

JOHNSON PROPERTY GROUP

CLIENT

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

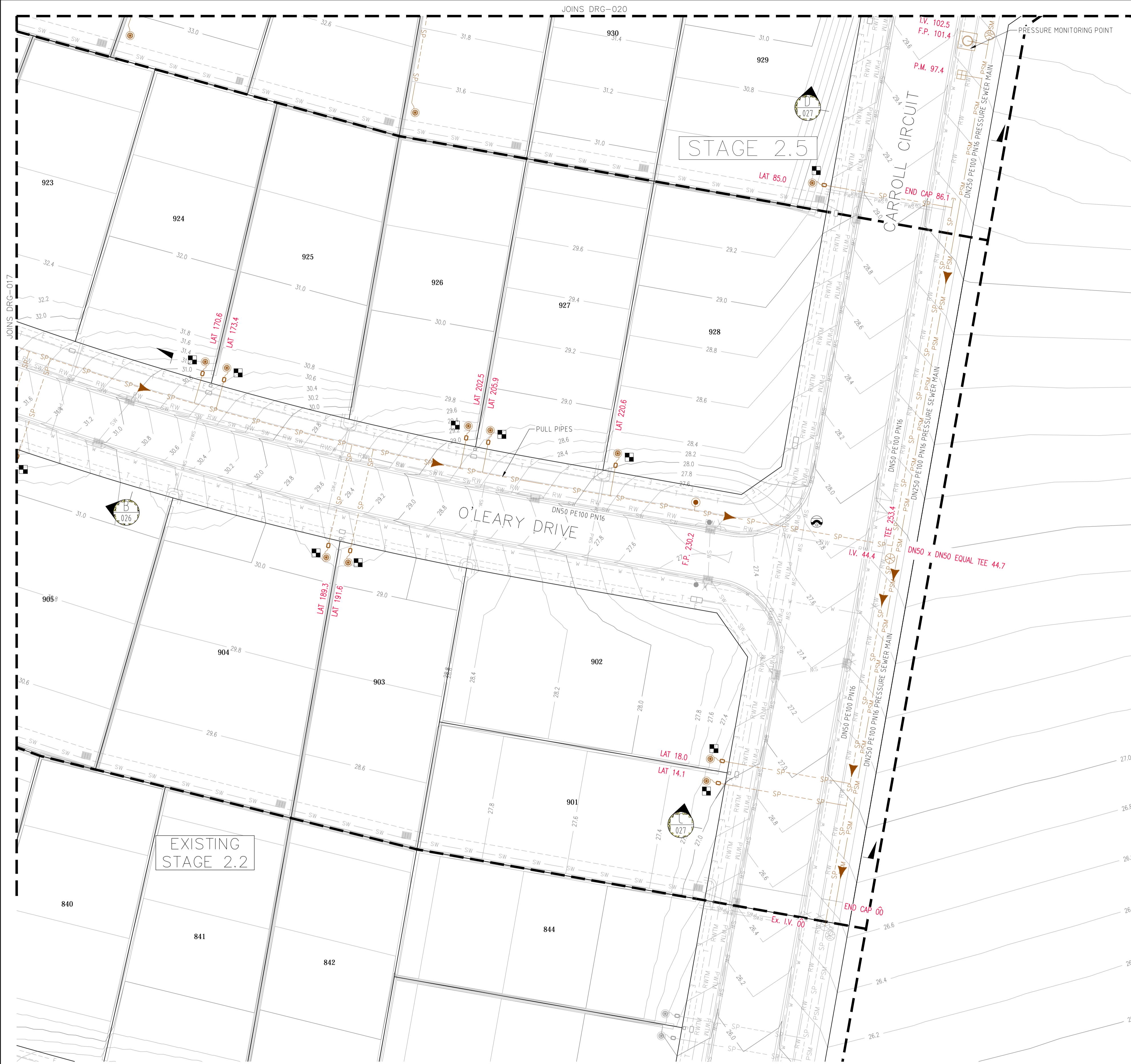
SURVEYED
ADW Johnson

DATUM
A.H.D.

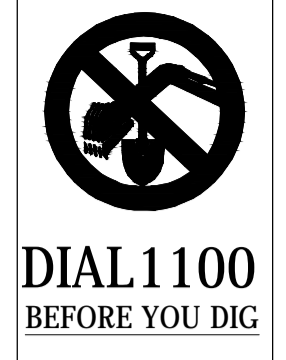
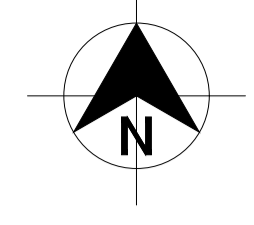
PROJECT
POTABLE WATER, RECYCLED WATER AND
PRESSURE SEWER RETICULATION

PLAN TITLE
PRESSURE SEWER DETAIL PLAN
- SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	017	WAC



PLAN
SCALE 1:250



LEGEND

SP	PE PRESSURE SEWER RETICULATION
PSM	PE SEWER PRESSURE MAIN
W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN250 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
IV	ISOLATION VALVE
FP	FLUSHING POINT
(Symbol)	WASTEWATER COLLECTION TANK AND BOUNDARY KIT
(Symbol)	PRESSURE SEWER FLOW DIRECTION
(Symbol)	PROPERTY SERVICE CONNECTION
(Symbol)	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
(Symbol)	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
(Symbol)	LIMIT OF SUBDIVISION WORKS

■ PRESSURE SEWER PROPERTY SERVICE CONNECTIONS
 TOTAL 51 CONNECTIONS
 • SINGLE SERVICES
 -23 x SHORT SIDE
 -28 x LONG SIDE

PRESSURE SEWER PIPE DATA		
PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PE100 PN16	169.4
DN180	PE100 PN16	214
DN160	PE100 PN16	36
DN125	PE100 PN16	14
DN63	PE100 PN16	153
DN50	PE100 PN16	175

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 AND 014.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.
 - FOR FLUSHING POINT TYPICAL DETAILS REFER TO STANDARD DRAWING PSS-1017-FS.
 - CONTRACTOR MAY BEND POLYETHYLENE PIPEWORK IN PLACE OF USING STANDARD FITTINGS WITH A MIN. BENDING RADIUS OF 20 x PIPE DIAM.
 - ALL BENDS WERE ELECTROFUSION SWEEP BENDS DN250, DN180 AND DN160 PE PRESSURE SEWER MAIN LAID TO GRADE.
 - FOR WASTEWATER COLLECTION TANK LEVEL DETAILS REFER TO DRG-025.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
1	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
1	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

DRAWN	CHECK	DESIGN	VERIFY	SCALES
J.N.	L.G.	J.N.	L.G.	0 5 10 A1 / A3 1:250 / 1:500

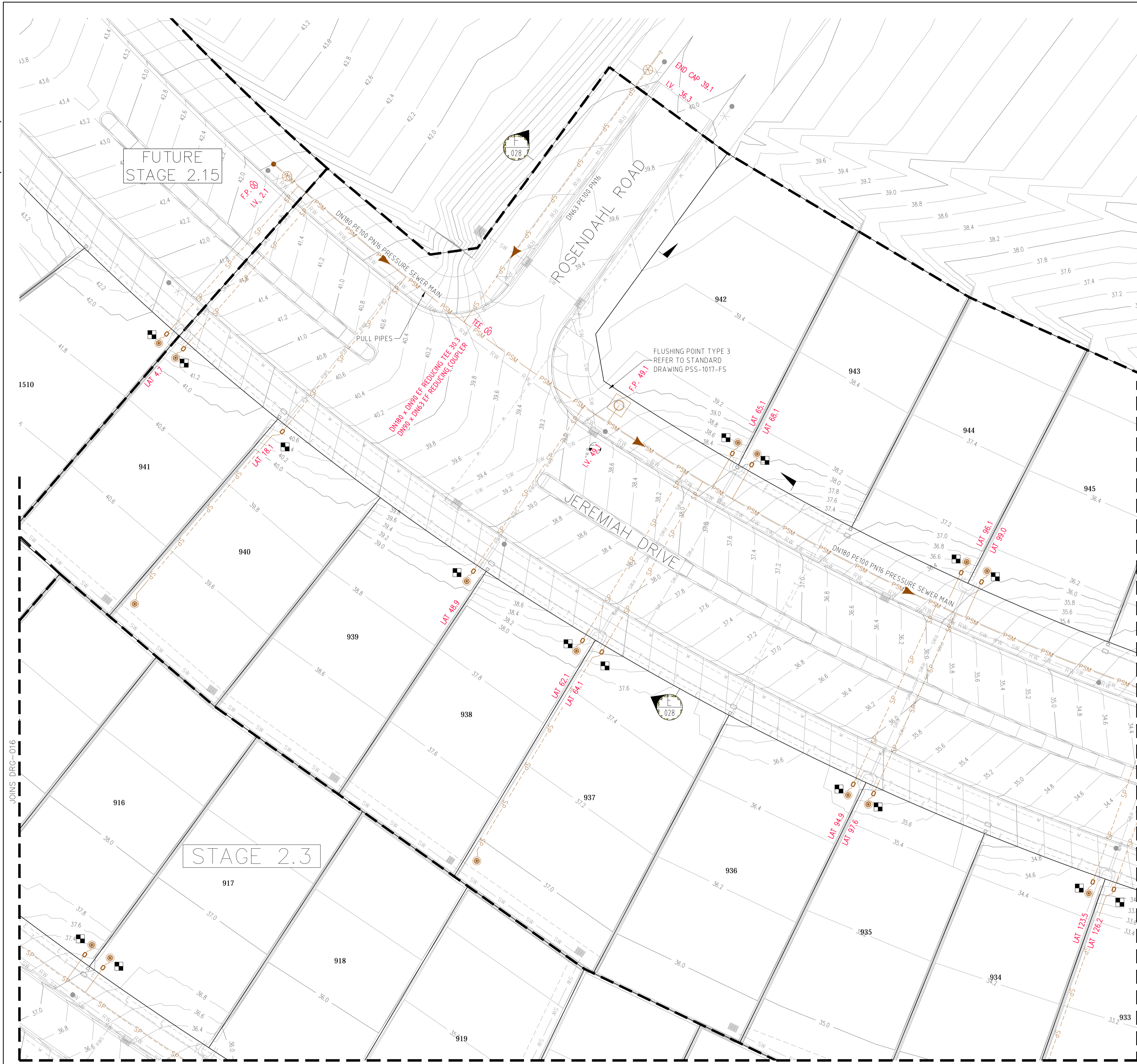
adw Johnson

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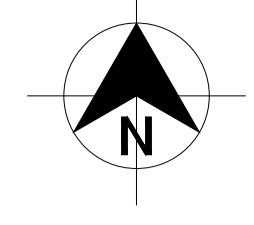
JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION	
PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	
SURVEYED	DATUM
ADW Johnson	A.H.D.

PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION			
PLAN TITLE PRESSURE SEWER DETAIL PLAN - SHEET 3			
PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	018	WAC



PLAN SCALE 1:250



LEGEND

SP	PE PRESSURE SEWER RETICULATION
PSM	PE SEWER PRESSURE MAIN
W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN250 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
IV	ISOLATION VALVE
FP	FLUSHING POINT
WWT	WASTEWATER COLLECTION TANK AND BOUNDARY KIT
▲	PRESSURE SEWER FLOW DIRECTION
■	PROPERTY SERVICE CONNECTION
○	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
○	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
- - -	LIMIT OF SUBDIVISION WORKS

■ PRESSURE SEWER PROPERTY SERVICE CONNECTIONS
 TOTAL 51 CONNECTIONS
 • SINGLE SERVICES
 - 23 x SHORT SIDE
 - 28 x LONG SIDE

PRESSURE SEWER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
DN250	PE100 PN16	169.4
DN180	PE100 PN16	214
DN160	PE100 PN16	36
DN125	PE100 PN16	14
DN63	PE100 PN16	153
DN50	PE100 PN16	175

- NOTES:**
- FOR POTABLE WATER PIPEWORK DETAIL PLANS REFER TO DRGS-004 TO 008.
 - FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 AND 014.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.
 - FOR FLUSHING POINT TYPICAL DETAILS REFER TO STANDARD DRAWING PSS-1017-FS.
 - CONTRACTOR MAY BEND POLYETHYLENE PIPEWORK IN PLACE OF USING STANDARD FITTINGS WITH A MIN. BENDING RADIUS OF 20 x PIPE DIAM.
 - ALL BENDS WERE ELECTROFUSION SWEEP BENDS DN250, DN180 AND DN160 PE PRESSURE SEWER MAIN LAID TO GRADE.
 - FOR WASTEWATER COLLECTION TANK LEVEL DETAILS REFER TO DRG-025.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	<p>A1 / A3 1:250 / 1:500</p>
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

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JOHNSON PROPERTY GROUP

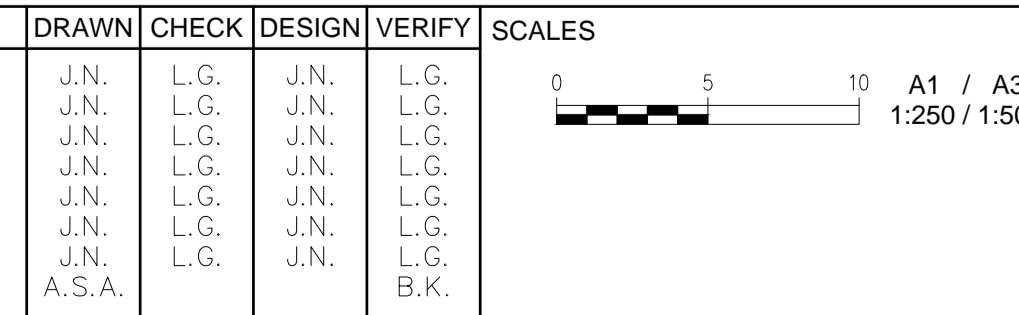
PROPERTY DESCRIPTION
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROJECT	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION		
PLAN TITLE	PRESSURE SEWER DETAIL PLAN - SHEET 4		
SURVEYED	ADW Johnson	DATUM	A.H.D.
PROJECT No.	239078(2.3 & 2.5)	DISCIPLINE	- WAT -
NUMBER	019	REV.	WAC



REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
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WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

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CLIENT
 PROPERTY DESCRIPTION
 PROPOSED SUBDIVISION
 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
 WHISTLER DRIVE, COORANBONG
 DA/307/2015

PROJECT
 POTABLE WATER, RECYCLED WATER AND
 PRESSURE SEWER RETICULATION
 PLAN TITLE
 PRESSURE SEWER DETAIL PLAN
 - SHEET 5

LEGEND

SP	PE PRESSURE SEWER RETICULATION
PSM	PE SEWER PRESSURE MAIN
W	PVC-M POTABLE WATER RETICULATION
PWS	POTABLE WATER PROPERTY SERVICE
PWTM	DN250 PVC-M POTABLE WATER TRANSFER MAIN
RW	PVC-M RECYCLED WATER RETICULATION
RWS	RECYCLED WATER PROPERTY SERVICE
RWTM	DN250 PVC-M RECYCLED WATER TRANSFER MAIN
T	TELSTRA
E	UNDERGROUND POWER
S/W	STORMWATER PIPEWORK
I.V.	ISOLATION VALVE
F.P.	FLUSHING POINT
(Symbol)	WASTEWATER COLLECTION TANK AND BOUNDARY KIT
(Symbol)	PRESSURE SEWER FLOW DIRECTION
(Symbol)	PROPERTY SERVICE CONNECTION
(Symbol)	LAY WATER MAIN UNDER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
(Symbol)	LAY WATER MAIN OVER STORMWATER PIPE (300mm MIN. VERTICAL CLEARANCE) - REFER TO WAT-1255-H
(Symbol)	LIMIT OF SUBDIVISION WORKS

PRESSURE SEWER PROPERTY SERVICE CONNECTIONS
 TOTAL 51 CONNECTIONS
 • SINGLE SERVICES
 - 23 x SHORT SIDE
 - 28 x LONG SIDE

PRESSURE SEWER PIPE DATA

PIPE SIZE (mm)	PIPE MATERIAL	TOTAL LENGTH (m)
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DN125	PE100 PN16	14
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- NOTES:**
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 - FOR RECYCLED WATER PIPEWORK DETAIL PLANS REFER TO DRGS-010 AND 014.
 - FOR TYPICAL SERVICE CONNECTION DETAILS REFER TO DRG-024.
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 - CONTRACTOR MAY BEND POLYETHYLENE PIPEWORK IN PLACE OF USING STANDARD FITTINGS WITH A MIN. BENDING RADIUS OF 20 x PIPE DIAM.
 - ALL BENDS WERE ELECTROFUSION SWEEP BENDS DN250, DN180 AND DN160 PE PRESSURE SEWER MAIN LAID TO GRADE.
 - FOR WASTEWATER COLLECTION TANK LEVEL DETAILS REFER TO DRG-025.

WORK-AS-CONSTRUCTED



DIAL 1100
BEFORE YOU DIG

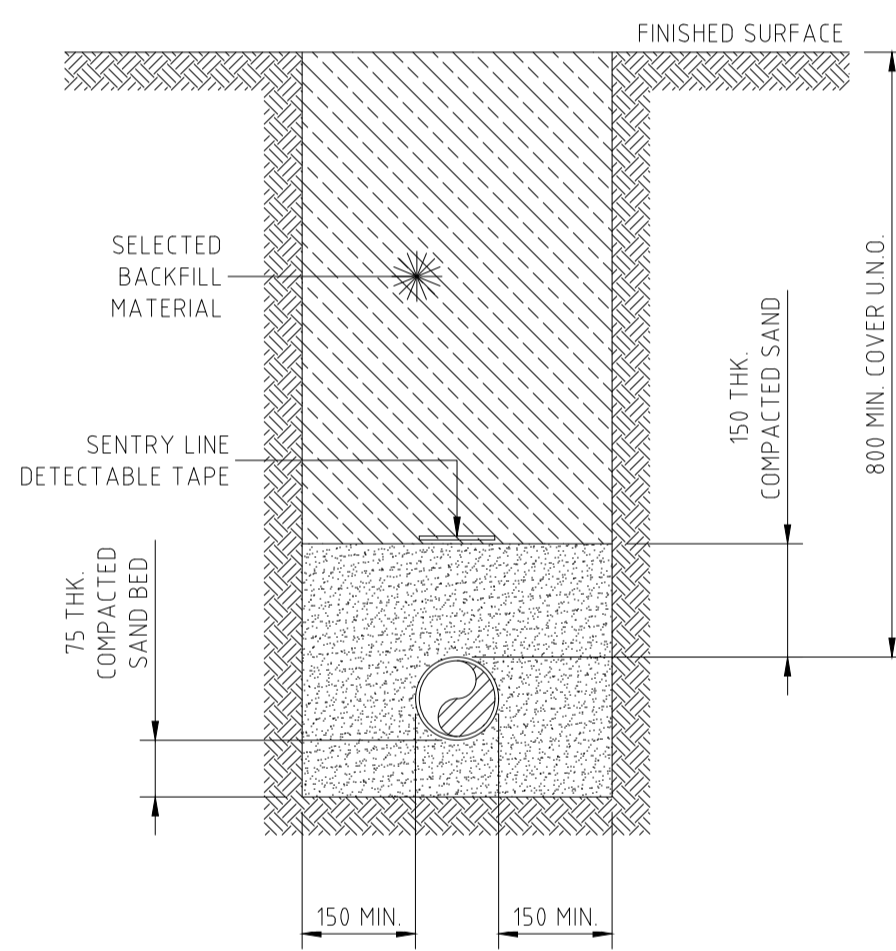
WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
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O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.		J.N.	B.K.	

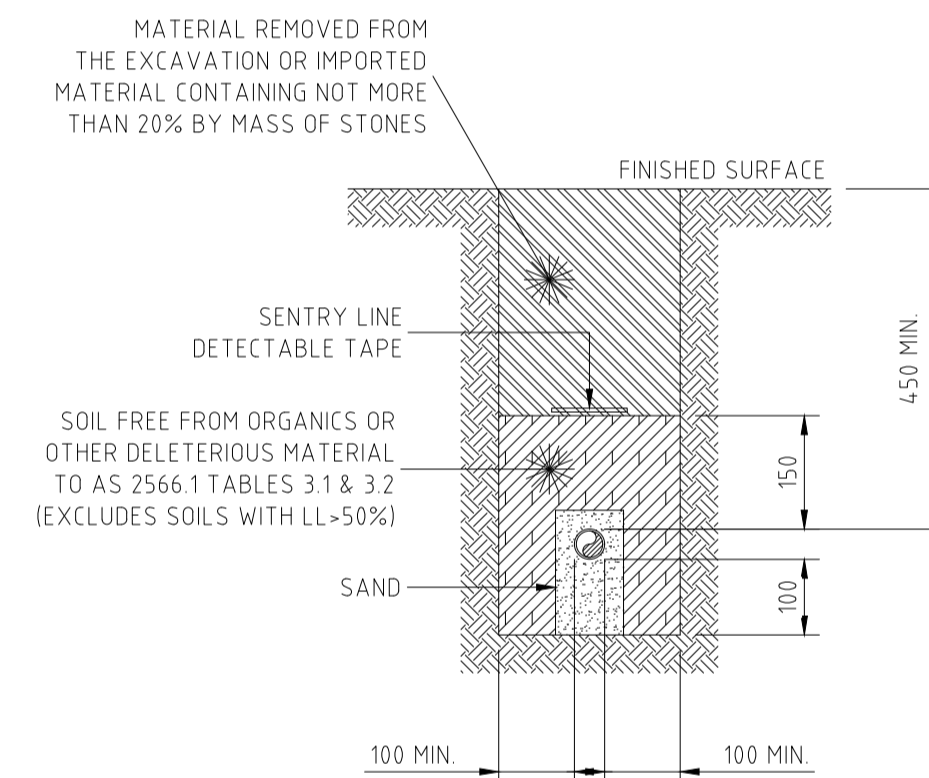
		Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohanson.com.au www.adwjohanson.com.au ABN 62 129 445 398	CLIENT 	PROPERTY DESCRIPTION PROPOSED SUBDIVISION PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION PLAN TITLE NOT USED		
DESIGN FILE N:\ P:\20 - Lake Macquarie\23647 Watagan Park\Stage 2.3 & 2.5\Drawings\239078(2.3 & 2.5)-WAT-016 WAC.dwg	ALL DIMENSIONS ARE IN METRES. DO NOT SCALE	SURVEYED ADW Johnson	DATUM A.H.D.	PROJECT No. 239078(2.3 & 2.5)	DISCIPLINE - WAT -	NUMBER 021	REV. WAC



DIAL 1100
BEFORE YOU DIG



STREET PRESSURE MAIN
TYPICAL DETAIL
SCALE 1:10



PRIVATE PROPERTY PRESSURE MAIN
TYPICAL DETAIL
SCALE 1:10

NOTES:

1. ALL POLYETHYLENE FITTINGS WERE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ROTATE BENDS AS NECESSARY.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
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WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALE
0 0.1 0.2 0.3 0.4 A1 / A3 1:10 / 1:20

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CLIENT



PROPERTY DESCRIPTION

PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED
ADW Johnson

DATUM
A.H.D.

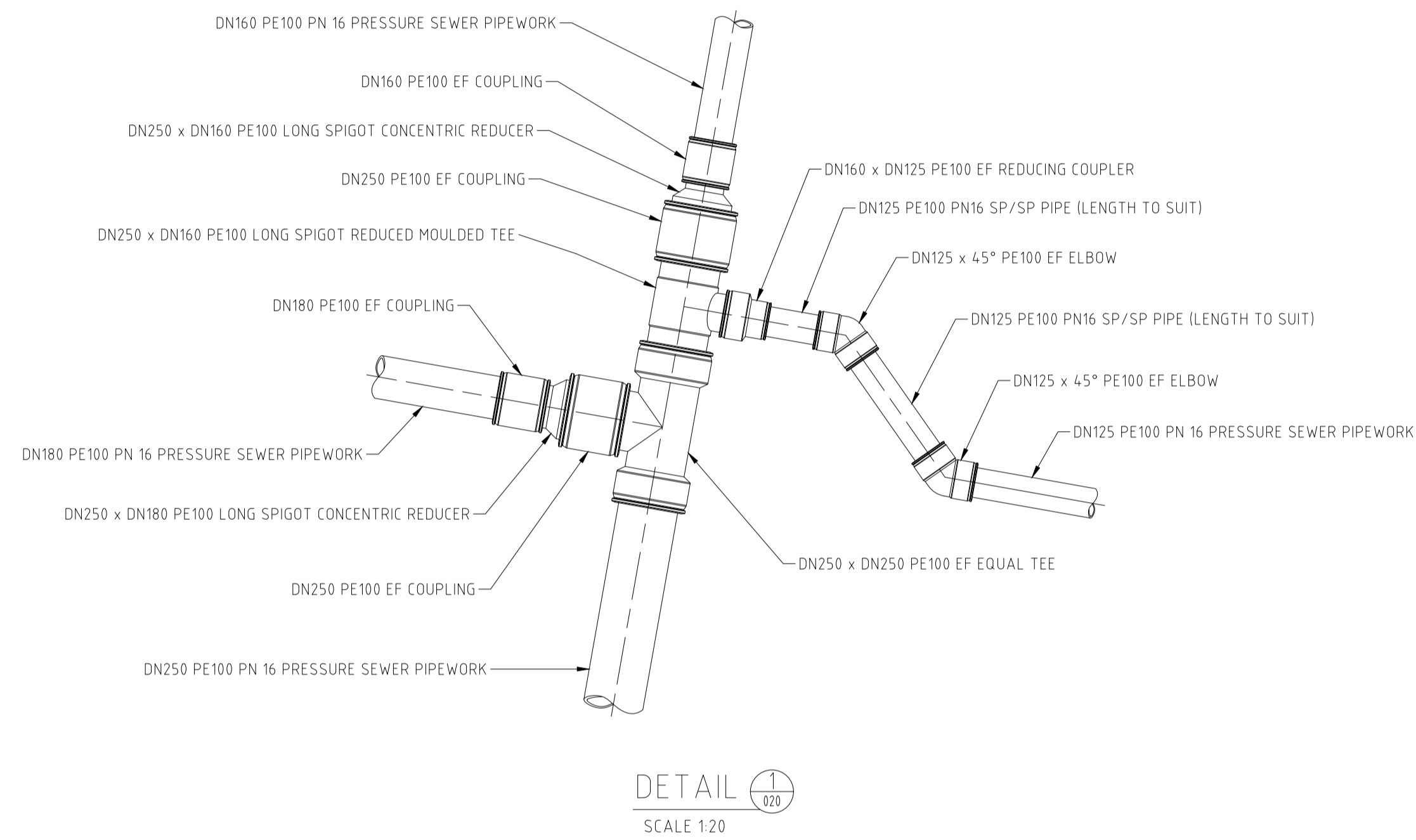
PROJECT POTABLE WATER, RECYCLED WATER AND
PRESSURE SEWER RETICULATION

PLAN TITLE
TYPICAL PIPEWORK TRENCHING DETAILS

PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	022	WAC



DIAL 1100
BEFORE YOU DIG

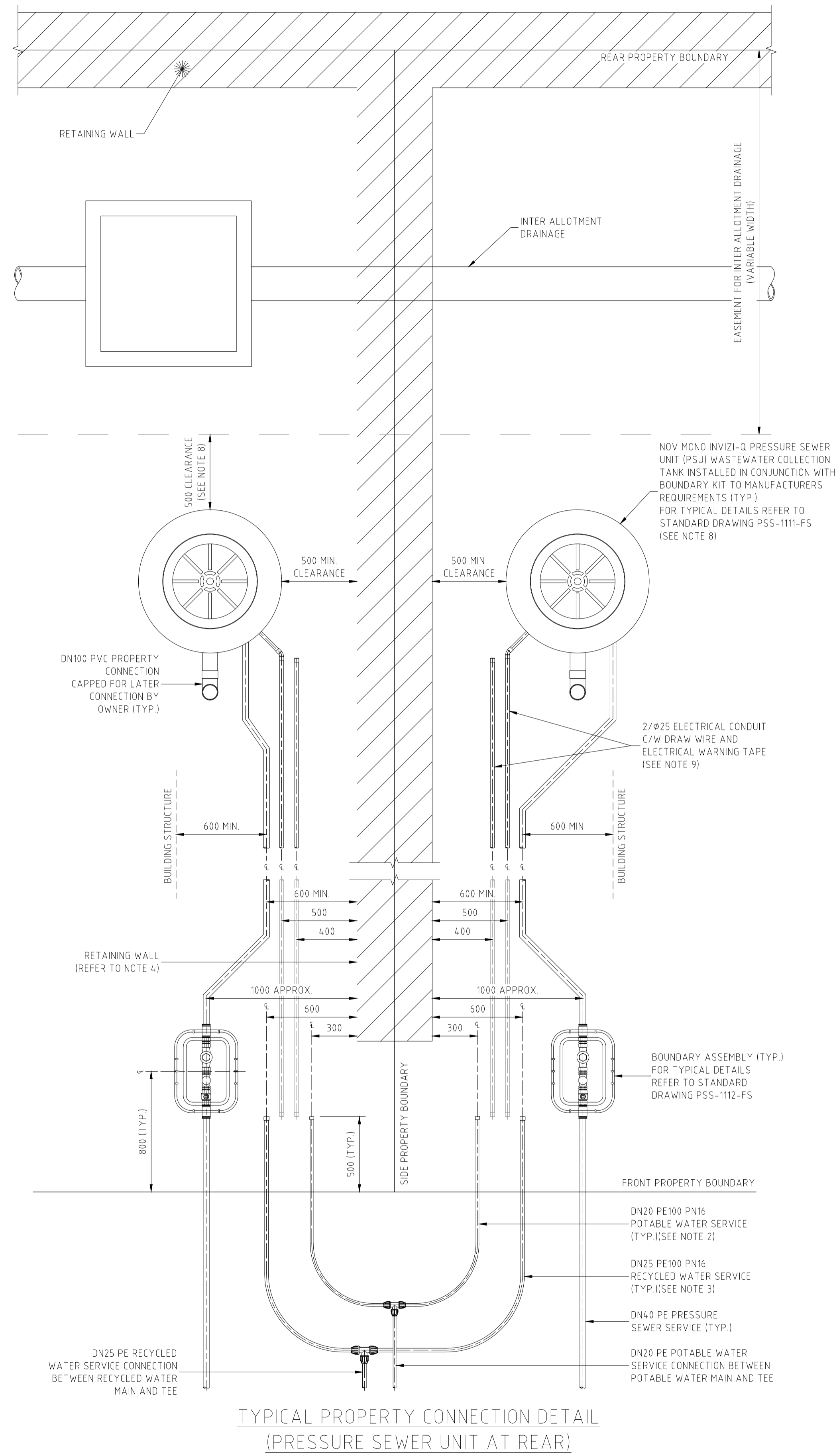


NOTES:

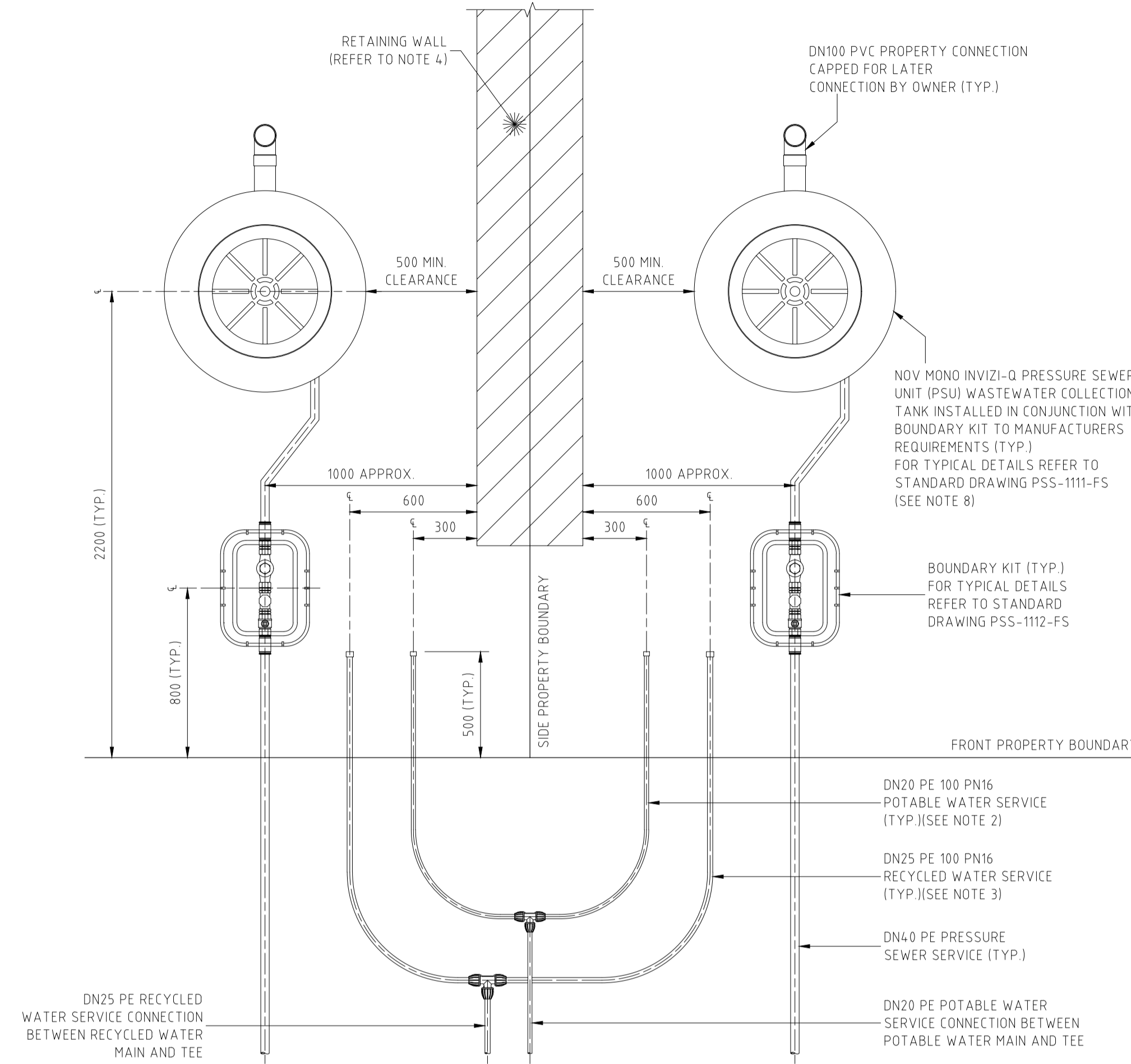
- ALL POLYETHYLENE FITTINGS WERE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ROTATE BENDS AS NECESSARY.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	DISCIPLINE	NUMBER	REV.
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	 A1 / A3 1:20 / 1:40	 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 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	PIPEWORK CONNECTION DETAILS	DA/307/2015	A.H.D.	WAC
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.								
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.				PROJECT No. 239078(2.3 & 2.5) - WAT - 023	DISCIPLINE - WAT - 023	NUMBER - 023	REV. - WAC	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.								
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.				DESIGN FILE N:\				
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.				ALL DIMENSIONS ARE IN METRES. DO NOT SCALE				
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.				Plotted By: DarrenSheather Plot Date: 29/09/16 - 20:18 Cad File: P:\20 - Lake Macquarie\23647 Watagan Park\Stage 2.3 & 2.5\Drawings\239078(2.3 & 2.5)-WAT-022 WAC.dwg				
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.		J.N.	B.K.								



TYPICAL PROPERTY CONNECTION DETAIL
(PRESSURE SEWER UNIT AT REAR)
SCALE 1:20



TYPICAL PROPERTY CONNECTION DETAIL
SCALE 1:20

NOTES:

- PROPERTY SERVICE CONNECTIONS WERE 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 CAPPED FOR LATER CONNECTION BY PROPERTY OWNER.
- DN25 PE100 PN16 RECYCLED WATER SERVICE EXTEND 500mm BEYOND PROPERTY BOUNDARY AND CAPPED FOR LATER CONNECTION BY PROPERTY OWNER.
- FOR PROPERTY CONNECTIONS WHERE A RETAINING WALL IS NOT PRESENT, SERVICES ARE 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 MAINTAINED.
- MINIMUM BENDING RADIUS FOR PE PIPEWORK IS 20 x PIPE DIAMETER.
- ALL POLYETHYLENE FITTINGS WERE JOINED USING ELECTROFUSION JOINTING TECHNIQUES IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ROTATE BENDS AS NECESSARY.
- PRESSURE SEWER UNIT (PSU) IS TO HAVE 500mm CLEARANCE FROM INTER ALLOTMENT DRAINAGE EASEMENT (IF PRESENT), REAR PROPERTY BOUNDARY RETAINING WALL (IF PRESENT) OR REAR PROPERTY BOUNDARY. 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 CAPPED. ELECTRICAL CONDUIT IS HEAVY DUTY ORANGE. ALL CONDUIT BENDS ARE LARGE RADIUS SWEEP BENDS.
- FOR MORE INFORMATION REFER TO FLOW SYSTEMS STANDARD DRAWING FSI-1000-F5.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
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B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALE
0 0.1 0.2 0.3 0.4 A1 / A3 1:10 / 1:20
0 0.4 0.8 A1 / A3 1:20 / 1:40

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www.adwjohanson.com.au
ABN 62 129 445 398

CLIENT

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION

PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED: ADW Johnson
DATUM: A.H.D.

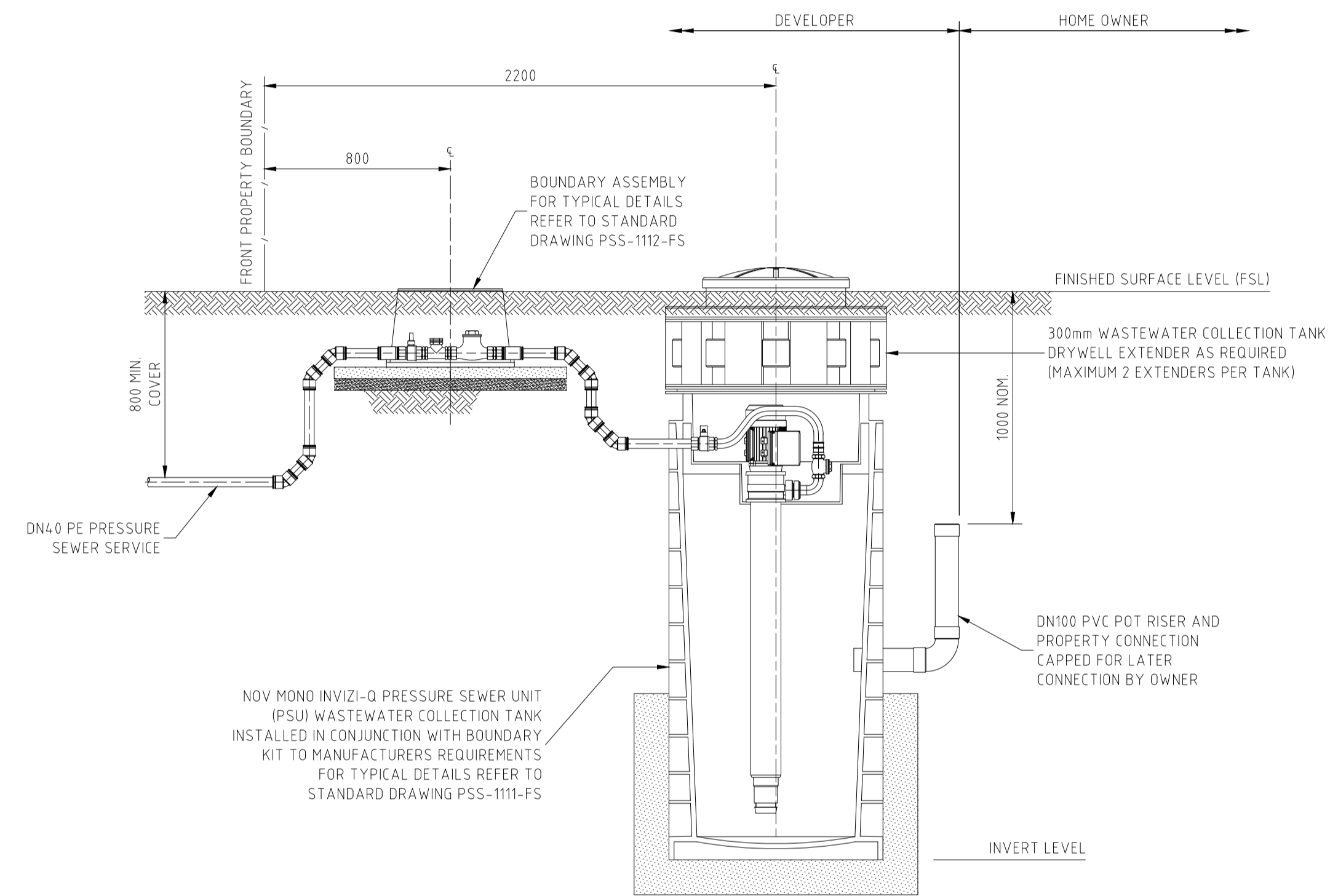
PROJECT	PLAN TITLE
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	TYPICAL SERVICE CONNECTION DETAILS
PROJECT No. 239078(2.3 & 2.5) - WAT - 024	DISCIPLINE NUMBER REV. A.H.D. WAC



DIAL 1100
BEFORE YOU DIG

WASTEWATER COLLECTION TANK LEVEL DETAILS			
LOT NUMBER	FINISHED SURFACE LEVEL (FSL)	INVERT LEVEL (IL)	NUMBER OF DRYWELL EXTENDERS
901	27.17	25.02	0
902	27.4	25.25	0
903	29.22	26.47	2
904	29.75	27.30	1
905	30.44	28.29	0
906	31.66	28.91	2
907	32.01	29.86	0
908	33.59	30.84	2
909	34.35	31.60	2
910	34.62	31.87	2
911	34.45	32.30	0
912	35.91	33.46	1
913	36.03	33.88	0
914	37.58	35.13	1
915	38.94	36.79	0
916	37.43	35.28	0
917	36.94	34.79	0
918	35.64	33.49	0
919	35.37	33.22	0
920	34.43	32.28	0
921	33.96	31.81	0
922	32.90	30.75	0
923	32.43	30.28	0
924	31.24	29.09	0
925	30.69	28.54	0
926	29.30	27.15	0
927	28.83	26.68	0
928	28.17	26.02	0
929	28.75	26.60	0
930	31.60	29.15	1
931	31.49	29.34	0
932	32.96	30.51	1
933	32.95	30.80	0
934	34.42	31.97	1
935	35.76	32.95	2
936	36.32	33.87	1
937	36.91	34.76	0
938	38.13	35.38	2
939	39.04	36.59	1
940	39.45	37.30	0
941	41.34	38.59	2
942	38.60	36.45	0
943	38.06	35.91	0
944	36.63	34.48	0
945	36.10	33.95	0
946	34.55	32.40	0
947	34.03	31.88	0
948	32.73	30.58	0
949	32.27	30.12	0
950	31.33	29.18	0
1510 (FUTURE)	41.84	39.39	1

☼ WASTEWATER COLLECTION TANK PLACED IN REAR OF LOT



PRESSURE SEWER SERVICE CONNECTION
TYPICAL SECTIONAL ELEVATION

SCALE 1:20
(SHOWN AS FRONT OF LOT SERVICE CONNECTION WITH 1 DRYWELL EXTENDER)

- NOTE:
- WASTEWATER COLLECTION TANK INVERT LEVEL(IL)=FINISHED SURFACE LEVEL(FSL)
 - MINUS 2150 FOR 0 DRYWELL EXTENDERS
 - MINUS 2450 FOR 1 DRYWELL EXTENDERS
 - MINUS 2750 FOR 2 DRYWELL EXTENDERS
- FOR FURTHER DETAILS REFER TO STANDARD DRAWING PSS-1113-FS.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.	
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.	
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.	
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.	
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.	
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.	

DESIGN FILE N:\

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ABN 62 129 445 398

CLIENT

JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION

PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED: ADW Johnson DATUM: A.H.D.

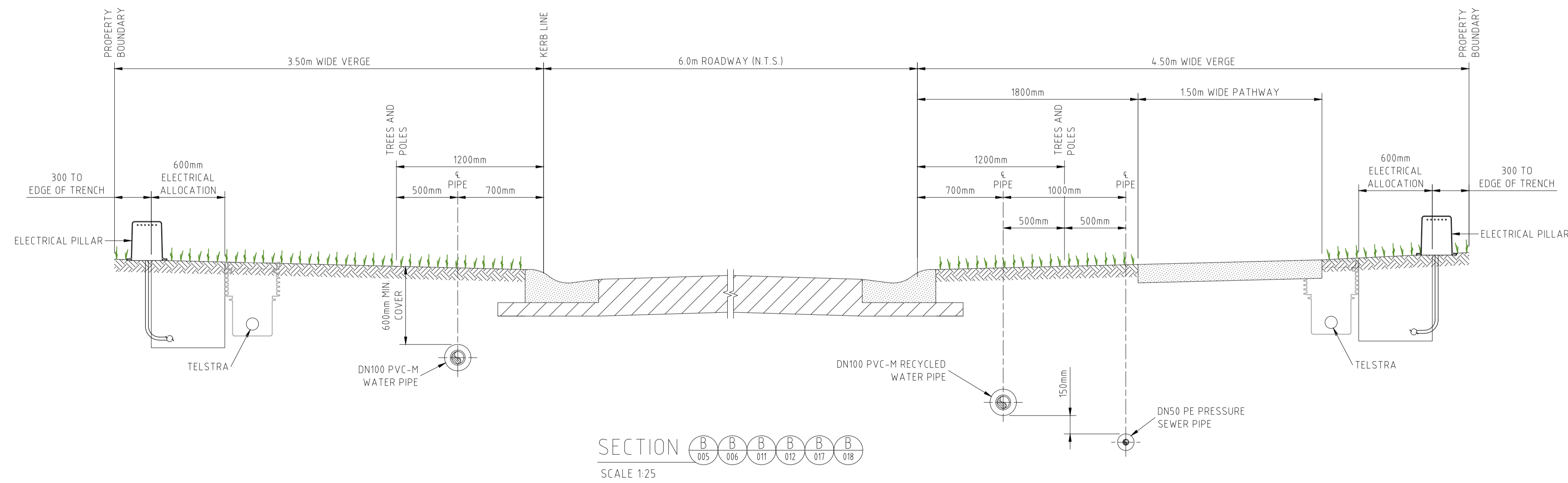
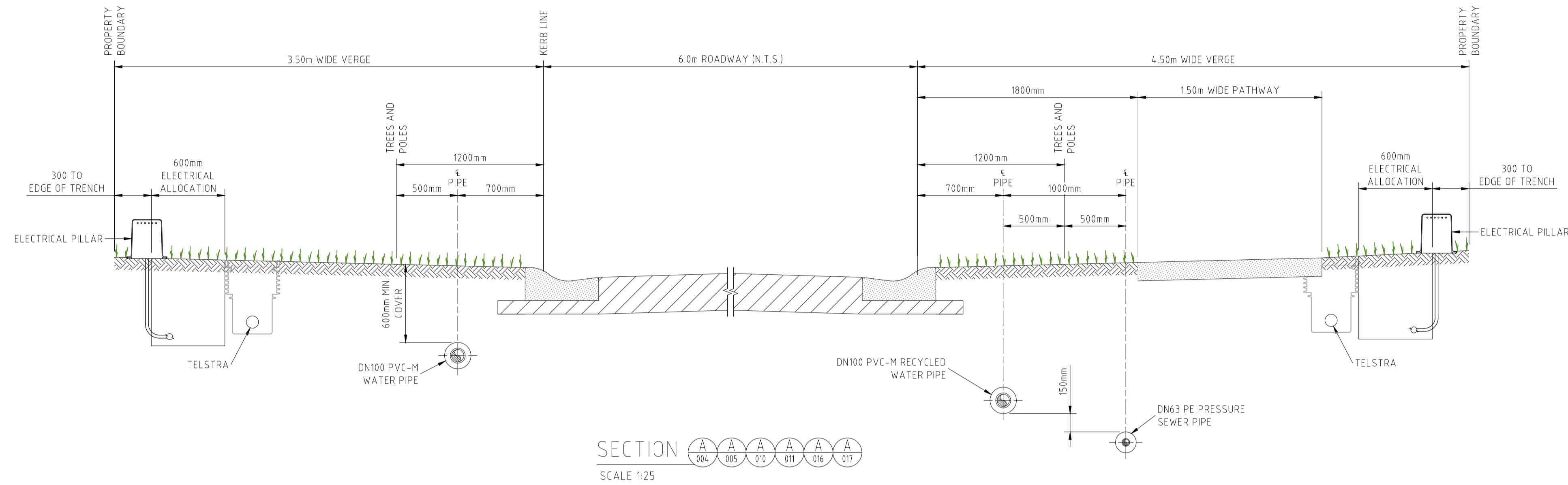
PROJECT: POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION

PLAN TITLE: WASTEWATER COLLECTION TANK LEVEL DETAILS

PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	025	WAC



DIAL 1100
BEFORE YOU DIG



NOTE:
1. FOR MINIMUM VERTICAL AND HORIZONTAL CLEARANCES REFER TO WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1. (SYDNEY WATER EDITION 2012).

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALES
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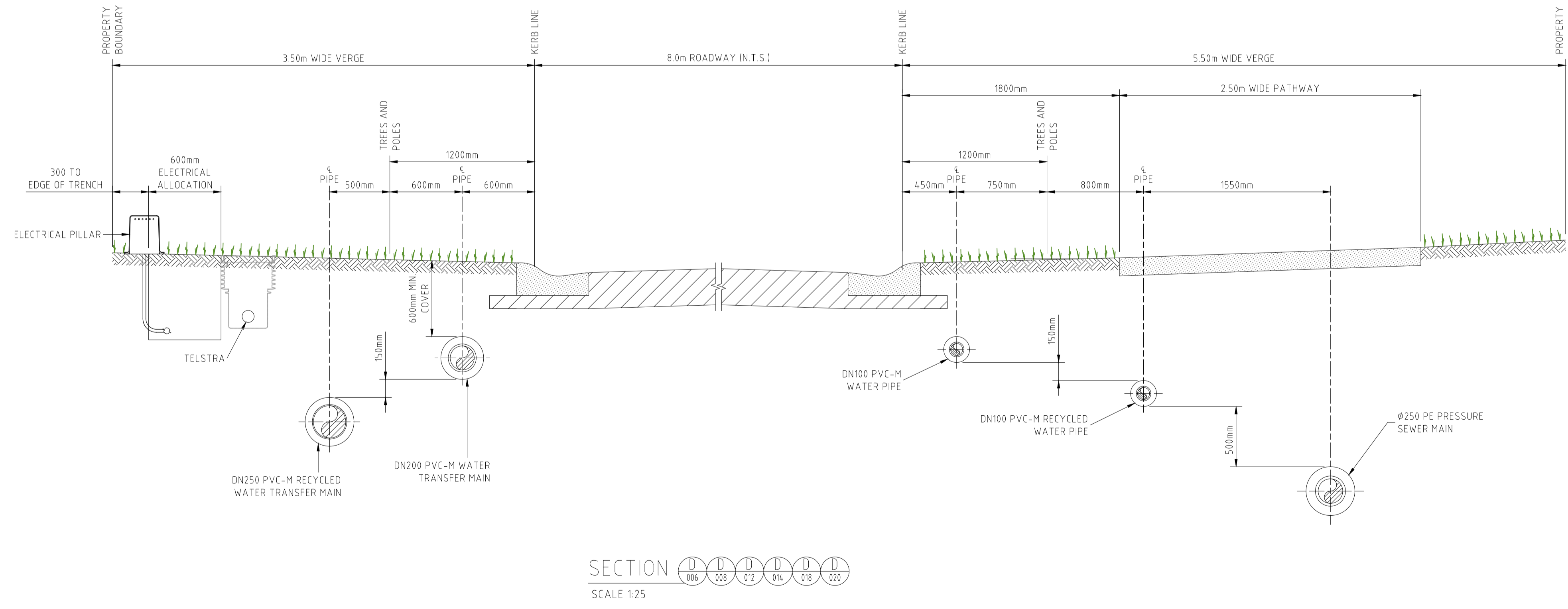
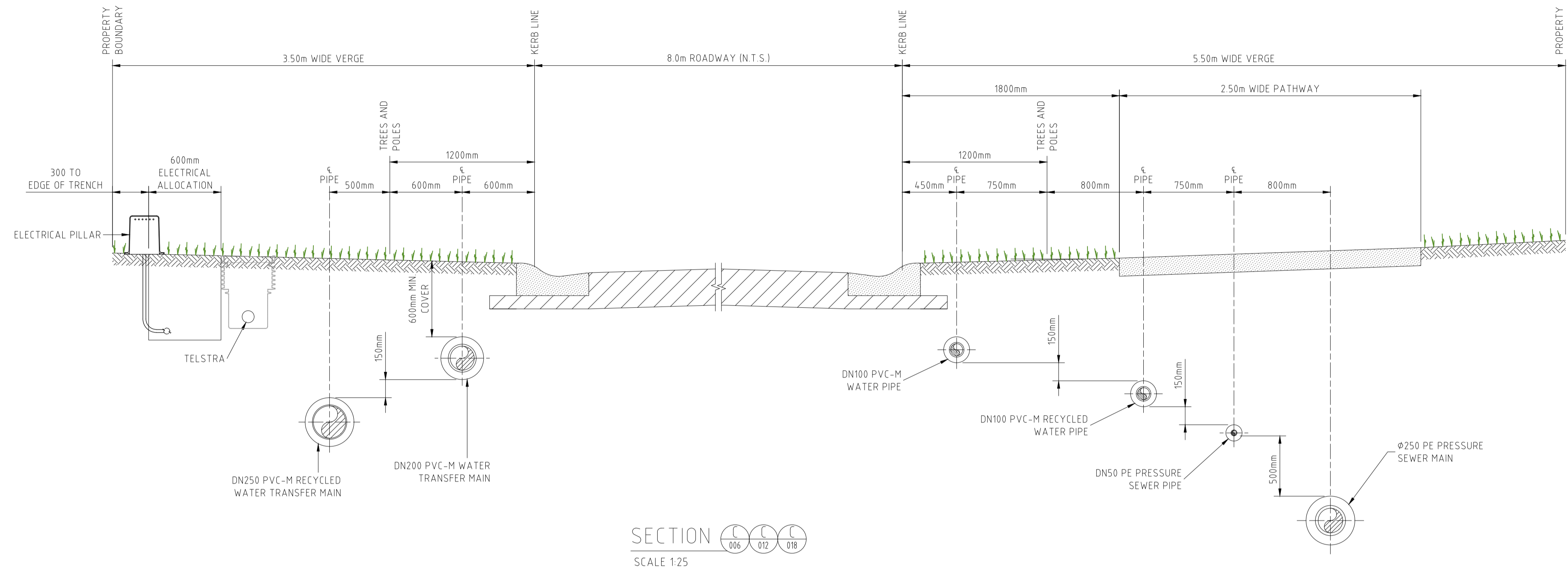
PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED ADW Johnson	DATUM A.H.D.
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PROJECT POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	PLAN TITLE ROAD CROSS SECTIONS - SHEET 1
PROJECT No. 239078(2.3 & 2.5) - WAT -	NUMBER 026
DISCIPLINE	REV. WAC



DIAL 1100
BEFORE YOU DIG



NOTE:
1. FOR MINIMUM VERTICAL AND HORIZONTAL CLEARANCES REFER TO WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1. (SYDNEY WATER EDITION 2012).

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALES
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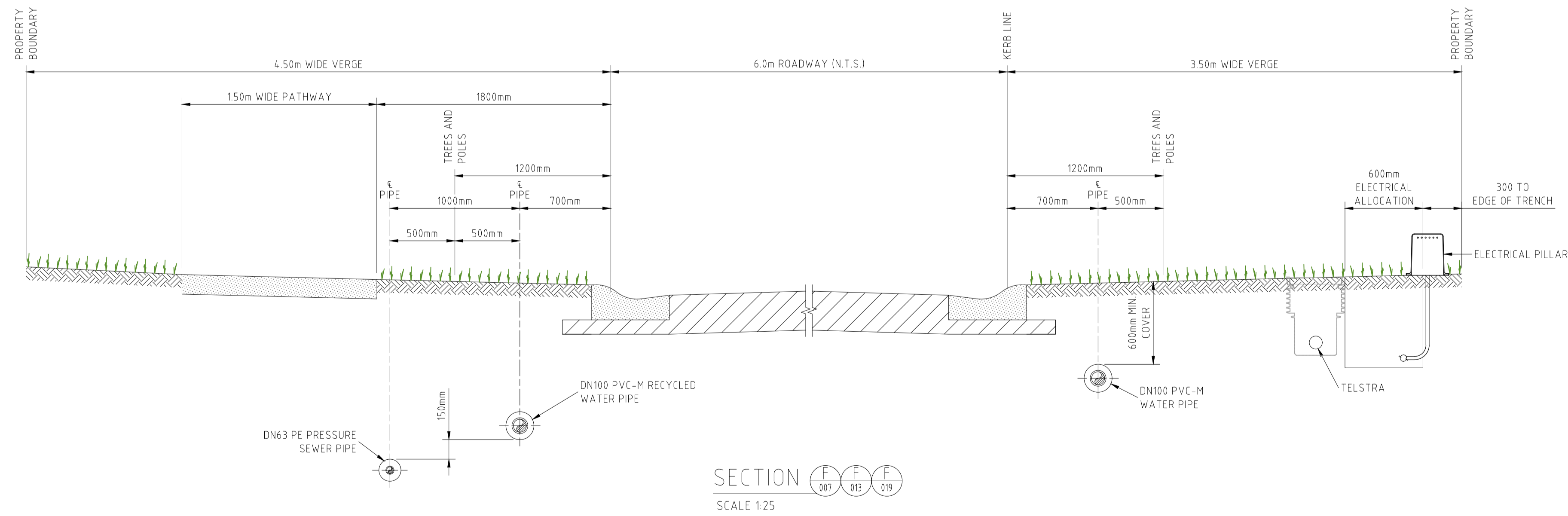
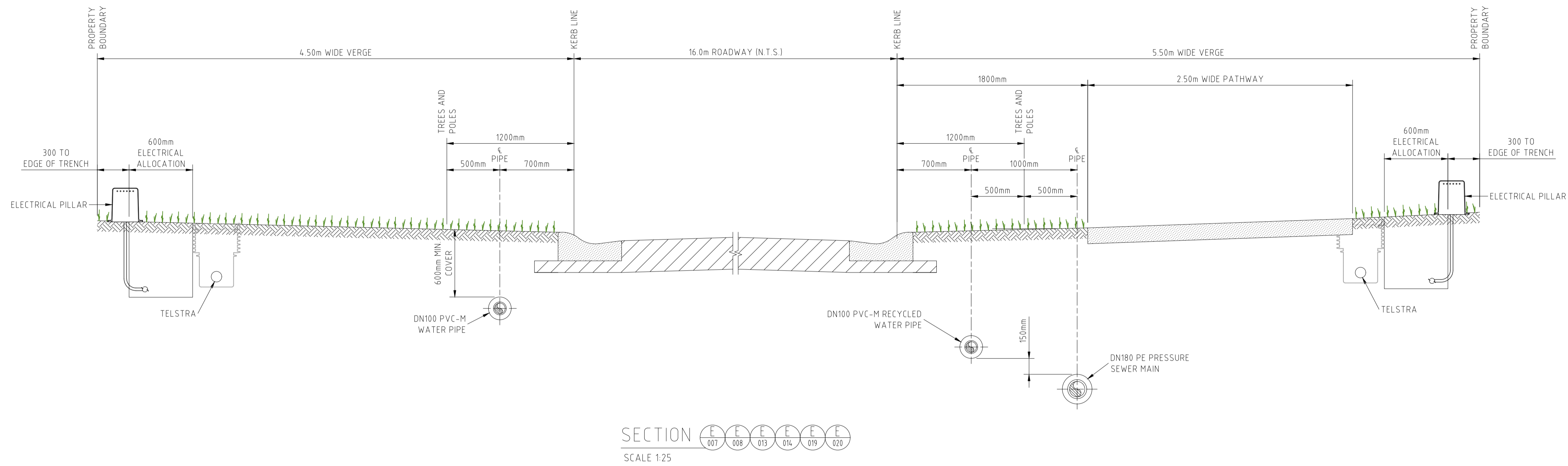
CLIENT
JOHNSON PROPERTY GROUP

PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

PROJECT	DISCIPLINE	NUMBER	REV.
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION			
PLAN TITLE ROAD CROSS SECTIONS - SHEET 2			
PROJECT No. 239078(2.3 & 2.5) - WAT -	DISCIPLINE	NUMBER 027	REV. WAC



DIAL 1100
BEFORE YOU DIG



NOTE:
1. FOR MINIMUM VERTICAL AND HORIZONTAL CLEARANCES REFER TO WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1. (SYDNEY WATER EDITION 2012).

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
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O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

DRAWN	CHECK	DESIGN	VERIFY
J.N.	L.G.	J.N.	L.G.
J.N.	L.G.	J.N.	L.G.
J.N.	L.G.	J.N.	L.G.
J.N.	L.G.	J.N.	L.G.
J.N.	L.G.	J.N.	L.G.
J.N.	L.G.	J.N.	L.G.
A.S.A.			B.K.

SCALES
0 0.5 1 A1 / A3 1:25 / 1:50



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PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

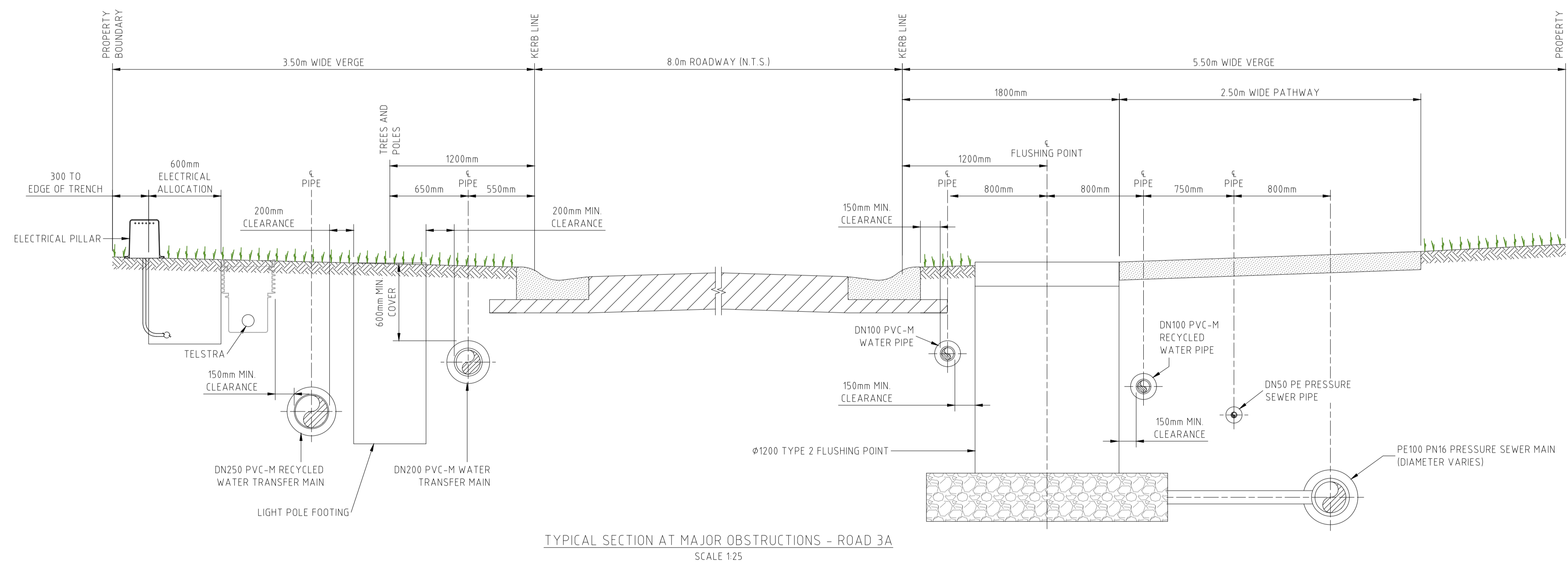
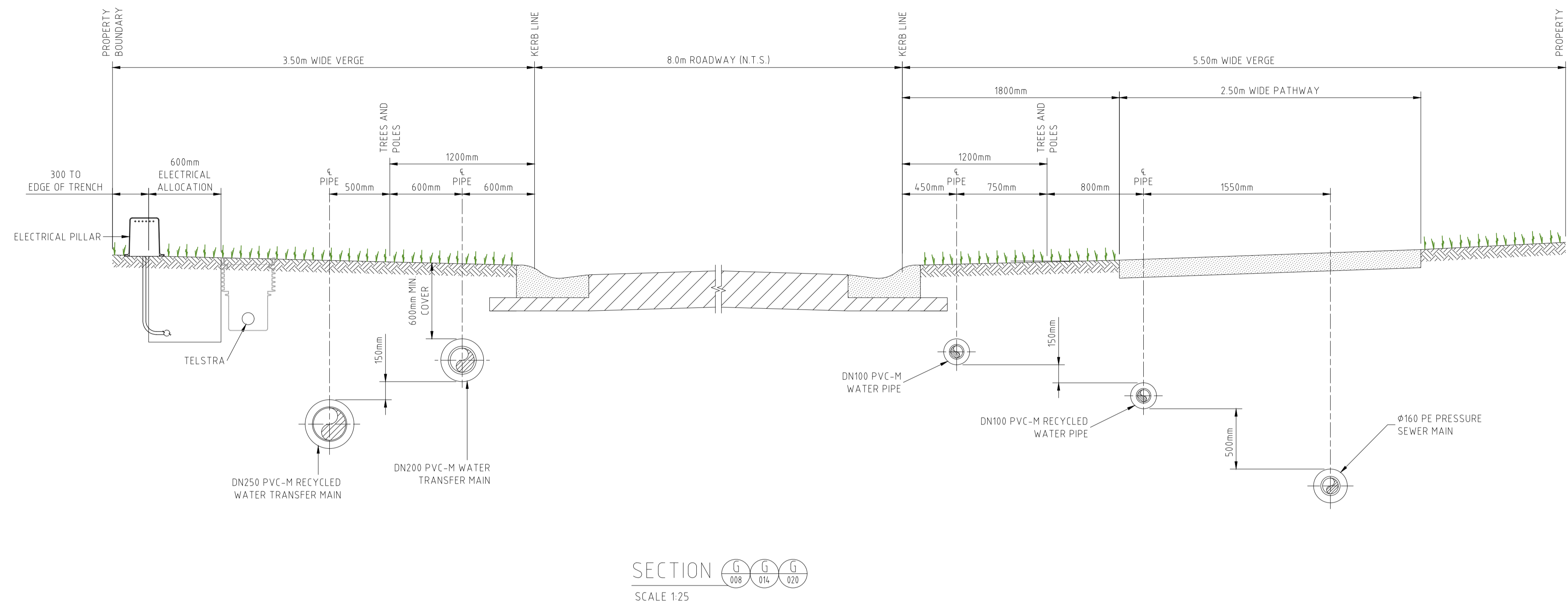
PROJECT	PLAN TITLE
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	ROAD CROSS SECTIONS - SHEET 3

SURVEYED	DATUM
ADW Johnson	A.H.D.

PROJECT No.	DISCIPLINE	NUMBER	REV.
239078(2.3 & 2.5)	- WAT -	028	WAC



DIAL 1100
BEFORE YOU DIG



NOTE:
1. FOR MINIMUM VERTICAL AND HORIZONTAL CLEARANCES REFER TO WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1. (SYDNEY WATER EDITION 2012).

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
O	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.
1	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.
WAC	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.

SCALE
0 0.5 1 A1 / A3 1:25 / 1:50

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CLIENT
JOHNSON PROPERTY GROUP

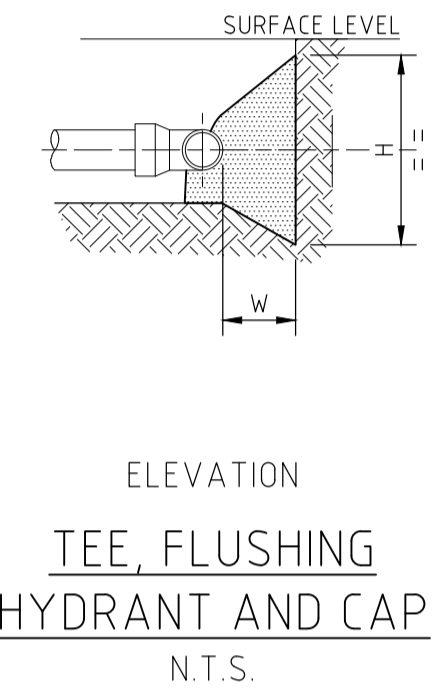
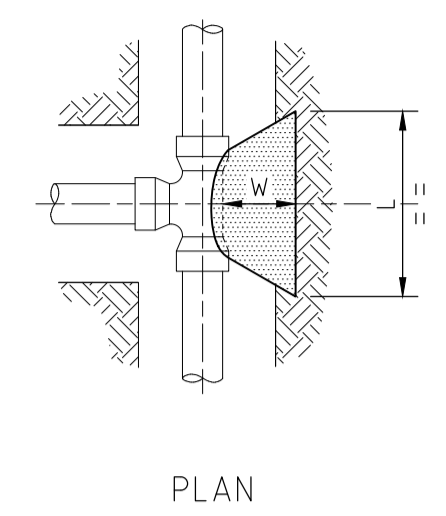
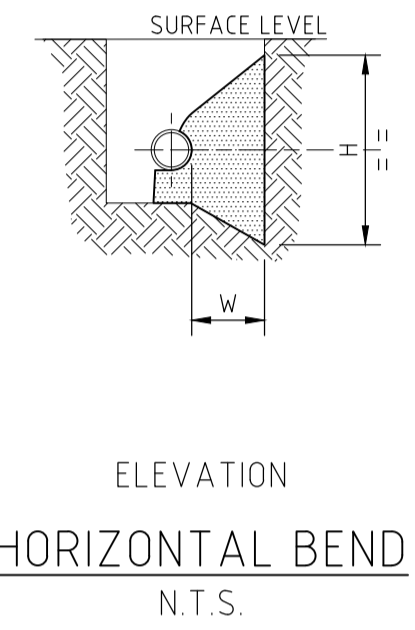
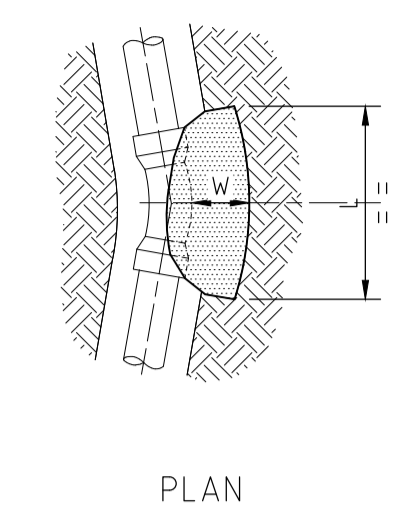
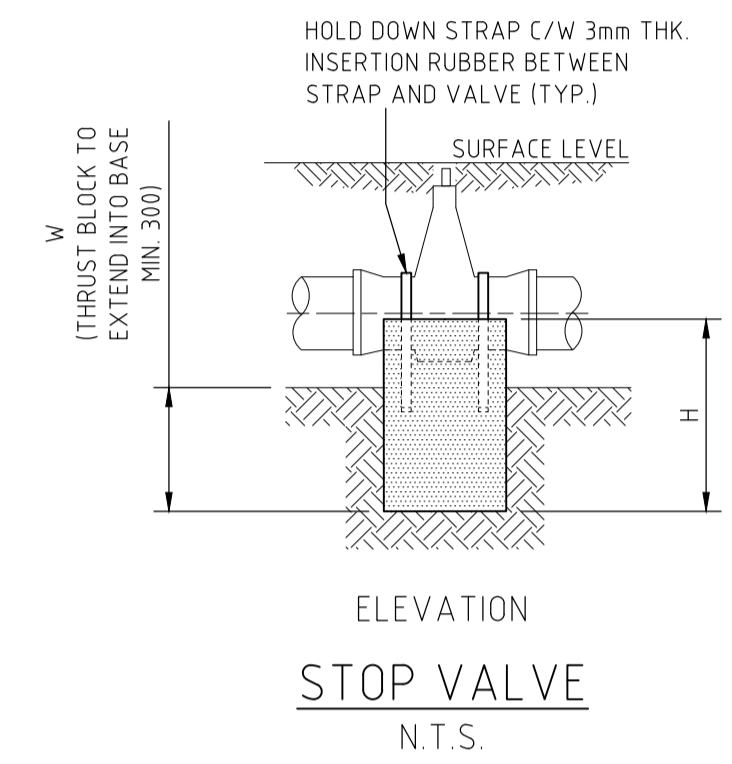
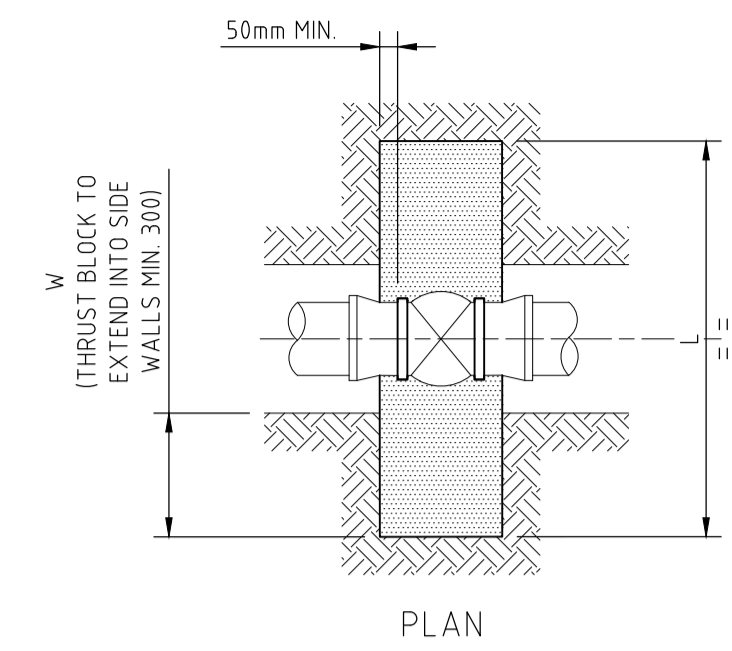
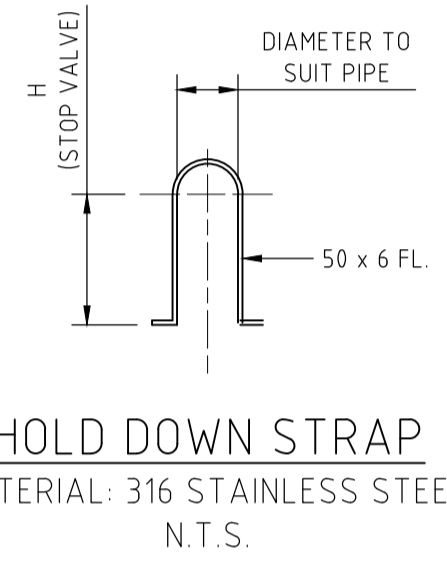
PROPERTY DESCRIPTION
PROPOSED SUBDIVISION
PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK
WHISTLER DRIVE, COORANBONG
DA/307/2015

SURVEYED ADW Johnson
DATUM A.H.D.

PROJECT	DISCIPLINE	NUMBER	REV.
POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	WAT	029	WAC
PLAN TITLE	ROAD CROSS SECTIONS - SHEET 4		
PROJECT No. 239078(2.3 & 2.5)	DISCIPLINE WAT	NUMBER 029	REV. WAC



DIAL 1100
BEFORE YOU DIG



TYPE	FITTING	Soil AHBP (Kpa)	Test STP (Kpa)	Thrust	TA (m2)	Length (L)	Height (H)	Width (W)
1	DN250 x 90° BEND	100	1000	91.00	0.91	1.00	0.91	0.40
2	DN250 x 45° BEND	100	1000	51.00	0.51	0.75	0.68	0.40
3	DN250 x 22.5° BEND	100	1000	26.00	0.26	0.55	0.47	0.40
4	DN250 x 11.25° BEND	100	1000	13.00	0.13	0.40	0.33	0.40
5	DN250 FLUSHING HYDRANT	100	1000	65.00	0.65	0.85	0.76	0.40
6	DN200 x DN200 EQUAL TEE	100	1000	43.00	0.43	0.70	0.61	0.30
7	DN200 x DN100 TAPER	100	1000	31.00	0.31	0.60	0.52	0.30
8	DN200 x 90° BEND	100	1000	60.00	0.60	0.80	0.75	0.30
9	DN200 x 45° BEND	100	1000	33.00	0.33	0.60	0.55	0.30
10	DN200 x 22.5° BEND	100	1000	17.00	0.17	0.45	0.38	0.30
11	DN200 x 11.25° BEND	100	1000	8.10	0.08	0.30	0.30	0.30
12	DN200 STOP VALVE	100	1000	43.00	0.43	1.20	0.52	0.30
13	DN200 FLUSHING HYDRANT	100	1000	53.00	0.53	0.75	0.71	0.40
14	DN100 x DN100 EQUAL TEE	100	1000	12.00	0.12	0.40	0.30	0.30
15	DN100 x 90° BEND	100	1000	17.00	0.17	0.45	0.38	0.30
16	DN100 x 45° BEND	100	1000	8.80	0.09	0.30	0.30	0.30
17	DN100 x 22.5° BEND	100	1000	4.50	0.05	0.30	0.30	0.30
18	DN100 x 11.25° BEND	100	1000	2.20	0.02	0.30	0.30	0.30
19	DN100 x 6° BEND	100	1000	2.20	0.02	0.30	0.30	0.30
20	DN100 STOP VALVE	100	1000	12.00	0.12	1.05	0.44	0.30
21	DN100 FLUSHING HYDRANT	100	1000	12.00	0.12	0.40	0.30	0.40

THRUST BLOCK NOTES:

- CONCRETE THRUST BLOCKS WERE PROVIDED FOR ALL FITTINGS IN ACCORDANCE WITH TABLE.
- THRUST BLOCK DIMENSIONS WERE BASED ON THE MINIMUM ALLOWABLE HORIZONTAL BEARING PRESSURES OF THE SOIL AS SHOWN.
- THRUST BLOCKS WERE CONSTRUCTED SUCH THAT THEY TRANSFER THE THRUST ONTO UNDISTURBED GROUND. THRUST BLOCKS DID NOT 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 (N). MAXIMUM ENCASEMENT TO BE 180°.
- CONCRETE FOR THE THRUST BLOCKS WAS GRADE S25 USING CEMENT TYPE "SR" TO AS3972. CONCRETE WAS MECHANICALLY VIBRATED.
- CONCRETE THRUST BLOCKS WERE CURED FOR A MINIMUM OF 7 DAYS BEFORE BEING SUBJECTED TO ANY THRUST LOAD.
- REFER TO WAT-1205 FOR GENERAL FITTING THRUST BLOCK ARRANGEMENTS.
- REFER TO WAT-1207 FOR GENERAL VALVE AND VERTICAL BEND THRUST BLOCK ARRANGEMENTS.

WORK-AS-CONSTRUCTED

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.
A	25.05.2015	PRELIMINARY ISSUE	J.N.	L.G.	J.N.	L.G.		<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 PRECINCT 2, STAGES 2.3 AND 2.5 WATAGAN PARK WHISTLER DRIVE, COORANBONG DA/307/2015	POTABLE WATER, RECYCLED WATER AND PRESSURE SEWER RETICULATION	239078(2.3 & 2.5) - WAT - 030	WAC		
B	31.07.2015	AMENDED ISSUE	J.N.	L.G.	J.N.	L.G.	SURVEYED ADW Johnson							DATUM A.H.D.	
C	19.08.2015	AMENDED ISSUE - FLOW SYSTEMS COMMENTS	J.N.	L.G.	J.N.	L.G.									
D	25.09.2015	AMENDED ISSUE - RETAINING WALLS RELOCATED	J.N.	L.G.	J.N.	L.G.									
E	30.10.2015	AMENDED ISSUE - PROPERTY SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.									
F	18.11.2015	CONSTRUCTION ISSUE	J.N.	L.G.	J.N.	L.G.									
O	08.02.2013	AMENDED CONSTRUCTION ISSUE - SERVICES RELOCATED	J.N.	L.G.	J.N.	L.G.									
1	13.09.2016	WORK AS CONSTRUCTED - RAR	A.S.A.			B.K.									

100mm AT FULL SIZE