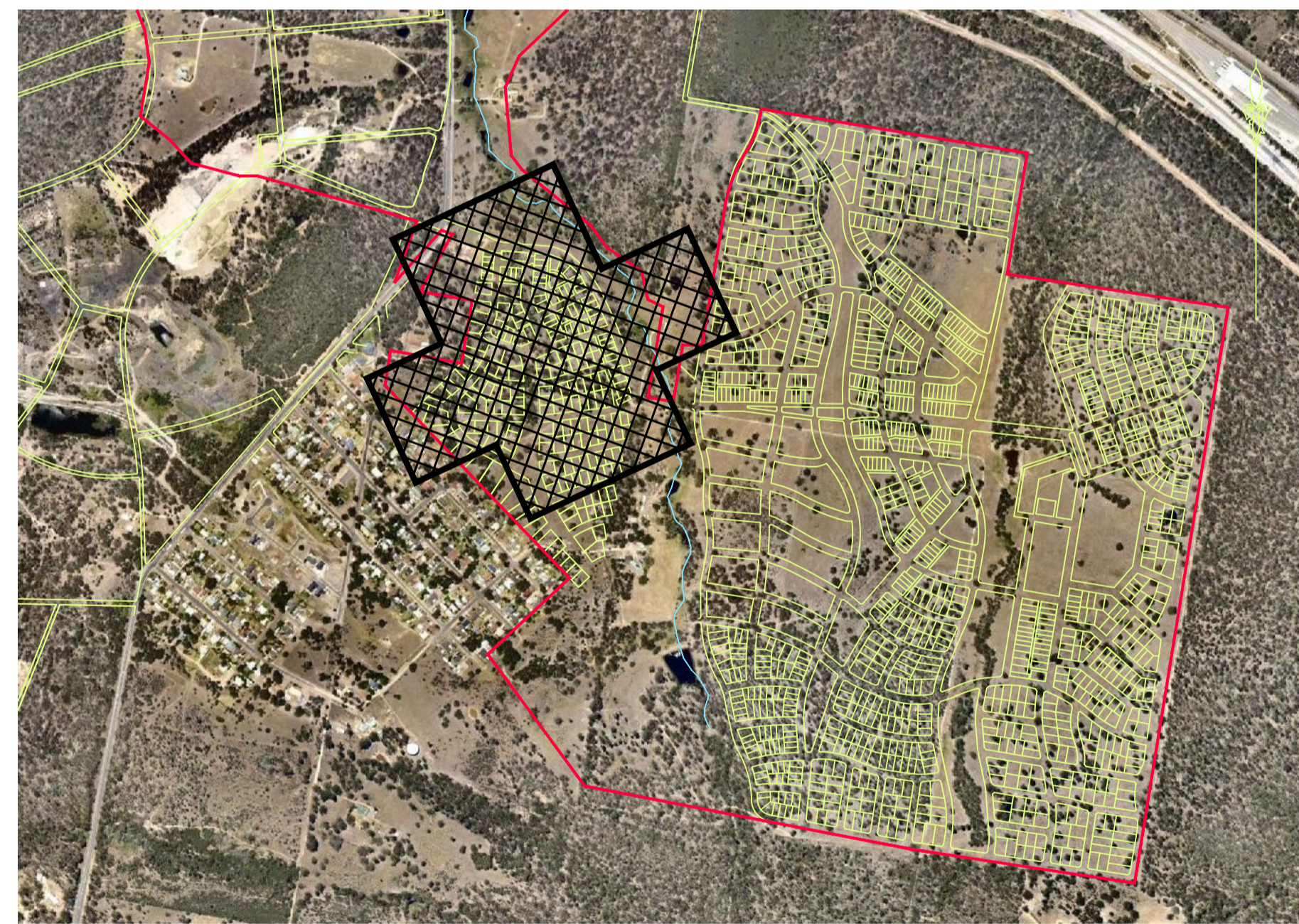


CONSTRUCTION NOTES

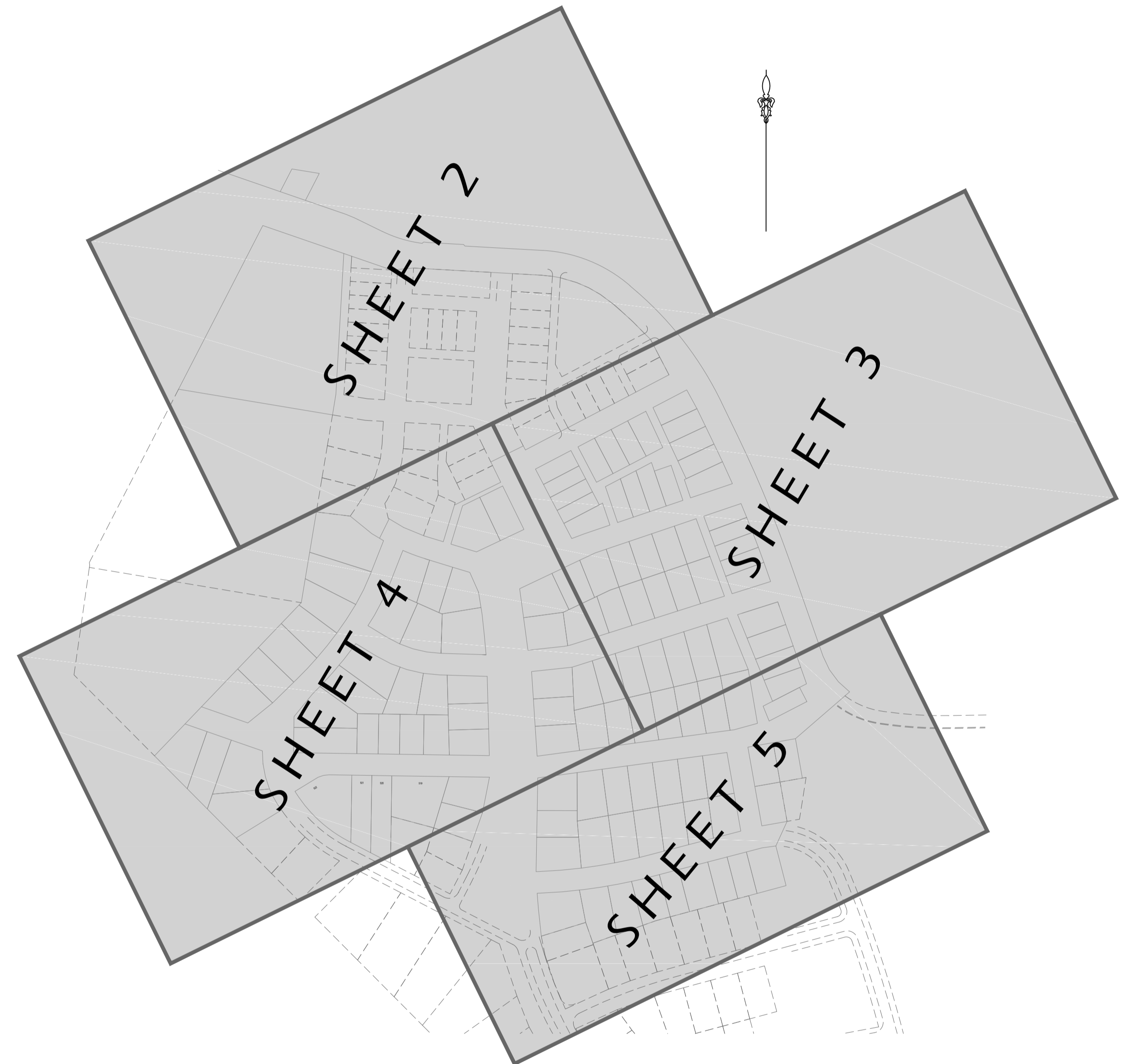
PIPE SCHEDULE

SIZE	TYPE	CLASS	LENGTH
DN200	PE100	PN16	643.0
DN110	PE100	PN16	522.8
DN90	PE100	PN16	1244.2
DN75	PE100	PN16	182.8
DN63	PE100	PN16	58.8
DN50	PE100	PN16	1043.1
DN40	PE100	PN16	1585.0
TOTAL			5279.7

- ALL WORKS WERE IN ACCORDANCE WITH, BUT NOT LIMITED TO, PRESSURE SEWERAGE CODE OF AUSTRALIA - WSA 07-2007, POLYETHYLENE PIPELINE CODE WSA 01-2004, URBAN WATER SOLUTIONS Pty Ltd MASTERPLAN DRAWINGS & HUNTLEE WATER REQUIREMENTS.
- ALL EQUIPMENT, MATERIALS & ACCESSORIES USED IN THIS CONTRACT WAS NEW, CONFORM WITH THE APPROPRIATE CURRENT AUSTRALIAN STANDARDS & COMPLIED WITH H.W. REQUIREMENTS.
- ALL SERVICES SHOWN WERE INDICATIVE ONLY. A CURRENT SERVICES SEARCH & SITE CHECK OF ALL EXISTING SERVICES WAS REQUIRED PRIOR TO COMMENCEMENT OF ANY WORKS. THE CONTRACTOR WAS TO DETERMINE LEVELS & LOCATIONS 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 ENSURED ALL SERVICES ARE LOCATED BY THE RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
- PRESSURE SEWER MAINS ARE BLACK POLYETHYLENE (PE100 PN16) WITH A CREAM STRIPE AS PER WSA 02-2007.
- ALL POLYETHYLENE MAINS WERE JOINED ELECTROFUSION TECHNIQUES IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
- MAIN LAID GENERALLY AS INDICATED IN SERVICE ALLOCATION DIAGRAMS. INSTRUCTION NOTES SHALL TAKE PRECEDENCE OVER DIAGRAMS WHERE PROVIDED. 600mm HORIZONTAL CLEARANCE WAS MAINTAINED BETWEEN ALL SEWER & WATER MAINS. MINIMUM PIPE COVER IS 800mm IN FOOTPATHS & 1200mm FOR ROAD CROSSINGS. MAXIMUM PIPE COVER IS 1500mm UNLESS SPECIFIED ON THE DESIGN PLANS OR APPROVAL IS OBTAINED FROM THE H.W. REPRESENTATIVE.
- MAINS CROSSING UNDER EXISTING DRIVEWAYS (SEALED, PAVED OR DECORATIVE) WERE CONDUCTED BY UNDER BORING ONLY.
- MAINS WITHIN 2m OF ELECTRICITY OR POWER POLES WERE CONDUCTED BY BORING TECHNOLOGY (UNLESS AGREED TO BY THE HUNTLEE WATER).
- ALL MAINS LAID IN (TRAFFICABLE) CARRIAGEWAYS WERE BACKFILLED WITH 16:1 STABILISED SAND CEMENT TO SUBGRADE LEVEL.
- ALL BENDS ARE ELECTROFUSION SWEEP BENDS.
- MINIMUM BENDING RADIUS FOR PN16 PE100 (SDR11) ARE 20 x DN (ie. DN200: R4.0m, DN110: R2.2m, DN90: R1.8m, DN75: R1.5m, DN63: R1.3m, DN50: R1.0m, DN40: R0.8m)
- ALL HOUSE SERVICE LATERALS ARE DN40 (PE100 PN16).
- FLUSHING PITS CONFORM WITH THE FOLLOWING:
TYPE 1: FLUSHING PIT IS CONCRETE WITH HEAVY DUTY COVER, 50mm 316 S/S PIPE WITH BALL VALVE USED FOR DN125 & SMALLER.
TYPE 2: FLUSHING PIT IS CONCRETE WITH HEAVY DUTY COVER INCORPORATING DN100 ISOLATION VALVE FOR MAINS LARGER THAN DN125.
- DETECTABLE MARKING TAPE WAS LAID ON TOP OF THE PIPE EMBEDMENT MATERIAL BEFORE BACKFILLING & CONNECTED TO SURFACE VALVES OR HYDRANTS.
- ALL SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS (ie ROADWAYS, PATHS etc) HAVE HEAVY DUTY SURROUNDS INSTALLED.
- DURING CONSTRUCTION, ALL OPEN ENDS OF PIPE WERE CAPPED OFF TO PREVENT ENTRY OF FOREIGN MATTER.
- ALL VALVES ARE RESILIENT SEATED SLUICE VALVES (CLOCKWISE CLOSING) & RESTRAINED IN ACCORDANCE WITH WAT-1207.
- ALL MAINS WERE TESTED (AS DIRECTED BY THE H.W. REPRESENTATIVE) TO MEET CERTIFYING AUTHORITY STANDARDS.
- FOR LOTS WITH TANKS IN THE REAR: 1 x 25mm INSTRUMENTATION CONDUIT (ORANGE) AND 1 x 25mm ELECTRICAL CONDUIT (ORANGE) (WITH DRAW WIRES) WERE INSTALLED FROM THE COLLECTION TANK TO WATER METERS. THE CONDUITS WERE LAID IN A COMMON TRENCH WITH THE SEWERAGE AND MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 400mm. THE CONDUIT RUNS WERE CUT & THE TWO ENDS BROUGHT TO THE SURFACE AT ONE LOCATION THAT IS APPROX. THE MIDDLE OF THE RUN AND IS A MAXIMUM OF 25m FROM THE COLLECTION TANK & 40m FROM THE RECYCLED WATER METER.
- PRESSURE TRANSMITTERS WERE INSTALLED AT SPECIFIED POINTS ARE MR621 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING, TELEMETRY & ALARM TO HUNTLEE WATER REQUIREMENTS.
- LOCALISED DEEPENING OF THE MAIN MAY HAVE BEEN REQUIRED TO FACILITATE AIR VALVE INSTALLATION. CONTRACTOR ENSURED THAT AIR VALVE OFFTAKE IS LOCATED AT A HIGH POINT IN THE MAIN (ie. MAIN SHALL GRADE DOWNWARDS EITHER SIDE OF THE AIR VALVE).
- THE CONTRACTOR PROVIDED H.W. WITH MINIMUM OF 7 DAYS NOTICE OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE.
- UPON COMPLETION OF WORKS, ALL SURFACES WERE RESTORED AS CLOSE AS POSSIBLE, TO THE CONDITION THAT EXISTED PRIOR TO COMMENCEMENT OF WORK.
- PERMISSION OF ENTRY WAS OBTAINED BY THE CONTRACTOR FROM THE OWNER/OCCUPIER PRIOR TO COMMENCEMENT OF WORK IN PRIVATE PROPERTY.
- BURIED FITTINGS WERE NOT BACKFILLED UNTIL W.A.C. DETAILS HAD BEEN OBTAINED & APPROVAL FOR BACKFILLING GIVEN BY THE HUNTLEE WATER REPRESENTATIVE.
- 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: NIL ** REFER NOTE 9 **
NON-TRAFFICABLE:
PIPE EMBEDMENT ZONE: 30 TESTS TRENCH FILL ZONE: 30 TESTS
- BOUNDARY KITS ARE 316 STAINLESS STEEL BALL VALVE & SWING CHECK VALVE (CLASS 16), COMPLETE WITH OPEN BASE ACCESS BOX WITH LID. COLLECTION TANK (AS SPECIFIED BY HUNTLEE WATER) WERE INSTALLED WITH BOUNDARY KIT (REFER GENERAL ARRANGEMENT). PUMP WAS INSTALLED BY OTHERS.
- ALL MAINS DN110 & ABOVE HAD BEEN SUBJECT TO AT LEAST ONE SWAB RUN TO ENSURE THAT THE MAIN IS FREE OF DELETERIOUS MATERIAL.
- ALL MAINS WERE FLUSHED WITH WATER TO REMOVE ANY DEBRIS PRIOR TO COMMISSIONING.
- SURFACE IDENTIFICATION MARKERS WERE PROVIDED TO H.W. REQUIREMENTS.
- ROPE OFF ALL PRESSURE SEWER UNITS & FLUSHING POINTS TO LIMIT DAMAGE DURING CONSTRUCTION.



LOCALITY PLAN
(NOT TO SCALE)

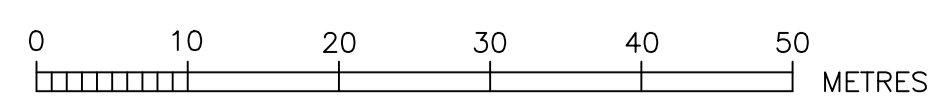


GENERAL ARRANGEMENT
(NOT TO SCALE)



PRESSURE SEWER LEGEND

	STOP VALVE
	TAPER
	FLUSHING POINT
	PROPERTY BOUNDARY KIT
	COLLECTION TANK
	CONTROL/ALARM PANEL
	ELECTRICAL CABLES
	FLOW METER
	AIR VALVE
	PRESSURE MONITORING POINT
	REMOTE MONITORED PRESSURE TRANSDUCER
	VERTICAL DEFLECTION



ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd.
 WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
 142 SUNNYHOLT ROAD, BLACKTOWN
 P.O. BOX 6745, BLACKTOWN N.S.W. 2148
 PH: (02) 9853 0200 FAX: (02) 9671 7399



HUNTLEE WATER REF:		DATE	U.S. REFERENCE
DRAWN	D.SHEATHER	1:500	15 E7
REVIEWED	R.CHIVAS	APPROVED	DATE
	D.SAWKINS		22/12/2015

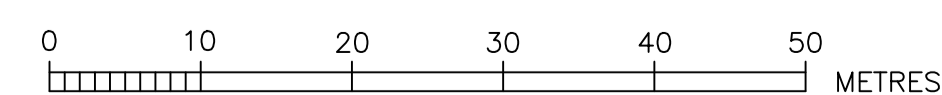
SHEET 2 OF 6	VERSION: WAC
39/23357/1	

JOIN LINE - SEE SHEET 3



PRESSURE SEWER LEGEND

X	STOP VALVE
I	TAPER
FP	FLUSHING POINT
⊠	PROPERTY BOUNDARY KIT
⊙	COLLECTION TANK
⊞	CONTROL/ALARM PANEL
-e-	ELECTRICAL CABLES
▶	FLOW METER
▲	AIR VALVE
PP	PRESSURE MONITORING POINT
⊕	REMOTE MONITORED PRESSURE TRANSDUCER
⋈	VERTICAL DEFLECTION

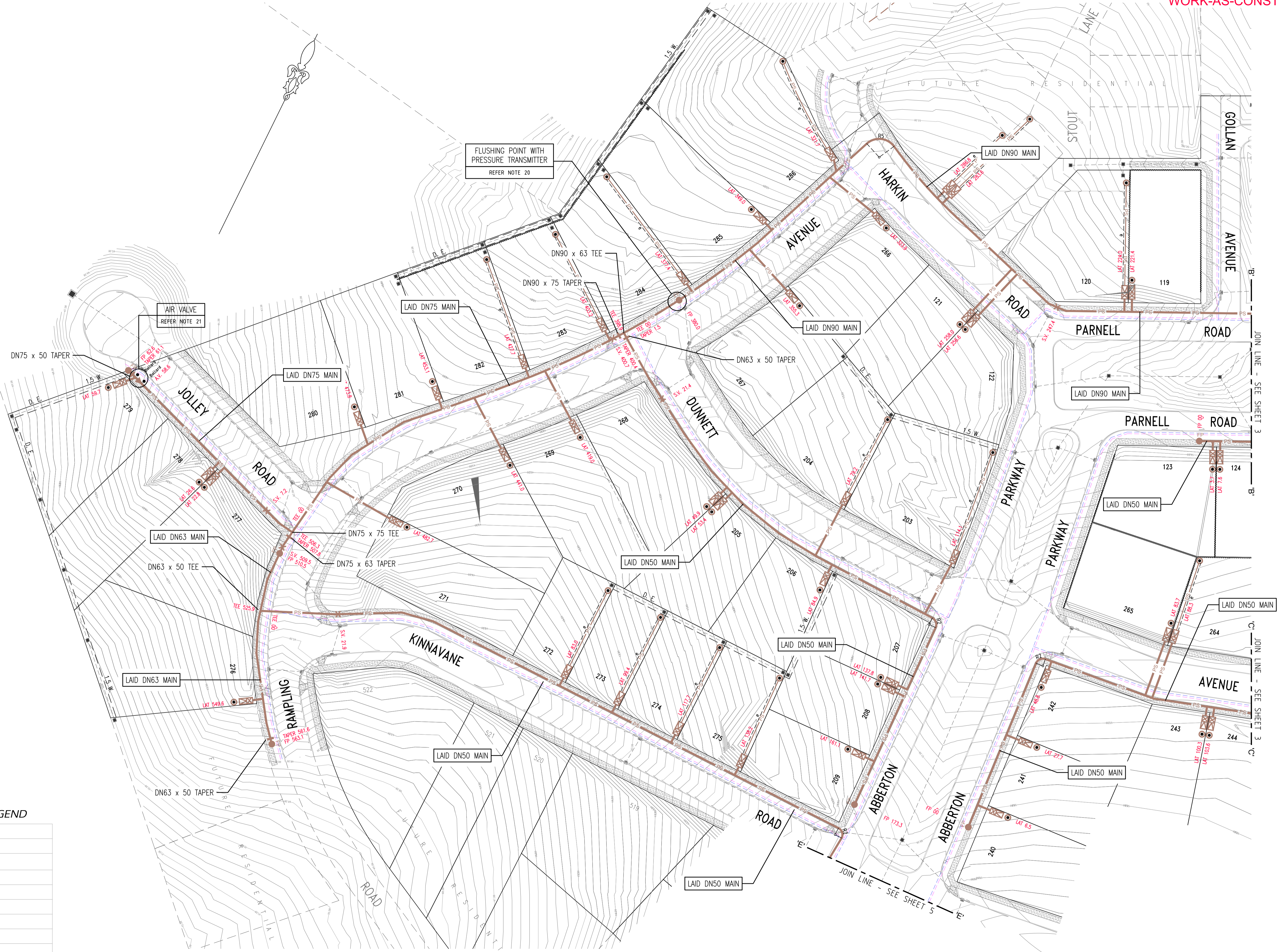


ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd.
RAR WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
 142 SUNNYHOLT ROAD, BLACKTOWN
 P.O. BOX 6745, BLACKTOWN N.S.W. 2148
 PH: (02) 9853 0200 FAX: (02) 9671 7399



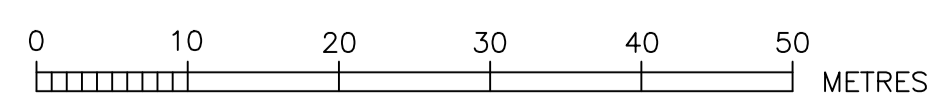
HUNTLEE WATER REF:			
DRAWN	SCALE	DATE	U.S. REFERENCE
D.SHEATHER	1:500	-	15 E7
VIEWED	REVIEWED	APPROVED	DATE
R.CHIVAS	D.SAWKINS		22/12/2015

SHEET 3 OF 6	VERSION
	WAC
JOB No. 39/23357/1	



PRESSURE SEWER LEGEND

X	STOP VALVE
I	TAPER
FP	FLUSHING POINT
⊠	PROPERTY BOUNDARY KIT
⊙	COLLECTION TANK
⊞	CONTROL/ALARM PANEL
-e-	ELECTRICAL CABLES
▶	FLOW METER
⊞	AIR VALVE
PP	PRESSURE MONITORING POINT
⊞	REMOTE MONITORED PRESSURE TRANSDUCER
⋈	VERTICAL DEFLECTION



ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd.
 WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
 142 SUNNYHOLT ROAD, BLACKTOWN
 P.O. BOX 6745, BLACKTOWN N.S.W. 2148
 PH: (02) 9853 0200 FAX: (02) 9671 7399



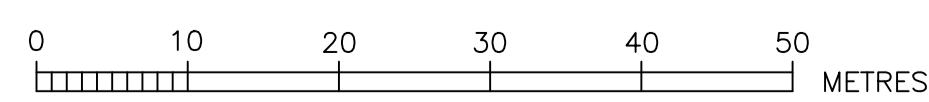
HUNTLEE WATER REF:			
DRAWN	SCALE	DATE	U.S. REFERENCE
D.SHEATHER	1:500	-	15 E7
REVIEWED		APPROVED	DATE
R.CHIVAS		D.SAWKINS	22/12/2015

SHEET 4 OF 6	WAC
39/23357/1	



PRESSURE SEWER LEGEND

X	STOP VALVE
I	TAPER
FP	FLUSHING POINT
⊠	PROPERTY BOUNDARY KIT
⊙	COLLECTION TANK
⊞	CONTROL/ALARM PANEL
-e-	ELECTRICAL CABLES
▶	FLOW METER
▲	AIR VALVE
PP	PRESSURE MONITORING POINT
⊕	REMOTE MONITORED PRESSURE TRANSDUCER
⋈	VERTICAL DEFLECTION



ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd.
 WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
RAR
 142 SUNNYHOLT ROAD, BLACKTOWN
 P.O. BOX 6745, BLACKTOWN N.S.W. 2148
 PH: (02) 9853 0200 FAX: (02) 9671 7399



HUNTLEE WATER REF:			
DRAWN	SCALE	DATUM	U.S. REFERENCE
D.SHEATHER	1:500	-	15 E7
VIEWED	REVIEWED	APPROVED	DATE
R.CHIVAS	D.SAWKINS		22/12/2015

SHEET 5 OF 6	VISION
	WAC
39/23357/1	

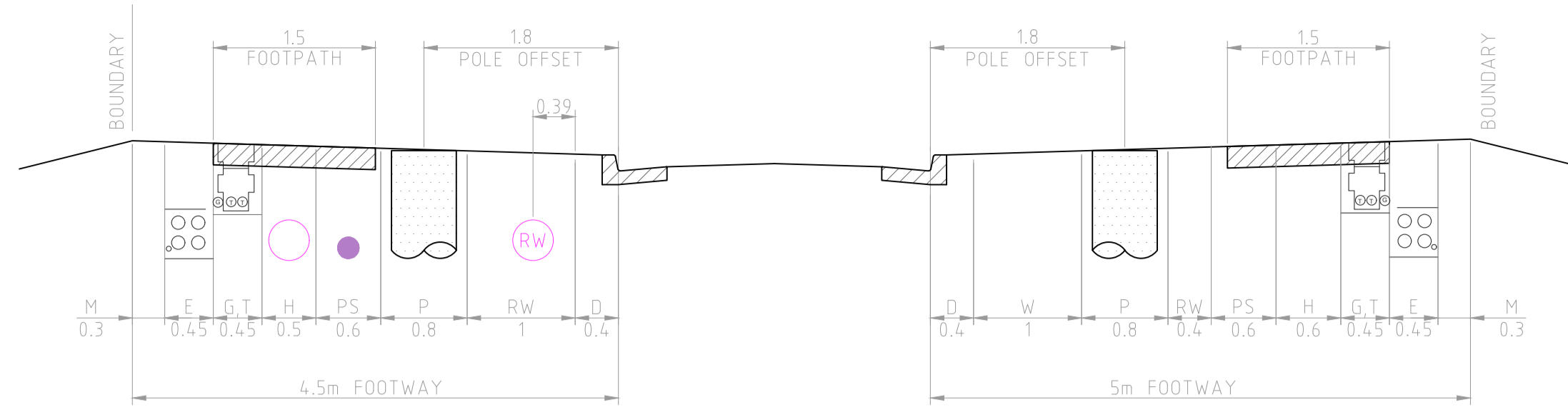
NOTES

1. CONCRETE PATHS TO BE PART OF LANDSCAPE CONTRACT.
2. FOR KERB DETAILS REFER TO DWG No. 0102

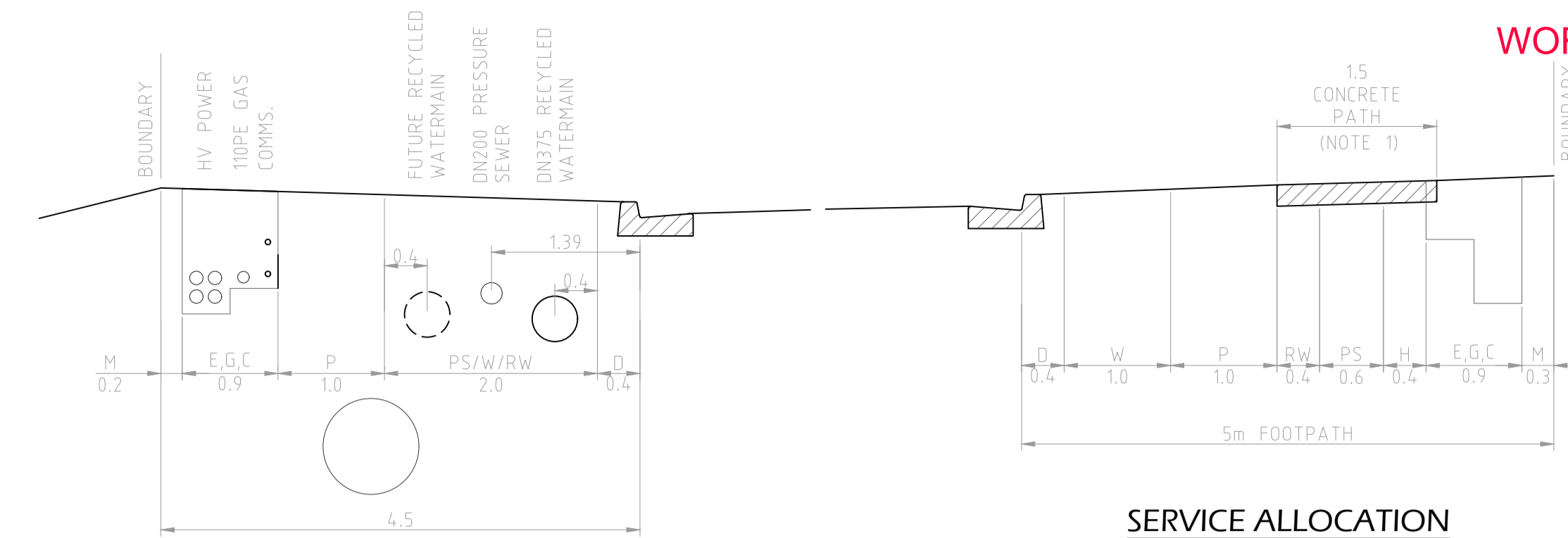
WORK-AS-CONSTRUCTED

SERVICES LEGEND

M	MISCELLANEOUS
E	ELECTRICITY
G	GAS
C	COMMUNICATIONS
P	POLES & TREES
W/RW	WATER + RECYCLED WATER
D	DRAINAGE
RW	RECYCLED WATER ONLY
H	HUNTLEE FUTURE SERVICES
PS	PRESSURE SEWER

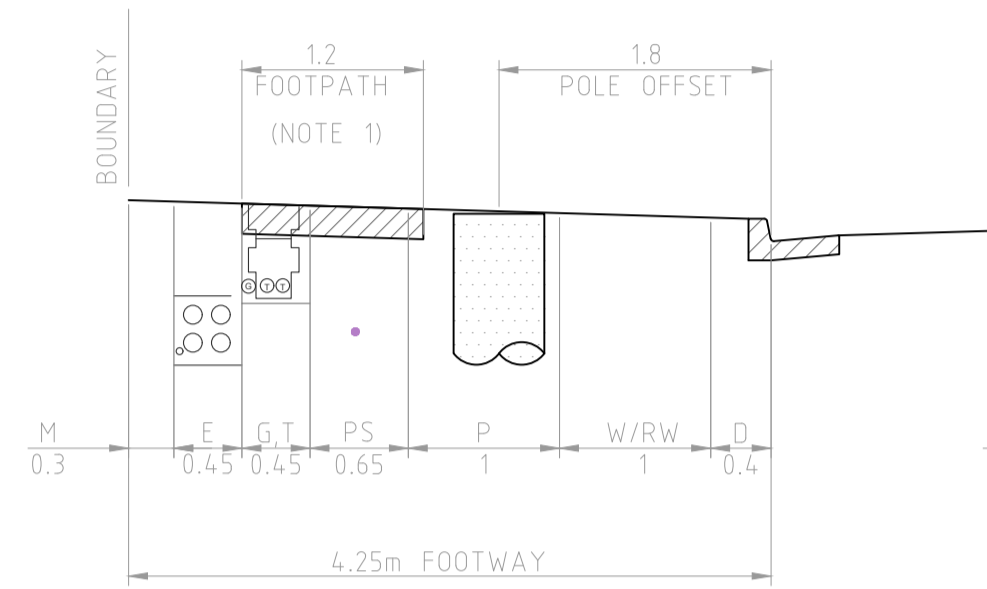


**SERVICE ALLOCATION
- ROAD 1
SCALE 1:50**

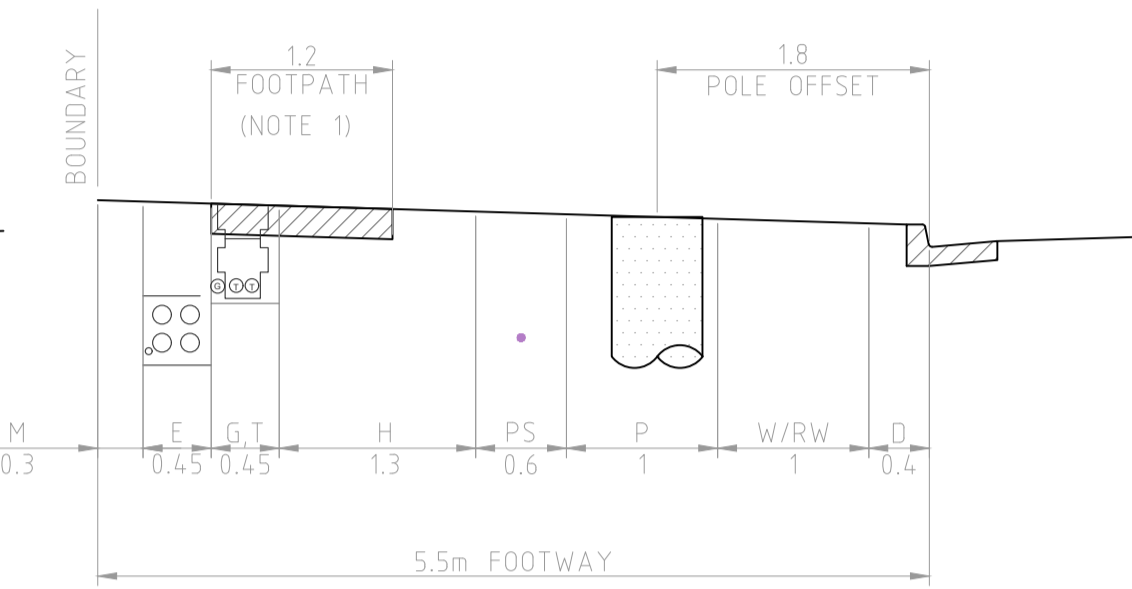


**SERVICE ALLOCATION
4.5m FOOTWAY (ROAD 1)
SCALE 1:50**

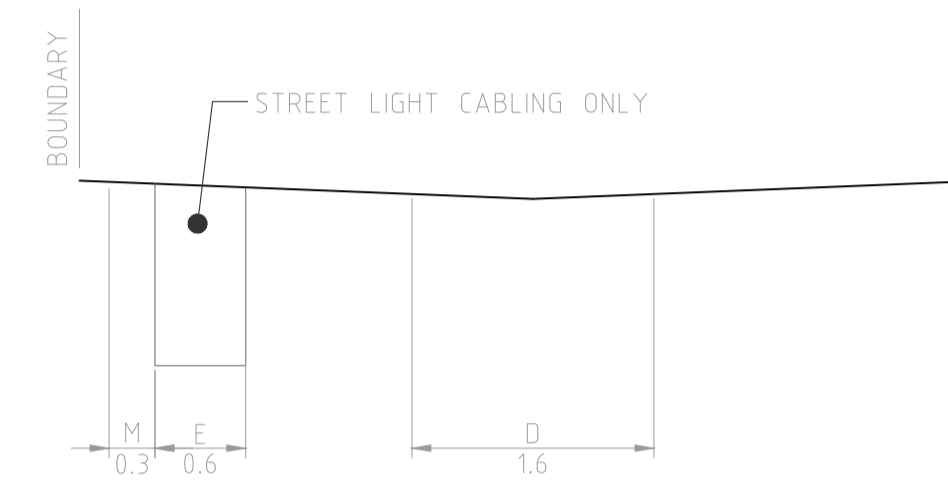
**SERVICE ALLOCATION
5.0m FOOTWAY (ROAD 1)
SCALE 1:50**



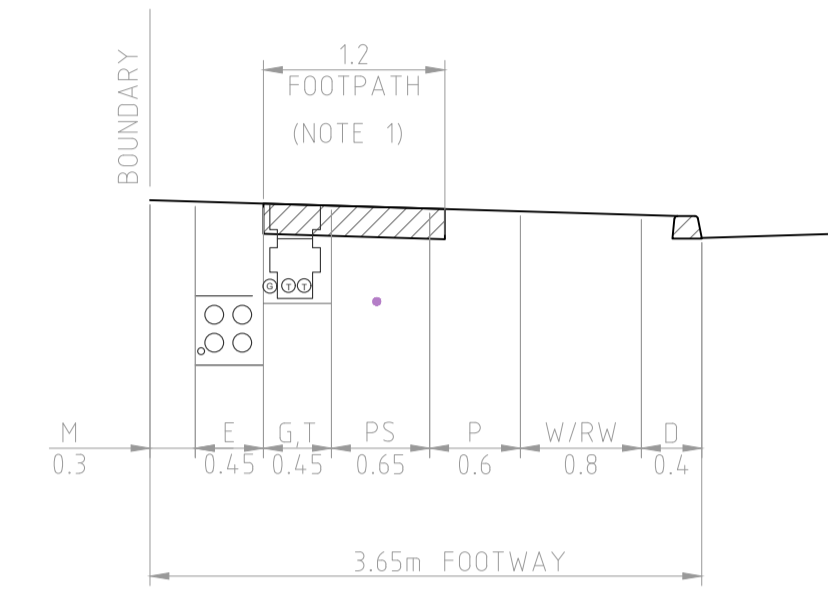
**SERVICE ALLOCATION
4.25m FOOTWAY
SCALE 1:50**



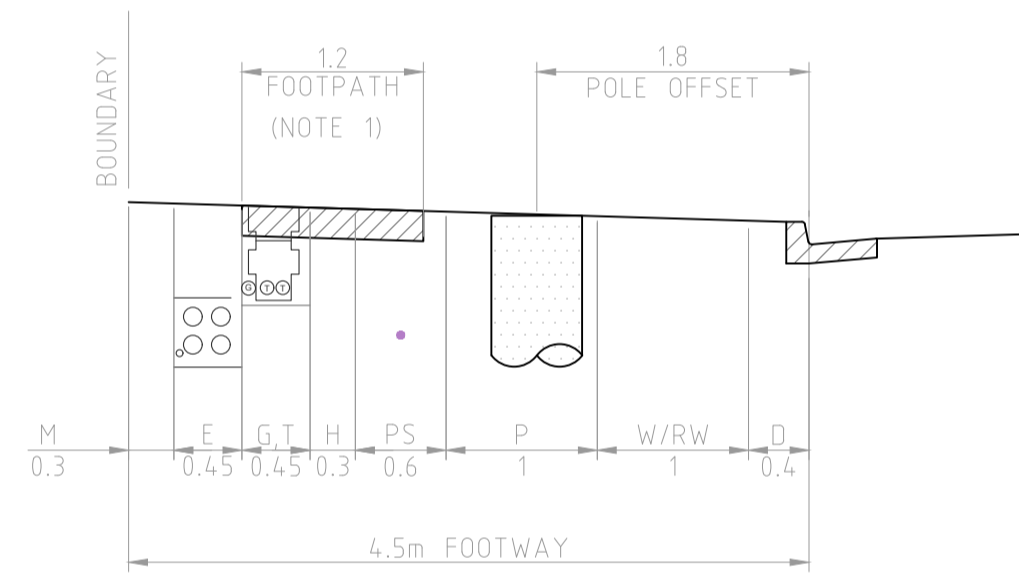
**SERVICE ALLOCATION
5.5m FOOTWAY
SCALE 1:50**



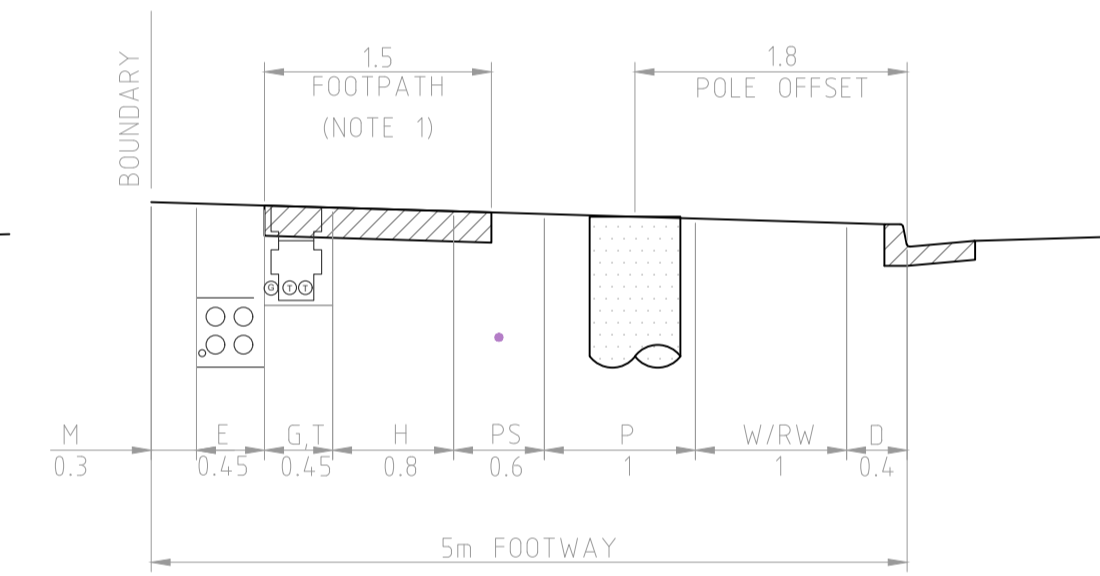
**SERVICE ALLOCATION
LANEWAY
SCALE 1:50**



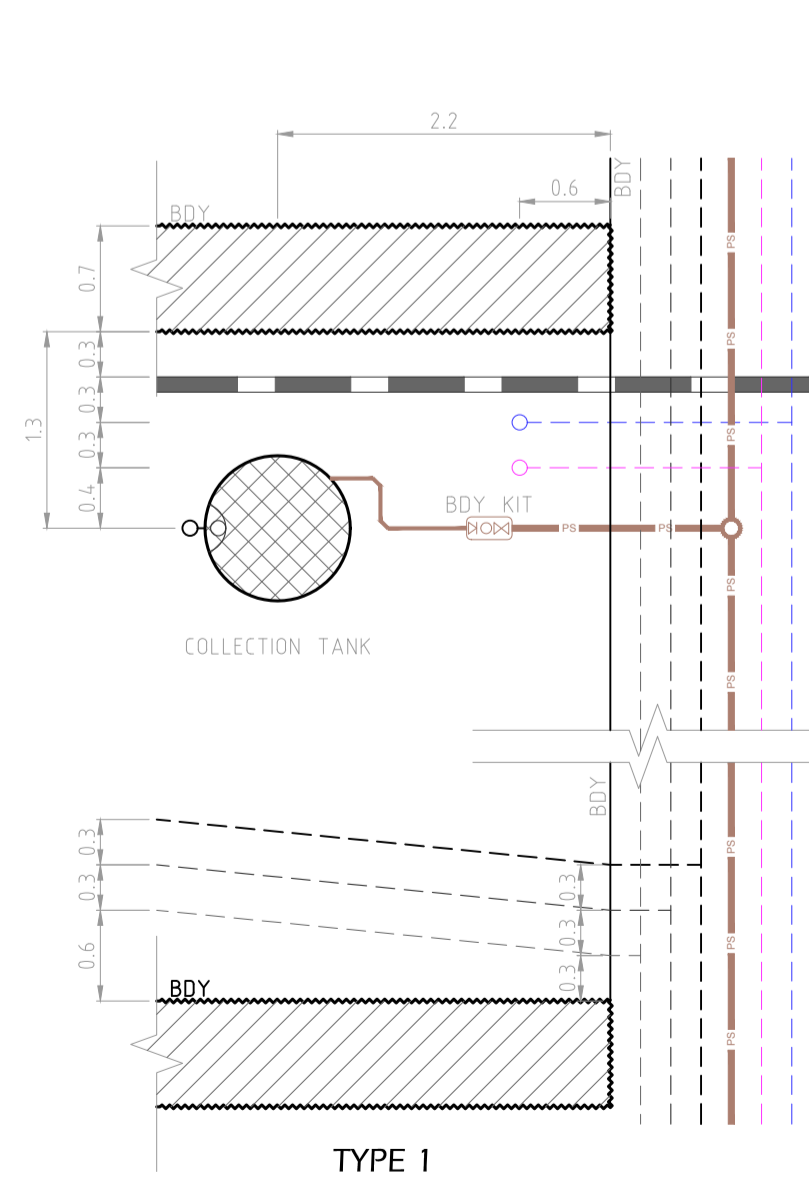
**SERVICE ALLOCATION
3.65m FOOTWAY
SCALE 1:50**



**SERVICE ALLOCATION
4.5m FOOTWAY (EXCL ROAD 1)
SCALE 1:50**



**SERVICE ALLOCATION
5.0m FOOTWAY (EXCL ROAD 1)
SCALE 1:50**



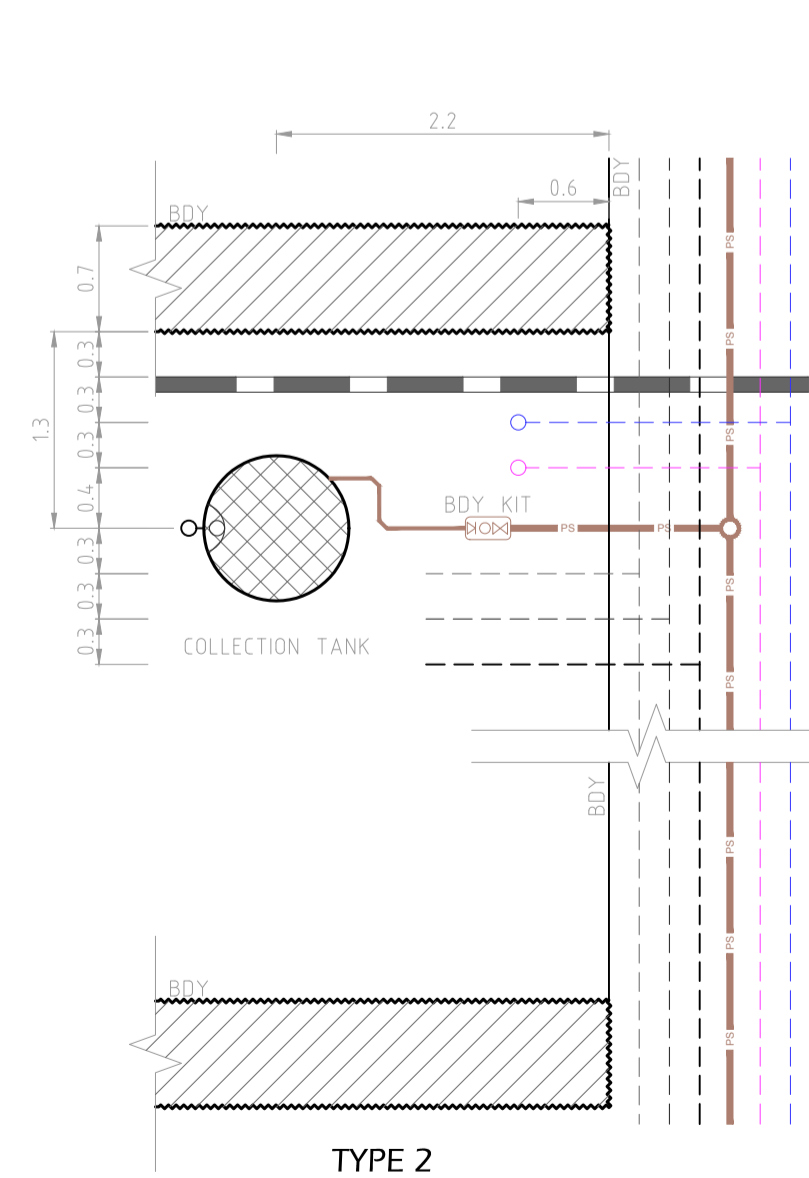
TYPE 1

UTILITIES CONFIGURATION

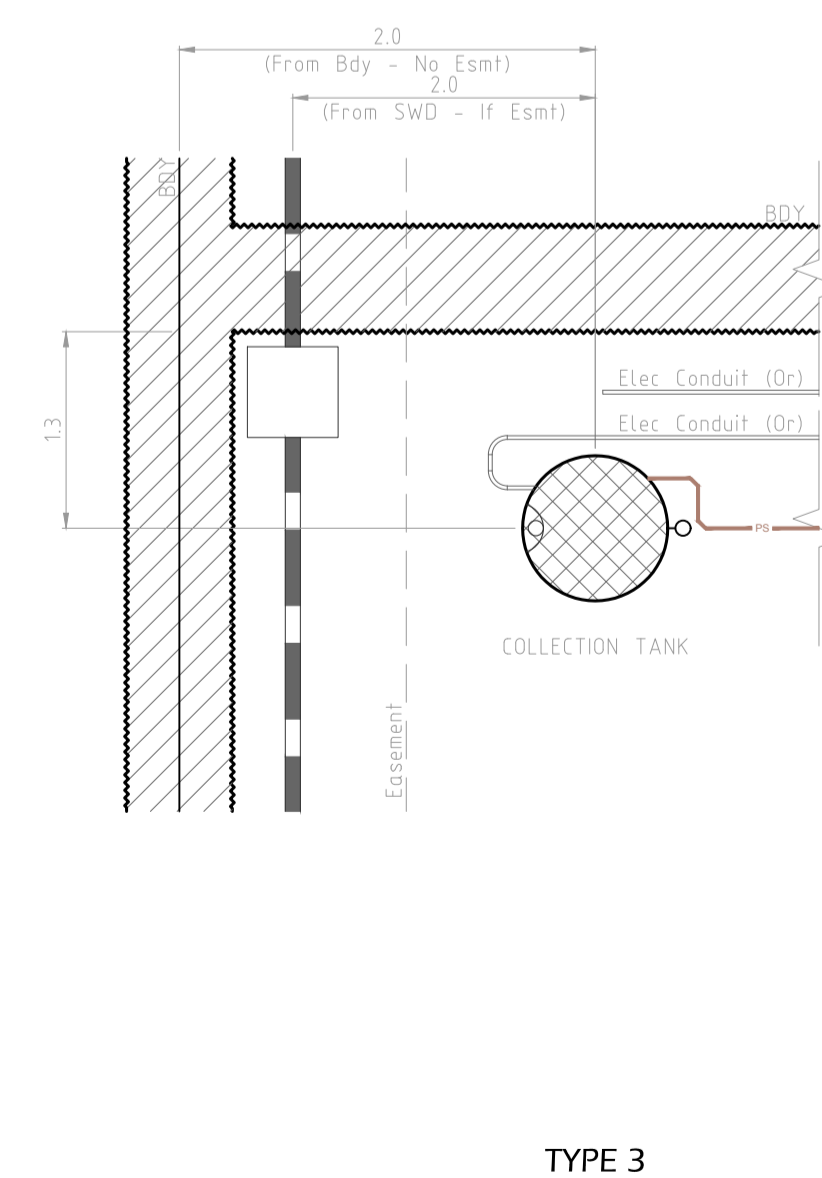
SCALE 1:25
NOTE: REFERS TO LOTS DENOTED BY 'x' ON WORLEY PARSONS UTILITY CONDUIT PLANS. (THESE DETAILS ARE TO BE CONFIRMED ON SITE WITH THE UTILITY AUTHORITIES).

LEGEND

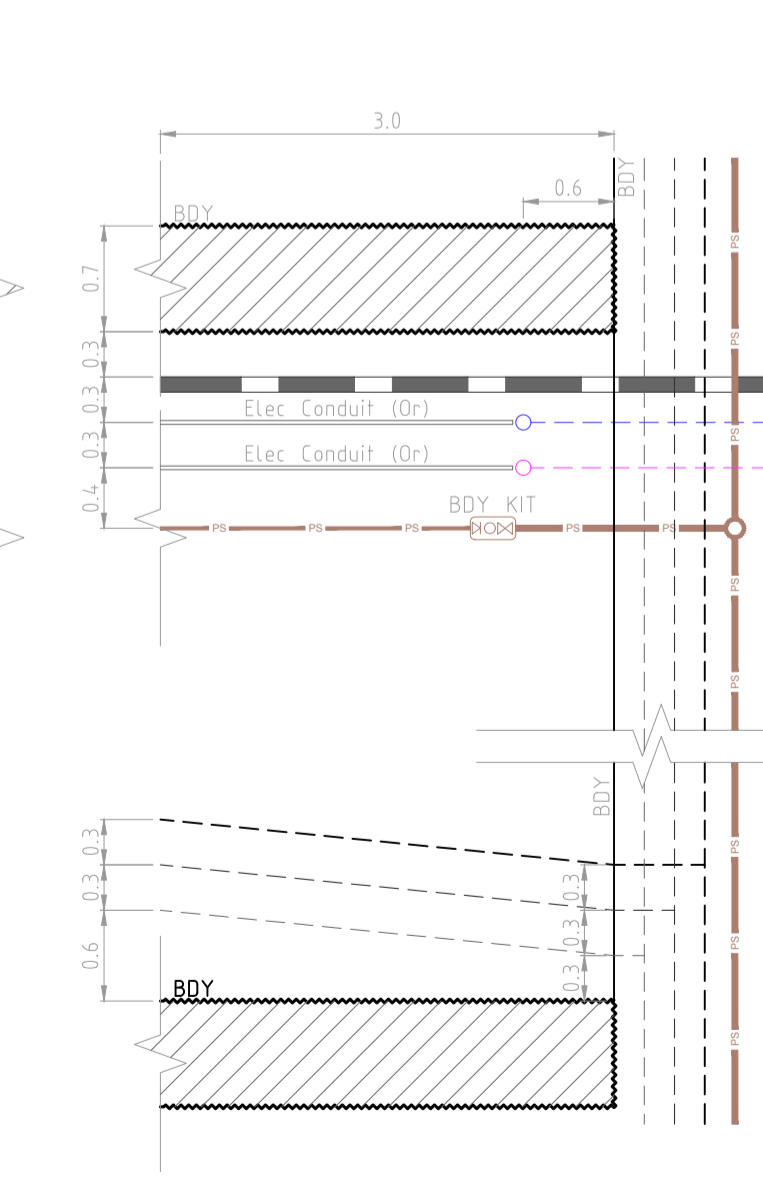
	RETAINING WALL (AREA OF BLOCKS & NO FINES BACKFILL)
	GAS
	COMMUNICATIONS
	ELECTRICAL
	RECYCLED WATER
	POTABLE WATER
	PRESSURE SEWER
	STORMWATER



TYPE 2



TYPE 3



TYPE 4