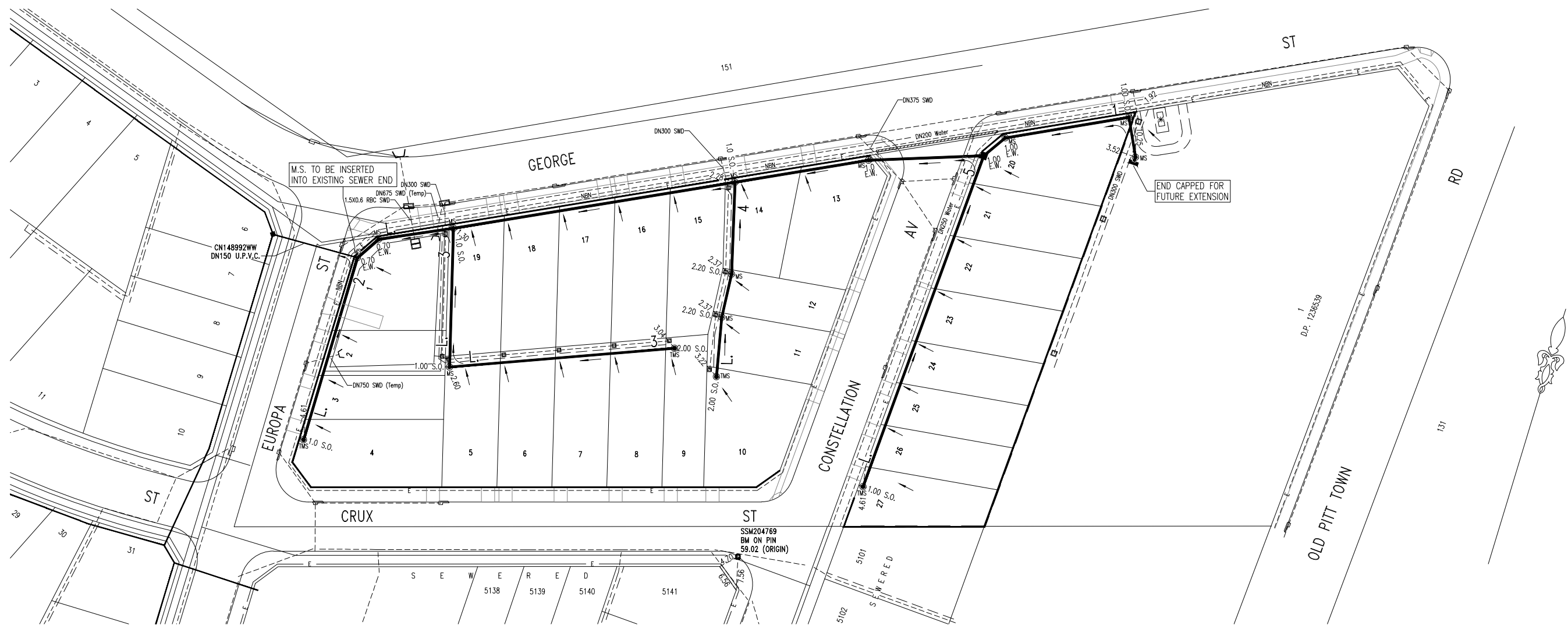


- DESIGNER AND WATER SERVICING COORDINATOR:  
QALCHEK PTY LTD (CERTIFIED No.289)  
77 UNION RD. PENRITH NSW 2750  
PH. No. (02) 4722 8181  
  
FOR:  
OSCORP DEVELOPMENTS PTY LTD  
P.O. BOX 141 SUTHERLAND NSW 1499  
02 8270 8383
- THE PROPOSED WORKS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SEWERAGE CODE OF AUSTRALIA WSA 02-2002-2.2 SYDNEY WATER EDITION VERSION 4 (2017) INCLUDING THE SYDNEY WATER SUPPLEMENT & APPENDICES. THE CONTRACTOR MUST HAVE A COPY OF THESE ON SITE AT ALL TIMES.
- ALL STRUCTURES TO BE CONSTRUCTED TO PROPOSED FINISHED SURFACE LEVELS. ALL LEVELS REFER TO PROPOSED FINISHED SURFACE LEVEL. SEWER CONSTRUCTOR TO LIAISE WITH ROAD AND/OR CIVIL CONTRACTOR TO VERIFY ALL LEVELS IN PARTICULAR IN OR ADJACENT TO ROADS. PROJECT SUPERVISOR/DESIGNER TO BE INFORMED OF ANY DISCREPANCIES.
- ALL BUILDING LAYOUTS, FINISHED SURFACE LEVELS, STORMWATER INFORMATION, AND GENERAL CIVIL ENGINEERING DETAILS TAKEN FROM 'RPS AUSTRALIA EAST PTY LTD' ENGINEERING PLANS REVISION 'B' DATED '08.08.18'

- THE MINIMUM NUMBER OF FIELD COMPACTION TESTS REQUIRED TO SATISFY THE SEWERAGE CODE OF AUSTRALIA ARE:  
IF SAND/CEMENT BACKFILL IS USED AT ROAD CROSSINGS, THE NUMBER OF TRENCH FILL COMPACTION TESTS MAY BE REDUCED BY 4 IF THE CONSTRUCTOR PROVIDES DOCUMENTATION FROM THEM SELF AND THE TESTING COMPANY STATING EXTENTS AND COMPLIANCE.  
  
PIPE EMBEDMENT ZONE: 6 TESTS REQUIRED (SEE NOTES A & B)  
TRENCH FILL ZONE (TRAFFICABLE): 4 TESTS REQUIRED  
TRENCH FILL ZONE (NON TRAFFICABLE): 18 TESTS REQUIRED  
TRENCH FILL ZONE (MAINTENANCE STRUCTURES): 41 TESTS REQUIRED  
TRENCH FILL ZONE - TOTAL: 63 TESTS REQUIRED  
PIPE EMBEDMENT COMPACTION  
  
(NUMBER OF TESTS TO BE VERIFIED BY ACCREDITED FIELD TESTER. NUMBER ABOVE ARE A GUIDE ONLY.)  
A). FOR RETICULATION SEWERS (UP TO DN300), NO COMPACTION TEST IS REQUIRED PROVIDED THAT 7mm, 10mm OR 14mm NOMINAL SINGLE-SIZE AGGREGATES ARE PLACED, SPREAD, AND TAMPED IN LAYERS NOT GREATER THAN 200mm TO FILL UP ALL THE VOIDS AROUND THE PIPE. SYDNEY WATER APPROVAL IS REQUIRED FOR SEWERS LARGER THAN DN300 PRIOR TO CONSTRUCTION. THE CONSTRUCTOR IS REQUIRED TO PROVIDE EVIDENCE THAT THE CORRECT SIZE AGGREGATE HAS BEEN USED OVER THE ENTIRE TRENCH AREA. THIS MAY BE IN THE FORM OF DELIVERY DOCKETS.  
B). IF EMBEDMENT MATERIAL OTHER THAN SINGLE-SIZE AGGREGATES ARE USED, COMPACTION TESTS EITHER IN THE FORM OF PRE-QUALIFICATION TESTING OR IN SITU TESTING AS NOMINATED IN THE CODE SHALL BE UNDERTAKEN FOR ALL SEWERS.  
  
NOTE: 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.
- ALL LEVELS ELECTRONICALLY GENERATED. NO LEVEL BOOK AVAILABLE.
- THE REVIEW OF ENVIRONMENTAL FACTORS IS AN INTEGRAL PART OF THIS DESIGN AND MUST BE READ IN CONJUNCTION WITH THIS PLAN.
- PRIOR TO ANY EXCAVATION THE CONSTRUCTOR MUST HAVE A CURRENT COPY OF THE UNDERGROUND SERVICES REPORT WHICH IS TO BE READ IN CONJUNCTION WITH THIS PLAN.
- SERVICES SHOWN FROM 'DIAL BEFORE YOU DIG' SERVICES SEARCH ARE INDICATIVE ONLY. AUTHENTICITY AND ACCURACY SHOULD NOT BE PRESUMED AND SHOULD BE CONFIRMED BY THE CONSTRUCTOR PRIOR TO ANY EXCAVATION WORKS ON SITE.
- BUILDING OVER/ADJACENT TO SEWER - CONDITIONS MAY APPLY. REFER TO QALCHEK FOR DETAILS.
- ALL EXCAVATION, SHORING EXCAVATION AND STABILITY OF ADJACENT STRUCTURES/SERVICES/DWELLINGS IS THE RESPONSIBILITY OF THE CONSTRUCTOR. USE OF SHORING BOXES IS NOT A FORM OF STABILITY CONTROL. NEITHER IS SAND CEMENT BACKFILL OR CONCRETE ENCASUREMENT.
- ALL JUNCTIONS FOR THE PCS'S ARE TO BE LOCATED 0.7m MIN. OFF THE DOWNSTREAM PROPERTY BOUNDARY (CURRENT AND FUTURE) OR DOWNSTREAM EASEMENT BOUNDARY OR 1.0m MIN. OFF THE DOWNSTREAM STRUCTURE.  
- DENOTES STANDARD PCS CONNECTION (REFER DTC-2120 ISSUE A DATE 18.03.15)
- IT IS THE CONSTRUCTORS RESPONSIBILITY TO PROVIDE THE CHAINAGES FOR THE PCS'S, THE LENGTH OF THE PCS'S, THE TYPE OF CONNECTION USED, THE LENGTH OF THE IO AND THE INVERT LEVEL AT THE PCP (IF APPLICABLE) TO THE WSC FOR WORK AS CONSTRUCTED PURPOSES.
- THE TOTAL LENGTH OF THE DN100 PCS'S EXCLUDING RISERS IS APPROXIMATELY 28.0m. PCS'S TO HAVE MINIMUM STIFFNESS RATING OF SN10. JOINTING TO BE SOLVENT WELDED.
- CONSTRUCTOR TO ENSURE THAT WORKS ARE CONSTRUCTED IN ACCORDANCE WITH SYDNEY WATER'S DEEMED TO COMPLY DRAWINGS:  
- FOR ALL MH'S DTC-2000 (ISSUE C 18.03.15), DTC-2220 (ISSUE D 18.03.15), DTC-2221 (ISSUE B 01.03.13), DTC-2222 (ISSUE C 18.03.15), DTC-2223 (ISSUE B 18.03.15)  
- FOR MH'S WHERE DEPTH TO IL IS 1.2m-6m, SEWERS <DN300 IN A RESIDENTIAL AREA NOT SUBJECT TO VEHICULAR WHEEL LOADS USE DTC-2203 (ISSUE B 18.03.15)
- PIPES TO BE CONCRETE ENCASED SHOWN ACCORDINGLY:- REFER TO SEW-1205-V  
EACH SECTION OF PIPE SHALL BE CONCRETE ENCASED IN THE FOLLOWING MANNER  
EACH PIPE JOINT REQUIRES A 12mm THICK COMPRESSIBLE MEMBRANE TO BE INSERTED  
EACH PIPE JOINT IS REQUIRED TO HAVE 2 R16 DOWEL PINS, ONE EITHER SIDE OF THE PIPE.  
DOWEL PINS ARE TO BE CENTRALLY PLACED IN CONCRETE WITH A MINIMUM BAR LENGTH OF 600mm  
THE DOWEL PIN IS TO BE EITHER GALVANISED OR STAINLESS STEEL  
AT THE ENDS OF EACH SECTION OF ENCASEMENT A 600mm ROCKER PIPE IS TO BE INSTALLED.
- ALL M.S.'s TO CONFORM TO WSA-137, "INDUSTRY STANDARD FOR MAINTENANCE SHAFTS AND MAINTENANCE CHAMBERS FOR SEWERAGE".
- PERMISSION TO ENTER REQUIRED FROM OWNER/TENANT OF 178 OLD PITT TOWN RD BOX HILL PRIOR TO CONSTRUCTION. WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE SIGNED PERMISSION TO ENTER FORMS.
- BULKHEADS REQUIRED AT EACH KERB CROSSING/EDGE OF BITUMEN CROSSING TO SEW-1206. THIS APPLIES TO ANY ACCESSROADS, CARPARKS, ETC.



No.	ISSUED FOR REVIEW	A.V.	16.08.18
No.	AMENDMENT DESCRIPTION	BY	DATE

PLAN TO BE READ IN CONJUNCTION WITH CURRENT SYDNEY WATER STANDARDS SYDNEY WATER CORPORATION

PRIOR TO COMMENCEMENT OF EXCAVATION FOR PROPOSED AND EXISTING SERVICES CONTACT:-  
DIAL BEFORE YOU DIG Ph. 1100  
ELECTRICITY, ENDEAVOUR ENERGY Ph. 131 003  
GAS JEMENA GAS Ph. 1300 880 906  
TELECOMMUNICATIONS TELSTRA Ph. 1800 114 918  
SYDNEY WATER Ph. 132 092  
GIVING AT LEAST 48 HOURS NOTICE.

UTILITIES			
TYPE	DATE	REF.	
WATER: DN100 Water	19.02.18	WAC	
PROP WATER: DN100 Water	16.08.18	DESIGN	
PROP STORMWATER: SMD	08.08.18	ENG.	
ELECTRICAL: E	03.05.18	DESIGN	
PROP ELECTRICAL: E	03.05.18	DESIGN	
PROP TELSTRA: TEL	27.04.18	DESIGN	
SSM 204769 (ORIGIN)	23.04.18	SCIMS	

WORK AS CONSTRUCTED CERTIFICATION			
DEVELOPER	CONSTRUCTOR	DESIGNER	
WATER SERVICE CO-ORDINATOR	COMPLETED		
			W.A.C. PREPARED
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.			

PIPE SCHEDULE				
SIZE (DN)	TYPE	CLASS	LENGTH	PIPE JOINING METHOD / NOTES
150	U.P.V.C.	SN8	440.74	SEE NOTES 12 - 14
100	U.P.V.C.	SN8	28.00	
NO BOUNDARY TRAPS REQUIRED.				

AUSTRALIAN HEIGHT DATUM
SCALES
PLAN : 1:500 . SECTION { HOR. : 1:500 . VERT. : 1:125 .
CROSS SECTIONS . . . . . NATURAL
LENGTHS, DEPTHS & LEVELS ARE IN METRES.

NO AMENDMENTS ARE TO BE MADE TO THIS PLAN WITHOUT REFERENCE TO SYDNEY WATER. THIS PLAN IS NOT NECESSARILY UP TO DATE OR CORRECT AND SYDNEY WATER ACCEPTS NO RESPONSIBILITY.
U.B. DIRECTORY . . . . . MAP.108/L10 EDITION 41 . . . . .
SHEET . 1 . OF . 2 . File No. N/A

**Sydney WATER** SYDNEY WATER CORPORATION

Case No. 171244WW

THE HILLS SEWERAGE DRAINS TO SPS 1154 VIA BOX HILL CARRIER SECTION 1