

PROPOSED RESIDENTIAL SUBDIVISION 190 CROATIA AVENUE, EDMONSON PARK CIVIL & STORMWATER CONCEPT DESIGN



LOCALITY PLAN
NOT TO SCALE
(COPYRIGHT OF NEARMAP, VERSION 2017)

PREPARED BY:



SGC Consulting Engineers
Suite 5.03, Level 5
156 Pacific Highway
St Leonards, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

ARCHITECT:



CLIENT:

CROATIA 88 PTY LTD

DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	C100	COVER SHEET	J
2	C101	SPECIFICATIONS SHEET - DRAWING INDEX, NOTES & LEGENDS	J
3	C102	SPECIFICATIONS SHEET - NOTES & LEGENDS	J
4	C110	SITE LAYOUT PLAN	J
5	C201	CIVIL WORKS CONCEPT DESIGN - GENERAL ARRANGEMENT PLAN SHEET 1	J
6	C202	CIVIL WORKS CONCEPT DESIGN - GENERAL ARRANGEMENT PLAN SHEET 2	J
7	C203	CIVIL WORKS CONCEPT DESIGN - GENERAL ARRANGEMENT PLAN SHEET 3	J
8	C204	CIVIL WORKS CONCEPT DESIGN - GENERAL ARRANGEMENT PLAN SHEET 4	J
9	C231	CIVIL WORKS CONCEPT DESIGN - BULK EARTHWORKS PLAN	J
10	C301	CIVIL WORKS ROAD DESIGN - LONGITUDINAL SECTIONS ALONG COSTELLO LANE & PASSENDALE ROAD.	J
11	C302	CIVIL WORKS ROAD DESIGN - LONGITUDINAL SECTIONS ALONG SOMMA AVENUE & TEMPORARY ACCESS ROAD	J
12	C351	CIVIL WORKS CONCEPT DESIGN - TYPICAL ROAD CROSS SECTIONS	J
13	C352	CIVIL WORKS - MAXWELLS CREEK MODIFICATION SECTIONS & DETAILS	J
14	C501	CIVIL WORKS ROAD DESIGN - TYPICAL DETAILS SHEET 1 OF 2	J
15	C502	CIVIL WORKS ROAD DESIGN - TYPICAL DETAILS SHEET 2 OF 2	J
16	C601	STORMWATER CONCEPT DESIGN - BASEMENT 2 PLAN	J
17	C605	STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN	J
18	C606	STORMWATER CONCEPT DESIGN - DRAINAGE CATCHMENT PLAN	J
19	C613	STORMWATER CONCEPT DESIGN - ROOF PLAN	J
20	C621	STORMWATER CONCEPT DESIGN - FLOOD STORAGE COMPENSATION PLAN	J
21	C631	STORMWATER CONCEPT DESIGN - DETAILS SHEET	J
22	C651	STORMWATER CONCEPT DESIGN - MUSIC CATCHMENT PLAN	J
23	C701	EROSION AND SEDIMENT CONTROL PLAN & DETAILS	J
24	C702	EROSION AND SEDIMENT CONTROL PLAN FOR ROAD WORKS	J

GENERAL

- G1 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S CONSTRUCTION SPECIFICATIONS (REFER BELOW), BUILDING CODE OF AUSTRALIA, NSW CODE OF PRACTICE AND THE TO THE RELEVANT SERVICE CODES.
- G2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G3 ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE IN MILLIMETERS (U.N.O.). DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OF THESE DRAWINGS. USE FIGURED DIMENSIONS ONLY.
- G4 BENCHMARKS HAVE BEEN ESTABLISHED WHERE INDICATED ON THE DRAWINGS. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.). THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY SURVEY WORK TO ENSURE THAT THE WORKS ARE CONSTRUCTED TO DESIGN LINE AND LEVEL.
- G5 SETTING OUT DIMENSIONS AND LEVELS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.
- G6 ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.
- G7 IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH WORK HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.
- G8 NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.
- G9 WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
- G10 ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS.
- G11 DESIGN LEVELS GIVEN ARE TO FINISHED SURFACE LEVEL AND INCLUSIVE OF TOPSOIL. (TOPSOIL DEPTH VARIES)
- G12 THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A N.A.T.A. REGISTERED SURVEYOR.
- G13 CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
- G14 THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THE DRAWING HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.
- G15 THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.
- G16 S&G CONSULTANTS DOES NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THE DRAWING SHOWS MORE THAN THE PRESENCE OR ABSENCE OF SERVICES, AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
- G17 IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM THE UTILITY SERVICES AUTHORITIES A CURRENT COPY OF UNDERGROUND SERVICES SEARCH FOR THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORK AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY. CLEARANCE SHALL BE OBTAINED FROM THE RELEVANT REGULATORY AUTHORITY. CONTRACTOR TO KEEP COPY OF UNDERGROUND SERVICES SEARCH ON SITE AT ALL TIMES. ANY DAMAGES TO SERVICES OR SERVICES ADJUSTMENTS SHALL BE CARRIED OUT BY THE CONTRACTOR OR RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE.
- G18 VISIT THE SITE BEFORE SUBMITTING THE FINAL TENDER PRICE TO ASSESS 'ON SITE' CONDITIONS. FAILURE TO DO SO WILL FORFEIT ANY CLAIM FOR NOT BEING AWARE OF CONDITIONS AFFECTING THE TENDER.
- G19 THE CONTRACTOR SHALL PREPARE ACCURATE WORK-AS-EXECUTED DRAWINGS FOLLOWING THE COMPLETION OF ALL WORKS.
- G20 IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE IN PLACE & MAINTAIN TRAFFIC FACILITIES AT ALL TIMES DURING CONSTRUCTION.
- G21 A ROAD OCCUPANCY APPLICATION SHALL BE APPROVED BY COUNCIL'S TRAFFIC SECTION PRIOR TO COMMENCEMENT OF WORKS WITHIN MOUNT VIEW ESTATE WINERY

SURVEY CONTROL

- SU1 THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY NORTH POINT SURVEYS PTY LTD. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. S&G CONSULTANTS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
- SU2 SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT S&G CONSULTANTS.
- SU3 ADOPT NORTH POINT SURVEYS PTY LTD REF. DRG. I70124 D1, DATE: 24/01/2017 FROM N GEO SURVEYS.

SETTING OUT NOTES:

- SE1 THE CONTRACTOR SHALL USE A SUITABLY QUALIFIED SURVEYOR TO SET OUT ALL WORKS. THE SURVEYOR SHALL ISSUE A CERTIFICATE TO THE PRINCIPAL CERTIFYING AUTHORITY CERTIFYING THAT THE WORKS HAVE BEEN SET OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS PRIOR TO THE WORKS BEING CONSTRUCTED.
- SE2 THE SURVEY WORK ASSOCIATED WITH THE CONTRACT SHALL INCLUDE SETTING OUT THE FOLLOWING COMPONENTS OF THE WORK:
 - ROADS AND KERBS
 - DRAINAGE STRUCTURES

SERVICES NOTES

- SN1 IT IS THE CONSTRUCTORS RESPONSIBILITY TO NOTIFY THE RELEVANT SERVICES AUTHORITIES OF THE WORKS AND VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES COMMENCING.
- SN2 THE CONTRACTOR SHALL LIAISE AND CO-ORDINATE THE TIMING OF THE CONSTRUCTION OF THE WORKS WITH THE RELEVANT SERVICES AUTHORITIES &/OR OTHER CONSTRUCTORS INSTALLING SERVICES CONCURRENTLY AT THIS SITE.
- SN3 THE LOCATION OF ALL EXISTING SERVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND HAVE BEEN TAKEN FROM INFORMATION PROVIDED BY THE RELEVANT SERVICE AUTHORITIES.
- SN4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO EXISTING SERVICES AS A RESULT OF THE CONSTRUCTION WORKS.

EROSION CONTROL

- EC1 BEFORE EARTHWORKS CAN COMMENCE THE EROSION & SEDIMENT CONTROL MEASURES MUST BE IN PLACE IN COMPLIANCE WITH PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997.
- EC2 DURING THE CONSTRUCTION PERIOD, THESE CONTROL MEASURES WILL NEED TO BE INSPECTED & MAINTAINED REGULARLY, ESPECIALLY AFTER STORM EVENTS, BY THE CONTRACTOR.
- EC3 ALL WORK IS TO BE CARRIED OUT TO PREVENT EROSION, CONTAMINATION & SEDIMENTATION OF THE STORAGE SITE, SURROUNDING AREAS & DRAINAGE SYSTEMS.
- EC4 MINIMIZE DISTURBED AREA COVERED WITH NATURAL VEGETATION. ONLY THOSE AREAS DIRECTLY REQUIRED FOR CONSTRUCTION ARE TO BE DISTURBED.
- EC5 INSTALL EROSION/SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION OR EXCAVATION OPERATIONS.
- EC6 PROVIDE SILT FENCE/STRAW BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS. THE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
- EC7 ISOLATE EXISTING STORMWATER PITS WITH STRAW BALES OR SILT TRAPS TO FILTER ALL INCOMING FLOWS.
- EC8 DO NOT STOCKPILE EXCAVATED MATERIAL ON THE ROAD WAY.
- EC9 DIVERT CLEAN WATER FROM UNDISTURBED AREAS AROUND THE WORKING AREAS.
- EC10 CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING AND LEAVING THE SITE DO SO IN A FORWARD DIRECTION.
- EC11 TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL
- EC12 ADOPT TEMPORARY MEASURES AS MAY BE NECESSARY FOR EROSION & SEDIMENT CONTROL, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: -
 - DRAINS: TEMPORARY DRAINS AND CATCH DRAINS.
 - SPREADER BANKS OR OTHER STRUCTURES: TO DISPERSE CONCENTRATED RUNOFF.
 - SILT TRAPS: CONSTRUCTION AND MAINTENANCE OF SILT TRAPS TO PREVENT DISCHARGE OF SCOURED MATERIAL TO DOWNSTREAM AREAS.
- EC13 AFTER RAIN, INSPECT, CLEAN, AND REPAIR IF REQUIRED, TEMPORARY EROSION & SEDIMENT CONTROL MEASURES.
- EC14 REMOVE TEMPORARY EROSION & SEDIMENT CONTROL MEASURES WHEN THEY ARE NO LONGER REQUIRED.
- EC15 COMPLY WITH THE REQUIREMENTS OF LANDCOM'S MANAGING URBAN STORMWATER - SOIL AND CONSTRUCTION 'THE BLUE BOOK' LATEST EDITION
- EC16 THE EROSION & SEDIMENT CONTROL PLAN PROVIDED IS ONLY INDICATIVE. THE CONTRACTOR SHOULD PREPARE A DETAILED ESCP SUITABLE FOR THE SPECIFIC SITE CONDITIONS
- EC17 APPROPRIATE DUST CONTROL METHODS ARE TO BE EMPLOYED TO PREVENT LOSS OF SOIL VIA AIRBORNE DUST. PROMPT REVEGETATION OR MULCHING OF DISTURBED AREAS WILL REDUCE SURFACE & AIRBORNE MOVEMENT OF SEDIMENT. OTHER METHODS OF DUST CONTROL INCLUDE:
 - a) THE RETENTION OF EXISTING TREES & SHRUBS TO ACT AS WINDBREAK
 - b) THE CONTROL OF TRAFFIC MOVEMENT OVER THE CONSTRUCTION SITE
 - c) WETTING THE SITE SURFACE IS AN EMERGENCY TREATMENT WHICH CAN BE REPEATED AS NECESSARY (CONTROL OF SEDIMENT LADEN RUNOFF FROM OVER-WATERING MUST BE CLOSELY MONITORED).

Erosion Control Continued

- EC18 COUNCIL'S ENGINEER MAY STIPULATE THAT WORK CEASE UNTIL SUCH TIME AS ANY PARTICULAR DUST NUISANCE HAS BEEN APPROPRIATELY CONTROLLED.
- EC19 ALL VEHICLE WASHING SHALL BE CONDUCTED IN A WASH BAY APPROVED, INSTALLED & CONNECTED TO THE SEWER IN ACCORDANCE WITH SYDNEY WATER'S REQUIREMENTS.

DEMOLITION

- D1 THE EXISTING CAR PARK ON THE SUBJECT SITE IS TO BE DEMOLISHED AND REMOVED AS PART OF THE APPROVED WORK.
- D2 ALL DEMOLITION WORKS ARE TO BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS OF AS 2601:1991 "THE DEMOLITION OF STRUCTURES". PRIOR TO DEMOLITION, ALL SERVICES SHALL BE SUITABLY DISCONNECTED AND CAPPED OFF OR SEALED TO THE SATISFACTION OF THE RELEVANT SERVICE AUTHORITY REQUIREMENTS.
- D3 ALL DEMOLITION AND EXCAVATED MATERIAL SHALL BE DISPOSED OF AT A COUNCIL APPROVED SITE OR WASTE FACILITY. DETAILS OF THE PROPOSED DISPOSAL LOCATION(S) OF ALL EXCAVATED MATERIAL FROM THE DEVELOPMENT SITE SHALL BE PROVIDED TO THE PRINCIPAL CERTIFYING AUTHORITY PRIOR TO COMMENCEMENT OF DEMOLITION.
- D4 DUST SUPPRESSION TECHNIQUES ARE TO BE EMPLOYED DURING DEMOLITION TO REDUCE ANY POTENTIAL NUISANCES TO SURROUNDING PROPERTIES.
- D5 MUD AND SOIL FROM VEHICULAR MOVEMENTS TO AND FROM THE SITE MUST NOT BE DEPOSITED ON THE ROAD.

TREES REMOVAL

- T1 THE APPLICANT IS ADVISED THAT NO TREES ARE TO BE REMOVED WITHOUT COUNCIL PERMISSION.
- T2 REMOVAL OF TREES IS LIMITED TO THOSE APPROVED FOR REMOVAL IN THE DEVELOPMENT CONSENT OR THOSE DIRECTLY AFFECTED BY ROAD AND/OR DRAINAGE CONSTRUCTION.
- T3 TREES WHICH, IN THE OPINION OF COUNCIL'S ENGINEER, ARE CONSIDERED TO BE DANGEROUS OR MAY DAMAGE ANY PART OF THE ROAD, PROPOSED ROAD OR PUBLIC PLACE, DRAINAGE STRUCTURE OF ANY PUBLIC UTILITY INSTALLATION, OR MAY AFFECT VISIBILITY, SHALL BE REMOVED OR TRIMMED AS DIRECTED BY COUNCIL'S ENGINEER AT NO COST TO COUNCIL.
- T4 THE REMOVAL OF TREES IN FILL AREAS MAY ONLY BE UNDERTAKEN WITH THE EXPRESS PERMISSION OF COUNCIL'S ENGINEER, AND WILL DEPENDENT UPON THE DEPTH OF FILL AND/OR THE TYPE OF TREE.
- T5 TREES AND/OR SHRUBS TO BE RETAINED ARE TO ADEQUATELY PROTECTED AT ALL TIMES AND PARTICULAR CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS, TRUNKS AND BRANCHES.
- T6 THE REMOVAL OF ANY OTHER TREE IS TO CONFORM TO PENRITH CITY COUNCIL'S TREE PRESERVATION ORDER.
- T7 TREES IDENTIFIED FOR REMOVAL ARE TO BE FELLED & LOWERED TO THE GROUND SLOWLY TO ALLOW ANY RESIDENT FAUNA TIME TO ESCAPE & TO ENSURE THEY AREN'T INJURED BY FALLING TREES AND BRANCHES. THIS REPLACES THE NEED FOR PRE-CLEARING SURVEY & INSPECTION. ANY NATIVE FAUNA FOUND THAT DO NOT SELF-RELOCATE ARE TO BE RELOCATED TO THE REGIONAL PARK UNDER THE SUPERVISION OF A QUALIFIED ECOLOGIST. IF ANY INJURED FAUNA ARE FOUND, "WIRES" IS TO BE CONTACTED IMMEDIATELY.

CLEARING & GRUBBING

- CG1 CLEARING MUST BE CARRIED OUT IN ADVANCE OF ANY EARTHWORK OPERATIONS AND IS TO INCLUDE THE REMOVAL OF ALL FOREIGN MATERIAL AND VEGETATION, EXCEPT TREES AND PLANTS REQUIRED TO BE PRESERVED, FROM WITHIN THE BOUNDARIES OF AREA AFFECTED BY EARTHWORKS OR OTHER AREAS TO BE CLEARED AS DESIGNATED ON THE DRAWINGS.
- CG2 CLEARING SHALL INCLUDE BUT NOT LIMITED TO:
 - a) THE FELLING, CUTTING AND REMOVAL OF ALL TREES STANDING OR FALLEN,
 - b) THE REMOVAL OF ALL BRUSH, SHRUBS, GRASSES & OTHER VEGETATION,
 - c) THE REMOVAL OF RUBBISH AND DEBRIS,
 - d) THE REMOVAL OF SURFACE BOULDERS AND BOULDERS DISLODGES DURING VEGETATION REMOVAL AND
 - e) THE GRUBBING OUT OF ALL STUMPS AND ROOTS LARGER THAN 80mm DIAMETER OR WITH ANY DIMENSION GREATER THAN 300mm TO A DEPTH OF 300mm BELOW EITHER THE EXISTING SURFACE OR FINISHED SUBGRADE SURFACE, WHICHEVER IS THE LOWER.
- CG3 THE BURNING OF MATERIALS IS PROHIBITED THROUGHOUT THE PENRITH CITY COUNCIL AREA.
- CG4 ALL MATERIAL CLEARED AND/OR GRUBBED IN ACCORDANCE WITH "PENRITH COUNCIL - ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS" SHALL BECOME THE PROPERTY OF THE APPLICANT AND SHALL BE REMOVED FROM SITE AND DISPOSED OF IN AN APPROPRIATE MANNER.

EARTHWORKS

- EE9 ALL IMPORTED FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE ENGINEER AND SHALL GENERALLY CONSIST OF SINGLE SIZED AGGREGATE WITH PARTICLE SIZE NOT GREATER THAN 5mm WRAPPED ALL AROUND WITH GEOTEXTILE FILTER FABRIC OR APPROVED HIGH COMPACTED SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RTA FORM 23051 OR SIMILAR.
- E10 THE CONTRACTOR SHALL PROGRAMME THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLAYING MATERIAL. TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. REGISTERED LABORATORY.
- E7 TESTING OF SOIL AND FILL MATERIAL SHALL BE CARRIED OUT BY THE CONTRACTOR IN ACCORDANCE WITH AS1289:METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES'. GEOTECHNICAL TESTING IS TO BE UNDERTAKEN BY THE CONTRACTOR TO AT LEAST LEVEL 2 CONTROL OF FILL COMPACTION STANDARD.
- E8 DESCRIPTION AND CLASSIFICATION OF SOILS SHALL BE CARRIED OUT BY THE CONTRACOR AND SHALL CONFORM TO AS1726-1993:GEOTECHNICAL SITE INVESTIGATIONS'.
- E9 ALL LAND THAT HAS BEEN DISTURBED BY EARTHWORKS IS TO BE SPRAY GRASSED OR SIMILARLY TREATED TO ESTABLISH A GRASS COVER.
- E10 NO FILL MATERIAL SHALL BE IMPORTED TO THE SITE UNTIL SUCH TIME AS A VALIDATION CERTIFICATE (WITH A COPY OF ANY REPORT FORMING THE BASIS FOR VALIDATION) FOR THE FILL MATERIAL HAS BEEN SUBMITTED TO, CONSIDERED AND APPROVED BY COUNCIL. THE VALIDATION CERTIFICATE SHALL :
 - a) STATE THE LEGAL PROPERTY DESCRIPTION OF THE FILL MATERIAL SOURCE SITE.
 - b) BE PREPARED BY AN APPROPRIATELY QUALIFIED PERSON (AS DEFINED IN PENRITH DEVELOPMENT CONTROL PLAN) WITH CONSIDERATION OF ALL RELEVANT GUIDELINES (eg. EPA, ANZECC, NH&MRC), STANDARDS, PLANNING INSTRUMENT AND LEGISLATION.
 - c) CLEARLY INDICATE THE LEGAL PROPERTY DESCRIPTION OF THE FILL MATERIAL SOURCE SITE.
 - d) PROVIDE DETAILS OF THE VOLUME OF FILL MATERIAL TO BE USED IN THE FILLING OPERATIONS.
 - e) PROVIDE CLASSIFICATION OF THE FILL MATERIAL TO BE IMPORTED TO THE SITE IN ACCORDANCE WITH THE ENVIRONMENT PROTECTION AUTHORITY'S "ENVIRONMENTAL GUIDELINES: ASSESSMENT, CLASSIFICATION & MANAGEMENT OF NON-LIQUID WASTES" 1997, AND
- E11 f) (BASED ON THE CLASSIFICATION) DETERMINE WHETHER THE FILL MATERIAL IS SUITABLE FOR ITS INTENDED PURPOSE AND LAND USE AND WHETHER THE FILL MATERIAL WILL OR WILL NOT POSE AN UNACCEPTABLE RISK TO HUMAN HEALTH OR THE ENVIRONMENT.
- E12 ALL WASTE MATERIALS STORED ON-SITE ARE TO BE CONTAINED WITHIN A DESIGNATED AREA SUCH AS WASTE BAY OR BIN TO ENSURE NO WASTE MATERIALS ARE ALLOWED TO ENTER THE STORMWATER SYSTEM OR NEIGHBOURING PROPERTIES. THE DESIGNATED WASTE STORAGE AREAS SHALL PROVIDE AT LEAST TWO WASTE BAYS/BINS SO AS TO ALLOW FOR THE SEPARATION OF WASTES, AND ARE TO BE FULLY ENCLOSED WHEN SITE IS UNATTENDED.

ALL EXCAVATED MATERIALS AND OTHER WASTES GENERATED AS A RESULT OF THE DEVELOPMENT ARE TO BE RE-USED, RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE APPROVED WASTE MANAGEMENT PLAN. WASTE MATERIALS NOT SPECIFIED IN THE APPROVED WASTE MANAGEMENT PLAN ARE TO BE DISPOSED OF AT A LAWFUL WASTE MANAGEMENT FACILITY. WHERE THE DISPOSAL LOCATION OR WASTE MATERIALS HAVE NOT BEEN IDENTIFIED IN THE WASTE MANAGEMENT PLAN, DETAILS SHALL BE PROVIDED TO THE CERTIFYING AUTHORITY AS PART OF THE WASTE MANAGEMENT DOCUMENTATION ACCOMPANYING THE CONSTRUCTION CERTIFICATE APPLICATION. ALL RECEIPTS AND SUPPORTING DOCUMENTATION MUST BE RETAINED IN ORDER TO VERIFY LAWFUL DISPOSAL OF MATERIALS AND ARE TO BE MADE AVAILABLE TO PENRITH CITY COUNCIL ON REQUEST.

NOISE

- N1 NOISE LEVELS FROM THE PREMISES SHALL NOT EXCEED THE RELEVANT NOISE CRITERIA DETAILED IN THE DA ACOUSTIC ASSESSMENT PREPARED BY ACOUSTIC LOGIC DATED 01/12/2014. PROJECT NUMBER : 20131158.2.
- N2 A CERTIFICATE IS TO BE OBTAINED FROM A QUALIFIED ACOUSTIC CONSULTANT CERTIFYING THAT THE BUILDING HAS BEEN CONSTRUCTED TO MEET THE NOISE CRITERIA IN ACCORDANCE WITH THE APPROVED ACOUSTIC REPORT.
- N3 THE OPERATING NOISE LEVEL OF THE DEVELOPMENT SHOULD NOT EXCEED 58dB(A) ABOVE THE BACKGROUND NOISE LEVEL WHEN MEASURED AT THE BOUNDARIES OF THE PREMISES.

Reference Coordination Drawing			
		Discipline	Drawing Title and Number
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019 2
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019 2
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019 2
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019 2
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019 2
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019 2
B	ISSUE FOR D.A.	BW	08.12.2017 2
A	ISSUE FOR D.A.	BW	07.06.2017 2
Issue Last revision Title		by	Date Status
Issuer internal sequence and revision history			
1-preliminary	2-development application	3-construction certificate	6-other
4-tender	5-construction		



DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES MANS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.

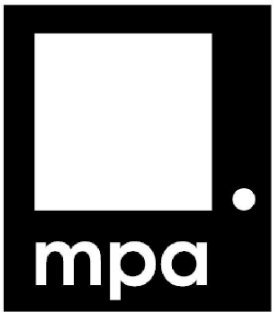
QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD

Scales

CLIENT
CROATIA 88 PTY LTD

ARCHITECT



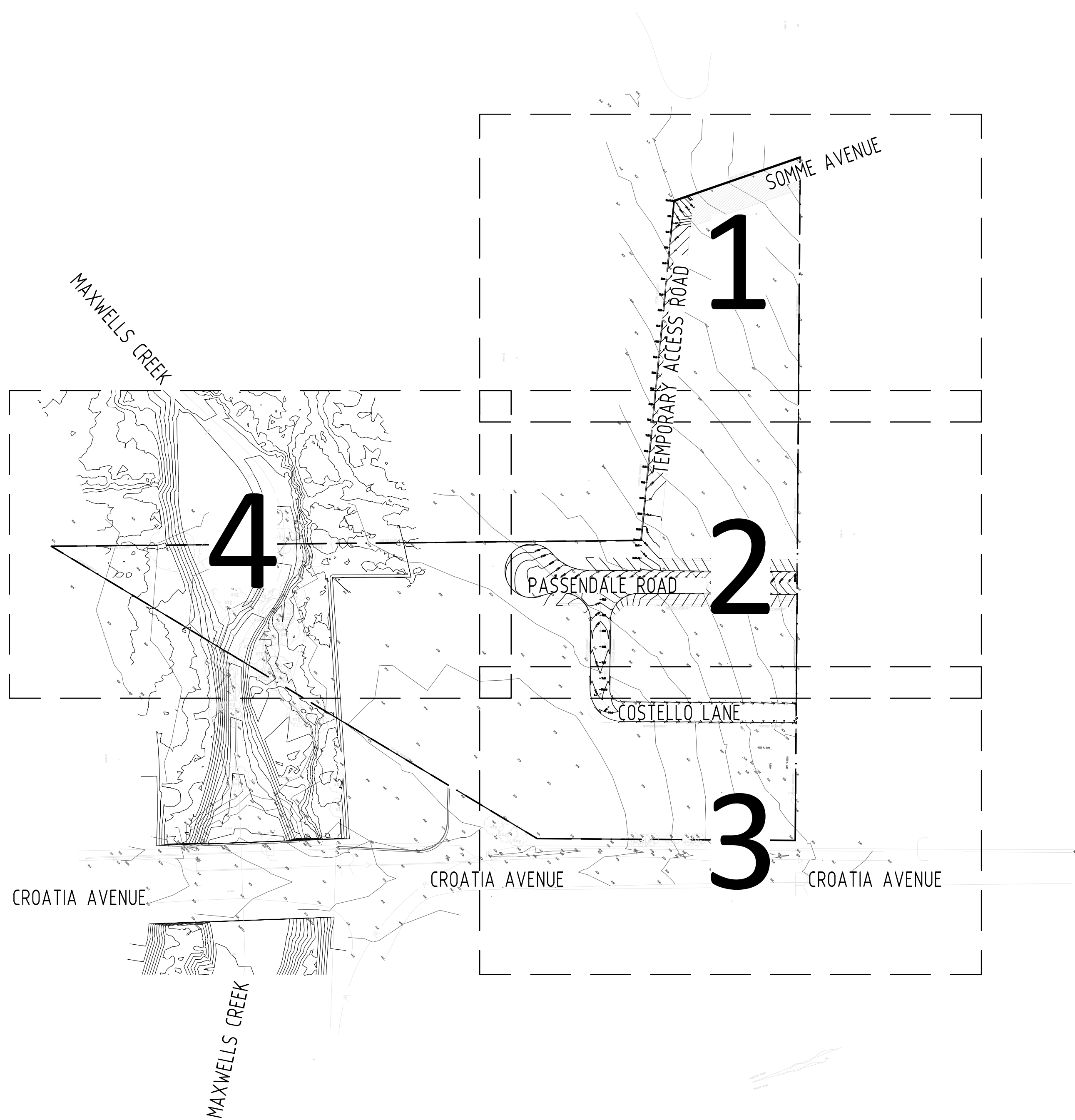
Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

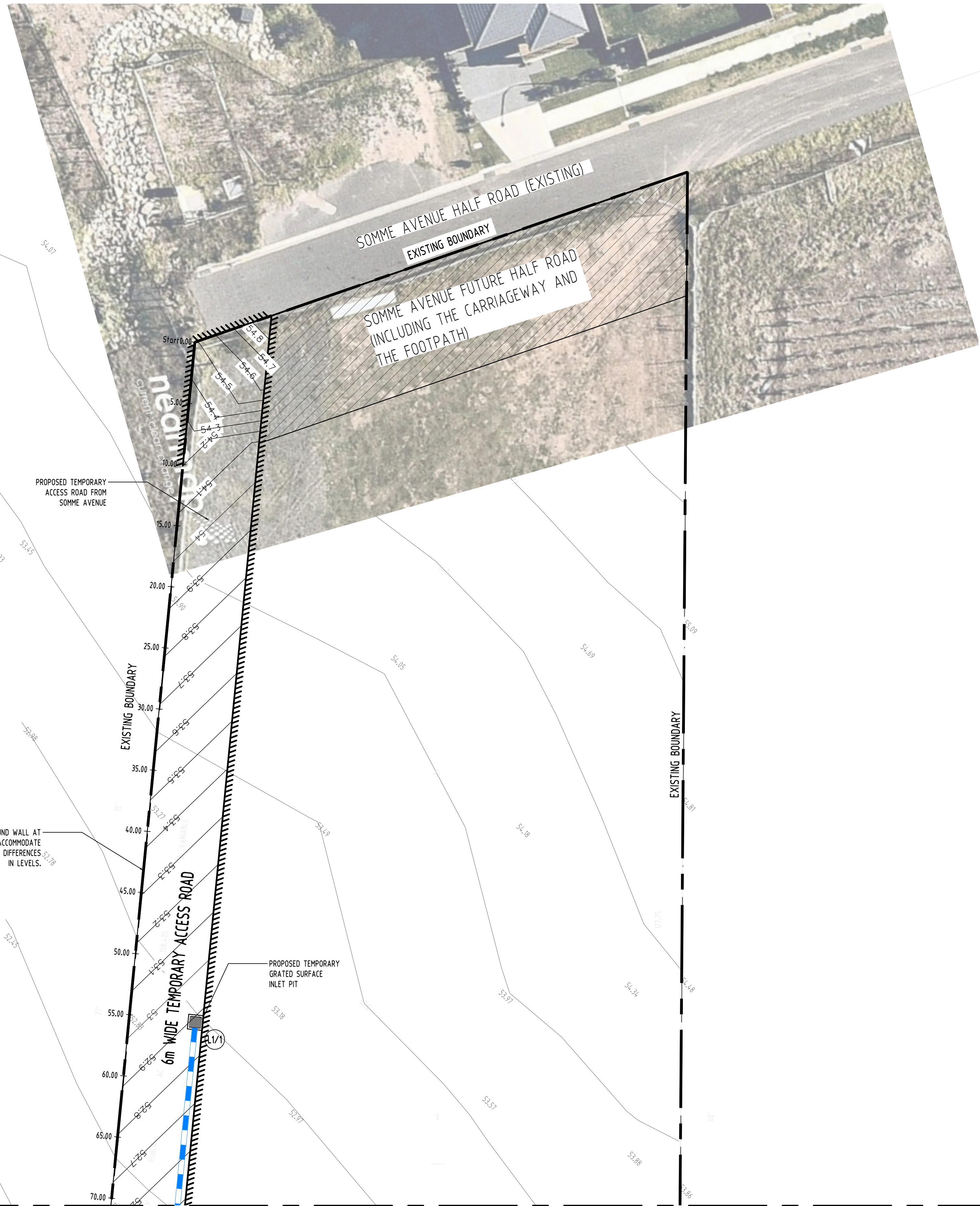
PROJECT
PROPOSED RESIDENTIAL
SUBDIVISION
190 CROATIA AVENUE,
EDMONSON PARK.

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	2 of 24	N.T.S. @ A1

Drawing Status	FOR APPROVAL		
	NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title	SPECIFICATION SHEET		
	DRAWING INDEX, NOTE & LEGENDS		
	SHEET 1 OF 2		
Project No	Drawing No	Revision No	
20150295	C101	J	



Reference Coordination Drawing						 ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	QUALITY CONTROL		<p>WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD</p> 	Scales	CLIENT CROATIA 88 PTY LTD	ARCHITECT 	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES				
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019	2				Drawing Title CIVIL WORKS - ROAD DESIGN SITE PLAN							Project No 20150259	Drawing No C110	Revision No J		
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019	2	Discipline		Drawing Title and Number											Date	Rev.
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019	2	ARCH														
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2	ARCH														
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2	STRUCT														
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019	2	MECH														
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC														
A	ISSUE FOR D.A.	BW	07.12.2017	2	HYD														
Issue Last revision title				by	Date		Status											LANDS	
Issuer internal sequence and revision history				1-preliminary 4-tender		2-development application 5-construction			3-construction certificate 6-other										
				CIVIL		SURVEY													
</																			

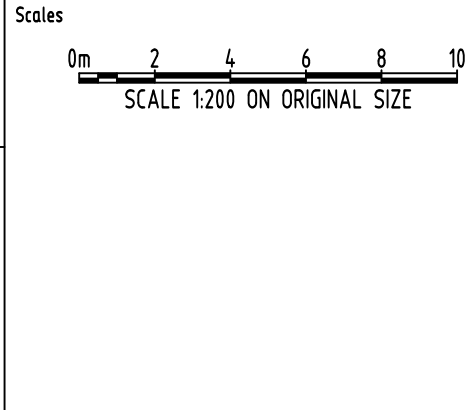
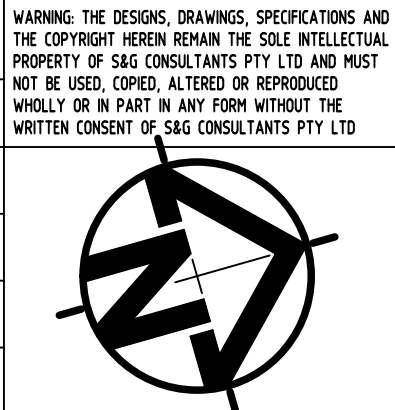


CONTINUATION ON DRAWING C202

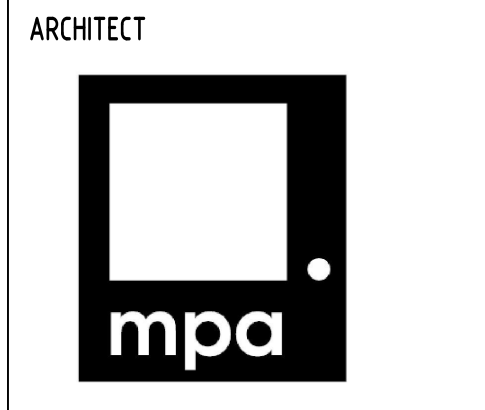
Reference Coordination Drawing				Revision History			
Issue	Last revision title	by	Date	Status	Discipline	Drawing Title and Number	Date
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019	2			
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019	2	ARCH		
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019	2	ARCH		
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2	ARCH		
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2	STRUCT		
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019	2	MECH		
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC		
A	ISSUE FOR D.A.	BW	07.12.2017	2	HYD		
Issue internal sequence and revision history				LANDS			
1-preliminary	2-development application	3-construction certificate	6-other	CIVIL			
4-tender	5-construction			SURVEY			

ENGINEERS AUSTRALIA	
Chartered Professional Engineer	
MEMBER	
DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE UP THIS DRAWING. POSITIONS OF AUTHORITIES MANS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.	

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019



CLIENT
CROATIA 88 PTY LTD

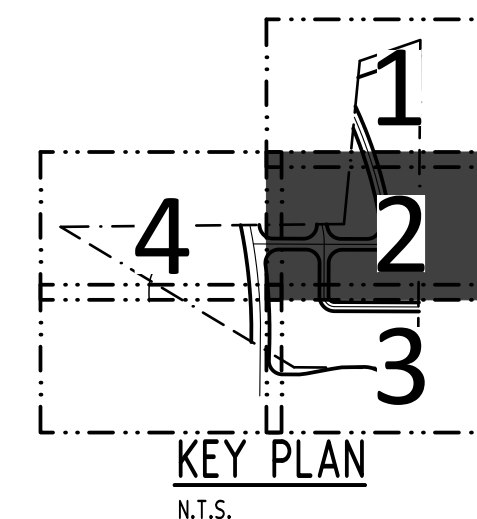


Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au










A.B.N. 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
190 CROATIA AVENUE,
EDMONDSON PARK

Drawing Status			FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES			CIVIL WORKS - ROAD DESIGN		
Drawing Title			GENERAL ARRANGEMENT PLAN		
Project No			Revision No		
20150259			J		
Drawing No			SHEET 1 OF 4		
C201					
Grid			Scale (at original size)		
-			1:200 @ A1		
Datum			Sheet		
A.H.D.			5 of 24		



LEGEND:

- | | |
|---|-----------------------------------|
|  | PROPOSED STORMWATER DRAINAGE |
|  | EXISTING GAS LINE |
|  | EXISTING COMMUNICATION CONDUIT |
|  | EXISTING ELECTRICAL OVERHEAD LINE |
|  | EXISTING RECYCLED WATER |
|  | DENOTES LIMIT OF WORKS |
|  | PROPOSED KERB INLET PIT |
|  | EXISTING POWER POLE |
|  | PROPOSED PIT NUMBER/LINE NUMBER |

CONTINUATION ON DRAWING C204

— ENSURE SMOOTH CONNECTION TO NEIGHBORING DEVELOPMENT
REFER TO:
INDESCO CONSULTING AUSTRALIA PROJECT NO-5533

CONTINUATION ON DRAWING C203

J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	05.08.2019
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	03.08.2019
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	03.08.2019
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	01.08.2019
B	ISSUE FOR D.A.	BW	08.12.2017
A	ISSUE FOR D.A.	BW	07.12.2017
Issue	Last revision title	by	Date
Issuer internal sequence and revision history 1-preiminary 2-development application 3-construction 4-approval certificate 4-topedit 5-construction 6-sheet			

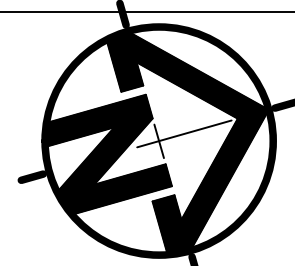
Reference Coordination Drawing			
Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

ENGINEERS AUSTRALIA
Chartered Professional Engineer
MEMBER

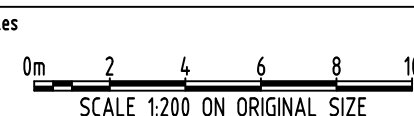
DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES MAINS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD



50	Scg
----	-----



CLIENT
CROATIA 88 PTY
LTD

ARCHITECT



Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

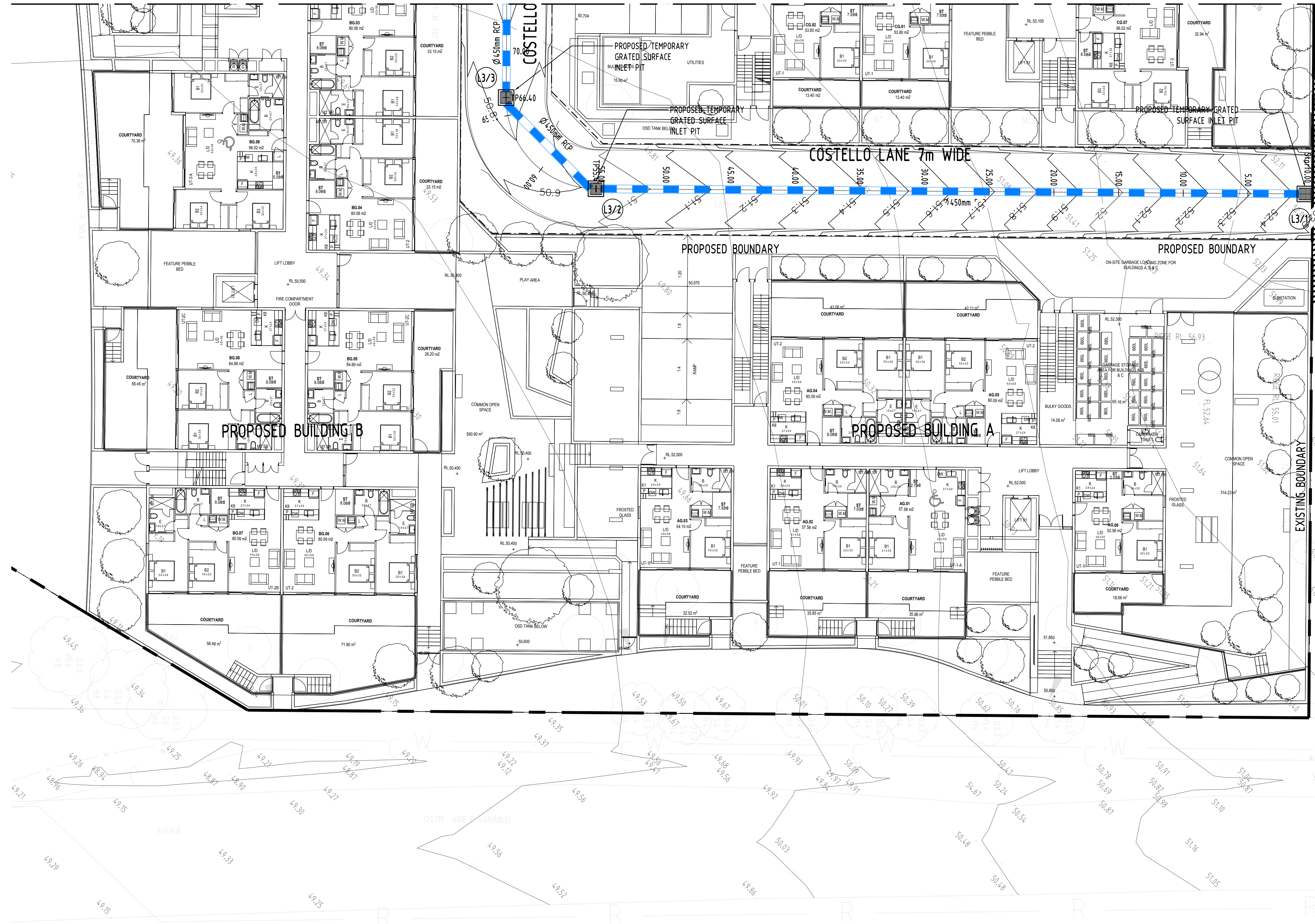
PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
190 CROATIA AVENUE,
EDMONDSON PARK

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	6 of 24	1:200 @ A1

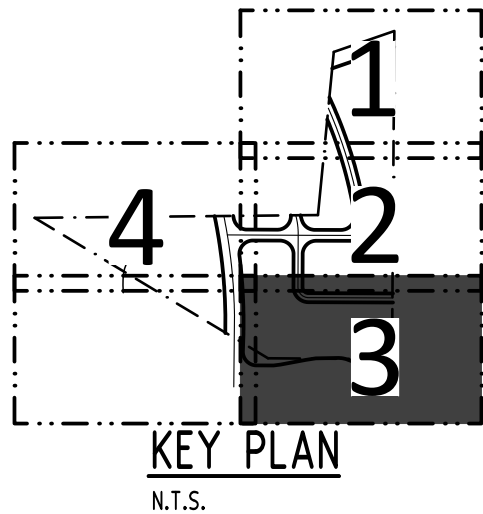
Drawing Status	FOR APPROVAL
Drawing Title	NOT TO BE USED FOR CONSTRUCTION PURPOSES
	CIVIL WORKS - ROAD DESIGN
	GENERAL ARRANGEMENT PLAN
	SHEET 2 OF 4

Project No	Drawing No	Rev
20150259	C202	





ENSURE SMOOTH CONNECTION TO NEIGHBORING DEVELOPMENT
REFER TO:
INDESCO CONSULTING AUSTRALIA PROJECT NO.5533



LEGEND:

- PROPOSED STORMWATER DRAINAGE
- EXISTING GAS LINE
- EXISTING COMMUNICATION CONDUIT
- EXISTING ELECTRICAL OVERHEAD LINE
- EXISTING RECYCLED WATER
- DENOTES LIMIT OF WORKS
- PROPOSED KERB INLET PIT
- EXISTING POWER POLE
- PROPOSED PIT NUMBER/LINE NUMBER

Reference Coordination Drawing				
J	Revised Civil Works Drawing for D.A.	JH	02.09.2019	2
H	Revised Civil Works Drawing for D.A.	JH	15.08.2019	2
G	Revised Civil Works Drawing for D.A.	JH	13.08.2019	2
F	Revised Civil Works Drawing for D.A.	JH	13.08.2019	2
E	Revised Civil Works Drawing for D.A.	JH	07.08.2019	2
D	Revised Civil Works Drawing for D.A.	BW	08.12.2017	2
B	Issue for D.A.	BW	07.12.2017	2
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

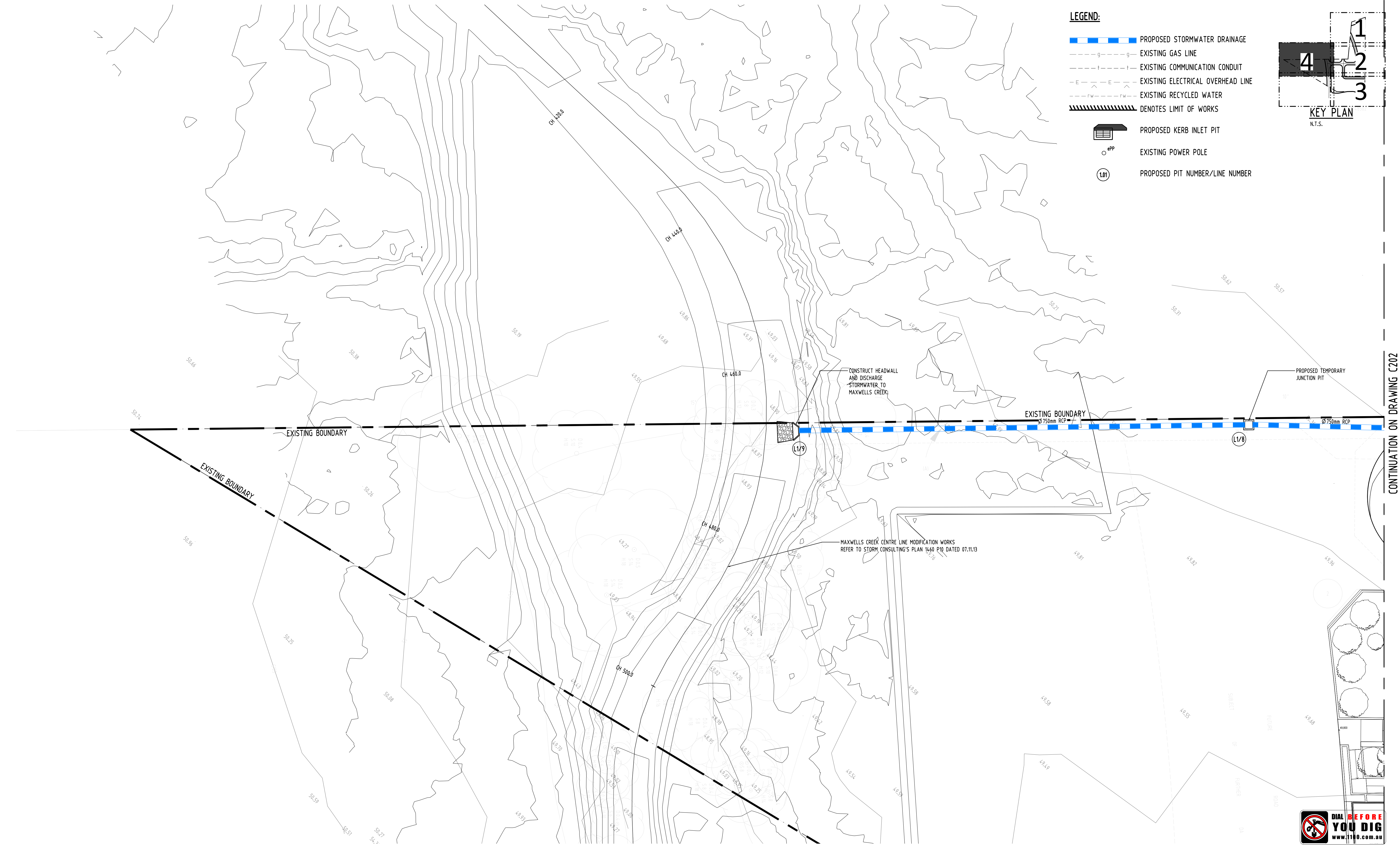
Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other



Reference Coordination Drawing				
JH	02.09.2019	2	Discipline	Drawing Title and Number
JH	15.08.2019	2	ARCH	
JH	13.08.2019	2	ARCH	
JH	13.08.2019	2	STRUCT	
JH	07.08.2019	2	MECH	
BW	08.12.2017	2	ELEC	
BW	07.12.2017	2	HYD	
Issue Last revision title				
Issued internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction
6-other	6-other	6-other	6-other	6-other

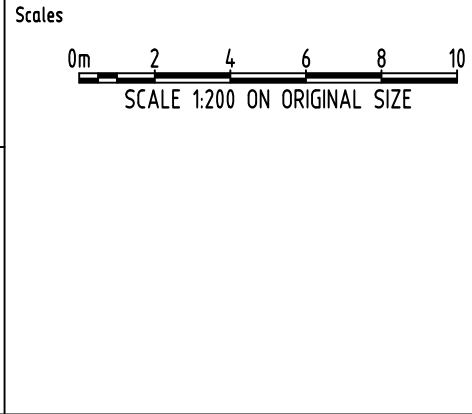


Reference Coordination Drawing				
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019	2
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019	2
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019	2
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019	2
B	REVISED CIVIL WORKS DRAWING FOR D.A.	BW	08.12.2017	2
A	ISSUE FOR D.A.	BW	07.12.2017	2
Issue Last revision title		by	Date	Status
Issuer internal sequence and revision history				
1-preliminary	2-development application	3-construction certificate	6-other	
4-tender	5-construction			
Discipline	Drawing Title and Number	Date	Rev.	
ARCH				
ARCH				
STRUCT				
MECH				
ELEC				
HYD				
FIRE				
LANDS				
CIVIL				
SURVEY				

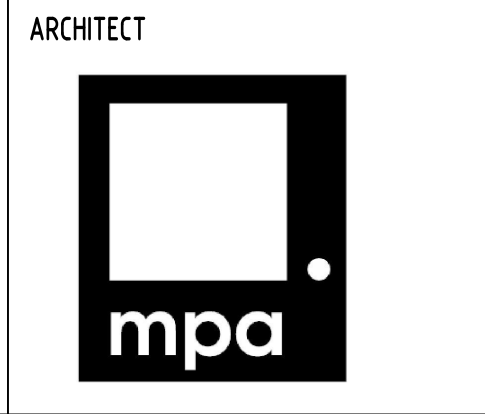
ENGINEERS AUSTRALIA
Chartered Professional Engineer
MEMBER

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD



CLIENT
CROATIA 88 PTY LTD



Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

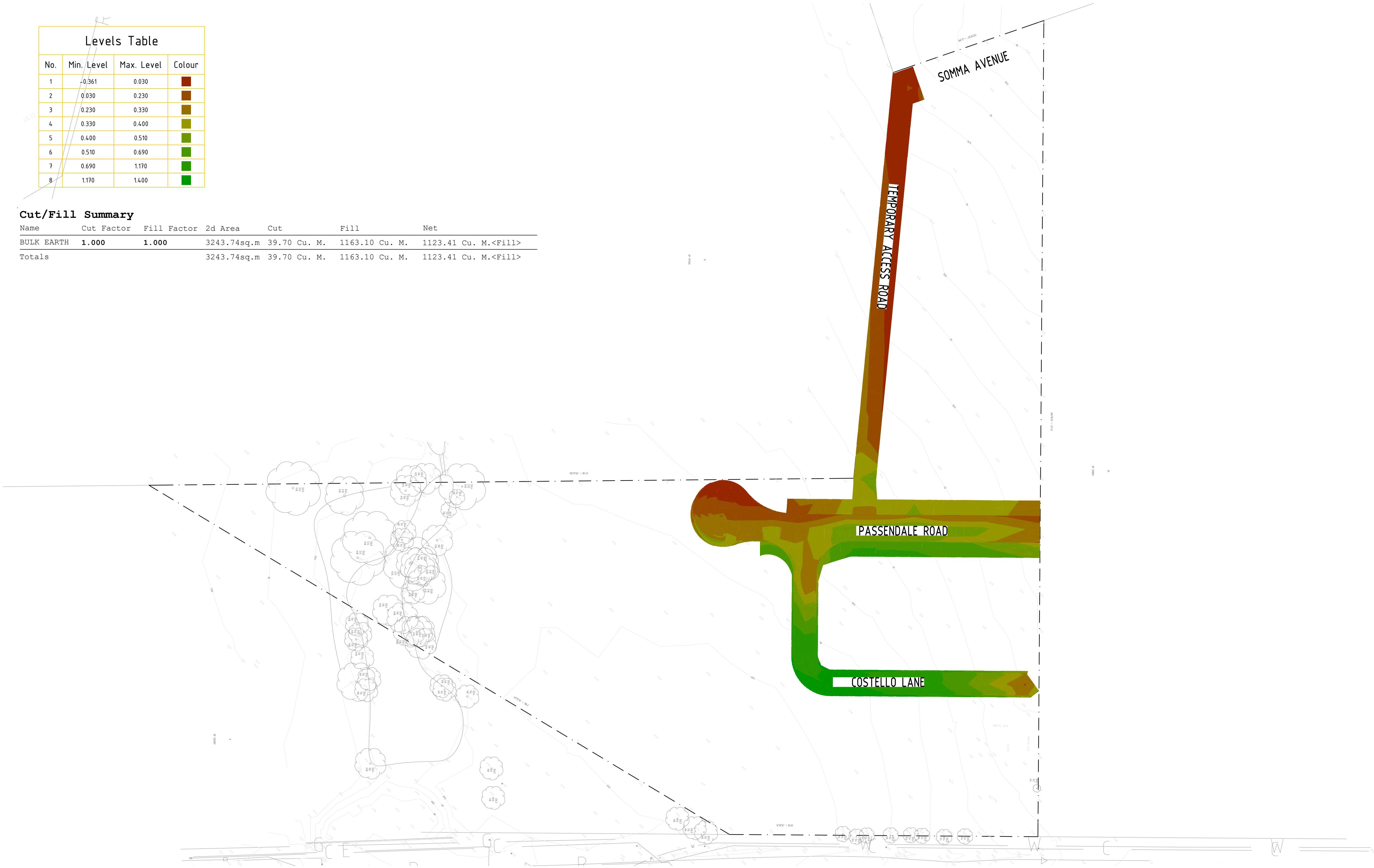
PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
190 CROATIA AVENUE,
EDMONDSON PARK

Drawing Status			FOR APPROVAL
Drawing Title			NOT TO BE USED FOR CONSTRUCTION PURPOSES
			CIVIL WORKS - ROAD DESIGN
			GENERAL ARRANGEMENT PLAN
			SHEET 4 OF 4
Project No	Drawing No	Revision No	
20150259	C204	J	

Levels Table			
No.	Min. Level	Max. Level	Colour
1	-0.361	0.030	■
2	0.030	0.230	■
3	0.230	0.330	■
4	0.330	0.400	■
5	0.400	0.510	■
6	0.510	0.690	■
7	0.690	1.170	■
8	1.170	1.400	■

Cut/Fill Summary

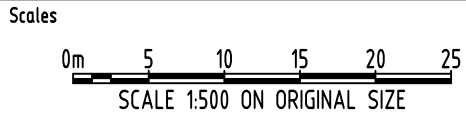
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
BULK EARTH	1.000	1.000	3243.74sq.m	39.70 Cu. M.	1163.10 Cu. M.	1123.41 Cu. M.<Fill>
Totals			3243.74sq.m	39.70 Cu. M.	1163.10 Cu. M.	1123.41 Cu. M.<Fill>



Reference Coordination Drawing			
J	Revised Civil Works Drawing for D.A.	JH	02.09.2019
H	Revised Civil Works Drawing for D.A.	JH	19.08.2019
G	Revised Civil Works Drawing for D.A.	JH	15.08.2019
F	Revised Civil Works Drawing for D.A.	JH	13.08.2019
E	Revised Civil Works Drawing for D.A.	JH	13.08.2019
D	Revised Civil Works Drawing for D.A.	JH	07.08.2019
B	Issue for D.A.	BW	06.12.2017
A	Issue for D.A.	BW	07.12.2017
Issue Last revision title		by	Date
1-preliminary		2-development application	3-construction certificate
4-tender		5-construction	6-other

QUALITY CONTROL			
Discipline	Drawing Title and Number	Date	Rev.
ARCH		23.11.2017	
MECH		06.12.2017	
ELEC		23.11.2017	
HYD		06.12.2017	
FIRE		06.12.2017	
LANDS		06.12.2017	
CIVIL		06.12.2017	
SURVEY		06.12.2017	

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD



CLIENT
CROATIA 88 PTY LTD






Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

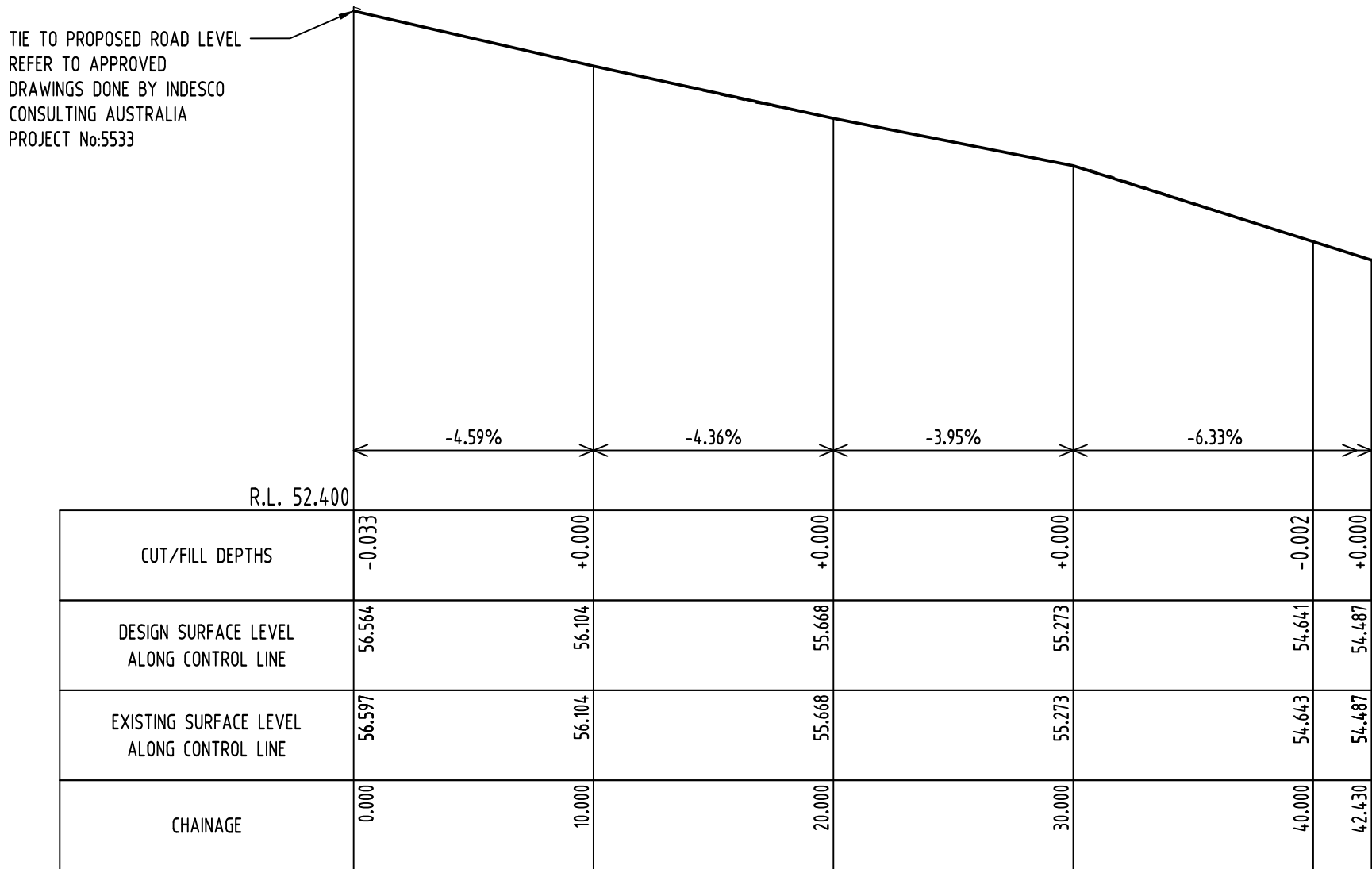
A.B.N. 21 118 222 530

PROJECT			
PROPOSED RESIDENTIAL DEVELOPMENT			
190 CROATIA AVENUE, EDMONDSON PARK			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	9 of 24	1:500 @ A1

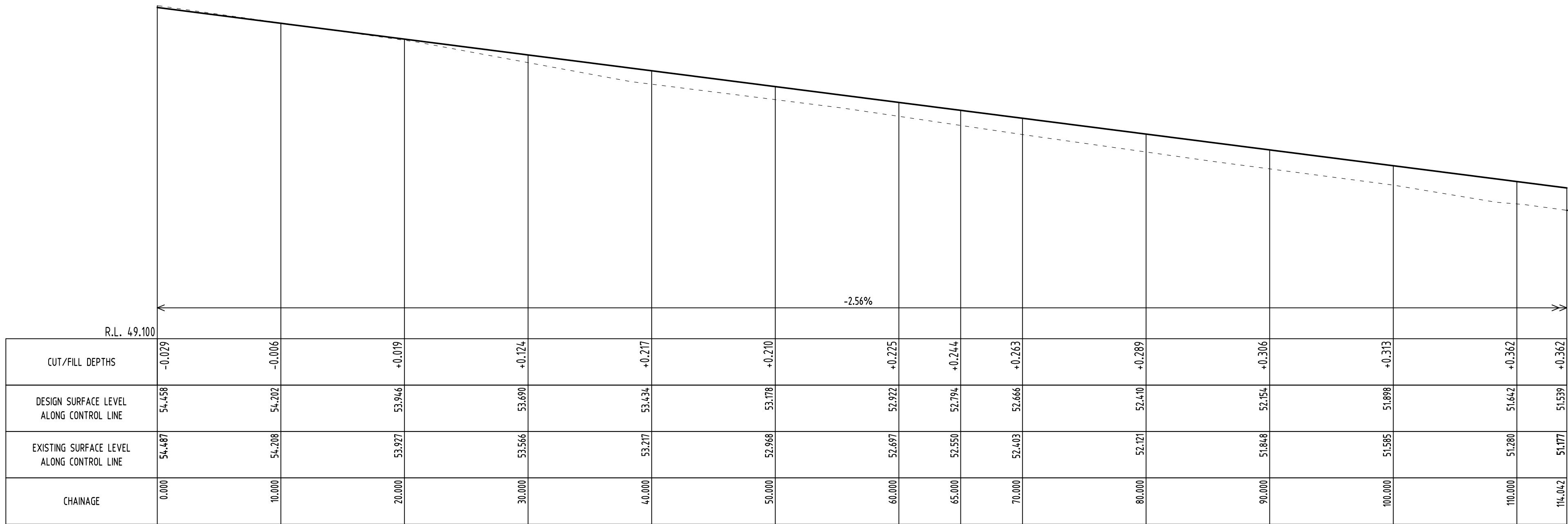
Drawing Status		
FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title		
CIVIL WORKS - ROAD DESIGN BULK EARTH WORKS PLAN		
Project No	Drawing No	Revision No
20150259	C231	J



JH 02.09.2019 2		Reference Coordination Drawing			QUALITY CONTROL		<p>WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD.</p>	<p>Scales</p> <div><div>0m 0.5 1 1.5 2 2.5</div><div>SCALE 1:50 ON ORIGINAL SIZE</div><div>0m 1 2 3 4 5 6 7 8 9 10 11 12</div><div>SCALE 1:250 ON ORIGINAL SIZE</div></div>	<p>CLIENT</p> <p>CROATIA 88 PTY LTD</p> <p>ARCHITECT</p> <div></div>	<div></div> <p>Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au</p> <p>A.B.N. ZI 118 222 530</p>	<p>PROJECT</p> <p>PROPOSED RESIDENTIAL DEVELOPMENT</p> <p>190 CROATIA AVENUE, EDMONDSON PARK</p>	<p>Drawing Status</p> <p>FOR APPROVAL</p> <p>NOT TO BE USED FOR CONSTRUCTION PURPOSES</p>	<p>Drawing Title</p> <p>CIVIL WORKS – ROAD DESIGN</p> <p>ROAD LONGITUDINAL SECTIONS ALONG COSTELLO LANE & PASSENDALE ROAD.</p>	<p>Project No</p> <p>20150259</p>	<p>Drawing No</p> <p>C301</p>	<p>Revision No</p> <p>J</p>	
HJ 19.08.2019 2		Discipline Drawing Title and Number Date Rev.			DRAWN JH DATE 07.08.2019												
JH 15.08.2019 2		ARCH			CHECKED SH DATE 07.08.2019												
FH 03.06.2019 2		ARCH			DESIGNED JH DATE 07.08.2019												
DH 03.06.2019 2		STRUCT			VERIFIED SH DATE 07.08.2019												
JH 07.08.2019 2		MECH			APPROVED SH DATE 07.08.2019												
BW 08.12.2017 -		ELEC															
AH 07.12.2017 2		LIVD															
Issue Last revision title		by Date Status			FIRE												
Issuer internal sequence and revision history		LANDS															
1-preliminary		2-development application		CIVIL													
4-tender		5-construction		SURVEY													
		6-other															



ROAD LONGITUDINAL SECTION ALONG SOMMA AVENUE CENTRE LINE
SCALE H:1250 V:150




ROAD LONGITUDINAL SECTION ALONG TEMPORARY ACCESS ROAD RIGHT HAND SIDE EDGE
SCALE H:1250 V:150





Reference Coordination Drawing				
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019	2
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019	
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019	2
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019	2
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	12.08.2019	2
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019	2
B	ISSUE FOR D.A.	BW	08.12.2017	2
A	ISSUE FOR D.A.	BW	07.12.2017	2
Issue	Last revision title	by	Date	Status
Issuer internal sequence and revision history 1-preliminary 4-tender 2-development/ application 5-construction 3-construction certificate 6-other				
LANDS CIVIL SURVEY				

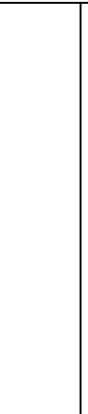
 ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	QUALITY CONTROL			
	DRAWN	JH	DATE	07.08.2019
	CHECKED	SH	DATE	07.08.2019
	DESIGNED	JH	DATE	07.08.2019
	VERIFIED	SH	DATE	07.08.2019
DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE THIS DRAWING. POSITIONS OF AUTHORITIES MAINS AND/OR EXISTING SERVICES TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DISCUSS/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.				
APPROVED	SH	DATE	07.08.2019	

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD

Scales


0m 0.5 1 1.5 2 2.5
SCALE 1:50 ON ORIGINAL SIZE

0m 2.5 5 7.5 10 12.5
SCALE 1:250 ON ORIGINAL SIZE



CLIENT
CROATIA 88 PTY
LTD

ARCHITECT

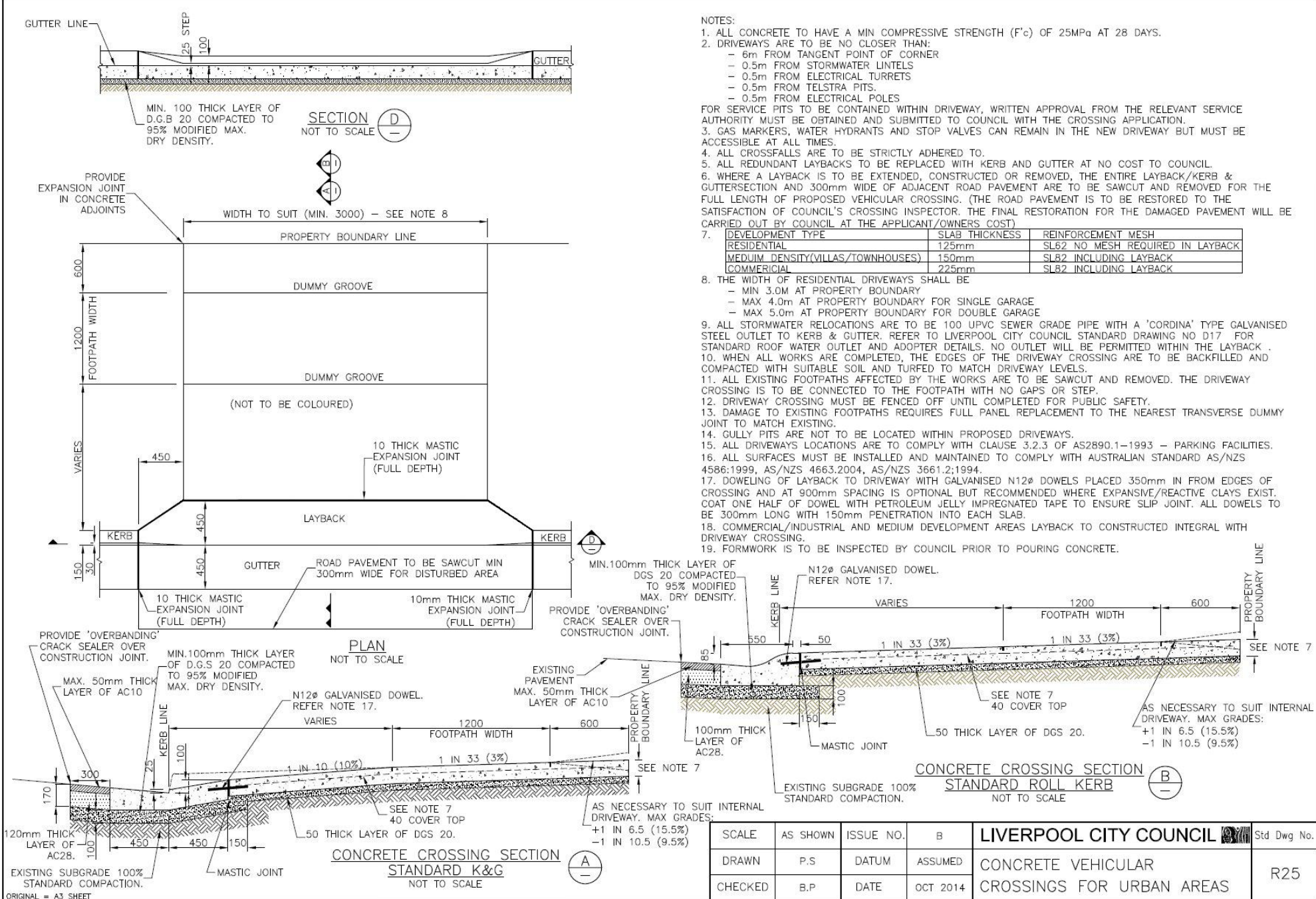
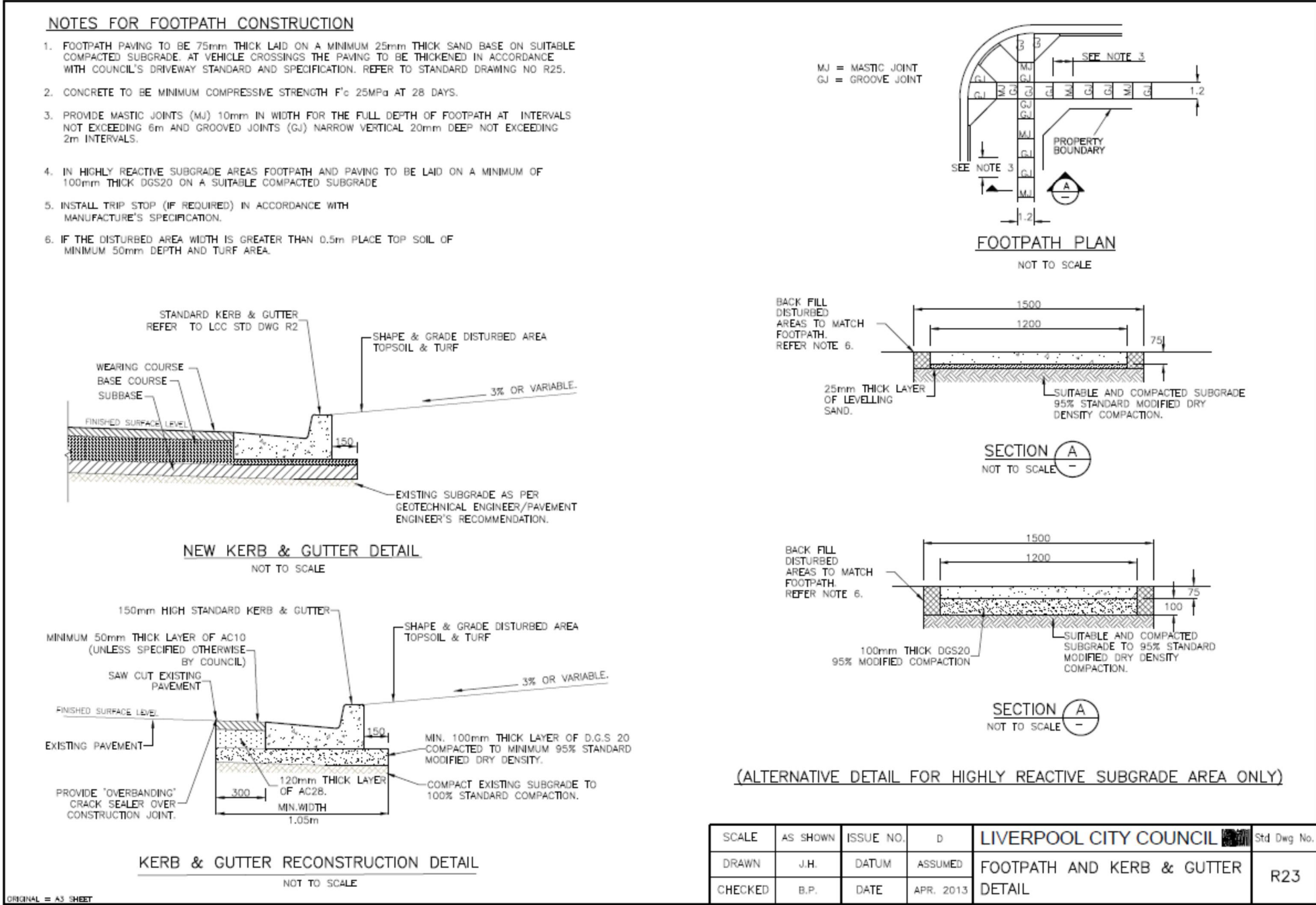
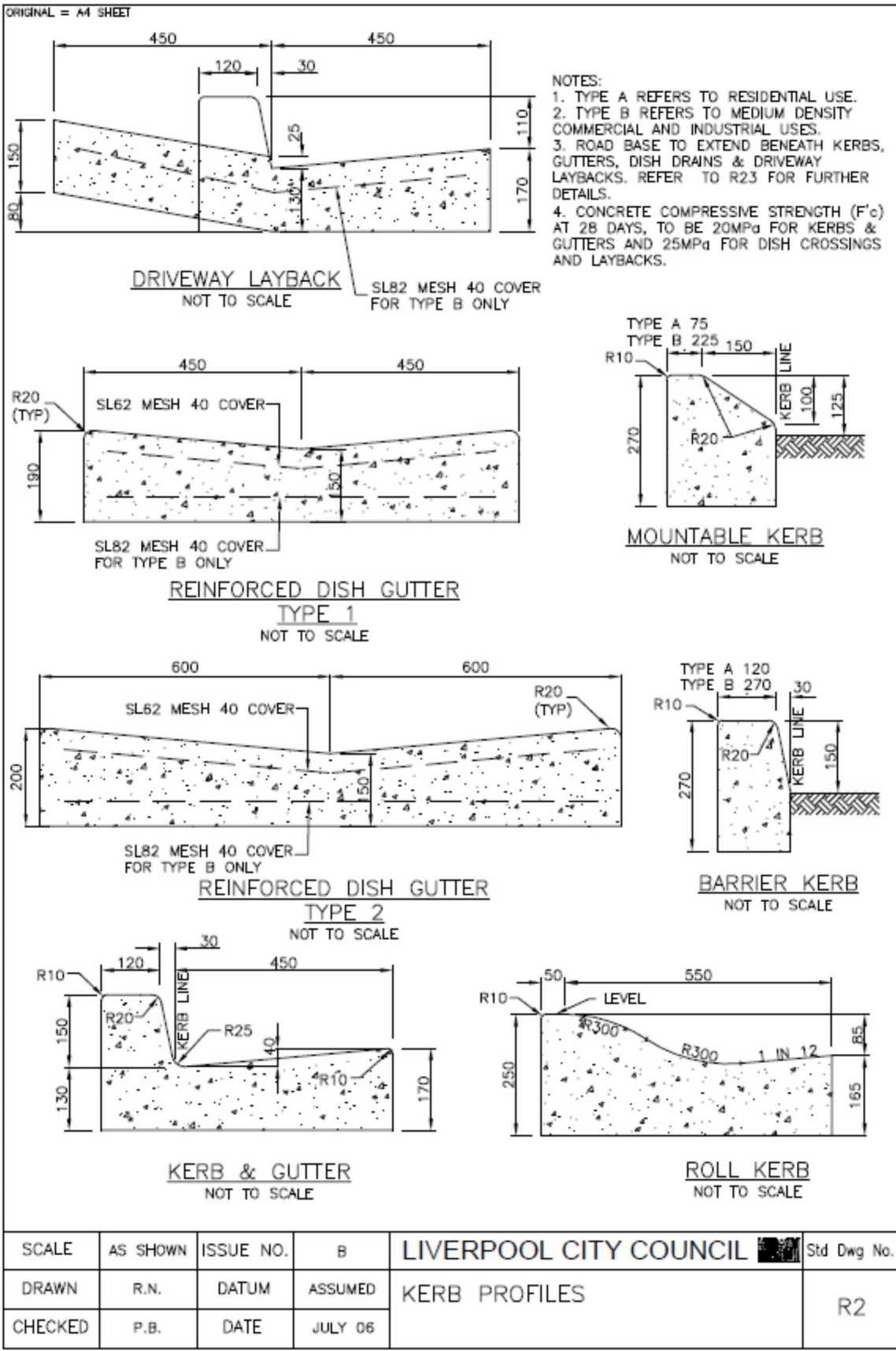
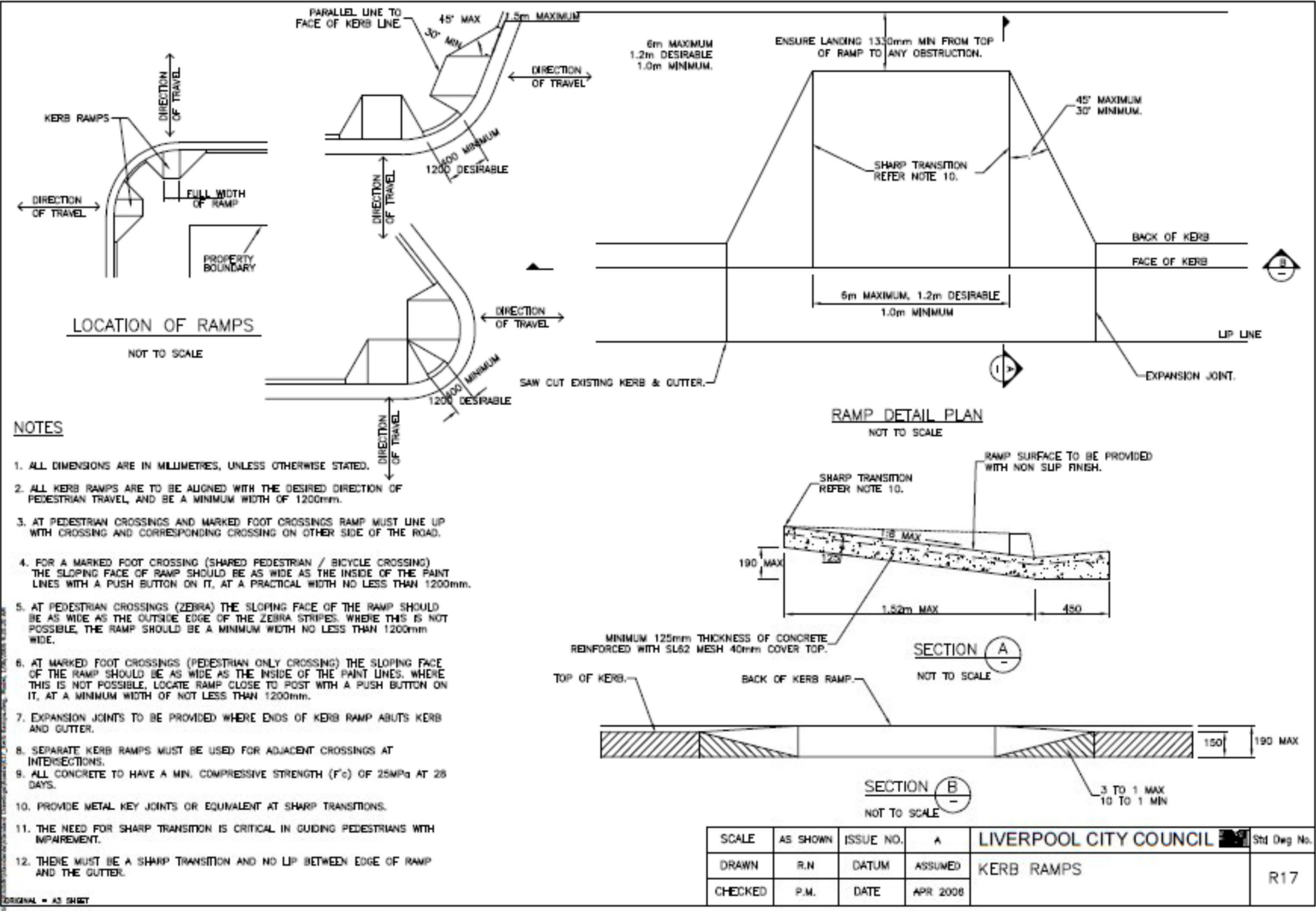


 Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

PROJECT			
PROPOSED RESIDENTIAL DEVELOPMENT			
190 CROATIA AVENUE, EDMONDSON PARK			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	12 of 24	AS SHOWN @ A1

Drawing Status			FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES					
Drawing Title					
CIVIL WORKS - ROAD DESIGN					
TYPICAL CROSS SECTIONS					
Project No		Drawing No		Revision No	
20150259		C351		J	



Issue				Last revision title			
1-preliminary	2-development application	3-construction certificate	4-tender	5-construction	6-other		

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2



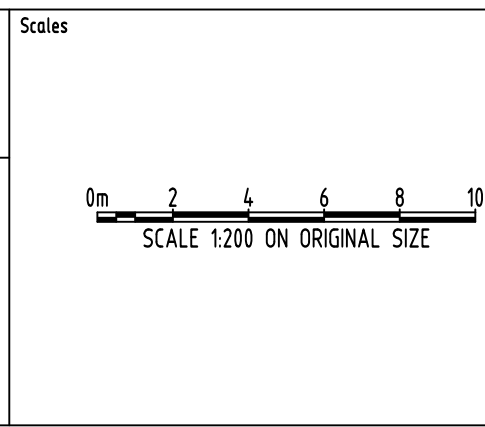
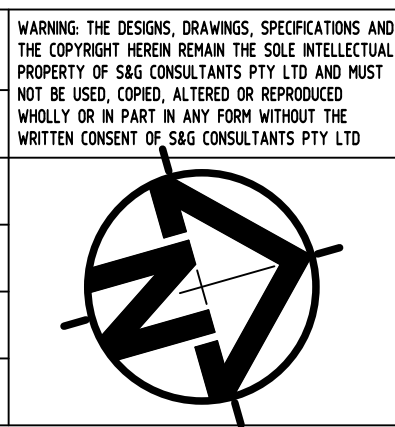
Discipline	Drawing Title and Number	Date	Rev.
JH	02.09.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	15.08.2019	2	
JH	07.08.2019	2	
BW	08.12.2017	2	
BW	07.12.2017	2	

Issue	Last revision title	by	Date	Status
1	Issue	JH	02.09.2019	2
2	Issue	JH	15.08.2019	2
3	Issue	JH	15.08.2019	2
4	Issue	JH	15.08.2019	2
5	Issue	JH	15.08.2019	2
6	Issue	JH	07.08.2019	2
7	Issue	BW	08.12.2017	2
8	Issue	BW	07.12.2017	2

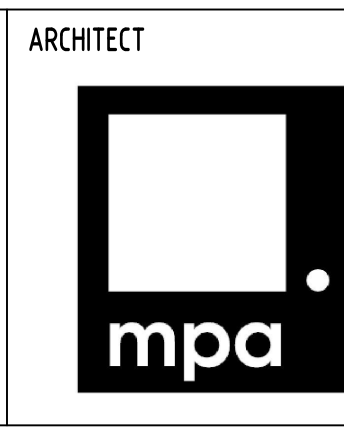
J	ISSUE FOR D.A.	JH	12.09.2019	2	Reference Coordination Drawing		
H	ISSUE FOR D.A.	JH	19.08.2019	2			
G	ISSUE FOR D.A.	JH	15.08.2019	2	Discipline	Drawing Title and Number	Date
F	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH	AP05	01.11.17
E	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
D	ISSUE FOR D.A.	JH	08.08.2019	2	STRUCT		
C	ISSUE FOR D.A.	LN	10.09.2018	2	MECH		
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC		
A	ISSUE FOR D.A.	LN	12.07.17	2	HYD		
Issue Last revision title		by	Date	Status	FIRE		
Issuer internal sequence and revision history							
1	preliminary				LANDS		
2	development application				CIVIL		
3	construction				SURVEY		
4							
5							
6							

ENGINEERS AUSTRALIA	
Chartered Professional Engineer MEMBER	
DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSTING OF AUTHORITIES HANG AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.	

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019

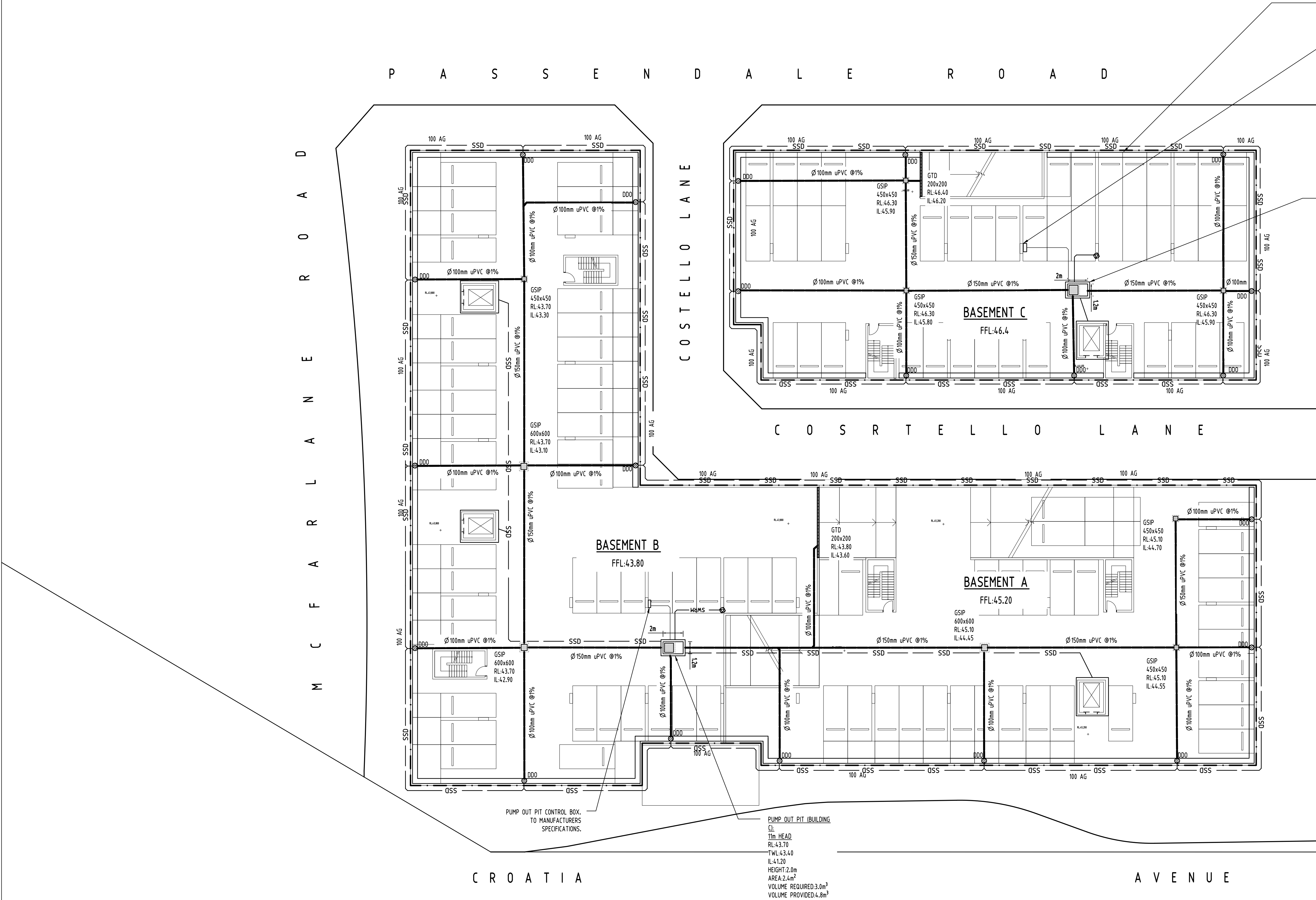


CLIENT
CROATIA 88 PTY LTD



Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK			Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Title STORMWATER CONCEPT DESIGN BASEMENT 2 PLAN			
Project No 20150259	Drawing No C601	Revision No J	
Grid	Datum A.H.D.	Sheet 16 of 24	Scale (at original size) 1:200 @ A1



Ø200mm HALF ROUND DISH DRAIN TO PERIMETER WALL OF BASEMENT 03

PUMP OUT PIT CONTROL BOX TO MANUFACTURERS SPECIFICATIONS.

PUMP OUT PIT (BUILDING C)
CL: 11m HEAD
RL:46.30
TWL:46.00
IL:44.80
HEIGHT:2.0m
AREA:2.4m²
VOLUME REQUIRED:3.0m³
VOLUME PROVIDED:4.8m³

PUMP-OUT PIT (BUILDING C) CALCS:
10yr 2hr ARI STORM = 35.7mm/hr
ARI x 2 = 71.4mm
AREA OF DRIVEWAY RAMP UNCOVERED = 88.9m²
VOLUME OF RUNOFF
V = A x d
= 88.9 x (71.4 / 1000)
= 7.24m³
VOLUME PUMPED IN 30 MINUTES = 18m³
WET WELL STORAGE MAXIMUM OF:
+ VOLUME OF RUNOFF - VOLUME PUMPED
+ 3m³
THEREFORE, A VOLUME OF 3m³ SUBSOL PUMP OUT PIT WILL BE APPLIED AS PER AUSTRALIAN STANDARD (AS3500).

PUMP-OUT PIT (BUILDING A-B) CALCS:
10yr 2hr ARI STORM = 35.7mm/hr
ARI x 2 = 71.4mm
AREA OF DRIVEWAY RAMP UNCOVERED = 123.5m²
VOLUME OF RUNOFF
V = A x d
= 123.5 x (71.4 / 1000)
= 8.81m³
VOLUME PUMPED IN 30 MINUTES = 18m³
WET WELL STORAGE MAXIMUM OF:
+ VOLUME OF RUNOFF - VOLUME PUMPED
+ 3m³
THEREFORE, A VOLUME OF 3m³ SUBSOL PUMP OUT PIT WILL BE APPLIED AS PER AUSTRALIAN STANDARD (AS3500).


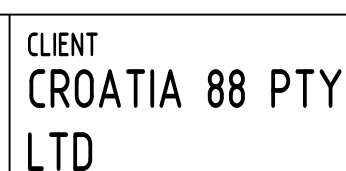
PUMP-OUT PIT NOTE:
EACH PUMP NEED TO BE INSTALLED FOLLOWING ITEMS:
- 900SQS HEAVY DUTY STEEL GRATED LID FOR ACCESS AND MAINTENANCE PURPOSES.
- CONFINED SPACE SIGN ABOVE PUMP OUT PIT FOR PUBLIC AWARENESS AND WARNING.
- STEP IRONS. REFER SW06 TO DETAILS.
- INSTALL 2x SUBMERSIBLE PUMPS EACH WITH A PUMP CAPACITY OF 10L/s AT 11.0m HEAD, FLOAT SWITCH AND CONTROL PANEL TO MANUFACTURER'S SPECIFICATIONS.

NOTE:
BASEMENT 02 DRAINAGE DESIGN SUBJECT TO GEOTECHNICAL INVESTIGATION AND STRUCTURAL DESIGN OF WALLS AND SLABS.





WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SAG CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SAG CONSULTANTS PTY LTD

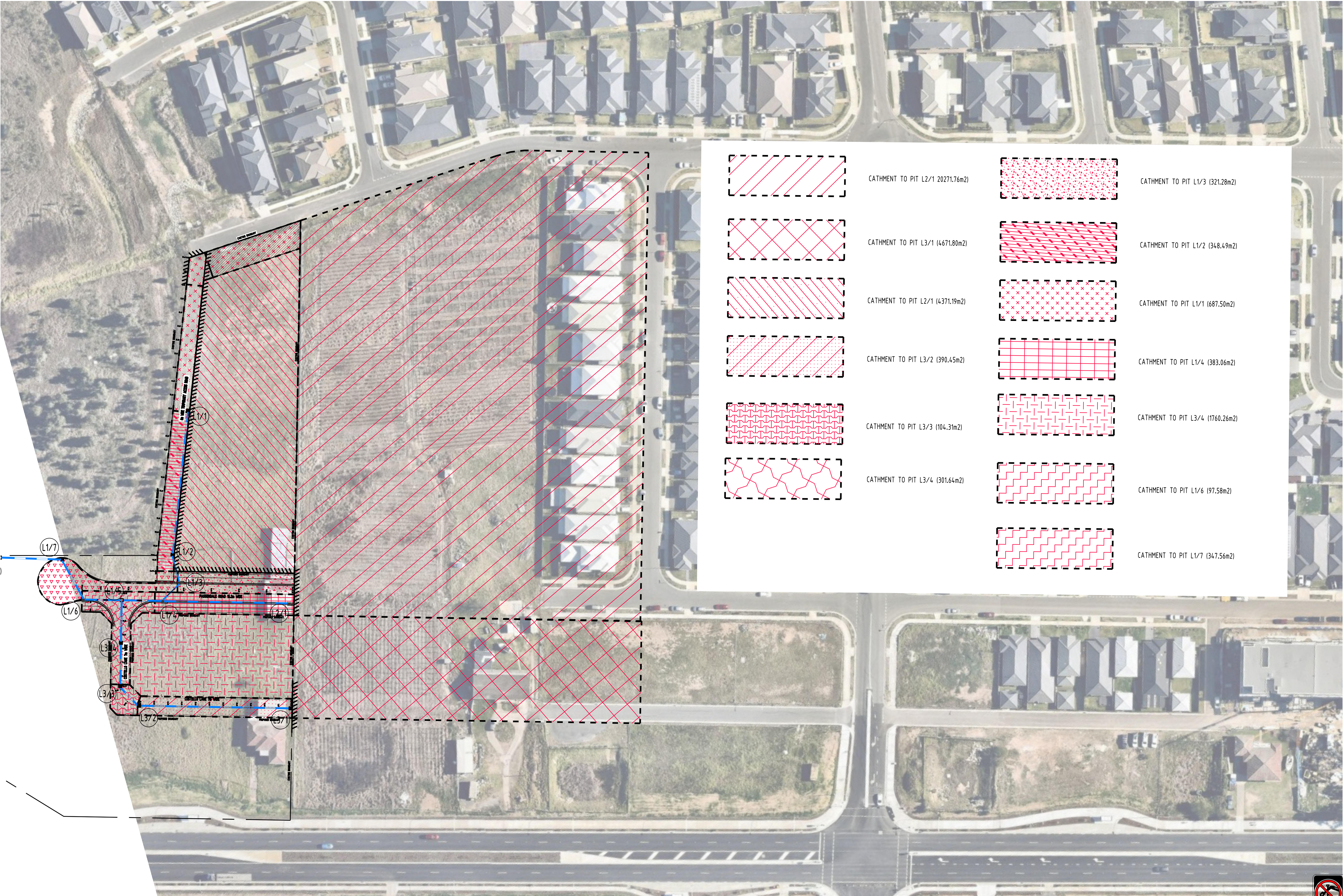
The logo for SAG Consultants Pty Ltd, featuring a stylized 'S' and 'G' intertwined within a circle, with a compass rose design.

Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

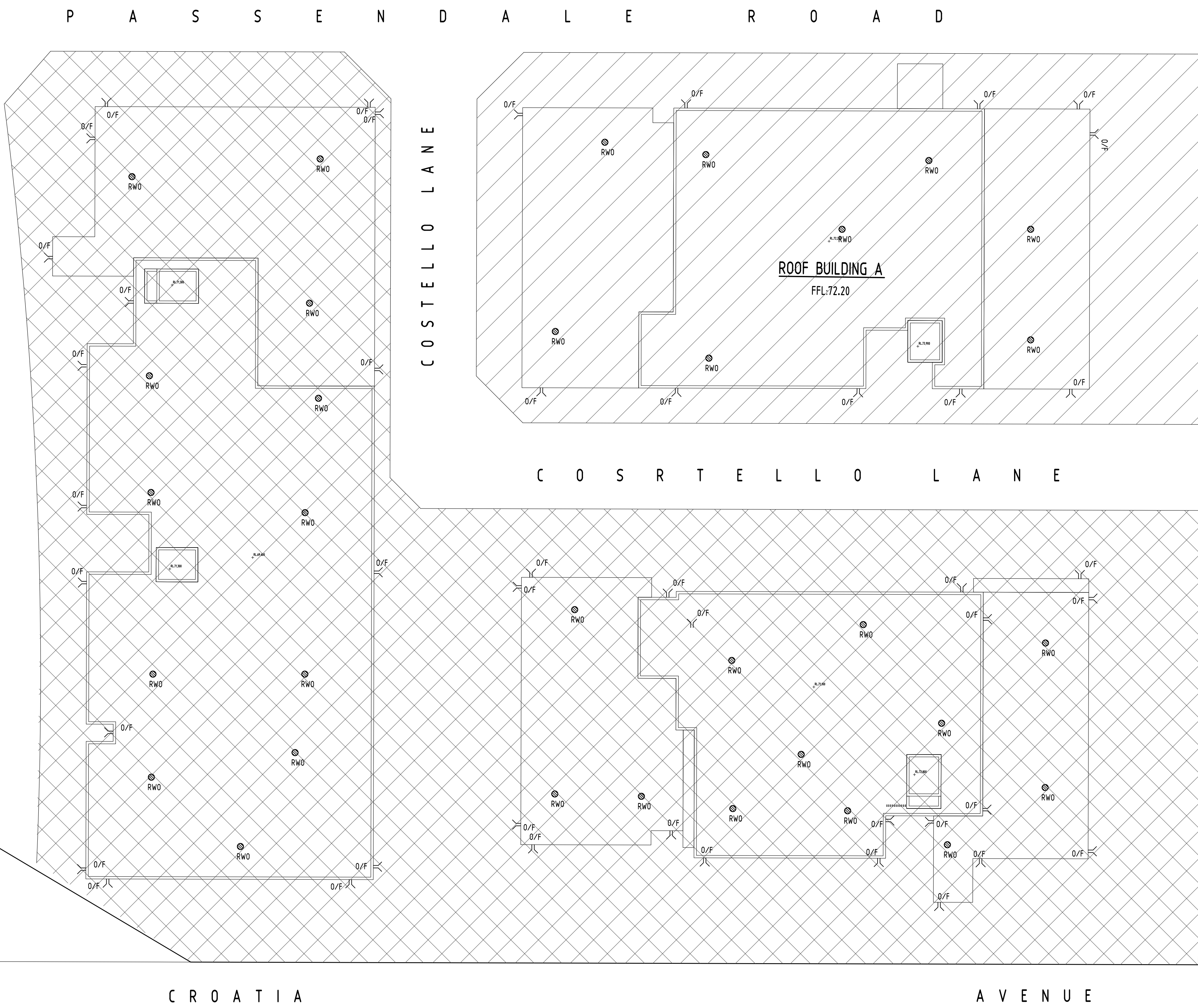
A.B.N. 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
190 CROATIA AVENUE, EDMONDSON PARK

Drawing Status	FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Drawing Title	STORMWATER CONCEPT DESIGN GROUND FLOOR PLAN		
Project No	Drawing No	Revision No	
20150259	C605	J	



	CATHMENT TO PIT L2/1 (20271.76m2)		CATHMENT TO PIT L1/3 (321.28m2)
	CATHMENT TO PIT L3/1 (4671.80m2)		CATHMENT TO PIT L1/2 (348.49m2)
	CATHMENT TO PIT L2/1 (4371.19m2)		CATHMENT TO PIT L1/1 (687.50m2)
	CATHMENT TO PIT L3/2 (390.45m2)		CATHMENT TO PIT L1/4 (383.06m2)
	CATHMENT TO PIT L3/3 (104.31m2)		CATHMENT TO PIT L3/4 (1760.26m2)
	CATHMENT TO PIT L3/4 (301.64m2)		CATHMENT TO PIT L1/6 (97.58m2)
			CATHMENT TO PIT L1/7 (347.56m2)



CATCHMENT 05D1 (4,250m²)

CATCHMENT 05D2 (1760m²)

NOTE:
RAINWATER OUTLET (RWO) AND OVERFLOW (OF)
LOCATIONS ARE INDICATIVE ONLY AND SUBJECT TO
FUTURE DESIGN DURING CONSTRUCTION CERTIFICATE.

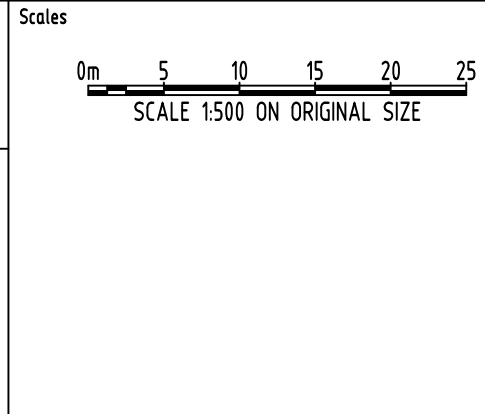
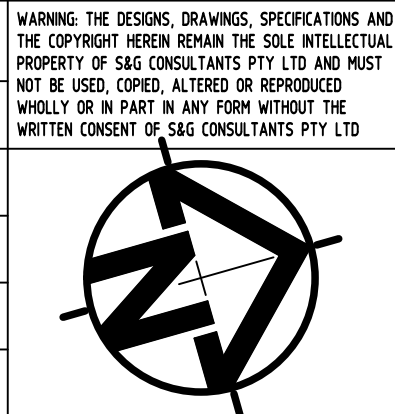
<div><div><div>J</div><div>ISSUE FOR D.A.</div></div><div><div>H</div><div>ISSUE FOR D.A.</div></div><div><div>G</div><div>ISSUE FOR D.A.</div></div><div><div>F</div><div>ISSUE FOR D.A.</div></div><div><div>E</div><div>ISSUE FOR D.A.</div></div><div><div>D</div><div>ISSUE FOR D.A.</div></div><div><div>C</div><div>ISSUE FOR D.A.</div></div><div><div>B</div><div>ISSUE FOR D.A.</div></div><div><div>A</div><div>ISSUE FOR D.A.</div></div><div><div>Issue</div><div>Last revision title</div></div></div> <div><div>JH</div><div>02.09.2019</div><div>2</div></div> <div><div>JH</div><div>19.08.2019</div><div>2</div></div> <div><div>JH</div><div>15.08.2019</div><div>2</div></div> <div><div>JH</div><div>13.08.2019</div><div>2</div></div> <div><div>JH</div><div>13.08.2019</div><div>2</div></div> <div><div>JH</div><div>08.08.2019</div><div>2</div></div> <div><div>LN</div><div>08.08.2018</div><div>2</div></div> <div><div>BW</div><div>08.12.2017</div><div>2</div></div> <div><div>LN</div><div>12.07.17</div><div>2</div></div> <div><div>by</div><div>Date</div><div>Status</div></div> <div><div>1-preliminary</div><div>2-development application</div><div>3-construction certificate</div><div>4-tender</div><div>5-construction</div><div>6-other</div></div> <tr><td colspan="4"><div><div>Issue internal sequence and revision history</div><div>LANDS</div><div>CIVIL</div><div>SURVEY</div></div></td><td colspan="4"><div><div>ENGINEERS AUSTRALIA</div><div>Chartered Professional Engineer MEMBER</div></div><div><div>DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES HANGS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.</div><div></div></div></td><td colspan="4"><div><div>QUALITY CONTROL</div><div>DRAWN</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>CHECKED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>DESIGNED</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>VERIFIED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>APPROVED</div><div>SH</div><div>DATE</div><div>07.08.2019</div></div></td><td colspan="4"><div><div>WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD</div></div></td><td colspan="4"><div><div>Scales</div><div><div>0m</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div>SCALE 1:200 ON ORIGINAL SIZE</div></div></td><td colspan="4"><div><div>CLIENT</div><div>CROATIA 88 PTY LTD</div></div></td><td colspan="4"><div><div>ARCHITECT</div><div></div></div></td><td colspan="4"><div><div></div><div>Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au</div></div><div>A.B.N. 21 118 222 530</div></td><td colspan="4"><div><div>PROJECT</div><div>PROPOSED RESIDENTIAL DEVELOPMENT</div><div>190 CROATIA AVENUE, EDMONDSON PARK</div></div></td><td colspan="4"><div><div>Drawing Status</div><div>FOR APPROVAL</div><div>NOT TO BE USED FOR CONSTRUCTION PURPOSES</div><div><div>Drawing Title</div><div>STORMWATER CONCEPT DESIGN</div><div>ROOF PLAN</div></div><div><div>Project No</div><div>Drawing No</div><div>Revision No</div><div>20150259</div><div>C613</div><div>J</div></div></div></td></tr>				<div><div>Issue internal sequence and revision history</div><div>LANDS</div><div>CIVIL</div><div>SURVEY</div></div>				<div><div>ENGINEERS AUSTRALIA</div><div>Chartered Professional Engineer MEMBER</div></div> <div><div>DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES HANGS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.</div><div></div></div>				<div><div>QUALITY CONTROL</div><div>DRAWN</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>CHECKED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>DESIGNED</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>VERIFIED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>APPROVED</div><div>SH</div><div>DATE</div><div>07.08.2019</div></div>				<div><div>WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD</div></div>				<div><div>Scales</div><div><div>0m</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div>SCALE 1:200 ON ORIGINAL SIZE</div></div>				<div><div>CLIENT</div><div>CROATIA 88 PTY LTD</div></div>				<div><div>ARCHITECT</div><div></div></div>				<div><div></div><div>Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au</div></div> <div>A.B.N. 21 118 222 530</div>				<div><div>PROJECT</div><div>PROPOSED RESIDENTIAL DEVELOPMENT</div><div>190 CROATIA AVENUE, EDMONDSON PARK</div></div>				<div><div>Drawing Status</div><div>FOR APPROVAL</div><div>NOT TO BE USED FOR CONSTRUCTION PURPOSES</div><div><div>Drawing Title</div><div>STORMWATER CONCEPT DESIGN</div><div>ROOF PLAN</div></div><div><div>Project No</div><div>Drawing No</div><div>Revision No</div><div>20150259</div><div>C613</div><div>J</div></div></div>			
<div><div>Issue internal sequence and revision history</div><div>LANDS</div><div>CIVIL</div><div>SURVEY</div></div>				<div><div>ENGINEERS AUSTRALIA</div><div>Chartered Professional Engineer MEMBER</div></div> <div><div>DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES HANGS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.</div><div></div></div>				<div><div>QUALITY CONTROL</div><div>DRAWN</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>CHECKED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>DESIGNED</div><div>JH</div><div>DATE</div><div>07.08.2019</div><div>VERIFIED</div><div>SH</div><div>DATE</div><div>07.08.2019</div><div>APPROVED</div><div>SH</div><div>DATE</div><div>07.08.2019</div></div>				<div><div>WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD</div></div>				<div><div>Scales</div><div><div>0m</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div>SCALE 1:200 ON ORIGINAL SIZE</div></div>				<div><div>CLIENT</div><div>CROATIA 88 PTY LTD</div></div>				<div><div>ARCHITECT</div><div></div></div>				<div><div></div><div>Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au</div></div> <div>A.B.N. 21 118 222 530</div>				<div><div>PROJECT</div><div>PROPOSED RESIDENTIAL DEVELOPMENT</div><div>190 CROATIA AVENUE, EDMONDSON PARK</div></div>				<div><div>Drawing Status</div><div>FOR APPROVAL</div><div>NOT TO BE USED FOR CONSTRUCTION PURPOSES</div><div><div>Drawing Title</div><div>STORMWATER CONCEPT DESIGN</div><div>ROOF PLAN</div></div><div><div>Project No</div><div>Drawing No</div><div>Revision No</div><div>20150259</div><div>C613</div><div>J</div></div></div>							



J	ISSUE FOR D.A.	JH	02.09.2019	2	Reference Coordination Drawing		
H	ISSUE FOR D.A.	JH	19.08.2019	2			
G	ISSUE FOR D.A.	JH	15.08.2019	2	Discipline	Drawing Title and Number	Date
F	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
E	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
D	ISSUE FOR D.A.	JH	08.08.2019	2	STRUCT		
C	ISSUE FOR D.A.	LN	10.09.2018	2	MECH		
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC		
A	ISSUE FOR D.A.	BW	07.12.2017	2	HYD		
Issue	Last revision title	by	Date	Status	FIRE		
Issuer internal sequence and revision history							
1	preliminary				LANDS		
2	development application				CIVIL		
3	construction certificate				SURVEY		
4	tender						
5	construction						
6	other						



QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019



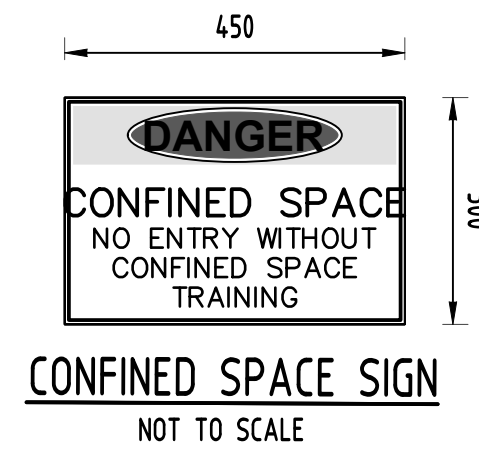
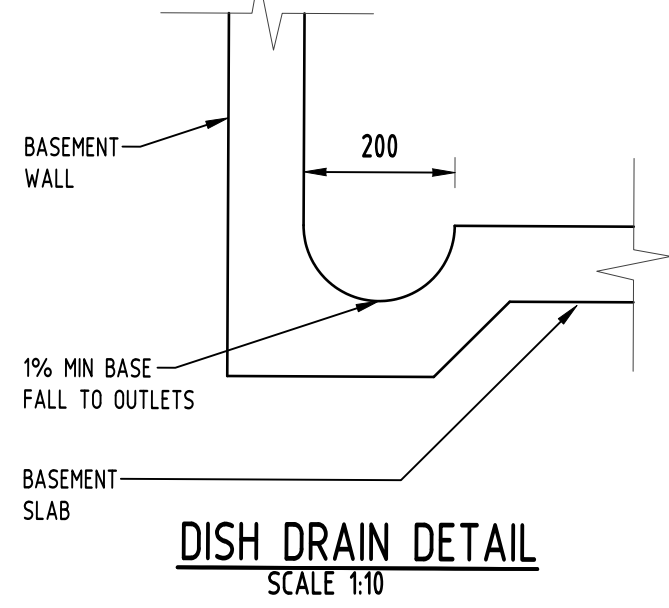
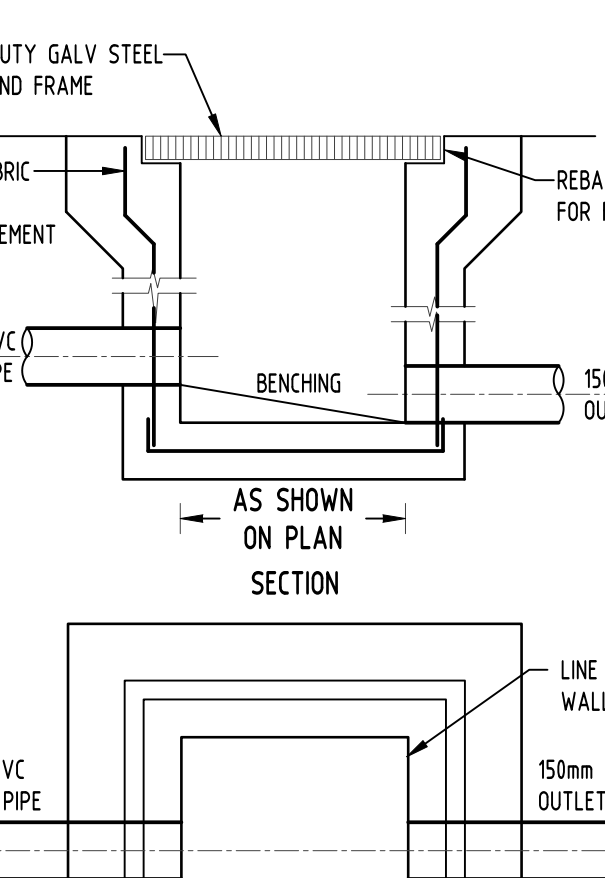
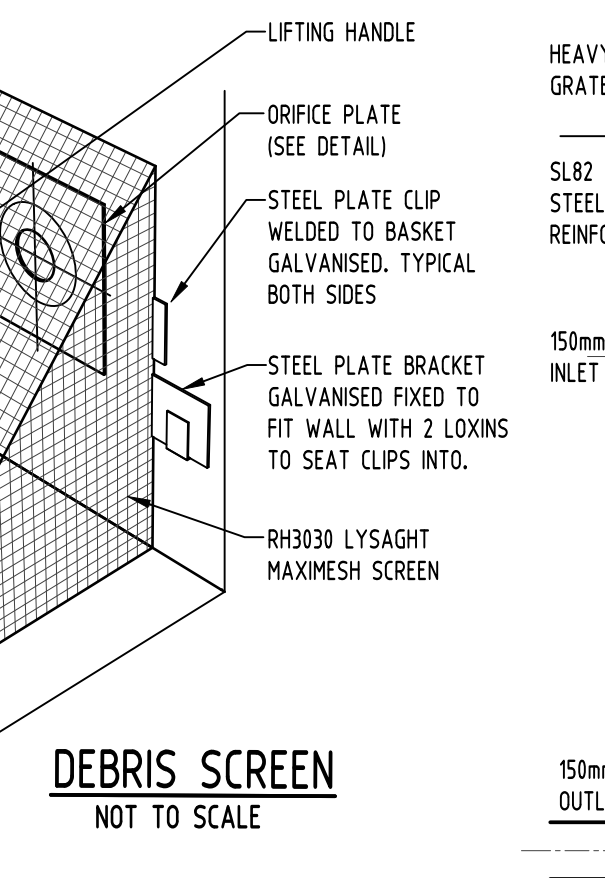
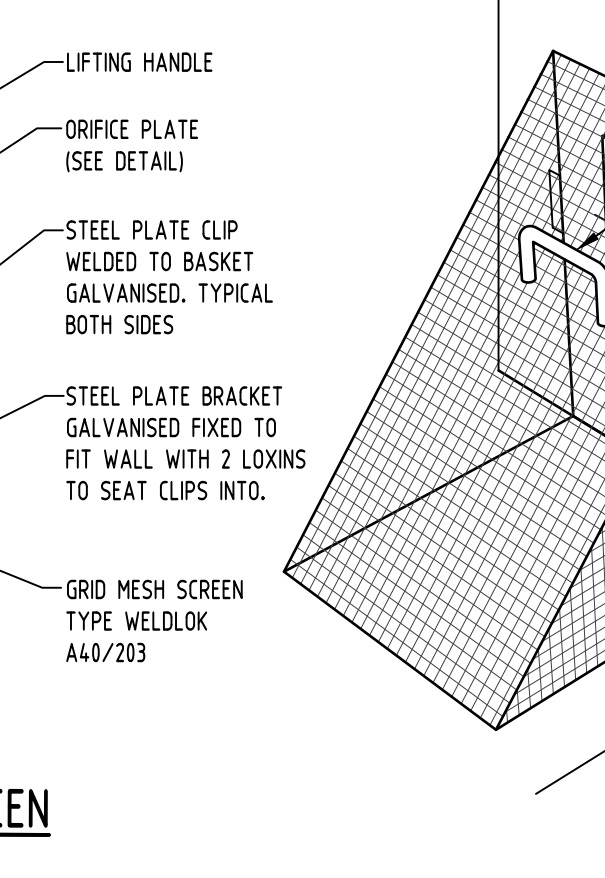
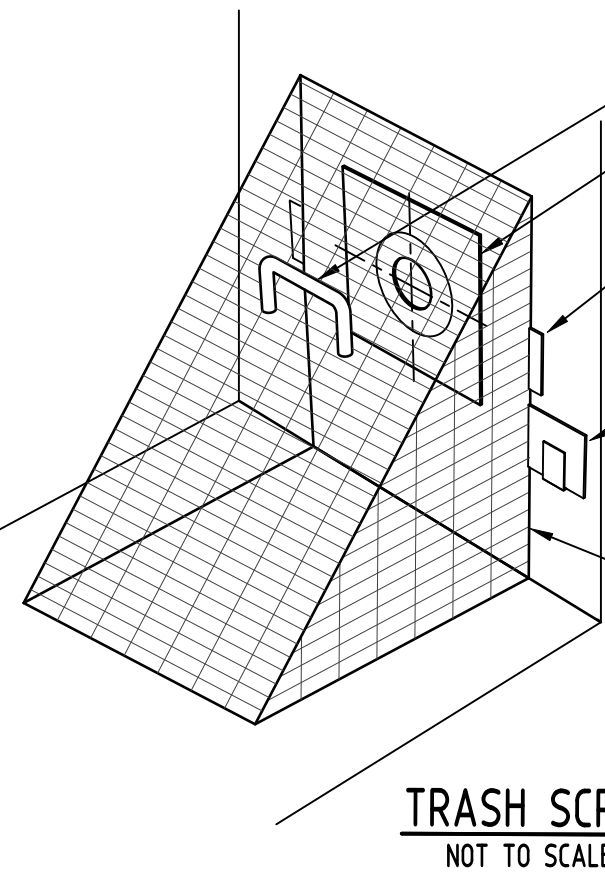
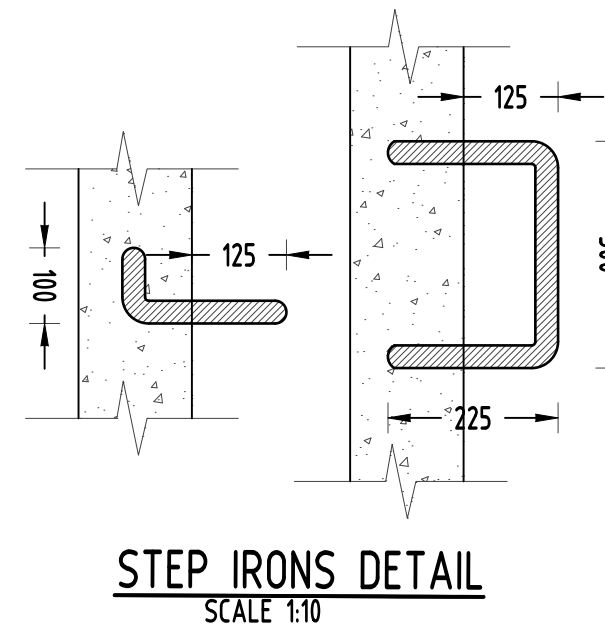
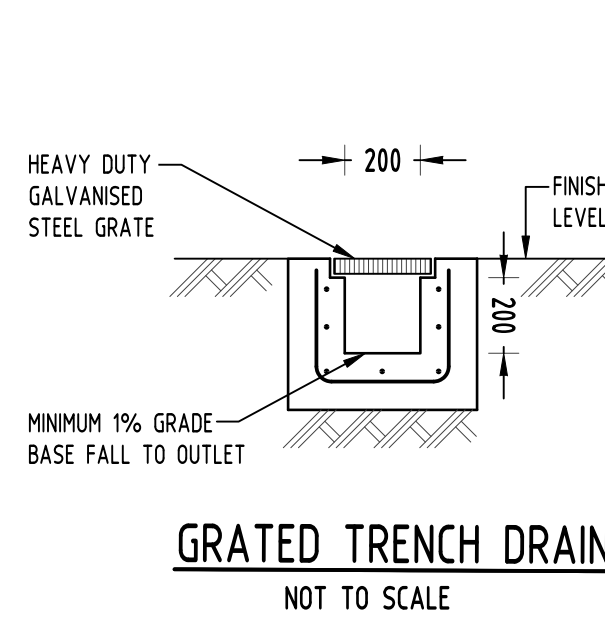
CLIENT
CROATIA 88 PTY LTD



Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONSON PARK			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	20 of 24	1500 @ A1
Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES Drawing Title STORMWATER CONCEPT DESIGN FLOOD STORAGE COMPENSATION PLAN			
Project No	Drawing No	Revision No	
20150259	C621	J	



POST-DEVELOPMENT OSD1 REQUIREMENTS:

LOT AREA (m2)	PRE-DEV IMPERVIOUS (%)	POST-DEV IMPERVIOUS (%)	STORM (YR)	PRE-DEV FLOW (m3/s)	POST-DEV FLOW (m3/s)	PIPE OUTFLOW (m3/s)	WEIR OUTFLOW (m3/s)	TOTAL PSD (m3/s)	OSD VOLUME (m3) FOR 100YR STORM STORAGE
4250	0	80	5	0.054	0.122	0.053	0	0.053	92.4
			20	0.088	0.166	0.063	0	0.063	
			100	0.126	0.217	0.074	0	0.074	

POST-DEVELOPMENT OSD2 REQUIREMENTS:

LOT AREA (m2)	PRE-DEV IMPERVIOUS (%)	POST-DEV IMPERVIOUS (%)	STORM (YR)	PRE-DEV FLOW (m3/s)	POST-DEV FLOW (m3/s)	PIPE OUTFLOW (m3/s)	WEIR OUTFLOW (m3/s)	TOTAL PSD (m3/s)	OSD VOLUME (m3) FOR 100YR STORM STORAGE
1760	10	80	5	0.022	0.051	0.021	0	0.021	41.5
			20	0.035	0.069	0.025	0	0.025	
			100	0.054	0.090	0.029	0	0.029	

DRAINAGE NOTES:

- ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED
- 100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE
- MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm
- ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS
- BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL
- HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS
- PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT
- ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP
- ALL PITS SHALL BE MAINTAINED REGULARLY
- TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER
- Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES
- COMPRESSIVE STRENGTH f_c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS
- ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS
- ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm
- STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

DESIGN NOTES:

THE SITE IS LOCATED IN LIVERPOOL CITY COUNCIL.

AREA DRAINS TO OSD1 = 4250m²
AREA DRAINS TO OSD2 = 1760m²

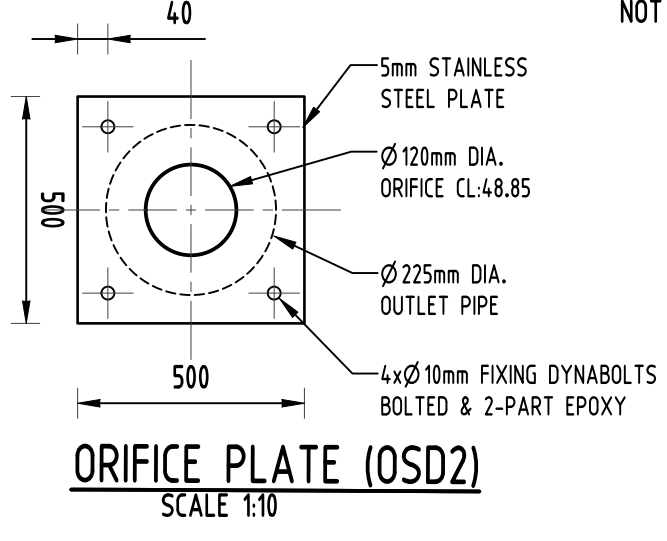
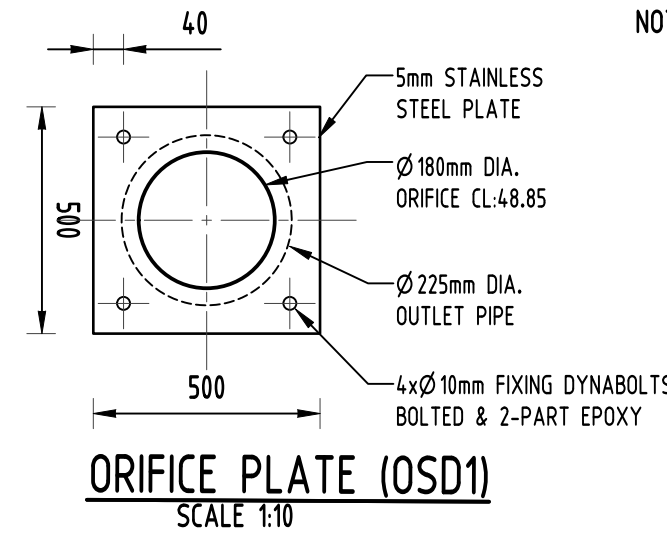
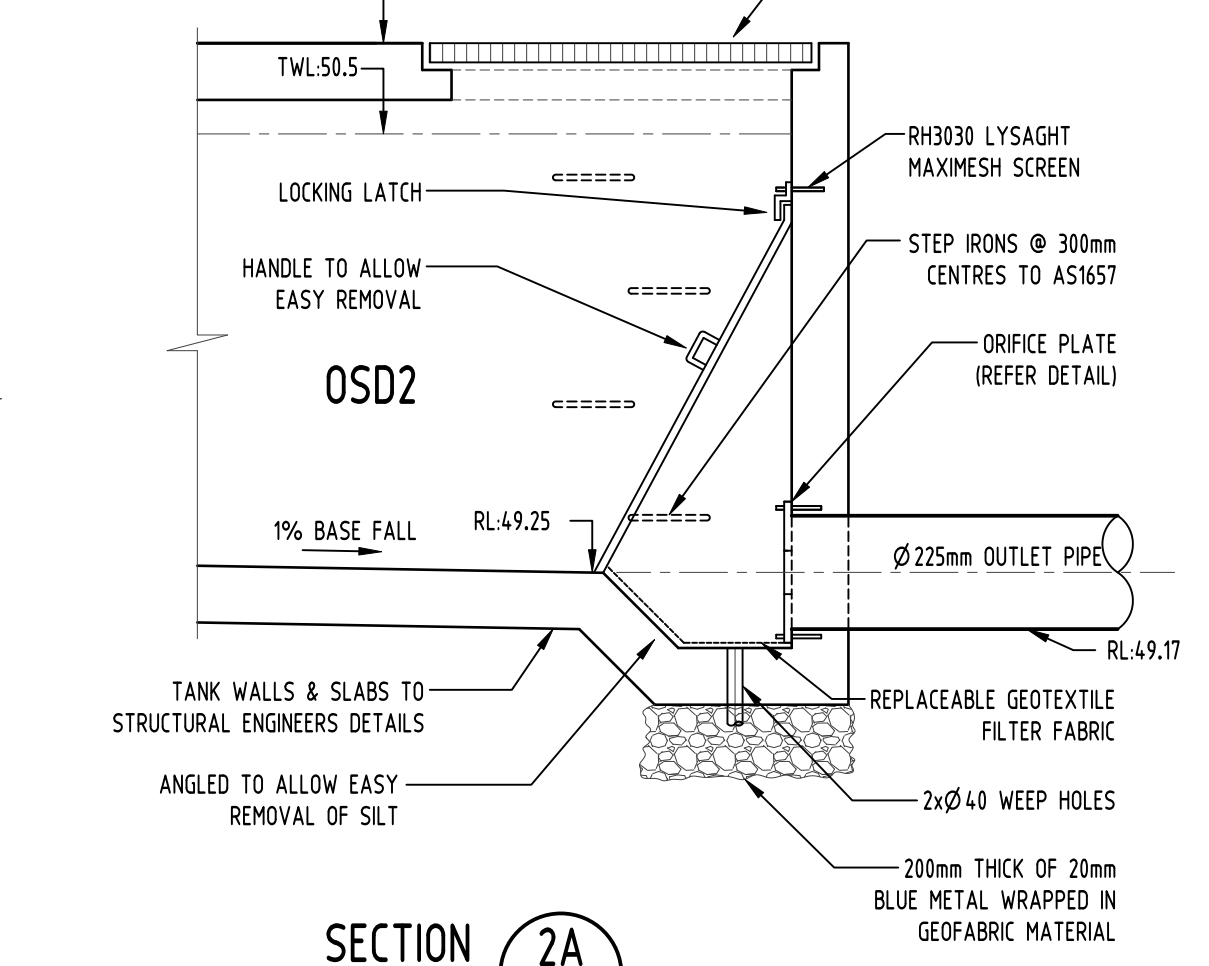
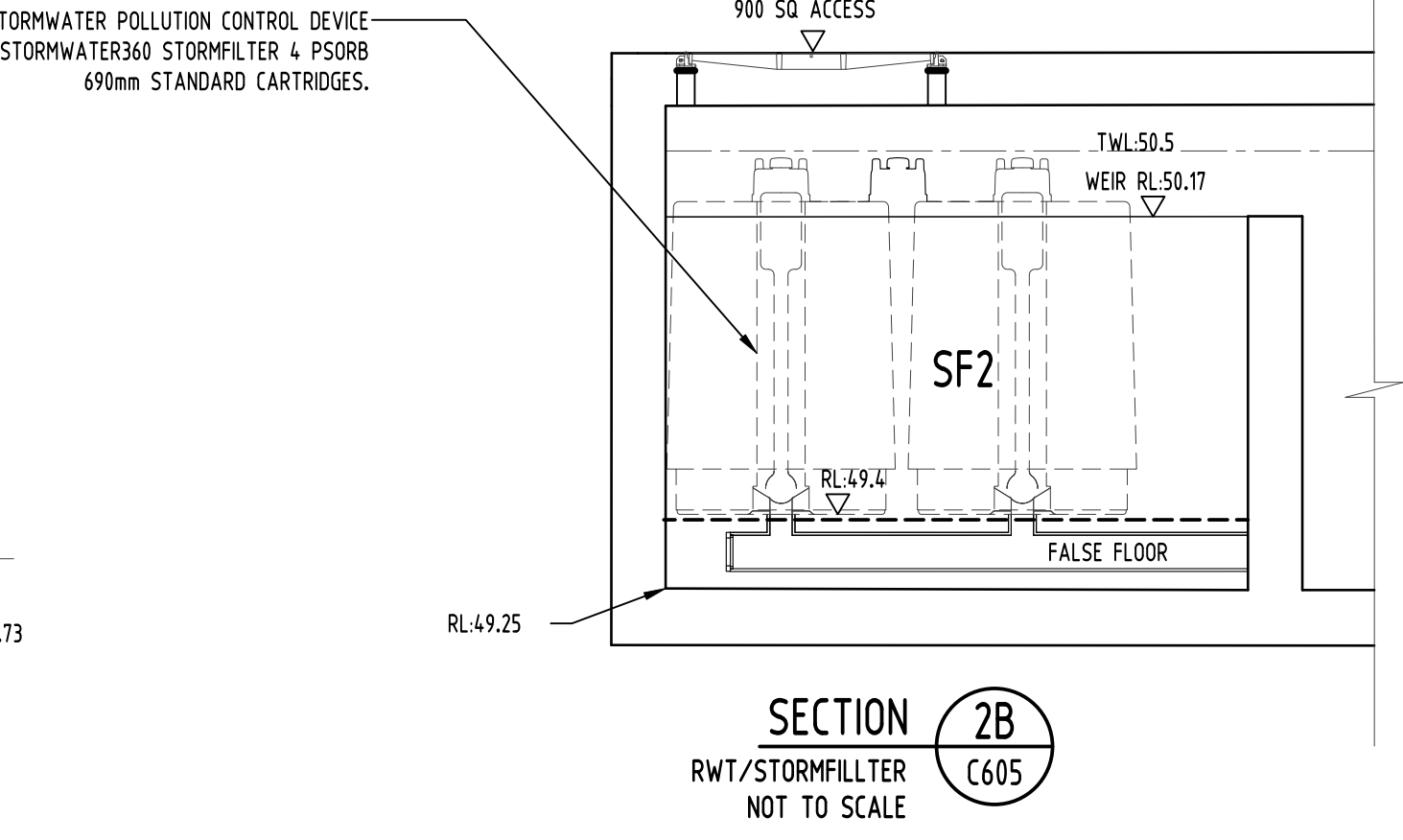
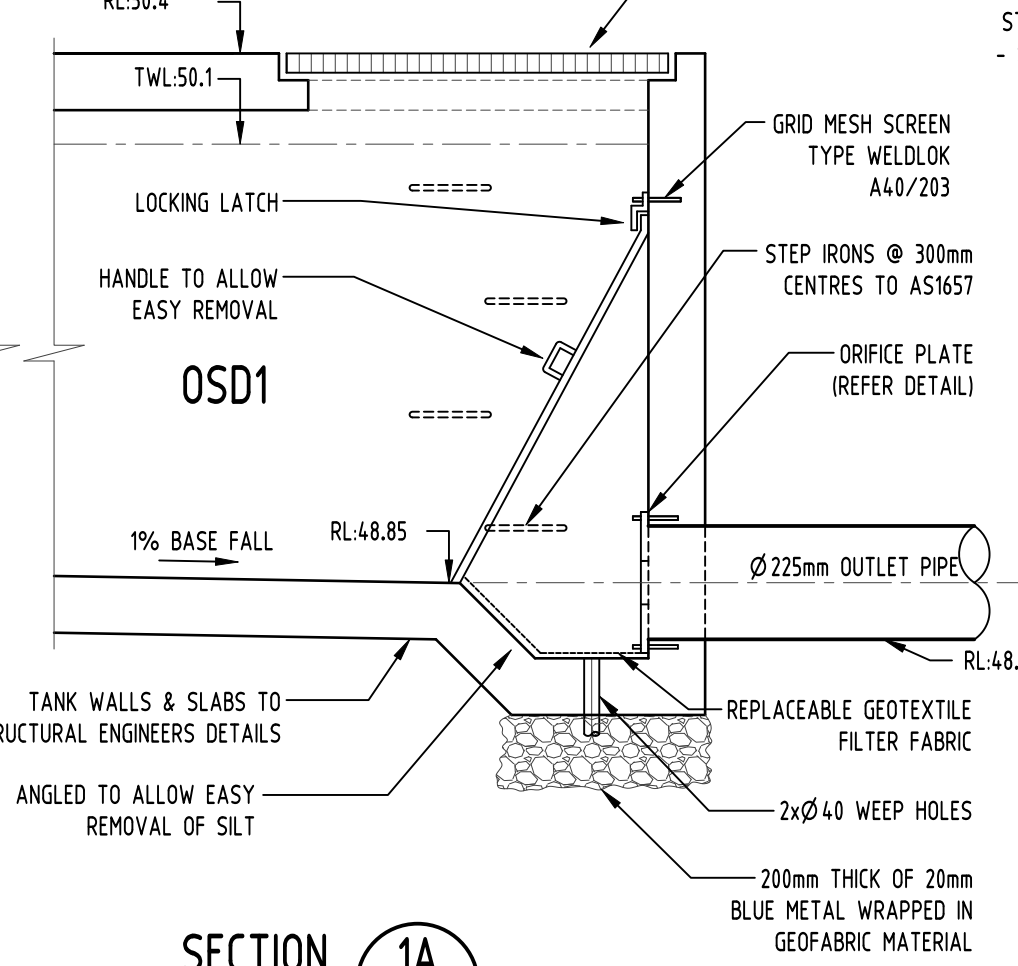
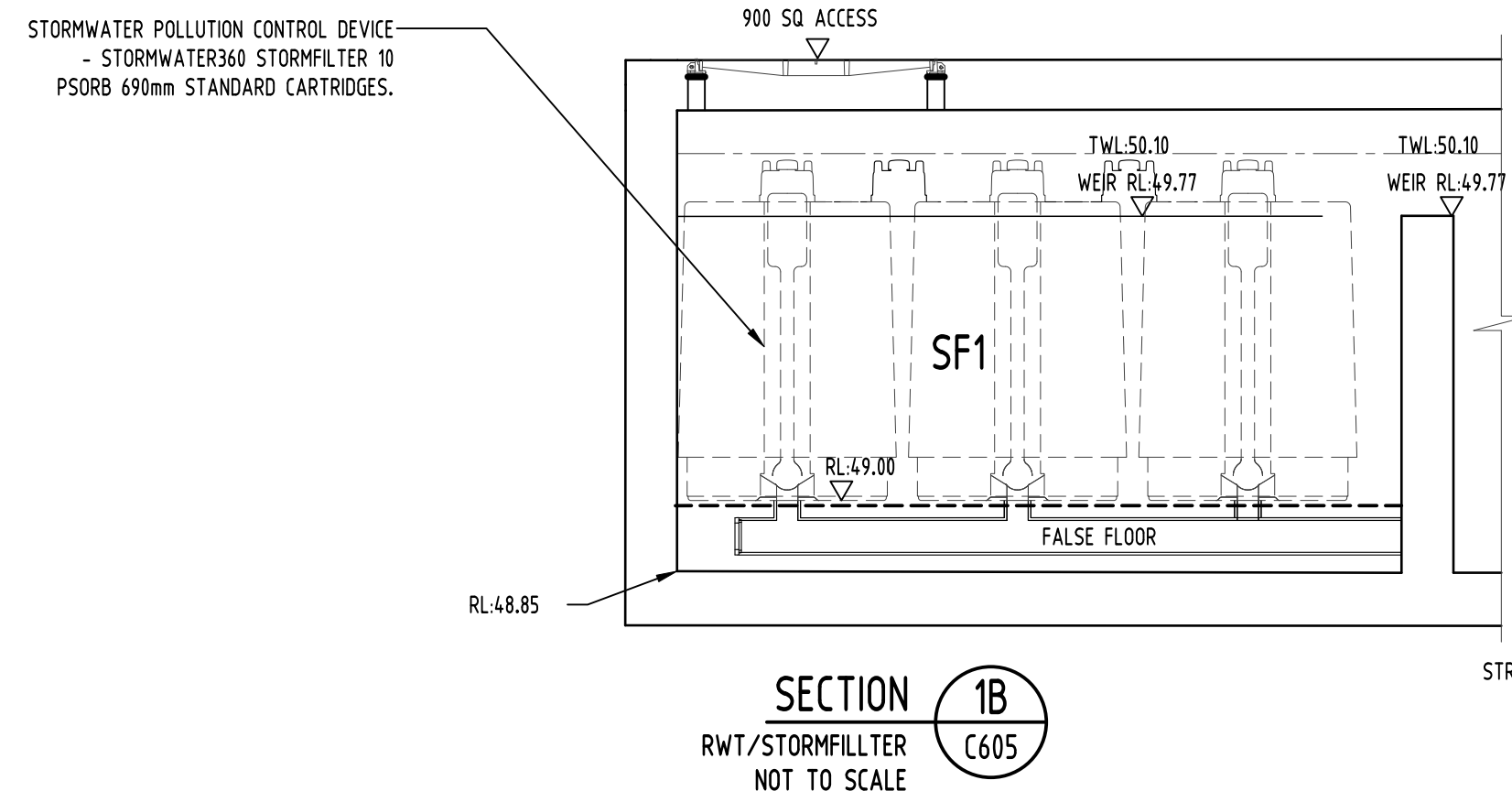
THE OSD IS SIZED USING "DRAINS" SOFTWARE. IT IS DESIGNED TO CONTROL STORMWATER RUNOFF FROM DEVELOPMENT SITES SUCH THAT, FOR 5 TO 100 YEAR ARI EVENTS, PEAK STORMWATER DISCHARGES FROM THE SITE DO NOT EXCEED PRE-DEVELOPMENT STORMWATER DISCHARGES.

SW QUALITY TARGET (ACHIEVED REFER TABLE BELOW)

TSS: 85%
TP: 65%
TN: 45%
GP: 90%

LEGEND:

- STORMWATER LINE
- SSD SUBSOIL LINE
- SWRM STORMWATER RISING MAIN
- S AUTHORITY SEWER LINE
- W AUTHORITY WATER LINE
- TEL AUTHORITY COMMS LINE
- GRATED SURFACE INLET PIT
- OVERLAND FLOW PATH
- DDO DISH DRAIN OUTLET
- PD PLANTER DRAIN
- DP DOWNPIPE
- WALL PENETRATION



Issue	Last revision title	by	Date	Status
J	ISSUE FOR D.A.	JH	02.09.2019	2
H	ISSUE FOR D.A.	JH	19.08.2019	2
G	ISSUE FOR D.A.	JH	15.08.2019	2
F	ISSUE FOR D.A.	JH	13.08.2019	2
E	ISSUE FOR D.A.	JH	13.08.2019	2
D	ISSUE FOR D.A.	JH	08.08.2019	2
C	ISSUE FOR D.A.	LN	10.09.2018	2
B	ISSUE FOR D.A.	BW	08.12.2017	2
A	ISSUE FOR D.A.	LN	12.07.17	2

Issue internal sequence and revision history

1-preliminary	2-development application	3-construction certificate
4-tender	5-construction	6-other

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

QUALITY CONTROL	DATE	07.08.2019
DRAWN	JH	DATE
CHECKED	SH	DATE
DESIGNED	JH	DATE
VERIFIED	SH	DATE
APPROVED	SH	DATE

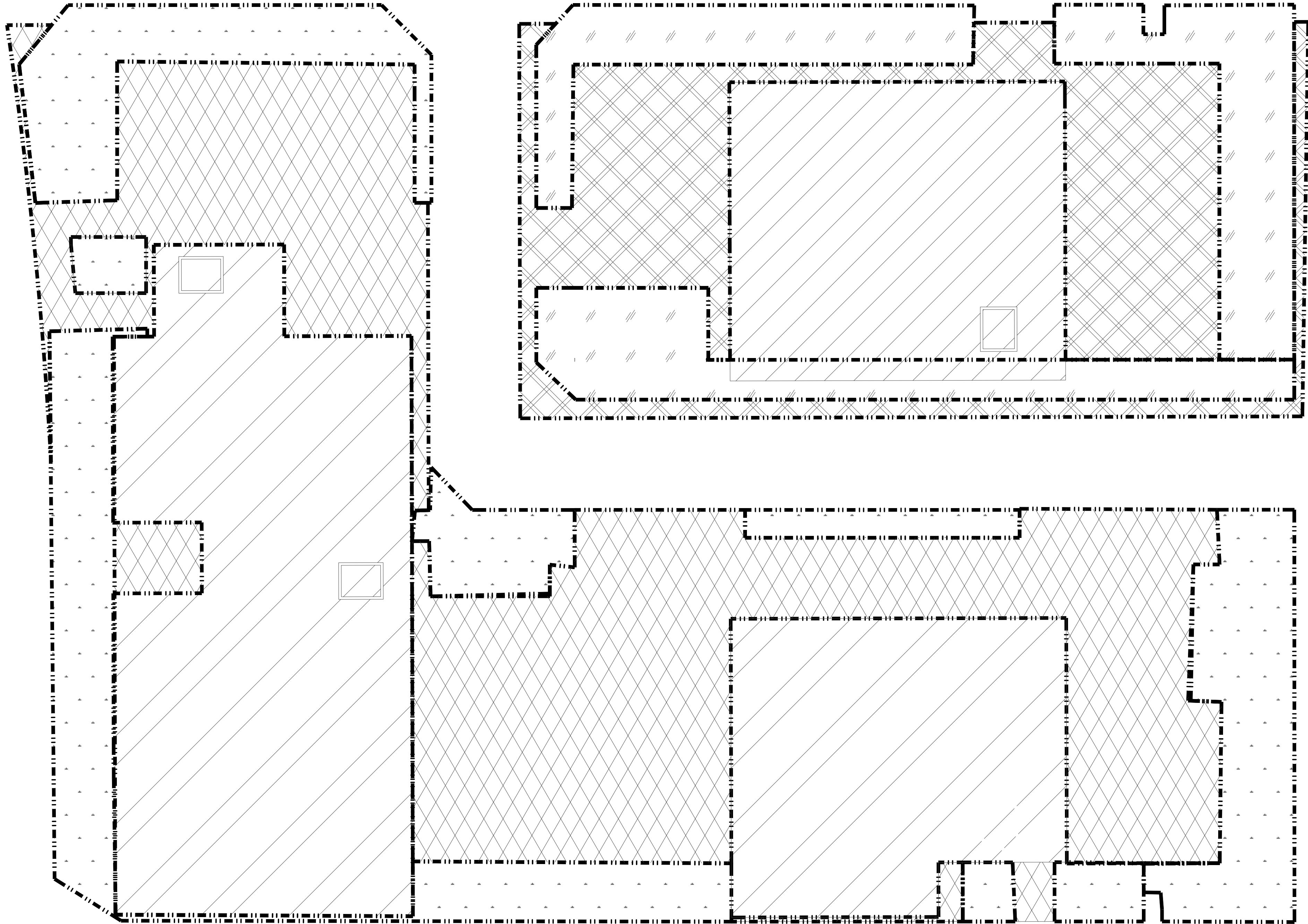
WARNING THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD	Scales
	0m 0.1 0.2 0.3 0.4 0.5
	SCALE 1:10 ON ORIGINAL SIZE
	0m 0.2 0.4 0.6 0.8 1.0
	SCALE 1:20 ON ORIGINAL SIZE

CLIENT
CROATIA 88 PTY LTD

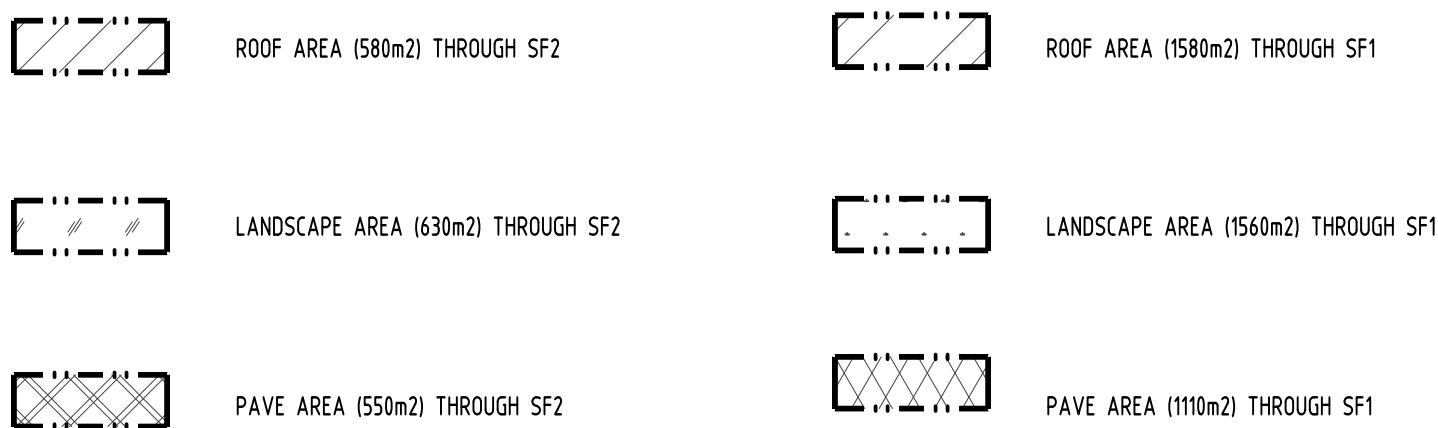
ARCHITECT
mpa

SGC Engineering Value
Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au
A.B.N. 21 118 222 530

PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES Drawing Title STORMWATER CONCEPT DESIGN DETAILS SHEET	Project No 20150259	Drawing No C631	Revision No J
---	--	------------------------	--------------------	------------------



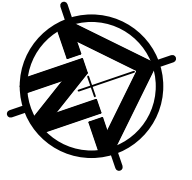
MUSIC PLAN
SCALE 1:200

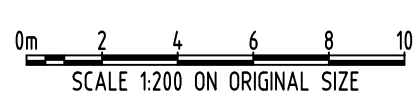


J	ISSUE FOR D.A.	JH	02.09.2019	2	Reference Coordination Drawing		
H	ISSUE FOR D.A.	JH	19.08.2019	2	Discipline	Drawing Title and Number	Date
G	ISSUE FOR D.A.	JH	15.08.2019	2	ARCH		
F	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
E	ISSUE FOR D.A.	JH	08.08.2019	2	ARCH		
D	ISSUE FOR D.A.	JH	08.08.2019	2	STRUCT		
C	ISSUE FOR D.A.	LN	10.09.2018	2	MECH		
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC		
A	ISSUE FOR D.A.	BW	07.12.2017	2	HYD		
Issue Last revision title					by	Date	Status
Issuer internal sequence and revision history					LANDS		
1-preliminary					CIVIL		
2-development application					SURVEY		
3-construction certificate							
4-tender							
5-construction							
6-other							


 ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	
DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSTING OF AUTHORITIES MARK AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.	

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD	
	

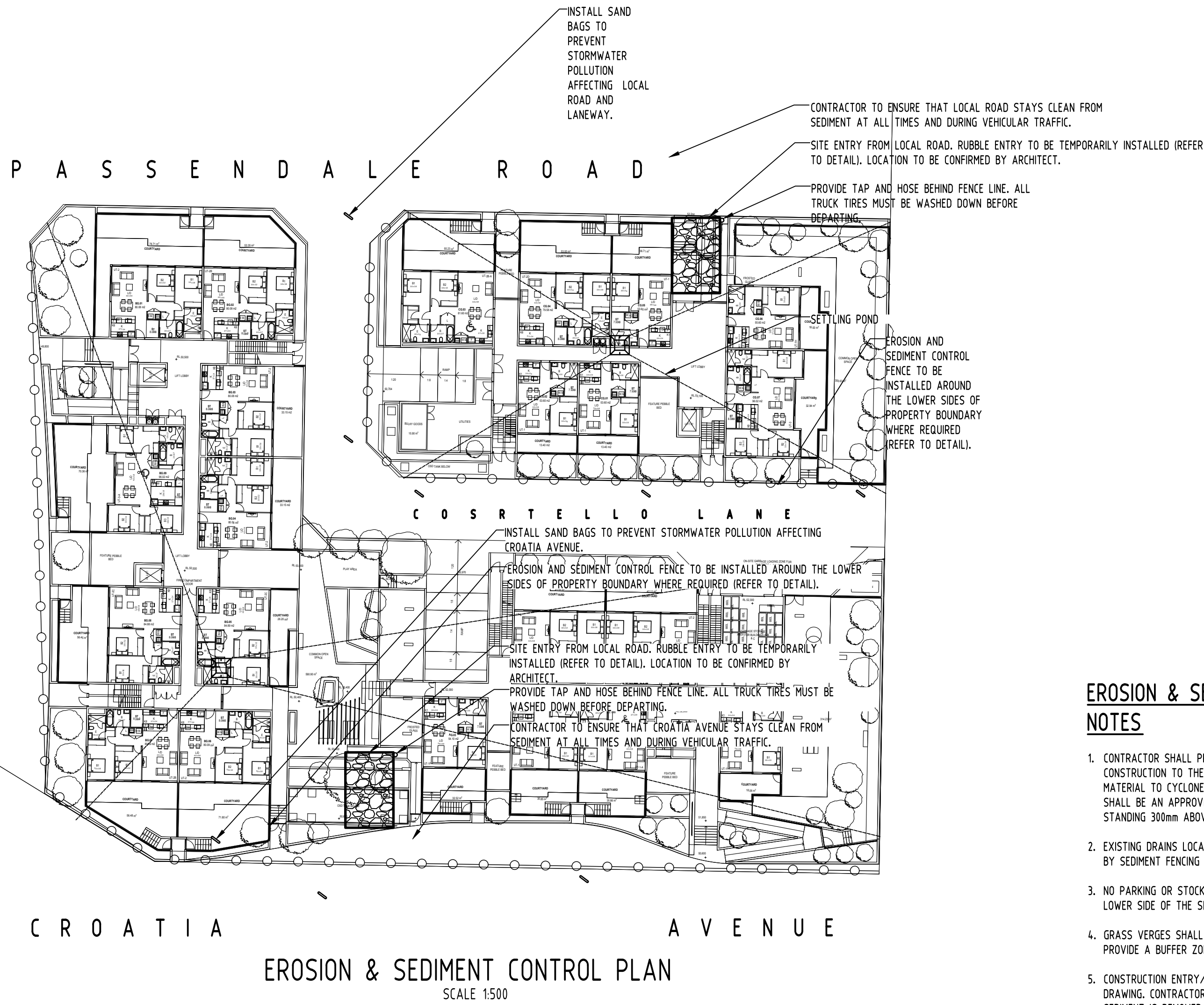
Scales	
	
SCALE 1:200 ON ORIGINAL SIZE	

CLIENT	CROATIA 88 PTY LTD
--------	--------------------

ARCHITECT	
-----------	---

	Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au
	A.B.N. 21 118 222 530

PROJECT		Drawing Status	
PROPOSED RESIDENTIAL DEVELOPMENT		FOR APPROVAL	
190 CROATIA AVENUE, EDMONDSON PARK		NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Drawing Title		STORMWATER CONCEPT DESIGN	
		MUSIC CATCHMENT PLAN	
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	22 of 24	AS SHOWN
Project No	Drawing No	Revision No	
20150259	C651	J	

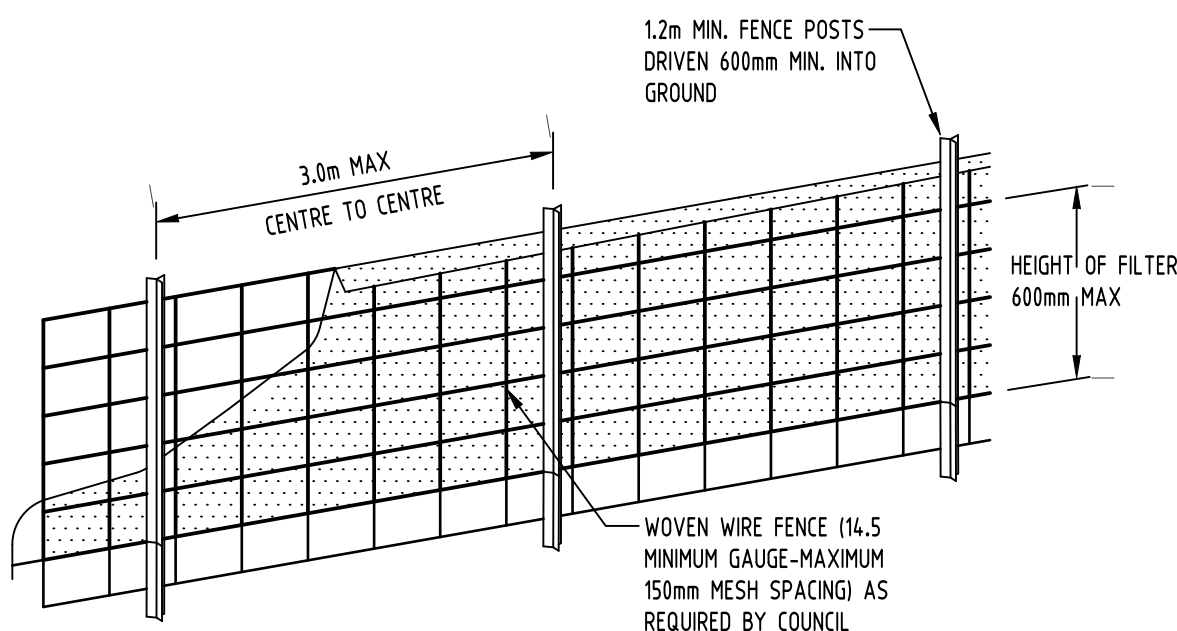


GENERAL NOTES

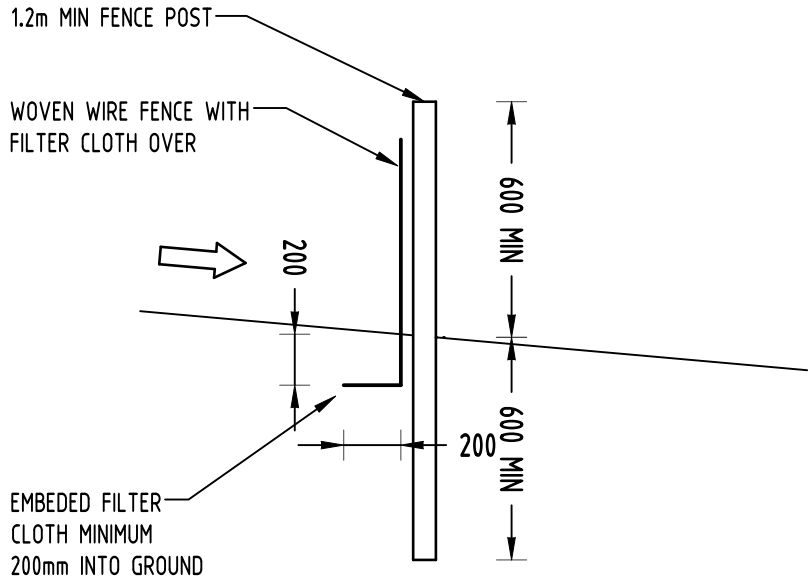
1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

CLAY SOILS

- A SYSTEM SHALL BE INSTALLED TO EITHER:
1. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
 2. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL



DIAGRAMMATIC VIEW



TYPICAL SECTION

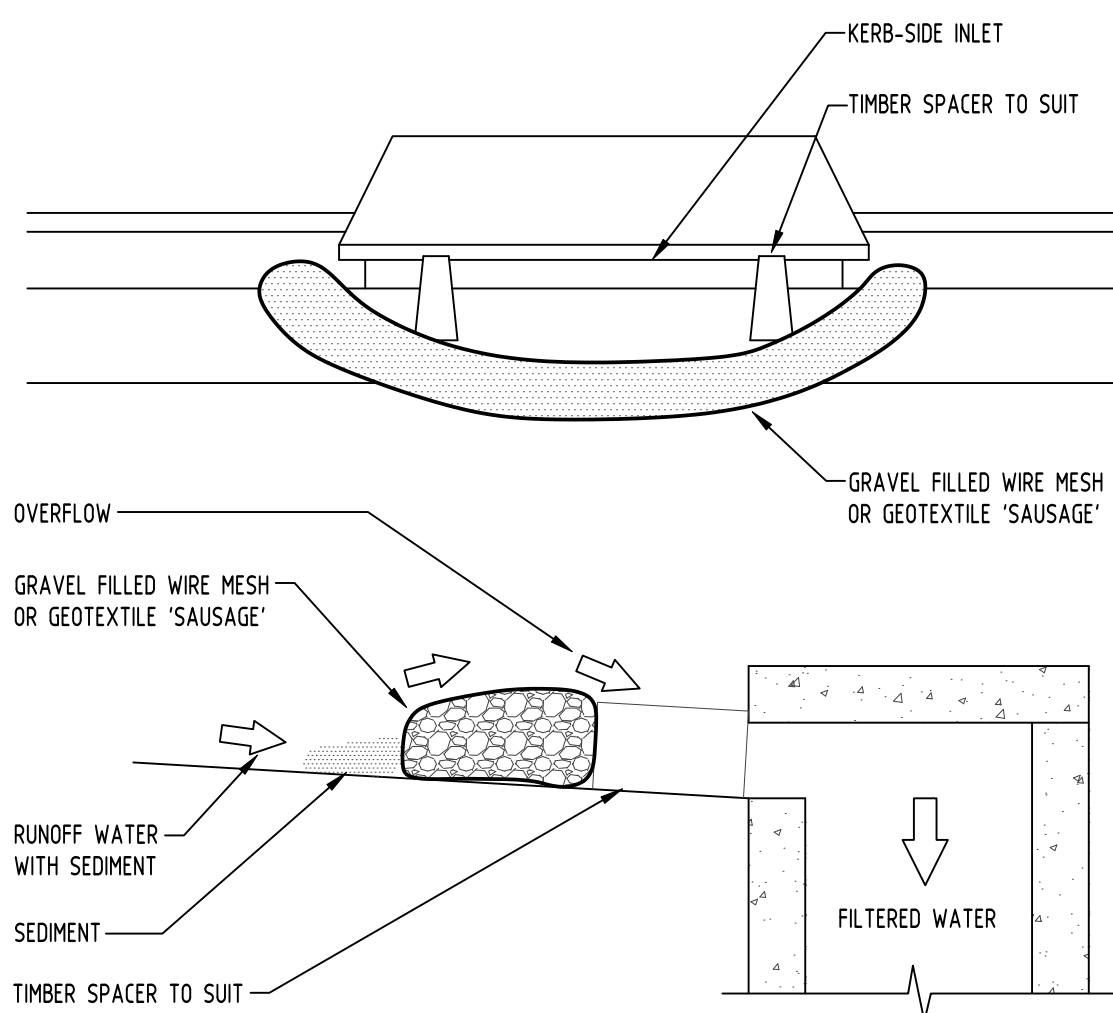
4 DETAIL
- SEDIMENT FENCE NOT TO SCALE

CONSTRUCTION NOTES:

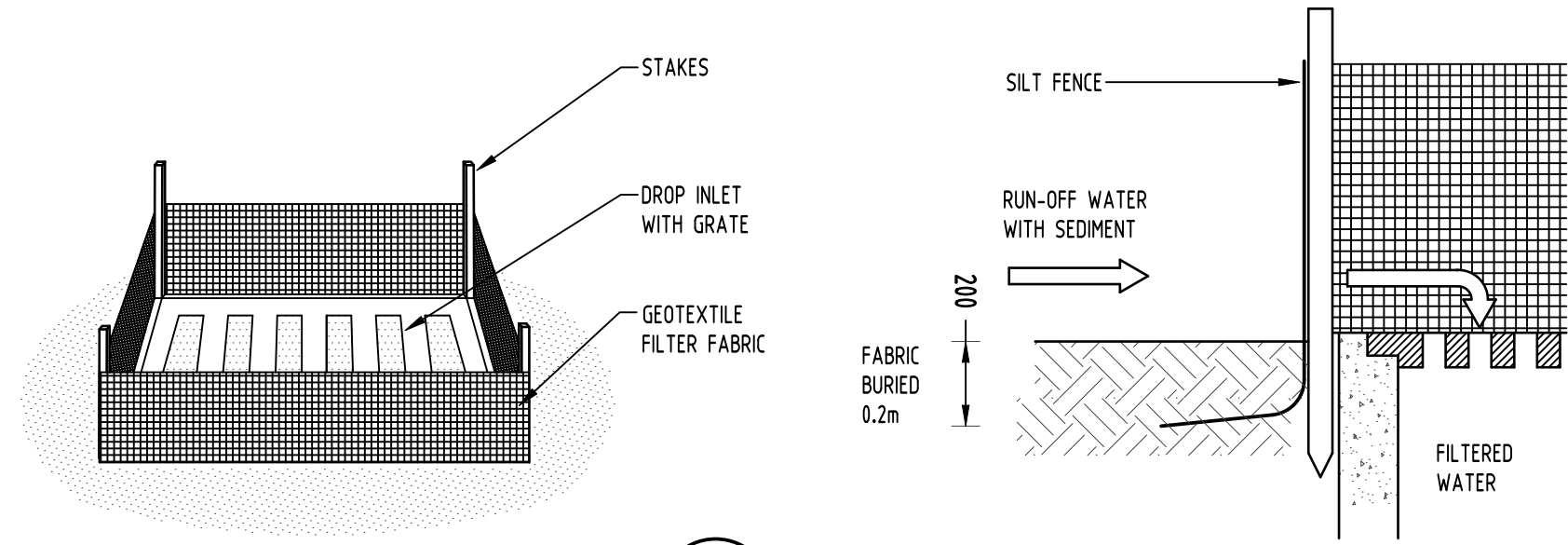
- FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT
- FILL THE SLEEVE WITH 25mm to 50mm GRAVEL
- FORM AN ELLIPTICAL CROSS-SECTION OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY
- MAINTAIN THE OPENING WITH SPACER BLOCKS
- FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER
- FIT TO ALL KERB INLETS AT SAG POINTS

EROSION & SEDIMENTATION CONTROL NOTES

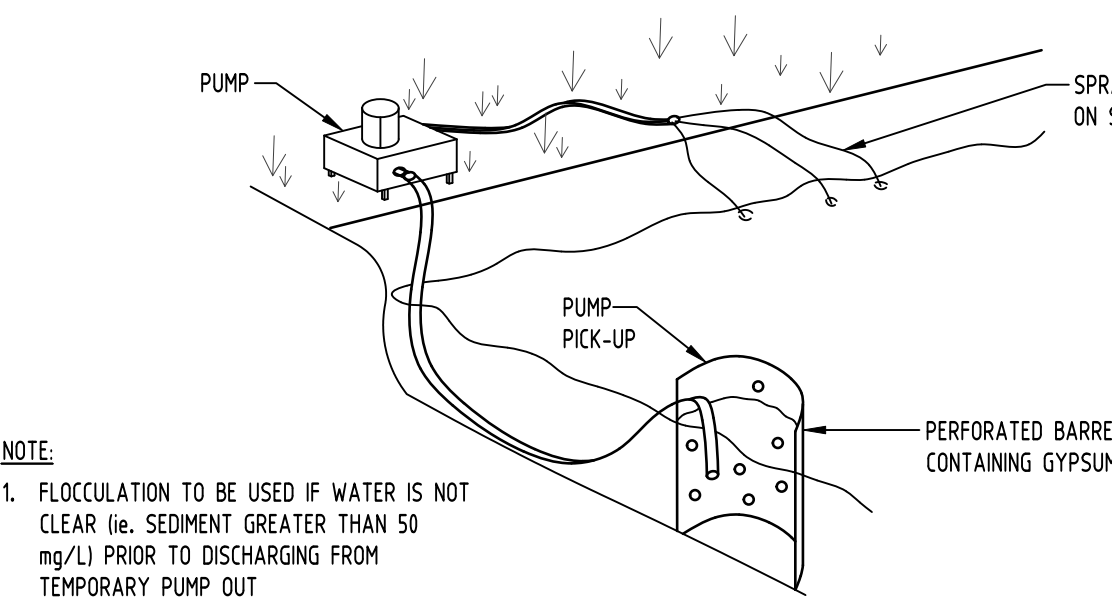
1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. THE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.



3 DETAIL
- GRAVEL INLET FILTER (SAUSAGE) NOT TO SCALE

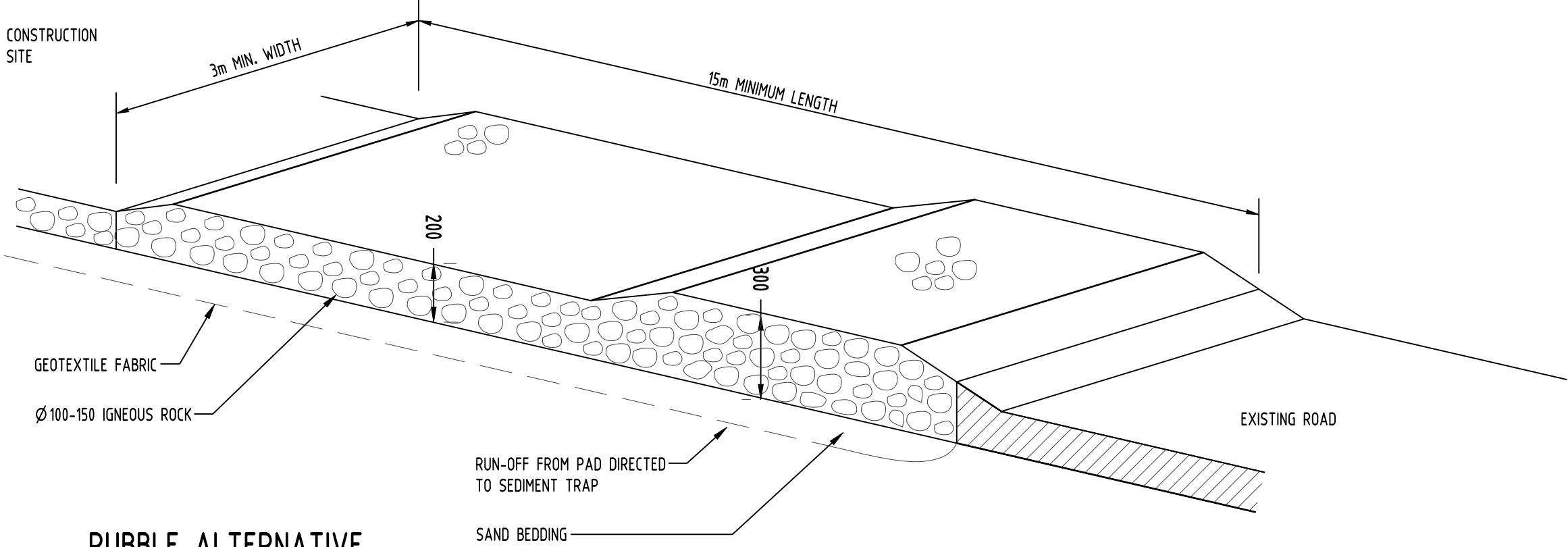


1 DETAIL
- SUMP SEDIMENT TRAP NOT TO SCALE



2 DETAIL
- FLOCCULATION DETAIL NOT TO SCALE

- NOTE:
1. FLOCCULATION TO BE USED IF WATER IS NOT CLEAR (ie. SEDIMENT GREATER THAN 50 mg/L) PRIOR TO DISCHARGING FROM TEMPORARY PUMP OUT
 2. FOR RATES & AGENTS SEE APPENDIX E OF NEW SOUTH WALES DEPARTMENT OF HOUSING "MANAGING URBAN STORMWATER SOILS & CONSTRUCTION".



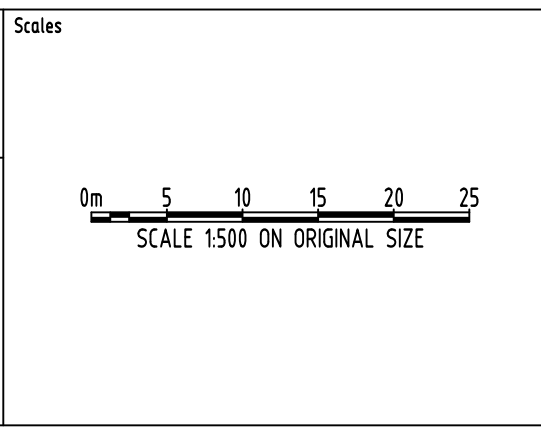
RUBBLE ALTERNATIVE

5 DETAIL
- TEMPORARY CONSTRUCTION EXIT NOT TO SCALE

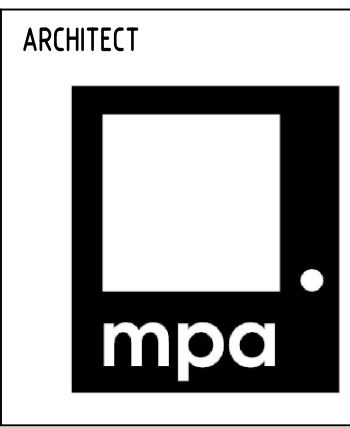
J	ISSUE FOR D.A.	JH	02.09.2019	2	Reference Coordination Drawing		
H	ISSUE FOR D.A.	JH	19.08.2019	2	Discipline	Drawing Title and Number	Date
G	ISSUE FOR D.A.	JH	15.08.2019	2	ARCH		
F	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
E	ISSUE FOR D.A.	JH	13.08.2019	2	ARCH		
D	ISSUE FOR D.A.	JH	08.08.2019	2	STRUCT		
C	ISSUE FOR D.A.	LN	10.09.2018	2	MECH		
B	ISSUE FOR D.A.	BW	08.12.2017	2	ELEC		
A	ISSUE FOR D.A.	LN	12.07.17	2	HYD		
Issue	Last revision title	by	Date	Status	FIRE		
Issuer internal sequence and revision history							
1	preliminary	2	development application	3	construction certificate	4	other
4	tender	5	construction	6	other		

	ENGINEERS AUSTRALIA		
	Chartered Professional Engineer MEMBER		
	DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSTING OF AUTHORITIES HANG AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DESIGN/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.		
	LANDS		
	CIVIL		

QUALITY CONTROL			
DRAWN	JH	DATE	07.08.2019
CHECKED	SH	DATE	07.08.2019
DESIGNED	JH	DATE	07.08.2019
VERIFIED	SH	DATE	07.08.2019
APPROVED	SH	DATE	07.08.2019



CLIENT
CROATIA 88 PTY LTD





Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au


A.B.N. 21 118 222 530


PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	23 of 24	AS SHOWN
Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES Drawing Title EROSION AND SEDIMENT CONTROL PLAN AND DETAILS			
Project No 20150259	Drawing No C701	Revision No H	


EROSION LEGEND


- 


SEDIMENT FENCE
- 

TEMPORARY DIVERSION CHANNEL
- 

LIMIT OF WORKS
- 

GEOTEXTILE INLET FILTER (FOR PITS WITHIN LANDSCAPED AREAS)
- 

HAYBALE AND GEOTEXTILE SEDIMENT FILTER
- 

MESH & GRAVEL INLET FILTER
- 

STABILISED SITE ACCESS

MAINTENANCE:

ALL SEDIMENT & EROSION CONTROL DEVICES SHALL BE MAINTAINED IN SATISFACTORY WORKING ORDER THROUGHOUT THE MAINTENANCE PERIOD OR UNTIL SUCH TIME AS THE AREA UPSTREAM HAS BEEN STABILIZED AND COUNCIL DIRECTS THAT THE DEVICE BE REMOVED.

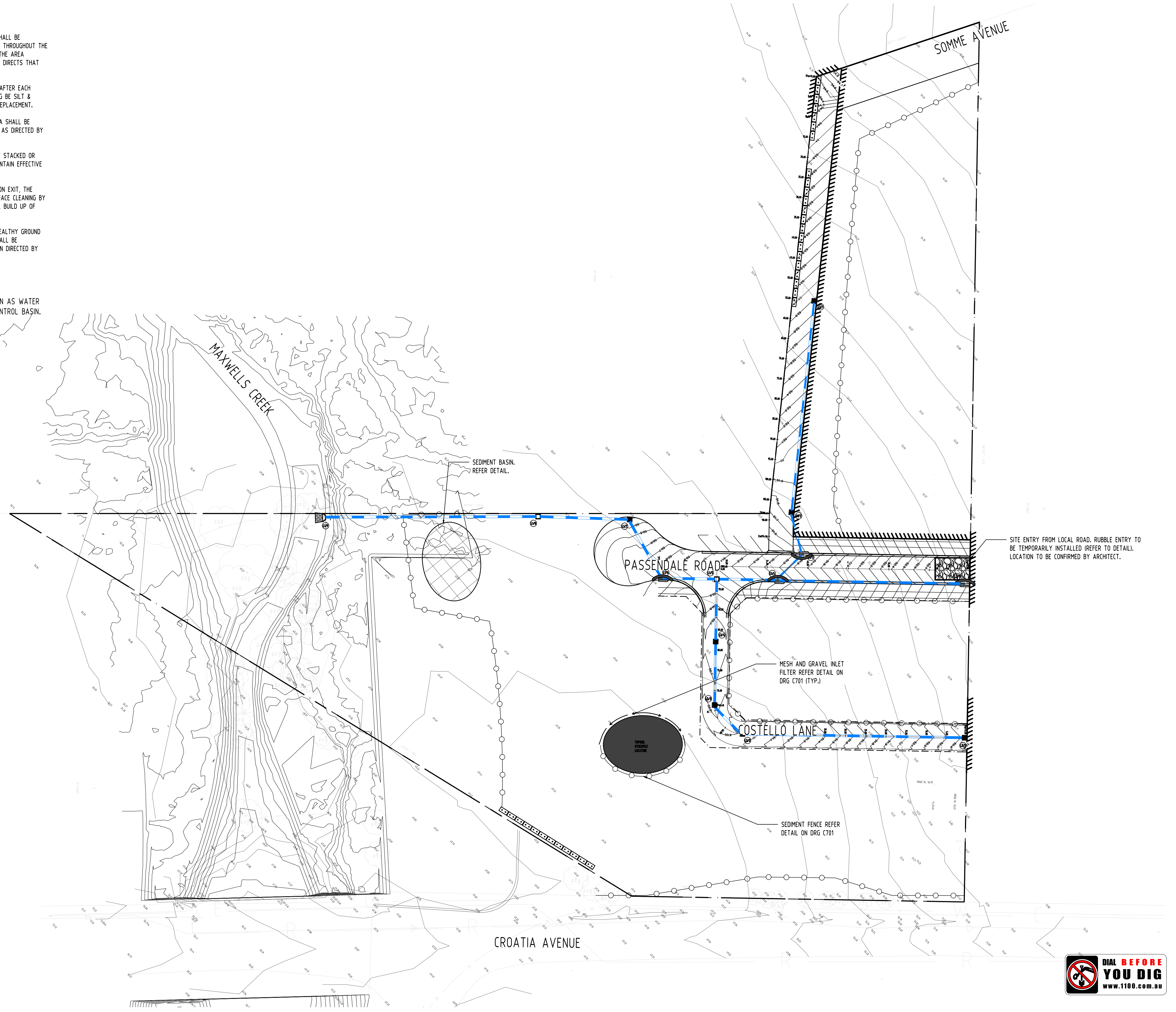
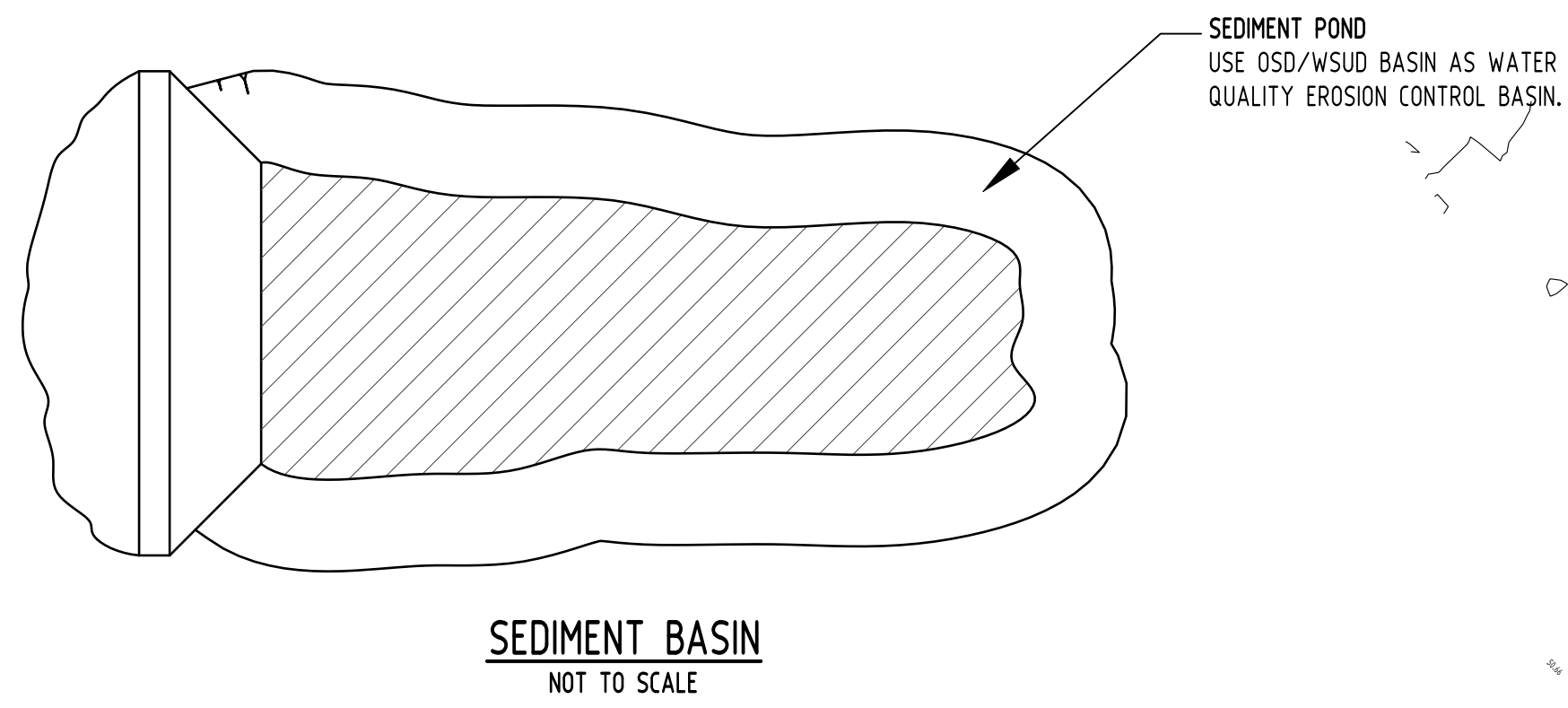
THE DEVELOPER SHALL INSPECT THE DEVICES AFTER EACH STORM FOR STRUCTURAL DAMAGE OR CLOGGING BE SILT & OTHER DEBRIS & MAKE PROMPT REPAIRS OR REPLACEMENT.

ALL SEDIMENT DEPOSITED WITHIN PONDED AREA SHALL BE PERIODICALLY REMOVED TO A DISPOSAL AREA AS DIRECTED BY COUNCIL.

FILTER MATERIALS SHALL BE CLEANED AND RE STACKED OR REPLACED WHEN DIRECTED BY COUNCIL TO MAINTAIN EFFECTIVE PERFORMANCE.

IN THE CASE OF THE TEMPORARY CONSTRUCTION EXIT, THE CONTRACTOR SHALL UNDERTAKE WEEKLY SURFACE CLEANING BY DRAG BROOM OR EQUIVALENT, TO REMOVE ALL BUILD UP OF FOREIGN MATERIAL.

TO CONTROL BANK GROWTH & TO MAINTAIN HEALTHY GROUND COVER IN CHANNELS & ON BANKS, MOWING SHALL BE UNDERTAKEN AT REGULAR INTERVALS OR WHEN DIRECTED BY COUNCIL.



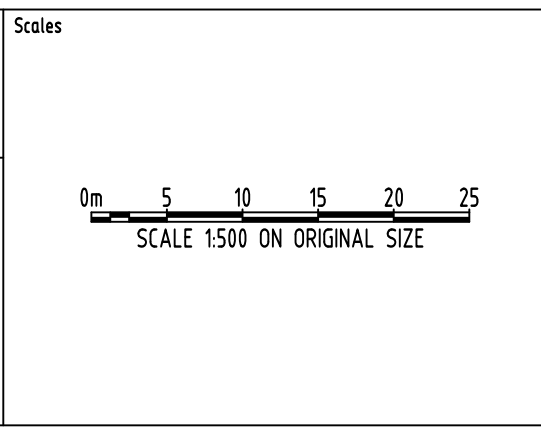
Reference Coordination Drawing			
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019
C	REVISED CIVIL WORKS DRAWING FOR D.A.	BW	08.12.2017
B	ISSUE FOR D.A.	B.W.	07.12.2017
A	ISSUE FOR D.A.		
Issue Last revision title			
by Date Status			
FIRE			
LANDS			
CIVIL			
SURVEY			

Issuer internal sequence and revision history			
1-preliminary	2-development application	3-construction certificate	4-tender
	5-construction	6-other	

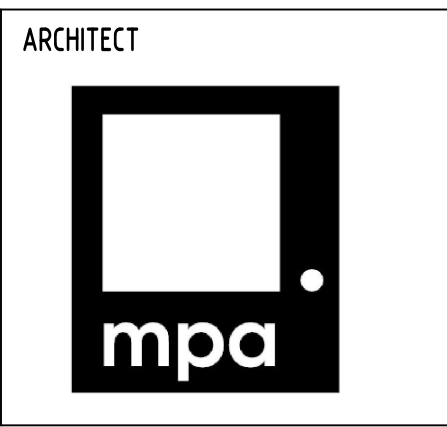
Reference Coordination Drawing			
J	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	02.09.2019
H	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	19.08.2019
G	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	15.08.2019
F	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019
E	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	13.08.2019
D	REVISED CIVIL WORKS DRAWING FOR D.A.	JH	07.08.2019
C	REVISED CIVIL WORKS DRAWING FOR D.A.	BW	08.12.2017
B	ISSUE FOR D.A.	B.W.	07.12.2017
A	ISSUE FOR D.A.		
Issue Last revision title			
by Date Status			
FIRE			
LANDS			
CIVIL			
SURVEY			

Issuer internal sequence and revision history			
1-preliminary	2-development application	3-construction certificate	4-tender
	5-construction	6-other	

WARNING THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SGC CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SGC CONSULTANTS PTY LTD



CLIENT
CROATIA 88 PTY LTD





Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

PROJECT			
PROPOSED RESIDENTIAL DEVELOPMENT			
190 CROATIA AVENUE, EDMONDSON PARK			
Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	24 of 24	AS SHOWN

Project No	Drawing No	Revision No
20150259	C702	J