BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED

0 10 20 30 40 50 METRES

WATER SERVICING COORDINATOR: ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
142 SUNNYHOLT ROAD BLACKTOWN NSW 2148
Ph: (02) 9853 0200

ORIGINAL DESIGN *[Version A–D]:* QALCHEK Pty. Ltd.
77 UNION ROAD PENRITH NSW 2750
Ph: (02) 4722 8181

DESIGNER: *[Version E]:* ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
142 SUNNYHOLT ROAD BLACKTOWN NSW 2148
Ph: (02) 9853 0200

FOR: *YUANTONG AUSTRALIA*
C/– YARRAMAN DEVELOPMENTS Pty. Ltd.
PO BOX 3748 MARSFIELD N.S.W. 2122
Ph: 0408 441 183

GENERAL NOTES

1. THIS DRAWING SET SHALL BE READ IN CONJUNCTION WITH THE HILLS SHIRE COUNCIL STANDARDS, FLOW SYSTEMS SUPPLEMENTARY MANUAL TO W.S.A.A. & OTHER ASSOCIATED DRAWINGS AND TECHNICAL SPECIFICATIONS.
2. ALL PRESSURE SEWER LATERALS & RECYCLED WATER PROPERTY SERVICE CONNECTIONS CROSSING CARRIAGEWAYS SHALL BE INSTALLED WITHIN INDIVIDUAL SERVICE CONDUITS.
3. THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS AND SHALL REPAIR ANY DAMAGE CAUSED TO SUCH SERVICES DURING THE COURSE OF WORKS. ANY SERVICE LOCATIONS ON THE FOLLOWING DRAWINGS ARE INDICATIVE ONLY.
4. MAKE SMOOTH TRANSITION TO EXISTING INFASTRUCTURE (ROADS, PAVEMENTS, FOOTPATHS ETC.) TO P.C.A. AND SUPERINTENDENT REQUIREMENTS.
5. SUITABLE PROTECTION OF EXISTING ROAD PAVEMENT, KERB AND GUTTER, FOOTPATHS AND ANY EXISTING FEATURES SHALL BE PROVIDED UNTIL THE CONSTRUCTION WORKS ARE COMPLETED.PROPERTIES

SEWER NOTES

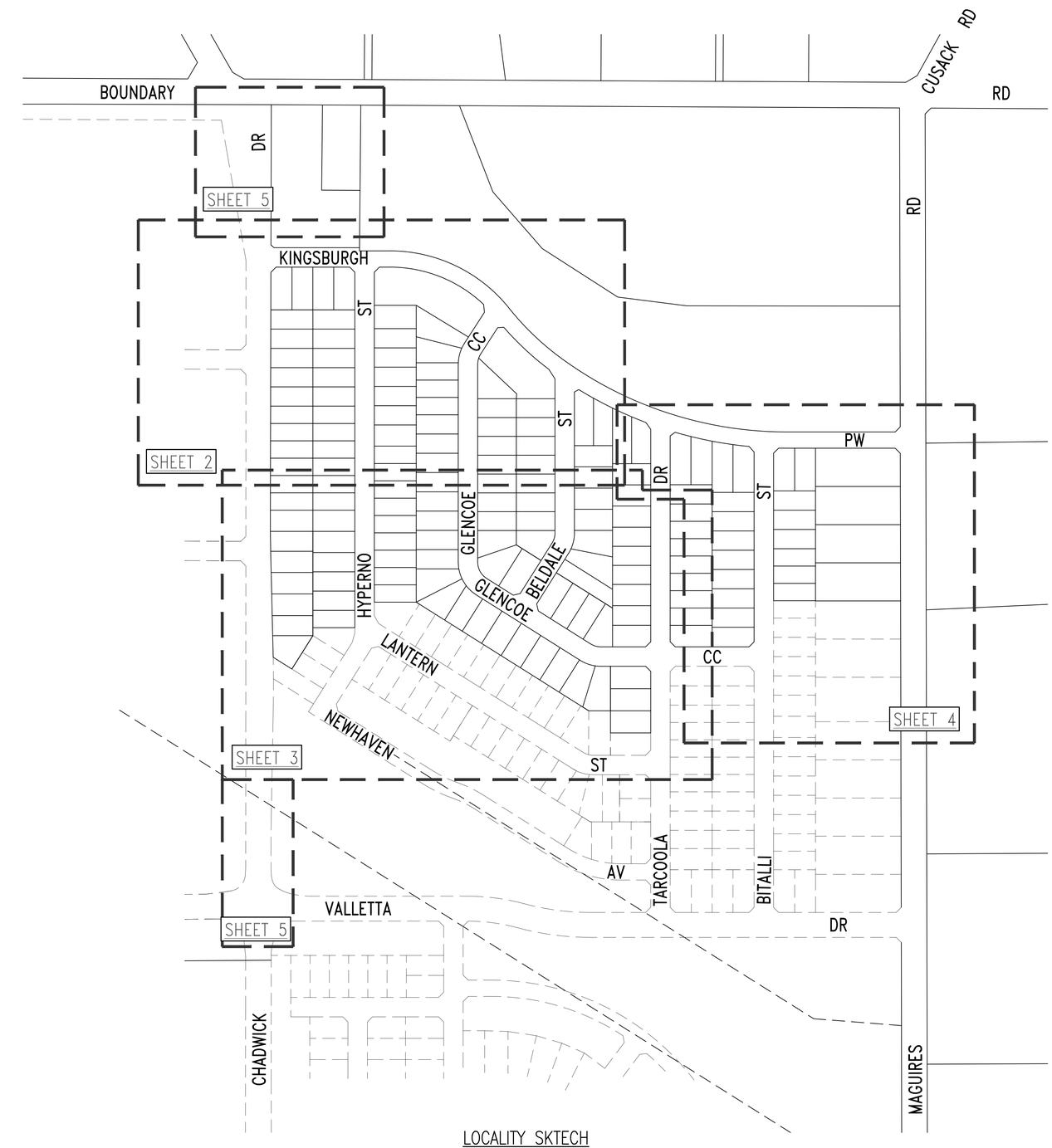
1. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS, FLOW SYSTEMS SUPPLEMENTARY MANUAL TO W.S.A.A, PRESSURE SEWERAGE CODE OF AUSTRALIA WSA 07–2007 VERSION 1.1 & POLYETHYLENE PIPELINE CODE WSA 01–2004.
2. ALL EQUIPMENT, MATERIALS & ACCESSORIES USED IN THIS CONTRACT SHALL BE NEW & SHALL COMPLY WITH FLOW SYSTEMS REQUIREMENTS. BUTT FUSION FITTINGS DENOTED HEREWITH HAVE BEEN DERIVED FROM THE 'GEORG FISCHER PIPING SYSTEMS' BUTT FUSION PRODUCT RANGE. ELECTROFUSION FITTINGS DENOTED HEREWITH HAVE BEEN DERIVED FROM THE PLASSON 'POLYETHYLENE PIPING SYSTEMS' PRODUCT RANGE.
3. ALL SERVICES SHOWN ARE INDICATIVE ONLY. A CURRENT SERVICES SEARCH & SITE CHECK OF ALL EXISTING SERVICES WILL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORKS. THE CONSTRUCTOR IS TO DETERMINE LEVELS & LOCATIONS OF EXISTING SERVICES IN THE VICINITY OF THE CONSTRUCTION SITE AND ANY CONSTRUCTED STRUCTURES FOR PROPOSED SERVICES, SUCH AS DUCTING FOR WATER OR ELECTRICITY WITHIN THE SUBDIVISION. THE CONTRACTOR MUST ENSURE ALL SERVICES ARE LOCATED BY THE RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
4. PRESSURE SEWER MAINS SHALL BE BLACK POLYETHYLENE (PE100 PN16) WITH A CREAM STRIPE AS PER WSA 07–2007 & FLOW SYSTEMS SUPPLEMENTARY MANUAL TO W.S.A.A.
5. ALL POLYETHYLENE MAINS ≤DN200 SHALL BE JOINED BY ELECTROFUSION TECHNIQUES IN ACCORDANCE WITH THE MANUFACTURER REQUIREMENTS. ALL POLYETHYLENE MAINS >DN200 SHALL BE JOINED BY BUTTWELDING TECHNIQUES IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.
6. MAIN TO BE LAID GENERALLY AT 1.30m COVER, 2.35m P.L. MINIMUM HORIZONTAL CLEARANCE BETWEEN SEWER AND WATER MAINS TO BE 600mm. WHERE COVER EXCEEDS 1.5m AND LESS THAT 2.5m, SAND–CEMENT BACKFILL IS TO BE USED.
7. MAINS CORSSING UNDER EXISTING DRIVEWAYS (SEALED, PAVED OR DECORATIVE) SHALL BE CONDUCTED BY UNDER BORING ONLY, UNLESS PERMISSION IS GRANTED BY THE AFFECTED PROPERTY OWNER.
8. MAINS WITHIN 2m OF ELECTRICITY OR POWER POLES SHALL BE CONDUCTED BY BORING TECHNOLOGY, UNLESS AGREED UPON BY THE BOX HILL WATER REPRESENTATIVE.
9. ALL PIPE BEDDING MATERIAL SHALL COMPLY WITH WSAA PRODUCT SPECIFICATION WSA–PS350 & WSA–PS351.
10. ALL BENDS SHALL BE ELECTROFUSION OR BUTTWELD SWEEP BENDS. FABRICATED BENDS SHALL NOT BE USED IN LIEU. KNUCKLE ELBOWS ARE NOT PERMITTED.
11. MINIMUM PIPE BENDING RADIUS FOR PN16 PE100 (SDR11) SHALL BE 20xDN.
12. ALL HOUSE SERVICE LATERALS SHALL BE DN40 (PE100 PN16).
13. FLUSHING PITS SHALL CONFORM WITH FLOW SYSTEMS STANDARD DRAWINGS PSS–1017A/B. REFER TO FLOW SYSTEMS WEBSITE FOR CURRENT VERSION.
14. LOCALISED DEEPENING OF MAINS MAY BE REQUIRED TO FACILITATE AIR VALVE INSTALLATION. THE CONTRACTOR SHALL ENSURE THAT THE AIR VALVE OFFTAKE IS LOCATED AT A HIGH POINT (NATURAL OR ARTIFICIAL) IN THE MAIN (i.e. MAIN SHALL GRADE DOWN IN EITHER DIRECTION FROM THE AIR VALVE).
15. DETECTABLE MARKING TAPE SHALL BE LAID ON TOP OF THE PIPE EMBEDMENT MATERIAL BEFORE BACKFILLING & CONNECTED TO SURFACE VALVES.
16. ALL SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS SHALL HAVE HEAVY DUTY SURROUNDS INSTALLED.
17. DURING CONSTRUCTION, ALL OPEN ENDS OF PIPE SHALL BE CAPPED OFF TO PREVENT ENTRY OF FOREIGN MATTER.
18. ALL VALVES SHALL BE RESILIENT SEATED SLUICE VALVES (CLOCKWISE CLOSING), SHALL BE RESTRAINED IN ACCORDANCE WITH WAT–1207 & SHALL COMPLY WITH FLOW SYSTEMS STANDARD DRAWING PSS–1015–FS
19. ALL MAINS SHALL BE TESTED IN ACCORDANCE WITH WSA 07–2007 VERSION 1.1.
20. FOR LOTS WITH TANKS IN THE REAR, 1x25mm INSTRUMENTATION CONDUIT (ORANGE) AND 1x25mm ELECTRICAL CONDUIT (ORANGE, WITH DRAW WIRES) SHALL BE INSTALLED FROM THE COLLECTION TANK TO WATER METERS. THE CONDUITS SHALL BE LAID IN A COMMON TRENCH WITH THE SEWERAGE AND MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 400mm.
21. THE CONSTRUCTOR SHALL PROVIDE BOX HILL WATER WITH MINIMUM OF 7 DAYS NOTICE IN WRITING OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE. CONNECTIONS ARE NOT PERMITTED UNTIL COMPLIANT TEST RESULTS HAVE BEEN PROVIDED & CONFIRMATION IS PROVIDED BY THE BOX HILL WATER REPRESENTATIVE.
22. UPON COMPLETION OF WORKS, ALL SURFACES MUST BE RESTORED AS CLOSE AS POSSIBLE TO THE CONDITION THAT EXISTED PRIOR TO WORKS.
23. PERMISSION OF ENTRY MUST BE OBTAINED BY THE CONTRACTOR FROM THE OWNER/OCCUPIER PRIOR TO COMMENCEMENT OF WORK IN PRIVATE PROPERTY.
24. BURIED FITTINGS ARE NOT TO BE BACKFILLED UNTIL WAC DETAILS HAVE BEEN OBTAINED & APPROVAL FOR BACKFILLING GIVEN BY THE THE BOX HILL WATER REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE MGA COORDINATED WORK–AS–CONSTRUCTED INFORMATION REGARDING THE INSTALLATION OF ALL BURIED FITTINGS.
25. THE MINIMUM NUMBER OF COMPACTION TESTS REQUIRED TO SATISFY THE PRESSURE SEWER CODE OF AUSTRALIA (CLAUSE 21.3.4) ARE:

    PIPE EMBEDMENT ZONE: 28 TESTS REQURIED

    TRENCH FILL ZONE (TRAFFICABLE): 51 TESTS REQUIRED

    TRENCH FILL ZONE (NON–TRAFFICABLE): 23 TESTS REQUIRED

    NOTE A HIGHER LEVEL OF COMPACTION MAY BE REQUIRED. THE CONSTRUCTOR WILL HAVE TO LIAISE WITH THE CIVIL CONTRACTOR/SUPERINTENDENT TO ENSURE THAT TESTING COMPLIES WITH COUNCIL SPECIFICATION.
26. BOUNDARY KITS (COMPLETE) SHALL BE NOV SUPPLIED (NOV PSS–BK4). NOV 900L COLLECTION TANK (PSS–VMS150–PRIL) SHALL BE INSTALLED WITH BOUNDARY KIT (REFER FLOW SYSTEMS STANDARD DRAWING PSS–1112–FS & PSS–1113–FS). PUMP TO BE INSTALLED BY OTHERS.
27. ALL MAINS (UP TO THE BOUNDARY KIT) SHALL BE PRESSURE TESTED TO 1600 kPa.
28. ALL MAINS SHALL BE FLUSHED WITH WATER TO REMOVE AND DEBRIS PRIOR TO COMMISSIONING.
29. SURFACE IDENTIFICATION MARKERS ARE TO BE PROVIDED TO BOX HILL WATER REQUIREMENTS.
30. ROPE OFF ALL PRESSURE SEWER UNITS & FLUSHING POINTS TO LIMIT DAMAGE DURING CONSTRUCTION.
31. PRESSURE TRANSMITTER TO BE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM AS PER FLOW SYSTEMS REQUIREMENTS.
32. WORK–AS–CONSTRUCTED DOCUMENTATION SHALL BE PROVIDED BY THE CONTRACTOR STRICTLY IN ACCORDANCE WITH FLOW SYSTEMS Q.A. SUBMISSION CHECKLIST.



LOCALITY SKTECH
(NOT TO SCALE)

No.	REVISION DESCRIPTION	BY	DATE
E	WORK–AS–CONSTRUCTED	D.S.	19/3/19
D	FURTHER COMMENTS ADDRESSED	B.B.	27/8/18
C	COMMENTS ADDRESSED	B.B.	6/7/18
B	INITIAL COMMENTS ADDRESSED	B.B.	14/6/18
A	FIRST ISSUE	B.B.	23/5/18

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

Box Hill Water

WORK-AS-CONSTRUCTED CERTIFICATION

DEVELOPER: *YUANTONG AUSTRALIA*
PROJECT SUPERVISOR: ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
CONSTRUCTOR: C J DOYLE CONTRACTING SERVICES Pty. Ltd.
COMPLETED: W.A.C. PREPARED: 19/3/2019

DESIGNER:
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.

PIPE SCHEDULE

SIZE	TYPE	CLASS	LENGTH (m)	NOTES
DN125	PE100	PN16	130.1	
DN90	PE100	PN16	147.0	
DN75	PE100	PN16	256.5	
DN63	PE100	PN16	729.6	
DN50	PE100	PN16	1159.1	
DN40	PE100	PN16	1779.7	

DESIGN HEAD 120 m
NO BOUNDARY TRAPS REQUIRED.

CLIENT

YUANTONG AUSTRALIA Pty Ltd
C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

LEVELS PROVIDED IN AHD AUSTRALIAN HEIGHT DATUM

SCALES
PLAN 1:500 SECTION HOR. VERT.
CROSS SECTIONS NATURAL
LENGTHS, DEPTHS & LEVELS ARE IN METRES.

PROJECT
PRECINCT I - STAGE 1 - BOX HILL PRESSURE SEWER

L.G.A. - THE HILLS SHIRE

SHEET 1 OF 6

DESIGNER
QALCHEK
QALCHEK PTY. LTD.
P.O. BOX 4185
WESTFIELDS PENRITH 2750
PH: (02) 4722 8181
FAX: (02) 4722 3155

QALCHEK REF: PM19515LP

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BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED

SERVICES CROSSING TABLE – MAIN TO BE LAID AS NOTED

CROSSING	SERVICE	SERVICE SIZE	PSewer SIZE	SERVICE COVER (m)	PSewer COVER (m)	CLEARANCE (m)	COMMENT
'1'	RCWATER	DN100–150	DN50–125	0.70	1.30	0.45–0.50	LAY MAIN BENEATH SERVICE
'2'	PWATER	DN100–150	DN50–125	0.70	1.30	0.45–0.50	LAY MAIN BENEATH SERVICE
'3'	SWD	DN600	DN50	1.50	1.30	0.15	LAY MAIN OVER SERVICE
'4'	SWD	DN375	DN50	1.28	1.08	0.15	EASE MAIN OVER SERVICE
'5'	SWD	DN750	DN50	0.91	1.92	0.15	PS–1003
'6'	SWD	DN750	DN50	0.94	1.95	0.15	PS–1003
'7'	SWD	DN375	DN50	1.15	0.95	0.15	EASE MAIN OVER SERVICE
'8'	SWD	DN750	DN50	0.90	1.91	0.15	PS–1003
'9'	SWD	DN750	DN50	0.62	1.63	1.64	PS–1003
'10'	SWD	DN375	DN50	1.20	1	0.15	EASE MAIN OVER SERVICE
'11'	SWD	DN375	DN50	1.17	0.97	0.15	EASE MAIN OVER SERVICE

'5'	
TO BE READ IN CONJUNCTION WITH PS–1003	
	DIMENSION (mm)
"L1"	624
"W"	1864
"X1"	500
"X2"	500

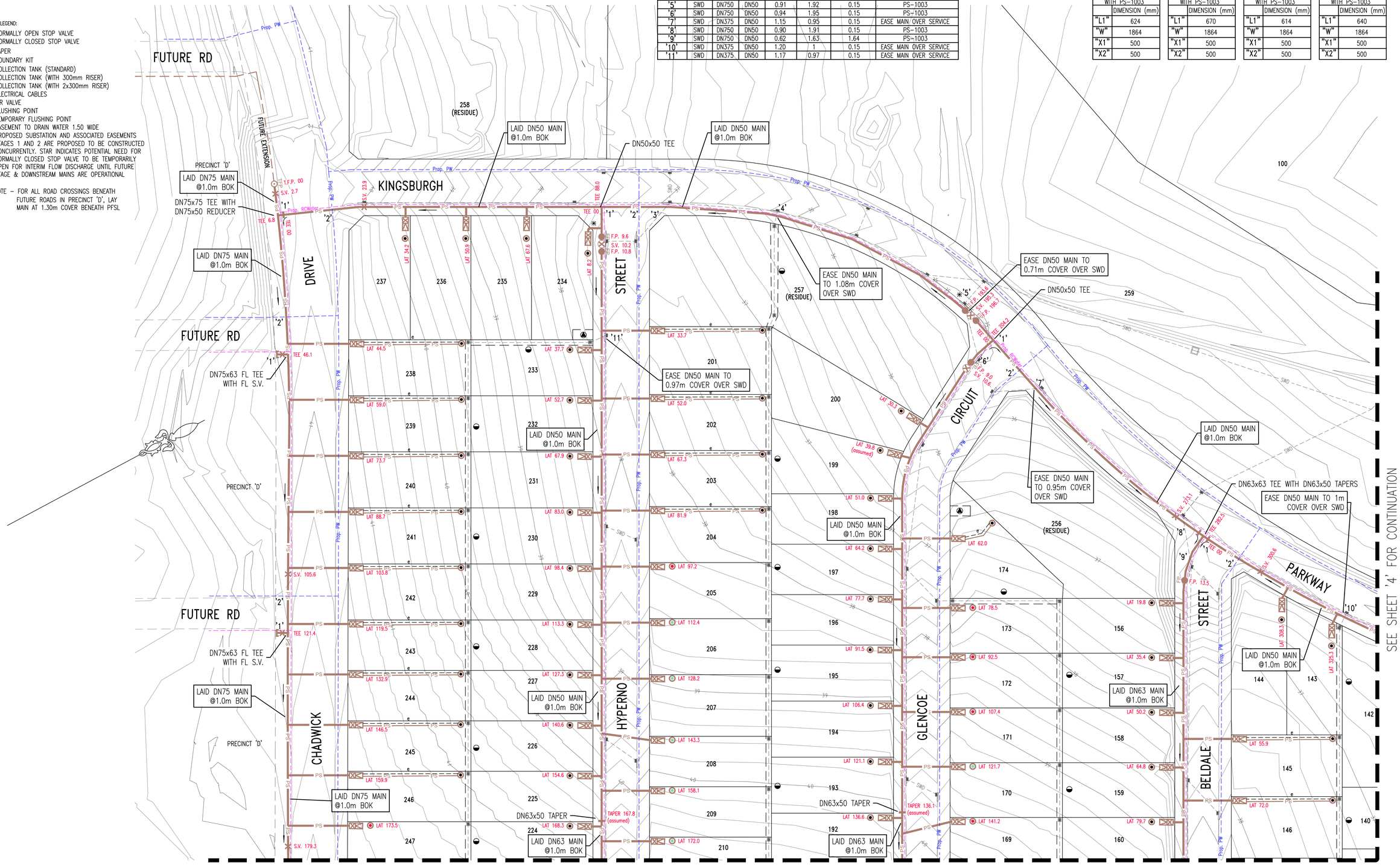
'6'	
TO BE READ IN CONJUNCTION WITH PS–1003	
	DIMENSION (mm)
"L1"	670
"W"	1864
"X1"	500
"X2"	500

'8'	
TO BE READ IN CONJUNCTION WITH PS–1003	
	DIMENSION (mm)
"L1"	614
"W"	1864
"X1"	500
"X2"	500

'9'	
TO BE READ IN CONJUNCTION WITH PS–1003	
	DIMENSION (mm)
"L1"	640
"W"	1864
"X1"	500
"X2"	500

DESIGN LEGEND:
- NORMALLY OPEN STOP VALVE
- NORMALLY CLOSED STOP VALVE
- TAPER
- BOUNDARY KIT
- COLLECTION TANK (STANDARD)
- (1R) COLLECTION TANK (WITH 300mm RISER)
- (2R) COLLECTION TANK (WITH 2x300mm RISER)
- ELECTRICAL CABLES
- AIR VALVE
- FP FLUSHING POINT
- TFP TEMPORARY FLUSHING POINT
- EASEMENT TO DRAIN WATER 1.50 WIDE
- PROPOSED SUBSTATION AND ASSOCIATED EASEMENTS
- STAGES 1 AND 2 ARE PROPOSED TO BE CONSTRUCTED CONCURRENTLY. STAR INDICATES POTENTIAL NEED FOR NORMALLY CLOSED STOP VALVE TO BE TEMPORARILY OPEN FOR INTERIM FLOW DISCHARGE UNTIL FUTURE STAGE & DOWNSTREAM MAINS ARE OPERATIONAL

NOTE – FOR ALL ROAD CROSSINGS BENEATH FUTURE ROADS IN PRECINCT 'D', LAY MAIN AT 1.30m COVER BENEATH PFSL



0 10 20 30 40 50 METRES

PROJECT SUPERVISOR
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RAR Incorporated in New South Wales
WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
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PROJECT
PRECINCT I - STAGE 1 - BOX HILL PRESSURE SEWER
L.G.A. - THE HILLS SHIRE
SHEET 2 OF 6

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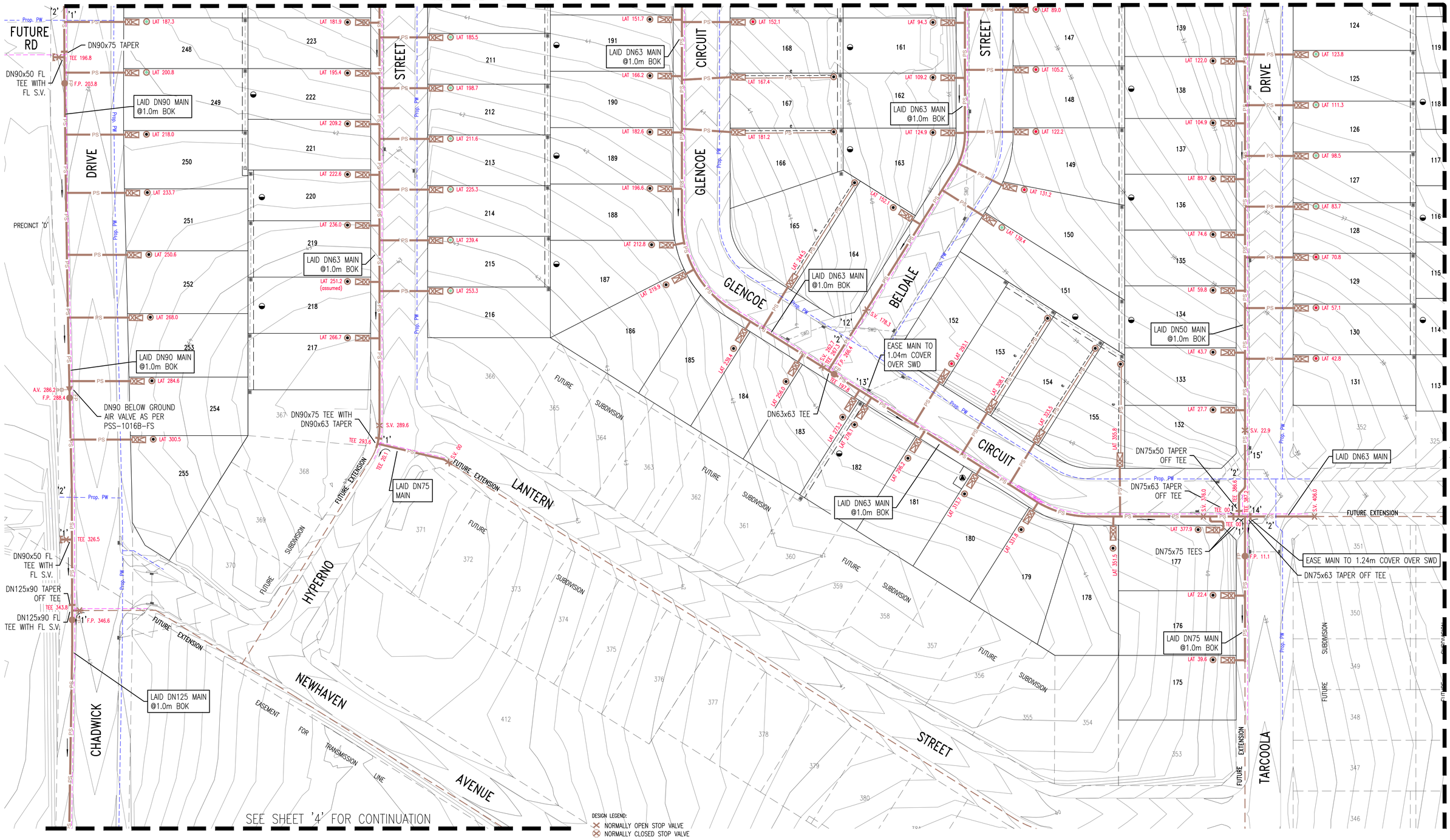
BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED

SEE SHEET '2' FOR CONTINUATION



SEE SHEET '4' FOR CONTINUATION

SEE SHEET '4' FOR CONTINUATION

0 10 20 30 40 50 METRES

SERVICES CROSSING TABLE – MAIN TO BE LAID AS NOTED

CROSSING	SERVICE	SERVICE SIZE	PSewer SIZE	SERVICE COVER (m)	PSewer COVER (m)	CLEARANCE (m)	COMMENT
'1'	RCWATER	DN100–150	DN50–125	0.70	1.30	0.45–0.50	LAY MAIN BENEATH SERVICE
'2'	PWATER	DN100–150	DN50–125	0.70	1.30	0.45–0.50	LAY MAIN BENEATH SERVICE
'12'	SWD	DN375	DN63	1.51	1.30	0.15	LAY MAIN OVER SERVICE
'13'	SWD	DN300	DN63	1.25	1.04	0.15	EASE MAIN OVER SERVICE
'14'	SWD	DN375	DN75	1.46	1.24	0.15	LAY MAIN OVER SERVICE
'15'	SWD	DN375	DN50	1.56	1.30	0.21	LAY MAIN OVER SERVICE
'22'	SWD	DN375	DN90	1.26	1.02	0.15	EASE MAIN OVER SERVICE

DESIGN LEGEND:
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- (1R) COLLECTION TANK (WITH 300mm RISER)
- (2R) COLLECTION TANK (WITH 2x300mm RISER)
- _e_ ELECTRICAL CABLES
- AIR VALVE
- FP FLUSHING POINT
- TFP TEMPORARY FLUSHING POINT
- EASEMENT TO DRAIN WATER 1.50 WIDE
- PROPOSED SUBSTATION AND ASSOCIATED EASEMENTS

NOTE – FOR ALL ROAD CROSSINGS BENEATH FUTURE ROADS IN PRECINCT 'D', LAY MAIN AT 1.30m COVER BENEATH PFSL

PROJECT SUPERVISOR
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RAR
WATER RELATED INFRASTRUCTURE DESIGN AND MANAGEMENT
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Box Hill Water

CLIENT
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C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

PROJECT
PRECINCT I - STAGE 1 - BOX HILL PRESSURE SEWER
L.G.A. - THE HILLS SHIRE
SHEET 3 OF 6

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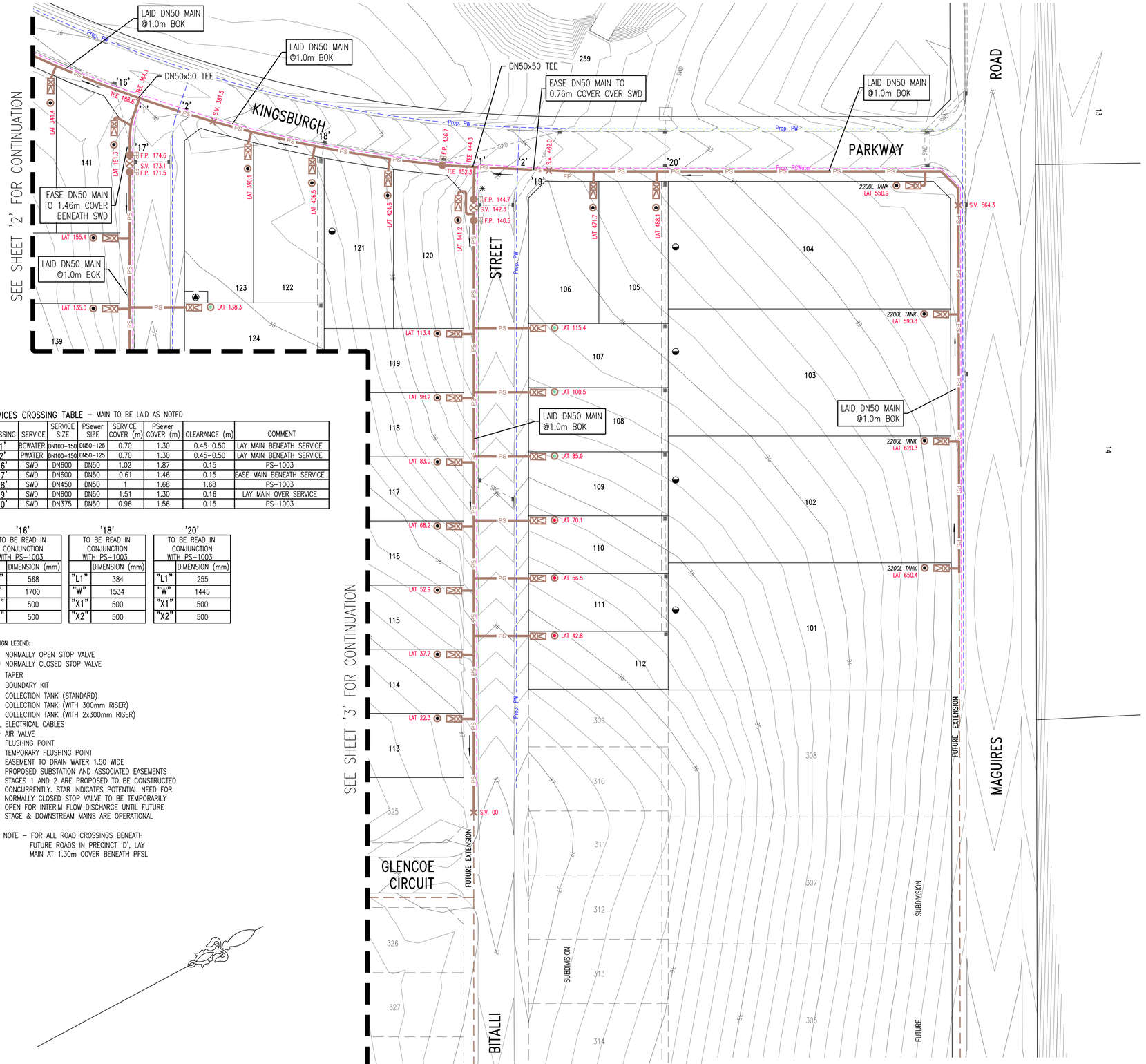
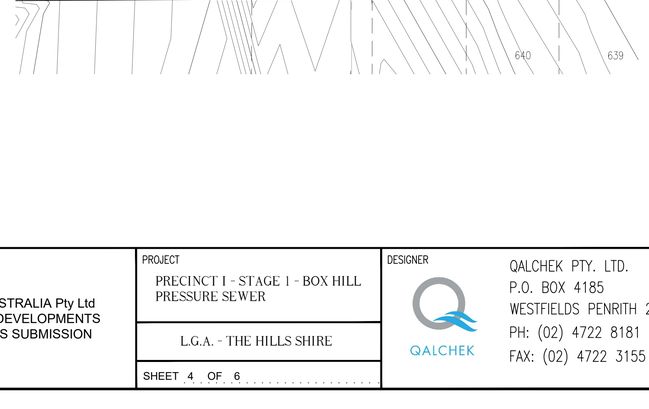
BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED





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'2'	PWATER	DN100–150	DN50–125	0.70	1.30	0.45–0.50	LAY MAIN BENEATH SERVICE
'16'	SWD	DN600	DN50	1.02	1.87	0.15	PS–1003
'17'	SWD	DN600	DN50	0.61	1.46	0.15	EASE MAIN BENEATH SERVICE
'18'	SWD	DN450	DN50	1	1.68	1.68	PS–1003
'19'	SWD	DN600	DN50	1.51	1.30	0.16	LAY MAIN OVER SERVICE
'20'	SWD	DN375	DN50	0.96	1.56	0.15	PS–1003

'16'

TO BE READ IN CONJUNCTION WITH PS–1003	DIMENSION (mm)
"L1"	568
"W"	1700
"X1"	500
"X2"	500

'18'

TO BE READ IN CONJUNCTION WITH PS–1003	DIMENSION (mm)
"L1"	384
"W"	1534
"X1"	500
"X2"	500

'20'

TO BE READ IN CONJUNCTION WITH PS–1003	DIMENSION (mm)
"L1"	255
"W"	1445
"X1"	500
"X2"	500

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- STAGES 1 AND 2 ARE PROPOSED TO BE CONSTRUCTED CONCURRENTLY. STAR INDICATES POTENTIAL NEED FOR NORMALLY CLOSED STOP VALVE TO BE TEMPORARILY OPEN FOR INTERIM FLOW DISCHARGE UNTIL FUTURE STAGE & DOWNSTREAM MAINS ARE OPERATIONAL

NOTE – FOR ALL ROAD CROSSINGS BENEATH FUTURE ROADS IN PRECINCT 'D', LAY MAIN AT 1.30m COVER BENEATH PFSL

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L.G.A. - THE HILLS SHIRE
SHEET 4 OF 6

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PRESSURE SEWER COLLECTION TANK LEVEL DETAILS

BOX HILL DEVELOPMENT - PRECINCT I [STAGE 1]

LOT NUMBER	COLLECTION TANK LOCATION	TANK SIZE	PFSL AT TANK LOCATION	QUANTITY OF DRYWELL RISERS REQUIRED	DESIGN SANITARY DRAINAGE INVERT LEVEL	*TOP OF COLLECTION TANK LID* *	*CALCULATED SANITARY DRAINAGE INVERT LEVEL*	*WAC v's DESIGN INVERT LEVEL COMPARISON*
	[FRONT / REAR]	*[900L / 2200L]*			*[Design R.L.]*	*[Work-As-Constructed]*	*[Work-As-Constructed]*	*[- LOWER / + HIGHER]*
101	FRONT	2200L	33.20		32.05	33.47	32.29	0.24
102	FRONT	2200L	32.97		31.82	33.31	32.13	0.31
103	FRONT	2200L	32.53		31.38	32.84	31.66	0.28
104	FRONT	2200L	32.05		30.90	32.41	31.23	0.33
105	FRONT	900L	33.50		32.35	33.80	32.46	0.11
106	FRONT	900L	33.75		32.60	34.08	32.74	0.14
107	FRONT	900L	34.20	1	32.75	34.64	33.00	0.25
108	FRONT	900L	34.40	1	32.95	34.93	33.29	0.34
109	FRONT	900L	34.80	1	33.35	35.24	33.60	0.25
110	FRONT	900L	35.25	2	33.50	35.71	33.77	0.27
111	FRONT	900L	35.70	2	33.95	36.12	34.18	0.23
112	FRONT	900L	36.10	2	34.35	36.65	34.71	0.36
113	FRONT	900L	37.13		35.98	37.43	36.09	0.11
114	FRONT	900L	36.75		35.60	37.04	35.70	0.10
115	FRONT	900L	36.25		35.10	36.50	35.16	0.06
116	FRONT	900L	35.75		34.60	36.01	34.67	0.07
117	FRONT	900L	35.25		34.10	35.54	34.20	0.10
118	FRONT	900L	34.90		33.75	35.23	33.89	0.14
119	FRONT	900L	34.20		33.05	35.09	33.75	0.70
120	FRONT	900L	34.30		33.15	34.85	33.51	0.36
121	FRONT	900L	35.05		33.90	35.59	34.25	0.35
122	FRONT	900L	35.50		35.35	36.13	34.79	-0.56
123	FRONT	900L	35.89		34.74	36.50	35.16	0.42
124	FRONT	900L	36.17	1	34.72	36.47	34.83	0.11
125	FRONT	900L	36.17	1	34.72	36.54	34.90	0.18
126	FRONT	900L	36.35	1	34.90	36.75	35.11	0.21
127	FRONT	900L	36.55	1	35.10	37.04	35.40	0.30
128	FRONT	900L	37.00	1	35.55	37.56	35.92	0.37
129	FRONT	900L	37.60	2	35.85	38.18	36.24	0.39
130	FRONT	900L	38.10	2	36.35	38.63	36.69	0.34
131	FRONT	900L	38.50	2	36.75	39.00	37.06	0.31
132	FRONT	900L	38.85		37.70	39.49	38.15	0.45
133	FRONT	900L	38.60		37.45	39.05	37.71	0.26
134	FRONT	900L	38.10		36.95	38.57	37.23	0.28
135	FRONT	900L	37.65		36.50	37.88	36.54	0.04
136	FRONT	900L	37.30		36.15	37.55	36.21	0.06
137	FRONT	900L	37.00		35.85	37.07	35.73	-0.12
138	FRONT	900L	36.70		36.55	36.91	35.57	-0.98
139	FRONT	900L	36.40		35.25	36.89	35.55	0.30
140	FRONT	900L	36.30		35.15	36.90	35.56	0.41
141	FRONT	900L	36.02		34.87	36.45	35.11	0.24
142	FRONT	900L	36.35		35.20	36.67	35.33	0.13
143	FRONT	900L	36.48		35.33	36.77	35.43	0.10
144	FRONT	900L	36.54		35.39	36.76	35.42	0.03
145	REAR	900L	37.00		35.85	37.39	36.05	0.20
146	REAR	900L	37.25		37.10	37.67	36.33	-0.77
147	FRONT	900L	38.00	2	36.25	38.69	36.75	0.50
148	FRONT	900L	38.25	2	36.50	38.86	36.92	0.42
149	FRONT	900L	38.40	2	36.65	38.93	36.99	0.34
150	FRONT	900L	38.65	2	36.90	39.08	37.14	0.24
151	FRONT	900L	38.85	1	37.40	39.33	37.69	0.29
152	FRONT	900L	39.85	2	37.10	40.83	38.89	1.79
153	REAR	900L	39.05		37.90	39.79	38.45	0.55
154	REAR	900L	38.92		37.77	39.93	38.59	0.82
155	REAR	900L	39.12		37.97	39.82	38.48	0.51
156	FRONT	900L	37.07		35.92	37.13	35.79	-0.13
157	FRONT	900L	37.48		36.33	37.79	36.45	0.12
158	FRONT	900L	37.93		36.78	38.20	36.86	0.08
159	FRONT	900L	38.40		37.25	38.55	37.21	-0.04
160	FRONT	900L	38.90		37.75	39.05	37.71	-0.04
161	FRONT	900L	39.50		38.35	39.38	38.04	-0.31
162	FRONT	900L	39.40		38.25	39.41	38.07	-0.18
163	FRONT	900L	39.25		38.10	39.42	38.08	-0.02
164	FRONT	900L	39.74		38.59	39.95	38.61	0.02
165	REAR	900L	40.20		39.05	40.49	39.15	0.10
166	REAR	900L	40.26		39.11	40.56	39.22	0.11
167	REAR	900L	39.98		38.83	40.45	39.11	0.28
168	FRONT	900L	40.35	2	38.60	40.88	38.94	0.34
169	FRONT	900L	39.85	2	38.10	40.33	38.39	0.29
170	FRONT	900L	38.18	1	37.73	39.95	38.31	0.58
171	FRONT	900L	38.90	2	37.15	39.24	37.30	0.15
172	FRONT	900L	38.00	2	36.25	38.80	36.86	0.61
173	FRONT	900L	38.00	2	36.25	38.43	36.49	0.24
174	FRONT	900L	37.15		36.00	37.40	36.06	0.06
175	FRONT	900L	39.90		38.75	40.03	38.69	-0.06
176	FRONT	900L	39.95		38.80	40.17	38.83	0.03
177	FRONT	900L	40.05		38.90	39.99	38.65	-0.25
178	FRONT	900L	40.50		39.35	40.82	39.48	0.13
179	FRONT	900L	41.10		39.95	41.28	39.94	-0.01
180	FRONT	900L	41.00		39.85	41.05	39.71	-0.14

* COLLECTION TANK LEVEL PROVIDED TO G.P.S. ACCURACY ONLY. THE BUILDER IS REQUIRED TO CONFIRM DRAINAGE CONSTRAINTS PRIOR TO MAKING CONNECTION TO TANK.

PROJECT SUPERVISOR
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Box Hill Water

CLIENT
YUANTONG AUSTRALIA Pty Ltd
C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

PROJECT
PRECINCT I - STAGE 1 - BOX HILL
PRESSURE SEWER
L.G.A. - THE HILLS SHIRE

DESIGNER
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QALCHEK PTY. LTD.
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PRESSURE SEWER COLLECTION TANK LEVEL DETAILS

BOX HILL DEVELOPMENT - PRECINCT I [STAGE 1]

LOT NUMBER	COLLECTION TANK LOCATION	TANK SIZE	PFSL AT TANK LOCATION	QUANTITY OF DRYWELL RISERS REQUIRED	DESIGN SANITARY DRAINAGE INVERT LEVEL	*TOP OF COLLECTION TANK LID* *	*CALCULATED SANITARY DRAINAGE INVERT LEVEL*	*WAC v's DESIGN INVERT LEVEL COMPARISON*
	[FRONT / REAR]	*[900L / 2200L]*			*[Design R.L.]*	*[Work-As-Constructed]*	*[Work-As-Constructed]*	*[- LOWER / + HIGHER]*
181	FRONT	900L	40.90		39.75	41.05	39.71	-0.04
182	FRONT	900L	40.85		39.70	40.88	39.54	-0.16
183	FRONT	900L	40.90		39.75	40.90	39.56	-0.19
184	FRONT	900L	41.35		40.20	41.57	40.23	0.03
185	FRONT	900L	41.90		40.75	42.16	40.82	0.07
186	FRONT	900L	42.38		41.23	42.56	41.22	-0.01
187	FRONT	900L	42.30		41.15	42.47	41.13	-0.02
188	FRONT	900L	41.95		41.80	42.13	40.79	-1.01
189	FRONT	900L	41.55		40.40	41.82	40.48	0.08
190	FRONT	900L	41.15		40.00	41.32	39.98	-0.02
191	FRONT	900L	40.55		39.40	41.00	39.66	0.26
192	FRONT	900L	40.20		39.05	40.53	39.19	0.14
193	FRONT	900L	39.40		38.25	39.92	38.58	0.33
194	FRONT	900L	39.10		37.95	39.31	37.97	0.02
195	FRONT	900L	38.45		37.30	38.71	37.37	0.07
196	FRONT	900L	37.99		36.84	38.11	36.77	-0.07
197	FRONT	900L	37.49		36.34	37.50	36.16	-0.18
198	FRONT	900L	36.90		35.75	37.17	35.83	0.08
199	FRONT	900L	36.60		35.45	36.79	35.45	0.00
200	FRONT	900L	36.20		35.05	36.47	35.13	0.08
201	REAR	900L	37.00		35.85	37.50	36.16	0.31
202	REAR	900L	37.23		36.08	37.64	36.30	0.22
203	REAR	900L	37.40		36.25	37.92	36.58	0.33
204	REAR	900L	37.65		36.50	38.09	36.75	0.25
205	FRONT	900L	38.02	2	36.27	38.78	36.84	0.57
206	FRONT	900L	38.65	1	37.20	39.27	37.63	0.43
207	FRONT	900L	38.90	1	37.45	39.64	38.00	0.55
208	FRONT	900L	39.65	1	38.20	40.10	38.46	0.26
209	FRONT	900L	40.20	1	38.75	40.62	38.98	0.23
210	FRONT	900L	40.75	1	39.30	41.08	39.44	0.14
211	FRONT	900L	41.25	1	39.80	41.53	39.89	0.09
212	FRONT	900L	41.75	1	40.30	41.92	40.28	-0.02
213	FRONT	900L	42.30	1	40.85	42.48	40.84	-0.01
214	FRONT	900L	42.65	1	41.20	42.91	41.27	0.07
215	FRONT	900L	43.00	1	41.55	43.22	41.58	0.03
216	FRONT	900L	43.30	1	41.85	43.60	41.96	0.11
217	FRONT	900L	43.55		42.40	44.06	42.72	0.32
218	FRONT	900L	43.25		42.10	43.73	42.39	0.29
219	FRONT	900L	42.85		42.70	43.42	42.08	-0.62
220	FRONT	900L	42.20		41.05	43.00	41.66	0.61
221	FRONT	900L	42.00		40.85	42.51	41.17	0.32
222	FRONT	900L	40.45		39.30	42.02	40.68	1.38
223	FRONT	900L	41.15		40.00	41.60	40.26	0.26
224	FRONT	900L	40.70		39.55	41.01	39.67	0.12
225	FRONT	900L	40.30		39.15	40.53	39.19	0.04
226	FRONT	900L	39.90		38.75	40.12	38.78	0.03
227	FRONT	900L	39.49		38.34	39.69	38.35	0.01
228	FRONT	900L	39.10		37.95	39.36	38.02	0.07
229	FRONT	900L	38.78		37.63	39.18	37.84	0.21
230	FRONT	900L	38.62		37.47	39.07	37.73	0.26
231	FRONT	900L	38.50		37.35	38.92	37.58	0.23
232	FRONT	900L	38.35		37.20	38.66	37.32	0.12
233	FRONT	900L	38.25		37.10	38.31	36.97	-0.13
234	FRONT	900L	37.50		36.35	37.78	36.44	0.09
235	FRONT	900L	38.40		37.25	38.69	37.35	0.10
236	FRONT	900L	39.10		37.95	39.35	38.01	0.06
237	FRONT	900L	39.90		38.75	40.13	38.79	0.04
238	REAR	900L	39.55		38.40	39.62	38.28	-0.12
239	REAR	900L	39.70		38.55	39.85	38.51	-0.04
240	REAR	900L	39.70		38.55	40.10	38.76	0.21
241	REAR	900L	39.90		38.75	40.29	38.95	0.20
242	REAR	900L	40.09		38.94	40.41	39.07	0.13
243	REAR	900L	40.25		39.10	40.71	39.37	0.27
244	REAR	900L	40.50		39.35	40.82	39.48	0.13
245	REAR	900L	40.77		39.62	41.11	39.77	0.15
246	REAR	900L	41.05		39.90	41.26	39.92	0.02
247	FRONT	900L	41.85	2	40.10	42.01	40.07	-0.03
248	FRONT	900L	41.85	1	40.40	42.22	40.58	0.18
249	FRONT	900L	42.00	1	40.55	42.39	40.75	0.20
250	FRONT	900L	42.18		41.05	42.67	41.33	0.28
251	FRONT	900L	42.40		41.25	42.91	41.57	0.32
252	FRONT	900L	42.55		41.40	43.04	41.70	0.30
253	FRONT	900L	42.70		41.55	43.10	41.76	0.21
254	FRONT	900L	42.85		42.70	43.15	41.81	-0.89
255	FRONT	900L	42.70		41.55	42.98	41.64	0.09

* COLLECTION TANK LEVEL PROVIDED TO G.P.S. ACCURACY ONLY. THE BUILDER IS REQUIRED TO CONFIRM DRAINAGE CONSTRAINTS PRIOR TO MAKING CONNECTION TO TANK.

PROJECT SUPERVISOR
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Box Hill Water

CLIENT
YUANTONG AUSTRALIA Pty Ltd
C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

PROJECT
PRECINCT I - STAGE 1 - BOX HILL
PRESSURE SEWER
L.G.A. - THE HILLS SHIRE

DESIGNER
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QALCHEK PTY. LTD.
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A1

BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED

0 10 20 30 40 50 METRES

WATER SERVICING COORDINATOR: ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
142 SUNNYHOLT ROAD BLACKTOWN NSW 2148
Ph: (02) 9853 0200

ORIGINAL DESIGN *[Version A–B]:* QALCHEK Pty. Ltd.
77 UNION ROAD PENRITH NSW 2750
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DESIGNER: ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
142 SUNNYHOLT ROAD BLACKTOWN NSW 2148
Ph: (02) 9853 0200

FOR: *YUANTONG AUSTRALIA*
C/– YARRAMAN DEVELOPMENTS Pty. Ltd.
PO BOX 3748 MARSFIELD N.S.W. 2122
Ph: 0408 441 183

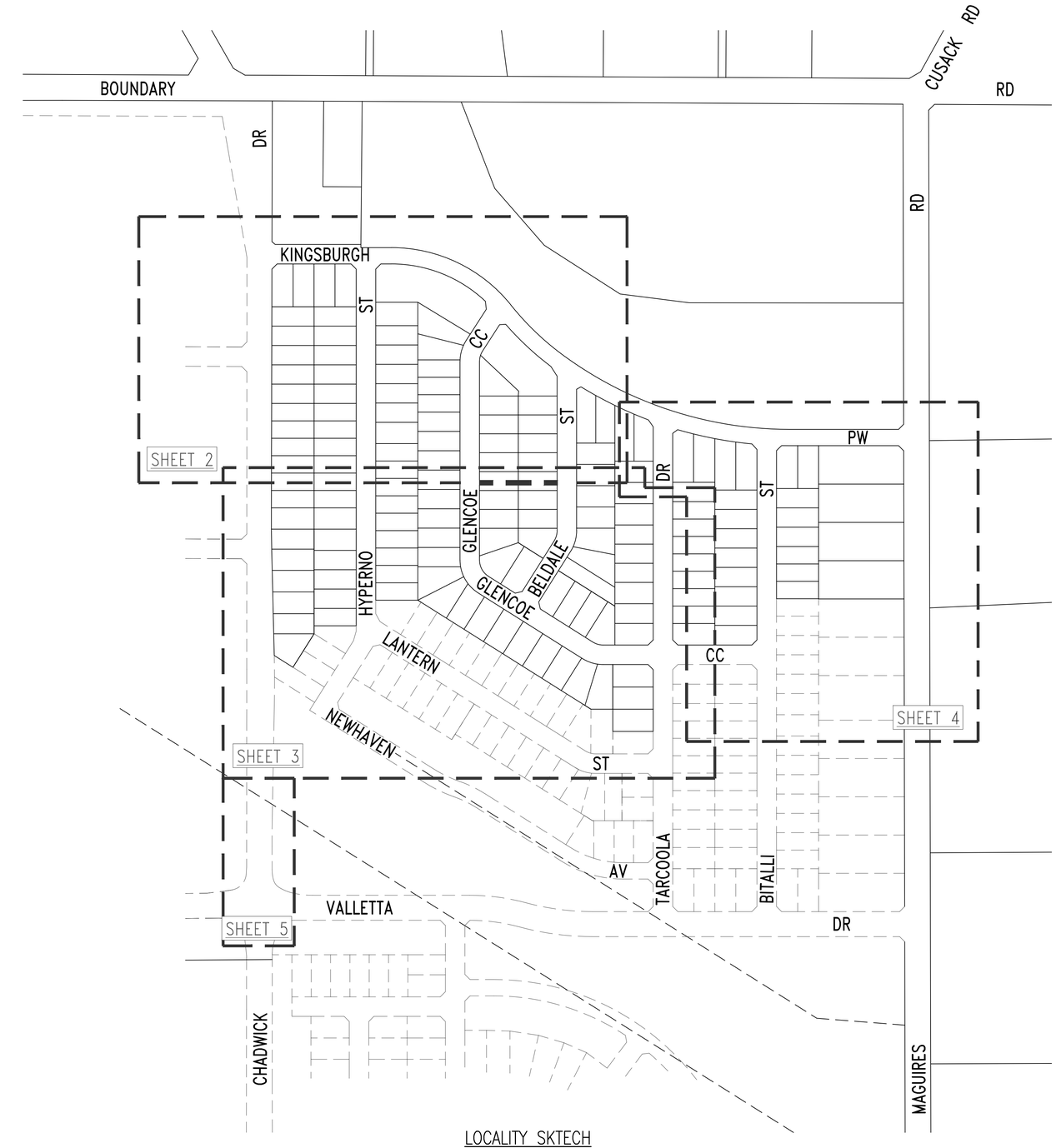
GENERAL NOTES

1. THIS DRAWING SET SHALL BE READ IN CONJUNCTION WITH THE HILLS SHIRE COUNCIL STANDARDS, FLOW SYSTEMS SUPPLEMENTARY MANUAL TO W.S.A.A. & OTHER ASSOCIATED DRAWINGS AND TECHNICAL SPECIFICATIONS.
2. ALL PRESSURE SEWER LATERALS & RECYCLED WATER PROPERTY SERVICE CONNECTIONS CROSSING CARRIAGEWAYS SHALL BE INSTALLED WITHIN INDIVIDUAL SERVICE CONDUITS.
3. THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS AND SHALL REPAIR ANY DAMAGE CAUSED TO SUCH SERVICES DURING THE COURSE OF WORKS. ANY SERVICE LOCATIONS ON THE FOLLOWING DRAWINGS ARE INDICATIVE ONLY.
4. MAKE SMOOTH TRANSITION TO EXISTING INFASTRUCTURE (ROADS, PAVEMENTS, FOOTPATHS ETC.) TO P.C.A. AND SUPERINTENDENT REQUIREMENTS.
5. SUITABLE PROTECTION OF EXISTING ROAD PAVEMENT, KERB AND GUTTER, FOOTPATHS AND ANY EXISTING FEATURES SHALL BE PROVIDED UNTIL THE CONSTRUCTION WORKS ARE COMPLETED.PROPERTIES

RECYCLED WATER NOTES:

1. ALL WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS, FLOW SYSTEMS SUPPLEMENTARY MANUAL TO W.S.A.A. & WSA 03–2011–3.1 (SYDNEY WATER EDITION – 2014).
2. PORTABLE WATER SHALL BE UTILISED FOR FIREFIGHTING PURPOSES.
3. ALL EQUIPMENT, MATERIALS & ACCESSORIES USED IN THIS CONTRACT SHALL BE NEW, SHALL CONFORM WITH THE APPROPRIATE CURRENT AUSTRALIAN STANDARDS & SHALL COMPLY WITH FLOW SYSTEMS REQUIREMENTS.
4. ALL SERVICES SHOWN ARE INDICATIVE ONLY. A CURRENT SERVICES SEARCH & SITE CHECK OF ALL EXISTING SERVICES WILL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORKS. THE CONSTRUCTOR IS TO DETERMINE LEVELS & LOCATIONS OF EXISTING SERVICES IN THE VICINITY OF THE CONSTRUCTION SITE AND ANY CONSTRUCTED STRUCTURES STRUCTURES FOR PROPOSED SERVICES, SUCH AS DUCTING FOR WATER OR ELECTRICITY WITHIN THE SUBDIVISION. THE CONTRACTOR MUST ENSURE ALL SERVICES ARE LOCATED BY THE RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
5. THE CONSTRUCTOR SHALL VERIFY WITH THE SITE SURVEYOR THE POSITION & LEVEL OF ALL EXISTING & PROPOSED BOUNDARIES PERTINENT TO THE INFRASTRUCTURE INSTALLATIONS.
6. MAINS TO BE LAID GENERALLY @0.70m COVER AS INDICATED. INSTRUCTION NOTES SHALL TAKE PRECEDENCE OVER DIAGRAMS WHERE PROVIDED. 600mm HORIZONTAL CLEARANCE TO BE MAINTAINED BETWEEN ALL SEWER & WATER MAINS. TYPE 'B' EMBEDMENT AS PER WAT–1202–V IS TO BE USED IN FOOTWAYS, AND TYPE 'L' EMBEDMENT AS PER WAT–1204–V TO BE USED IN ROADWAYS. MAXIMUM PIPE COVER SHALL GENERALLY BE 1.5m. WHERE COVER FOR A TRENCHED INSTALLATION IS BETWEEN 1.5m AND 2.5m, THE MAIN AS A MINIMUM SHALL BE EMBEDDED IN STABILISED SAND. THE CONTRACTOR SHALL ENSURE THAT ALL RECYCLED WATER & PRESSURE SEWER MAINS HAVE SUFFICIENT VERTICAL CLEARANCE AS PER TABLE 5.5 Cl.5.12.5.2 WSA 03–2011–3.1.
7. ALL RECYCLED WATER MAINS SHALL BE LILAC MPVC (PN16). DIFFERENTIATION OF PORTABLE & RECYCLED WATER SYSTEMS SHALL BE AS PER TABLE 4.1 WSA 03–2011 WITH BOTH SERVICES BEING CLASSIFIED AS WATER MAINS. RECYCLED WATER MAINS SHALL ALWAYS BE LOWER THAN PORTABLE WATER MAINS. 150mm VERTICAL CLEARANCE BETWEEN PORTABLE & RECYCLED WATER MAINS SHALL BE PROVIDED.
8. MAXIMUM JOINT DEFLECTION SHYALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
9. LOCALLY LOWER PIPEWORK IN VICINITY OF STOP VALVES TO ENSURE SUFFICIENT COVER IS MAINTAINED OVER VALVES. LOWERING OF PIPEWORK SHALL BE ACHIEVED OVER A NUMBER OF PIPE LENGTHS EITHER SIDE OF VALVES TO ELIMINATE ANY SHARP DEFLECTIONS.
10. ALL PIPE BEDDING MATERIAL SHALL COMPLY WITH WSAA PRODUCT SPECIFICATION PS–350, 368 & 369. GEOTECHNICAL CONDITIONS SHOULD BE ASSESSED DURING CONSTRUCTION BY CONTRACTOR IN ASSOCIATION WITH THE BOX HILL WATER REPRESENTATIVE TO DETERMINE THE NEED TO MODIFY EMBEDMENT/TRENCHFILL TYPE & THE ROAD FOR TRENCH DRAINAGE/BULKHEADS.
11. DURING CONSTRUCTION, ALL OPEN ENDS OF PIPES ARE TO BE CAPPED OFF TO PREVENT ENTRY OF FOREIGN MATTER.
12. HYDRANTS, STOP VALVES & ALL OTHER FITTINGS SHALL BE THE SAME SIZE AS THROUGH WATER MAIN & ANTICLOCKWISE CLOSING.
13. HYDRANTS MUST NOT BE INSTALLED IN POTENTIAL DRIVEWAY LOCATIONS. HYDRANTS & WATER SERVICES SHALL BE NOMINALLY AT LEAST 5m FROM EACH BOUNDARY OR ON BOUNDARIES. WHERE POSSIBLE, FITTINGS SHALL BE LOCATED BEHIND KERB INLET PITS.
14. THRUST BLOCKS ARE TO BE INSTALLED IN ACCORDANCE WITH WAT–1205.
15. ALL PROPERTY (MAIN TO METER) SERVICE CONNECTIONS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH FLOW SYSTEMS REQUIREMENTS. REFER TO FLOW SYSTEMS WEBSITE FOR CURRENT VERSIONS.
    - 15.1. SINGLE SERVICE – https://flowsystems.com.au/governance/Land_Housing/WAT–1854–FS.pdf
    - 15.2. DUAL SERVICE – https://flowsystems.com.au/governance/Land_Housing/WAT–1855–FS.pdf
16. PROPERTY SERVICE CONNECTIONS SHALL BE FLUSHED & LOCKED (BY THE BOX HILL WATER REPRESENTATIVE) FOLLOWING SUCCESSFUL PRESSURE TESTING.
17. SURFACE FITTINGS LOCATED IN TRAFFICABLE AREAS (i.e. ROADWAYS, PATHS etc.) SHALL HAVE HEAVY DUTY SURROUNDS INSTALLED.
18. ALL MAINS SHALL BE TETED IN ACCORDANCE WITH WSA 03–2011–3.1 (SYDNEY WATER EDITION – 2014).
19. ALL MAINS SHALL BE FLUSHED WITH WATER TO REMOVE ANY DEBRIS PRIOR TO COMMISSIONING.
20. WATER QUALITY TESTING SHALL BE IN ACCORDANCE WITH WSA 03–2011–3.1 (SYDNEY WATER EDITION – 2014 Cl.19.7).
21. THE CONSTRUCTOR SHALL PROVIDE BOX HILL WATER WITH A MINIMUM OF 7 DAYS NOTICE IN WRITING OF INTENT TO CONNECT NEW MAINS TO EXISTING INFRASTRUCTURE. CONNECTIONS ARE NOT PERMITTED UNTIL COMPLIANT TEST RESULTS HAVE BEEN PROVIDED & CONFIRMATION IS PROVIDED BY THE BOX HILL WATER REPRESENTATIVE.
22. UPON COMPLETION OF WORKS, ALL SURFACES MUST BE RESTORED AS CLOSE AS POSSIBLE TO EXISTING CONDITION.
23. PERMISSION OF ENTRY MUST BE OBTAINED BY THE CONTRACTOR FROM THE OWNER/OCCUPIER PRIOR TO COMMENCEMENT OF WORK IN PRIVATE PROPERTY.
24. BURIED FITTINGS ARE NOT TO BE BACKFILLED UNTIL W.A.C. DETAILS HAVE BEEN OBTAINED & APPROVAL FOR BACKFILLING GIVEN BY THE BOX HILL WATER REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE M.G.A. COORDINATED WORK–AS–CONSTRCUTED INFORMATION REGARDING THE INSTALLATION OF ALL BURIED FITTINGS.
25. THE MINIMUM NUMBER OF COMPACTION TESTS REQUIRED TO SATISFY THE PRESSURE SEWER CODE OF AUSTRALIA (CLAUSE 21.3.4) ARE:
    - PIPE EMBEDMENT ZONE: 28 TESTS REQUIRED
    - TRENCH FILL ZONE (TRAFFICABLE): 51 TESTS REQUIRED
    - TRENCH FILL ZONE (NON TRAFFICABLE): 26 TESTS REQUIRED
    - TRENCH FILL ZONE (PROPERTY SERVICES): 23 TESTS REQUIRED

    IMPORTANT NOTE: FIELD COMPACTION TESTING CAN BE SATISFIED UNDER LP SEWER COMPACTION TESTING PROVIDED THE CONSTRUCTION TRENCH IS SHARED. A HIGHER LEVEL OF COMPACTION MAY BE REQUIRED TO COMPLY. THE CONSTRUCTOR WILL HAVE TO LIAISE WITH THE CIVIL CONTRACTOR/SUPERINTENDENT TO ENSURE TESTING COMPLIES WITH COUNCIL SPECIFICATION.
26. SURFACE IDENTIFICATION MARKERS ARE TO BE PROVIDED TO BOX HILL WATER REQUIREMENTS.
27. PRESSURE TRANSMITTER TO BE MEASUREX MRB21 GENERAL PURPOSE TRANSMITTER WITH MICROSPIDER LOGGING TELEMETRY AND ALARM AS PER FLOW SYSTEMS REQURIEMENTS.
28. WORKS–AS–CONSTRUCTED DOCUMENTATION SHALL BE PROVIDED BY THE CONTRACTOR STRICTLY IN ACCORDANCE WITH THE FLOW SYSTEMS Q.A. SUBMISSION CHECKLIST.



LOCALITY SKTECH
(NOT TO SCALE)

No.	REVISION DESCRIPTION	BY	DATE
C	WORK–AS–CONSTRUCTED	D.S.	28/3/19
B	COMMENTS ADDRESSED	B.B.	24/8/18
A	FIRST ISSUE	B.B.	25/5/18

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Box Hill Water

WORK-AS-CONSTRUCTED CERTIFICATION
DEVELOPER: *YUANTONG AUSTRALIA*
PROJECT SUPERVISOR: ROSE ATKINS RIMMER (INFRASTRUCTURE) Pty. Ltd.
CONSTRUCTOR: C J DOYLE CONTRACTING SERVICES Pty. Ltd.
COMPLETED: W.A.C. PREPARED: 28/3/2019
DESIGNER:
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.

PIPE SCHEDULE

SIZE DN (mm)	TYPE	CLASS	LENGTH(m)	NOTES
150	m.P.V.C.	PN16	548.9	
100	m.P.V.C.	PN16	1931.8	

DESIGN HEAD m
NO BOUNDARY TRAPS REQUIRED.

CLIENT
YUANTONG AUSTRALIA Pty Ltd
C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

LEVELS PROVIDED IN AHD
AUSTRALIAN HEIGHT DATUM
SCALES
PLAN 1:500 SECTION HOR. / VERT.
CROSS SECTIONS NATURAL
LENGTHS, DEPTHS & LEVELS ARE IN METRES.

PROJECT
PRECINCT I - STAGE 1 - BOX HILL RECYCLED WATER
L.G.A. - THE HILLS SHIRE
SHEET 1 OF 4
L.G.A. Ref. - 17420

DESIGNER
QALCHEK
QALCHEK PTY. LTD.
P.O. BOX 4185
WESTFIELDS PENRITH 2750
PH: (02) 4722 8181
FAX: (02) 4722 3155

QALCHEK REF: PM19514RW

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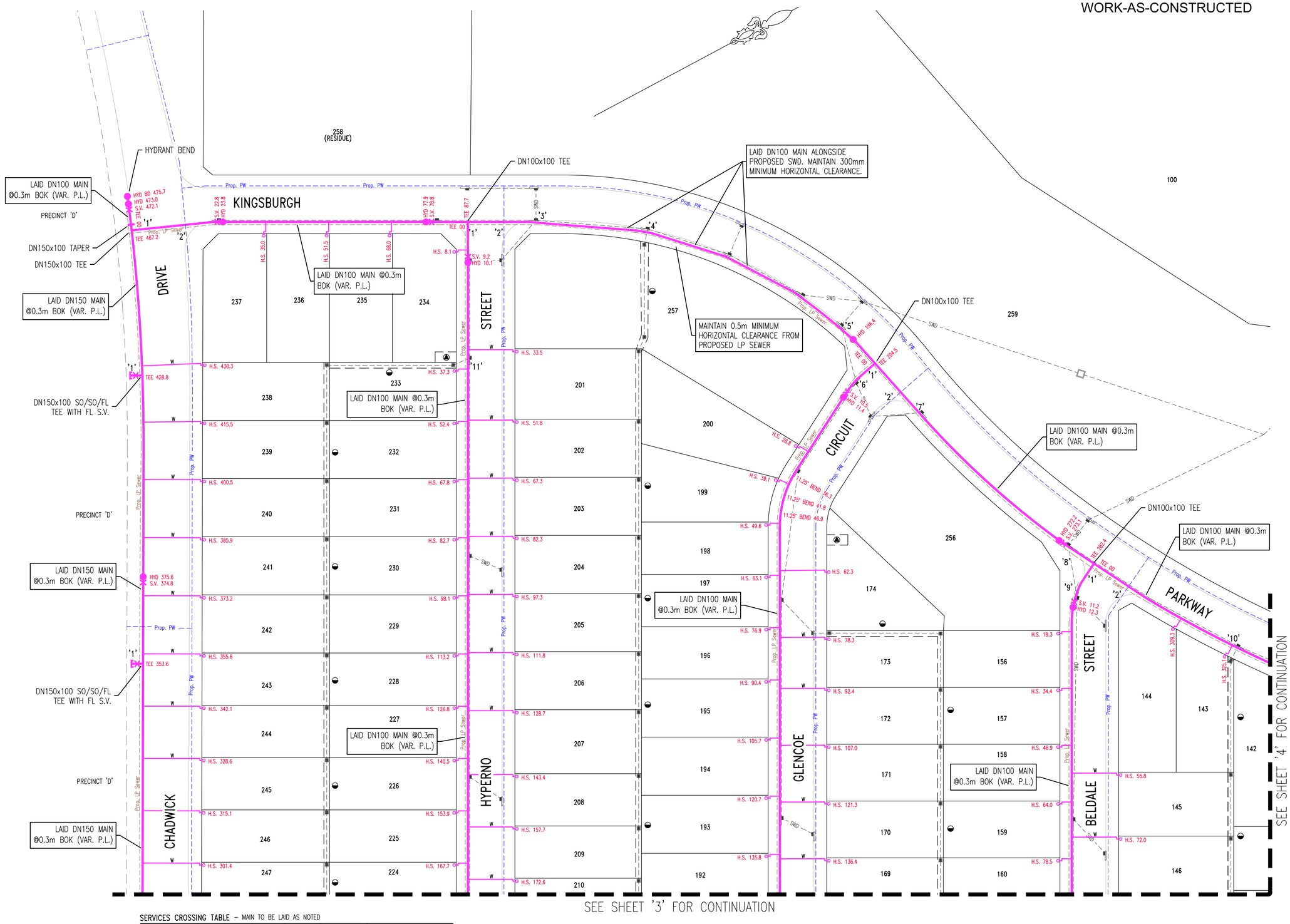
BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED



SERVICES CROSSING TABLE – MAIN TO BE LAID AS NOTED

CROSSING	SERVICE	SERVICE SIZE	RCWATER SIZE	SERVICE COVER (m)	RCWATER COVER (m)	CLEARANCE (m)	COMMENT
'1'	PSEWER	DN50–125	DN100–150	1.30	0.70	0.45–0.50	LAY MAIN OVER SERVICE
'2'	PWATER	DN100–150	DN100–150	0.70	1.00	0.15–0.20	LAY MAIN BENEATH SERVICE
'3'	SWD	DN600	DN100	1.50	0.70	0.68	LAY MAIN OVER SERVICE
'4'	SWD	DN375	DN100	1.28	0.70	0.46	LAY MAIN OVER SERVICE
'5'	SWD	DN750	DN100	0.91	0.64	0.15	EASE MAIN OVER SERVICE
'6'	SWD	DN750	DN100	0.94	0.67	0.15	EASE MAIN OVER SERVICE
'7'	SWD	DN375	DN100	1.15	0.70	0.33	LAY MAIN OVER SERVICE
'8'	SWD	DN750	DN100	0.90	0.63	0.15	EASE MAIN OVER SERVICE
'9'	SWD	DN750	DN100	0.62	1.63	0.15	REFER TO DETAIL 'A' ON SHEET 5
'10'	SWD	DN375	DN100	1.20	0.70	0.38	LAY MAIN OVER SERVICE
'11'	SWD	DN375	DN100	1.17	0.70	0.35	LAY MAIN OVER SERVICE

LEGEND: ◒ EASEMENT TO DRAIN WATER 1.50 WIDE
▲ EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE

0 10 20 30 40 50 METRES

PROJECT SUPERVISOR
ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd.
RAR Incorporated in New South Wales
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
Box Hill Water

CLIENT
YUANTONG AUSTRALIA Pty Ltd
C/- YARRAMAN DEVELOPMENTS
FLOW SYSTEMS SUBMISSION

PROJECT
PRECINCT I - STAGE 1 - BOX HILL RECYCLED WATER
L.G.A. - THE HILLS SHIRE
SHEET 2 OF 4

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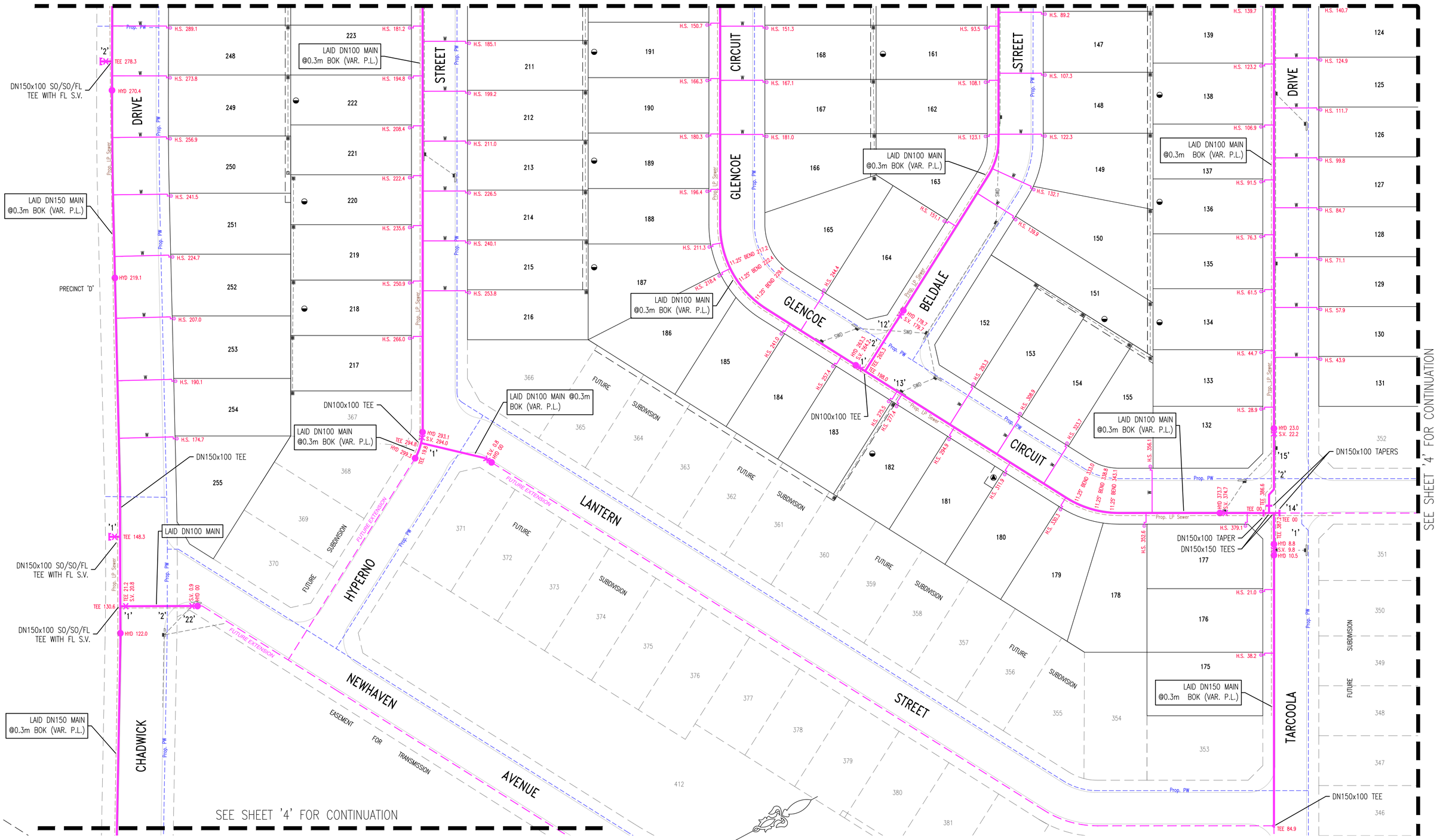
BOX HILL NORTH - PRECINCT I [STAGE 1]
WORK-AS-CONSTRUCTED

SEE SHEET '2' FOR CONTINUATION



LEGEND:
- EASEMENT TO DRAIN WATER 1.50 WIDE
- EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE

0 10 20 30 40 50 METRES

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CROSSING	SERVICE	SERVICE SIZE	RCWATER SIZE	SERVICE COVER (m)	RCWATER COVER (m)	CLEARANCE (m)	COMMENT
'1'	PSEWER	DN50–125	DN100–150	1.30	0.70	0.45–0.50	LAY MAIN OVER SERVICE
'2'	PWATER	DN100–150	DN100–150	0.70	1.00	0.15–0.20	LAY MAIN BENEATH SERVICE
'12'	SWD	DN375	DN100	1.51	0.70	0.69	LAY MAIN OVER SERVICE
'13'	SWD	DN300	DN100	1.25	0.70	0.47	LAY MAIN OVER SERVICE
'14'	SWD	DN375	DN150	1.46	0.70	0.64	LAY MAIN OVER SERVICE
'15'	SWD	DN375	DN100	1.56	0.70	0.74	LAY MAIN OVER SERVICE
'22'	SWD	DN375	DN100	1.26	0.70	0.52	LAY MAIN OVER SERVICE

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PROJECT
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SHEET 3 OF 4

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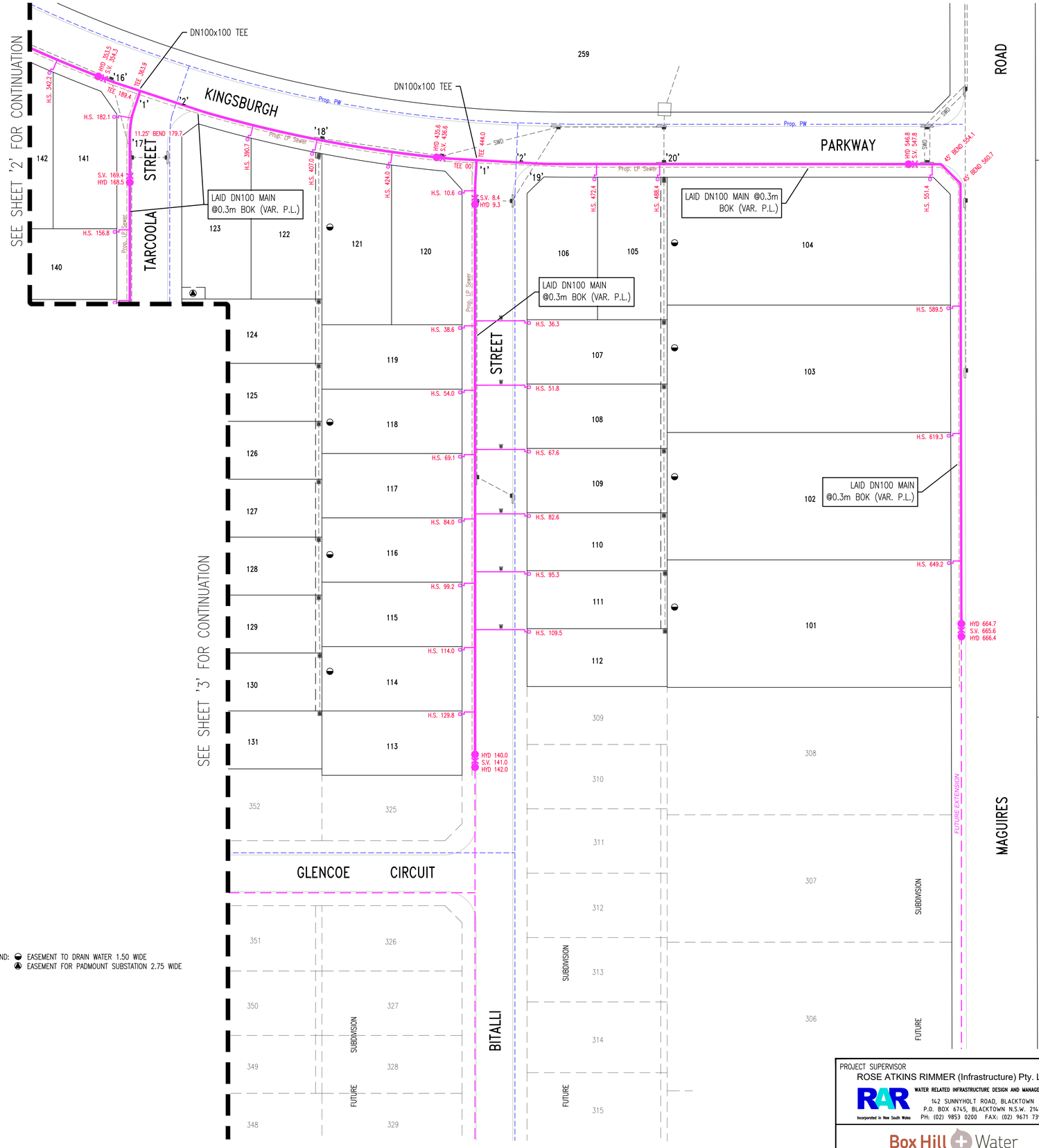
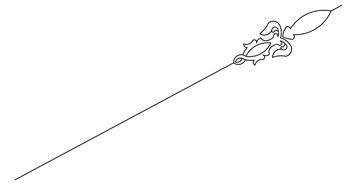
WORK-AS-CONSTRUCTED



LEGEND: ◒ EASEMENT TO DRAIN WATER 1.50 WIDE
▲ EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE

0 10 20 30 40 50 METRES



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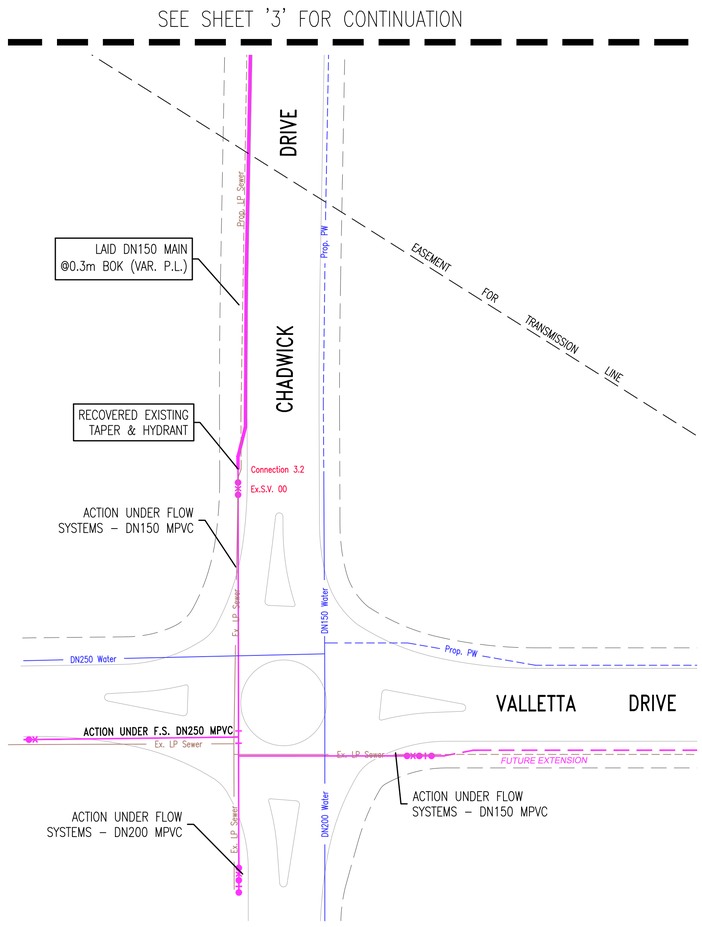
'2'	PWATER	DN100–150	DN100–150	0.70	1.00	0.15–0.20	LAY MAIN BENEATH SERVICE
'16'	SWD	DN600	DN100	1.02	0.70	0.20	LAY MAIN OVER SERVICE
'17'	SWD	DN600	DN100	0.61	1.61	0.15	REFER TO DETAIL 'A' ON SHEET 5
'18'	SWD	DN450	DN100	1.00	0.70	0.18	LAY MAIN OVER SERVICE
'19'	SWD	DN600	DN100	1.51	0.70	0.69	LAY MAIN OVER SERVICE
'20'	SWD	DN375	DN100	0.97	0.70	0.15	LAY MAIN OVER SERVICE



PROJECT SUPERVISOR ROSE ATKINS RIMMER (Infrastructure) Pty. Ltd. RAR Incorporated in New South Wales 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 Box Hill Water	CLIENT YUANTONG AUSTRALIA Pty Ltd C/- YARRAMAN DEVELOPMENTS FLOW SYSTEMS SUBMISSION	PROJECT PRECINCT I - STAGE 1 - BOX HILL RECYCLED WATER L.G.A. - THE HILLS SHIRE SHEET 4 OF 4	DESIGNER QALCHEK QALCHEK PTY. LTD. P.O. BOX 4185 WESTFIELDS PENRITH 2750 PH: (02) 4722 8181 FAX: (02) 4722 3155