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



LOCALITY PLAN

NOT TO SCALE
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1-preliminary

5-construction

6-other

4-tender

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#### **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

#### 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. 170124 D1, DATE: 24/01/2017 FROM N GEO SURVEYS.

WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND | Scales

#### SETTING OUT NOTES;

- SET THE CONSTRUCTOR 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 CONSTRUCTOR SHALL LIAISE AND CO-ORDINATE THE TIMING OF THE CONSTRICTION 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 CONSTRUCTOR 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
- 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. TIE 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.
- FC8 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 NECCESSARY 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
- 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 EMERGENGY 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
- 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**

- 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 ROUND WITH GEOTEXTILE FILTER FABRIC OR APPROVED HIGH COMPACTED SAND OR APPORVED CRUSHED ROAD GRAVEL CONFORMING TO RTA FORM 23051 OR SIMILAR.
- E6 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:
- SOURCE SITE. b) BE PREPARED BY AN APPROPRIATELY QUALIFIED PERSON (AS DEFINED IN PENRITH DEVELOPMENT CONTROL PLAN) WITH CONSIDERATION OF ALL

a) STATE THE LEGAL PROPERTY DESCRIPTION OF THE FILL MATERIAL

- 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. PROVIDE DETAILS OF THE VOLUME OF FILL MATERIAL TO BE USED IN THE FILLING OPERATIONS.
- 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 5dB(A) ABOVE THE BACKGROUND NOISE LEVEL WHEN MEASURED AT THE BOUNDARIES OF THE PREMISES.

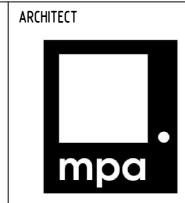
QUALITY CONTROL THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL J REVISED CIVIL WORKS DRAWING FOR D.A. | JH |02.09.2019| 2 | PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST H REVISED CIVIL WORKS DRAWING FOR D.A. JH | 19.08.2019 | 2 | Discipline Drawing Title and Number NOT BE USED. COPIED. ALTERED OR REPRODUCED DATE 07.08.2019 JH 15.08.2019 2 ARCH DRAWN JH REVISED CIVIL WORKS DRAWING FOR D.A. WHOLLY OR IN PART IN ANY FORM WITHOUT THE JH 13.08.2019 2 ARCH WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD F REVISED CIVIL WORKS DRAWING FOR D.A. JH 13.08.2019 2 STRUCT DIMENSIONS NOT SHOWN TO BE CHECKED ON CHECKED E REVISED CIVIL WORKS DRAWING FOR D.A. DATE 07.08.2019 JH 07.08.2019 2 MECH D REVISED CIVIL WORKS DRAWING FOR D.A. SITE, DO NOT SCALE OF THIS DRAWING. BW 08.12.2017 2 ELEC POSITIONS OF AUTHORITIES MAINS AND/OR B ISSUE FOR D.A. DESIGNED DATE 07.08.2019 EXISTING SERVICES ARE TO BE CHECKED BW 07.06.2017 2 HYD A ISSUE FOR D.A. ANY DISCREPANCIES TO THE CONSULTING by Date Status FIRE Issue Last revision title DATE 07.08.2019 FNGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS Issuer internal sequence and revision history LANDS CIVIL APPROVED SH DATE 07.08.2019 3-construction certificate 2-development application

WITH THE SPECIFICATIONS AND OTHER

CONSULTANTS' DRAWINGS.

Reference Coordination Drawing

CROATIA 88 PTY





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A.B.N. 21 118 222 530

PROJECT PROPOSED RESIDENTIAL SUBDIVISION 190 CROATIA AVENUE, EDMONSON PARK.

A.H.D.

2 of 24

SPECIFICATION SHEET DRAWING INDEX, NOTE & LEGENDS SHEET 1 OF 2

20150295

Drawing Title

Scale (at original size)

N.T.S. @ A1

Revision No Drawing No

FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

#### **STORMWATER**

- S1 CONTRACTOR TO PROVIDE WORKSHOP COORDINATED DRAWINGS PRIOR TO COMMENCING WORKS ON SITE. WORKSHOP DRAWINGS TO BE REVIEWED AND APPROVED BY DESIGN ENGINEER.
- S2 ALL RAINWATER OUTLETS TO OPEN AREAS SHALL BE SPS TRUFLO TYPE TIA100F UNLESS NOTED OTHERWISE. DO NOT INSTALL BALCONY OUTLETS OR SIMILAR IN AREAS SUBJECT TO DIRECT RAINFALL.
- S3 ALL EXTERNAL AREAS TO HAVE MINIMUM 1% FALL TO OUTLETS PROVIED.
- S4 PROVIDE OVERFLOWS TO ALL AREAS TO ARCHITECT'S SPECIFICATIONS.
- S5 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE AS3500.3-2003:'STORMWATER DRAINAGE'.
- S6 FOR STORMWATER DRAINAGE PIPES THAT EXCEED 1:5 GRADE, REINFORCED CONCRETE ANCHOR BLOCKS SHALL BE INSTALLED. ANCHOR BLOCKS TO BE CONSTRUCTED TO SPECIFICATIONS SET OUT IN AS3500.3-2003 SECTION 8.10
- S7 EXISTING SERVICES SHOWN IN APPROXIMATE LOCATIONS ONLY. CONFIRM EXACT LOCATIONS ON SITE PRIOR TO COMMENCING WORK.
- S8 COORDINATE THE INSTALLATION OF NEW SERVICES WITH ALL NEW & EXISTING SERVICES & STRUCTURAL PROVISIONS AS DETERMINED ON SITE.
- S9 ALL PIPEWORK TO BE SUPPORTED IN ACCORDANCE WITH AS3500.3-2003.
- S10 ALL PIPEWORK IS TO BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS AS SET DOWN IN AS3500.3-2003. ALL IN-GROUND PIPEWORK TO BE INSPECTED BY THE SUPERINTENDENT UNDER TEST CONDITIONS PRIOR TO BACKFILLING. BACKFILLING AND BEDDING TO AS3500.3-2003.
- S11 PIPES SHALL BE TRUE TO GRADES SHOWN AND ALIGNED SO THAT THE CENTRE OF THE INLET PIPE INTERSECTS WITH THE CENTRE OF THE OUTLET PIPE AT THE DOWNSTREAM FACE OF THE PIT.
- S12 BED ALL PIPES FIRMLY AND EVENLY WITH IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm IN SOIL AND 200mm IN ROCK.
- S13 LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS3725-2007: DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES'.
- S14 ALLOW TO TEST ALL PIPES AND PITS TO LOCAL AUTHORITY'S REQUIREMENTS.
- S15 EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD TO REUSE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED
- S16 BACKFILL PIPES WITH IMPORTED FILL. PROVIDE 200mm SIDE SUPPORT AND 150mm OVERLAY ABOVE PIPE CROWN. TRENCH FILL ABOVE THE EMBEDMENT ZONE TO THE UNDERSIDE OF THE ROAD PAVEMENT OR THE FOOTWAY SHALL BE AS FOLLOW:-
- S17 UNDER ROADWAY

TRENCH FILL MATERIAL SHALL CONSIST OF IMPORTED FILL AS SPECIFIED HEREIN OF EITHER HIGH GRADE COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RMS QA SPECIFICATION 3051 OR SIMILAR.

- S18 OTHER THAN ROADWAY TRENCH MATERIAL EXCAVATED SHALL CONSIST OF SELECT FILL AS SPECIFIED
- HEREIN AND SHALL NOT CONTAIN MORE THAN 20% OF STONES OF SIZE BETWEEN S19 25mm AND 75mm AND NONE LARGER THAN 75mm. PRIOR TO USE OF THE EXCAVATED MATERIAL IT SHALL BE INSPECTED AND APPROVED BY THE
- S20 COMPACT BEDDING. EMBEDMENT AND TRENCH FILL MATERIALS AS FOLLOW:-

FOR GRANULAR FILL MATERIAL (NON-COHESIVE SOIL) e.g. COARSE AGGREGATE FILL, THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

#### S22 TRENCH FILL:-

FOR GRANULAR MATERIAL (NON COHESIVE SOILS). THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%. FOR NON-GRANULAR FILL MATERIAL (COHESIVE SOILS). THE DRY DENSITY RATIO (RD) SHALL BE NOT LESS THAN 95%.

#### S23 EXISTING SERVICES

- UTILITY INFORMATION SHOWN ON THE PLANS IS NOT INTENDED TO DEPICT MORE THAN THE PRESENCE OF ANY SERVICES. ACTUAL LOCATIONS SHOULD BE VERIFIED BY HAND EXCAVATION PRIOR TO CONSTRUCTION.
- S24 THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE
- S25 THE CONTRACTOR SHALL ENSURE THAT SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED AT ALL TIMES. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING WHERE REQUIRED. ONCE THE WORKS ARE COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD ALL DISTURBED AREAS.

#### S26 DRAINAGE PIPES

J REVISED CIVIL WORKS DRAWING FOR D.A.

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REVISED CIVIL WORKS DRAWING FOR D.A.

- EXISTING PIPES WHICH FORM NO PART OF THE DRAINAGE SYSTEM SHALL BE REMOVED OR SEALED AS INDICATED ON THE PLANS. PIPES UP TO 300mm DIAMETER SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS (U.N.O.). ALL PIPE JUNCTIONS AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.
- S27 WHERE DOWNPIPES PASS UNDER FLOOR SLABS, SEWER GRADE uPVC WITH RUBBER RING JOINTS ARE TO BE USED.
- S28 MINIMUM GRADE TO DRAINAGE PIPES TO BE 1% (U.N.O.), MIN. SIZE 100mm DIAMETER (U.N.O.).
- S29 PIPES LARGER THAN OR EQUAL TO 375mm DIAMETER TO BE REINFORCED CONCRETE RUBBER RING JOINTED TYPE (CLASS 2) MANUFACTURED TO AS4058

JH |02.09.2019| 2

JH 19.08.2019 2 Discipline

JH 15.08.2019 2 ARCH

#### Stormwater Continued

- PIPE INSTALLATION UNDER TRAFFICABLE AREAS SHALL BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION OF AUSTRALIA PUBLICATION "CONCRETE PIPE SELECTION & INSTALLATION" TYPE HS3 SUPPORT.
- S30 EQUIVALENT STRENGTH FRC PIPES MAY BE USED SUBJECT TO AUTHORITY
- MINIMUM PIPE COVER TO BE 600mm UNDER TRAFFICABLE AREAS AND 300mm S31 ELSEWHERE (U.N.O.).
- MINIMUM PIPE COVER TO BE 600mm UNDER TRAFFICABLE AREAS AND 300mm S32 CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
- PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS.
- STORMWATER DRAINAGE CONNECTIONS TO COUNCIL'S SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL.
- DRAINAGE PITS
- S35 PITS DEEPER THAN 1200mm TO BE FITTED WITH STEP IRONS AT 300 CENTRES TO AS1657-2013: FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS -DESIGN, CONSTRUCTION AND INSTALLATION'.
- ALL EXPOSED EDGES TO BE ROUNDED WITH 20mm RADIUS, OR CHAMFERED 20mm x 20mm.
- PIT REINFORCEMENT MESH SL82 LAP TO BE 400mm MIN. CLEAR COVER 40 MIN. S37 CAST AGAINST BLINDING OR FORMWORK. CORNER RETURNS MAY BE FABRIC OR EQUIVALENT BARS.
- S38 BENCHING TO BE HALF OUTGOING PIPE DEPTH. CONCRETE FOR BENCHING TO BE 20MPa MASS CONCRETE.
- APPROVED PRECAST PITS MAY BE USED.
- 100mm DIAMETER HOLE FOR SUBSOIL DRAINAGE OUTLET TO BE LOCATED 100mm ABOVE INVERT OF ALL INLET PIPES. SUBSOIL DRAINAGE TO EXTEND FOR A S40 DISTANCE OF 3m UPSTREAM OF PIT (AT EACH INLET TRENCH) WITH THE UPSTREAM END SEALED.
- ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- S42 PIT GRATE, FRAMES AND SOLID COVERS SHALL BE CLASS B IN NON TRAFFIC AREAS AND CLASS D IN TRAFFICABLE AREAS IN ACCORDANCE WITH AS3996.
- ALL GRATES SHALL BE PROVIDED WITH A LOCKING CLIP.
- MAXIMUM FRONT ENTRY PIPE:-STRAIGHT ENTRY - Ø750
- S44 SKEW ENTRY 45° Ø 525

PIT GRATING TO BE GALVANISED STEEL TYPE 'WELDLOK' OR APPROVED EQUIVALENT.

- SUBSOIL DRAINAGE
- S45 SUBSOIL PIPES SHALL BE LAID AT A MIN GRADE OF 0.5% (U.N.O.).
- ADDITIONAL SUBSOIL DRAINAGE SHALL BE LAID TO SUIT SITE CONDITIONS AND S46 GROUNDWATER PRESENCE AS DIRECTED.
- SUBSOIL PIPES SHALL BE LAID BEHIND KERBS IN CUT AREAS OF THE SITE.
- SUBSOIL DRAINAGE SHALL CONSIST OF A SLOTTED 100mm DIAMETER PLASTIC PIPE WRAPPED IN GEOTEXTILE AND PLACED A MINIMUM OF 600mm BELOW THE
- S48 SUBGRADE LEVEL AND COVERED WITH 500mm OF 20mm GRAVEL. PROVIDE A MINIMUM OF 150mm GRAVEL AROUND SUBSOIL PIPE. TRENCH TO BE LINED WITH
- S49 GEOTEXTILE FABRIC TYPE BIDIM A24
- S50 GRATES TO PITS IN FOOTPATH AREAS SHALL BE HEEL SAFE COMPLYING WITH THE DISABLED ACCESS CODE

#### 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
- 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

Ø100mm 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 20MPlphaAT 28 DAYS

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS

DRAWN

QUALITY CONTROL

DATE 07.08.2019

DATE 07.08.2019

DATE 07.08.2019

DATE 07.08.2019

DATE 07.08.2019

#### Drainage Notes Continued

- 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

#### CONCRETE

- C1 GENERAL
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600-2009: CONCRETE STRUCTURES' LATEST EDITION AS AMENDED, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- UNLESS NOTED OTHERWISE, NO ALLOWNACE HAS BEEN MADE FOR STACKED MATERIALS ON THE CONCRETE STRUCTURE.
- NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C2 CONCRETE QUALITY

ELEMENT	SLUMP	MAX AGG SIZE	CONC. GRADE (MIN)
PAVEMENT SLAB	80+20	20	N32
FOOTPATH/KERB & GUTTER	80+20	20	N20
WALLS	80+20	20	N25
KERB & GUTTER	0	20	N25

C3 CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN:

ELEMENT	EXPOSURE	COVER
PAVEMENT SLAB	A2	50
RETAINING WALLS	A2 OR B1	AS NOTED

- C4 AGGREGATES CONCRETE AGGREGATES SHALL COMPLY WITH AS2758.1-1998:'CONCRETE AGGREGATES'.
- CEMENT TO BE TYPE SL U.N.O. TO AS3972-1997: PORTLAND AND BLENDED CEMENTS'. MAXIMUM 56 DAYS SHRINKAGE TO BE 600 MICROSTRAIN TO AS2350.13-2006: DETERMINATION OF DRYING SHRINKAGE OF CEMENT MORTARS' AND MAXIMUM WATER/CEMENT RATIO OF 0.40.
- NO ADMIXTURES ARE TO BE USED WITHOUT THE APPROVAL OF THE ENGINEER.
- A VIBRATOR IS TO BE USED FOR THE COMPACTION OF ALL CONCRETE.
- THE CONTRACTOR MAY ADD AN APPROVED SUPERPLASTICISING ADMIXTURE TO INCREASE SLUMP OF PAVEMENT CONCRETE TO NOT MORE THAN 100mm. QUALITY AND MIXING PROCEDURE TO BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND TO COMPLY WITH AS1478.1-2000: ADMIXTURES FOR
- CONCRETE SUPPLY SHALL BE IN ACCORDANCE WITH AS1379-2007: SPECIFICATION AND SUPPLY OF CONCRETE'.
- CONCRETE SHALL BE DELIVERED IN AGITATOR TRUCKS AND SHALL BE DEPOSITED UNIFORMLY WITHOUT SEGREGATION.
- C7 CONCRETE CURING
- CURING SHALL COMMENCE WITHIN TWO HOURS OF FINISHING OPERATIONS AND SHALL BE CONTINUED FOR A MINIMUM OF SEVEN DAYS BY AN APPROVED PROPRIETARY COMPOUND OR BY KEEPING CONTINUOUSLY WET.
- CONCRETE TO BE COVERED BY ASPHALT SHALL BE CURED BY THE USE OF ONE
- OF THE FOLLOWING:-- BITUMEN EMULSION GRADE CRS/170 COMPLYING WITH AS1160-1996: BITUMINOUS EMULSIONS FOR THE CONSTRUCTION AND MAINTENANCE OF PAVEMENTS' FOR ASPHALT WEARING SURFACE
- CHLORINATED RUBBER CURING COMPOUND COMPLYING WITH AS3799-1998:'LIQUID MEMBRANE-FORMING CURING COMPOUND FOR CONCRETE' CLASS C TYPE 1D OR RESIN-BASED CURING COMPOUND COMPLYING WITH AS3799-1998 CLASS B, TYPE 1D OR TYPE 2.
- C8 JOINTS CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR APPROVED BY THE ENGINEER.
- WHERE NOT SHOWN CONSTRUCTION JOINTS SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- C9 FINISH FOOTWAY - CONCRETE SHALL BE FINISHED WITH A STEEL TROWEL TO PRODUCE A SMOOTH UNIFORM FINISH, FREE OF IRREGULARITIES AND THEN BROOM FINISH APPLIED.
- ROAD CONCRETE SHALL BE COMPACTED AND FINISHED TO PRODUCE A LEVEL UNIFORM SURFACE FREE OF IMPERFECTIONS WHICH WILL IMPACT ON THE FINISHED SURFACE.
- THE CONCRETE SHALL BE SCREEDED TO THE REQUIRED CROSS SECTION PROFILE FREE OF DEPRESSIONS AND HIGH AREAS TO SATISFY THE REQUIREMENTS OF AN INITIAL FINISH.

#### Concrete continued

- C11 STEEL REINFORCEMENT REINFORCEMENT IS PRESENTED DIAGRAMMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN. THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE OBTAINED FOR ANY OTHER SPLICES. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL LENGTH OF THE REINFORCEMENT, AS NOMINATED IN AS/NZS4671-2001:'STEEL REINFORCING MATERIALS'.
- HOOKS, LAPS AND BENDS SHALL BE IN ACCORDANCE WITH AS3600-2001 U.N.O.
- WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- REINFORCEMENT SYMBOLS (TO AS/NZ4671-2001:'STEEL REINFORCING MATERIALS'):
- N DENOTES GRADE 500N HOT ROLLED HIGH STRENGTH BARS SL - DENOTES SQUARE WITH EDGE SIDE-LAPPING BARS TM - DENOTES TRENCH MECH
- C12 STEEL GALVANISING SHALL COMPLY WITH AS/NZS4680-2006: HOT-DIP GALVANIZED COATINGS ON FABRICATED FERROUS ARTICLES'.
- C13 TESTING CONCRETE TESTING SHALL COMPLY WITH AS1012: METHODS OF TESTING CONCRETE' AS AMENDED.
- FORMWORK FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3610-1995: FORMWORK FOR CONCRETE'. FORMWORK SHALL NOT BE STRIPPED NOR PROPS REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

#### **PAVEMENT**

SUBGRADE

- P1 THE SUBGRADE AND/OR SUBGRADE REPLACEMENT TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 100% WHEN TESTED IN ACCORDANCE WITH AS1289-E4.1:'STANDARD COMPACTION EFFECT' OR A MINIMUM DENSITY OF 80% FOR COHESIVELESS SOILS.
- P2 ALL SOFT, WET OR UNSUITABLE MATERIAL TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT & REPLACED WITH APPROVED SELECTED FILL SATISFYING THE REQUIREMENTS LISTED BELOW & APPROVED BY THE SUPERINTENDENT
- FREE FROM ORGANIC & PERISHABLE MATTER
- MAXIMUM PARTICLE SIZE 75mm - PLASTICITY INDEX BETWEEN 2% AND 15%
- P3 COMPACTION OF THE BASE COURSE TO ACHIEVE A MINIMUM MODIFIED DRY DENSITY OF 98% & COMPACTED IN LAYERS NOT GREATER THAN 200mm LOOSE THICKNESS AT + OR -2 % OF O.M.C.
- P4 COMPACTION TESTING OF THE SUBGRADE AND THE BASE COURSE SHALL BE CARRIED OUT BY A NATA REGISTERED SOIL LABORATORY FOR A MINIMUM OF:
- SUBGRADE 1 TEST PER 500sq.m (2 TEST min.) BASE COURSE - 1 TEST PER 500sq.m (2 TEST PER LAYER min.)
- PS MINIMUM DRY DENSITY RATIOS (AS1289:3.4.1-1993) TO BE: BASE COURSE 98% MODIFIED 95% MODIFIED SUBBASE
- SUBGRADE REPLACEMENT 100% STANDARD P6 MEASURE OF COMPACTION:
- THE DEGREE OF COMPACTION SHALL BE MEASURED BY ONE OF THE FOLLOWING GRANULAR FILL (NON-COHESIVE SOILS). THE DENSITY INDEX (ID) DETERMINED IN

100% STANDARD

- ACCORDANCE WITH AS1289.E6.1 BASED ON THE MAXIMUM AND MINIMUM DRY DENSITIES IN ACCORDANCE WITH AS1289.E5.1 AND THE FIELD DRY DENSITY IN ACCORDANCE WITH AS1289.5.3.2. AS1289.E.3.5 OR AS1289.E.8.1. NON-GRANUALR FILL (COHESIVE SOILS). THE DRY DENSITY RATION (RD)
- DETERMINED IN ACCORDANCE WITH AS1289.5.4.1 BASED ON THE FIELD DRY DENSITY IN ACCORDANCE WITH AS1289.5.3.2 AND THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289.5.1.1.
- P7 REPORT ALL TESTS AND GEOTECHNICAL RESULTS TO THE SUPERINTENDENT.



ARCHITECT

mpa

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#### KERBING NOTES

- K1 CONCRETE SHALL BE OF 25MPa COMPRESSIVE STRENGTH (F'c) AT 28 DAYS UNLESS NOTED OTHERWISE IN CONCRETE NOTES.
- K2 EXPANSION JOINTS OF APPROVED BITUMEN IMPREGNATED JOINTING MATERIAL OR EQUIVALENT SHALL BE PLACED AT 12m INTERVALS, AT JUNCTIONS WITH EXISTING WORK. KERB TRANSITIONS AND ADJACENT TO GULLY PIT. WEAKED
- K3 PLANE JOINTS (DUMMY JOINTS) SHALL BE CUT AT 3m INTERVALS.
- K4 FOR INTEGRAL KERB, ALL JOINTS SHOULD MATCH THE SLAB JOINTS.
- K5 ALL KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISH.

K6 ALL RAMPED CROSSING TO BE BROOMED FINISH.

- K7 GRATES FOR ALL SAG PITS TO BE LOCATED AT CENTRE OF INLET.
- K8 BACKFILLING OF THE KERB AND GUTTER SHALL NOT BE UNDERTAKEN UNTIL AT
- LEAST FOUR DAYS AFTER PLACEMENT. K9 A MAXIMUM TOLERANCE OF +/-10mm ALONG TOP OF KERB AND/OR FACE OF

KERB OVER A LENGTH OF 5 METRES SHALL BE ADOPTED. FOR MACHINES WITH A

MILLING ATTACHMENT THE MAXIMUM CUT SHALL BE 20mm. K10 GRATES FOR ALL SAG PITS TO BE LOCATED AT CENTRE OF LINTEL.

#### LINEMARKING & SIGN POSTING NOTES

- LM1 PROVIDE TRAFFIC MANAGEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE RMS TRAFFIC CONTROL AT WORK SITES MANUAL AND AS1742.3 WHILE UNDERTAKING WORK.
- LM2 LINEMARKING AND SIGNPOSTING SHALL COMPLY WITH THE REQUIREMENTS OF
- LM3 REFLECTIVE RAISED PAVEMENT MARKERS SHALL COMPLY WITH THE REQUIREMENTS OF RMS QA DOCUMENT R142.

GRAVEL FLAKING PAVEMENT MATERIAL AND OTHER LOOSE OR FOREIGN MATERIAL.

LM5 ALL PAVEMENT MARKINGS SHALL BE THERMO PLASTIC WITH REFLECTIVE GLASS BEADS TO AS2009, UNLESS NOTED OTHERWISE. THICKNESS OF THERMO PLASTIC

SHALL BE 1.8mm FOR LINES AND 3mm FOR OTHER MARKINGS.

LM4 THE SURFACE AREA TO BE LINEMARKED MUST BE DRY AND FREE OF DIRT,

- LM6 SIGN SUPPORT STRUCTURES SHALL BE MANUFACTURED IN ACCORDANCE WITH AS4100. ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANISED TO THE REQUIREMENT OF AS4680.
- LM7 POSTS ERECTED IN GRASS OR SOIL BEHIND KERB OR ON SHOULDERS, VERGES ETC SHALL BE SET IN CONCRETE AND PINNED AT THE POLE BASE FLATTENED TO ELIMINATE THE TWISTING OF POLES. HOLE DIAMETER SHALL BE A MINIMUM 300mm, WITH A DEPTH 400mm OF CONCRETE. A MINIMUM COVER OF SOIL OF TURF MUST COVER THE CONCRETE.
- LM8 ALL POSTS ARE TO BE CAPPED AND OF EQUAL HEIGHT ABOVE THE SIGN e.g. 50mm. ALL SIGNS SHALL BE ANTI-GRAFFITI COATED.

STORMWATER LINE

---- SWRM----- SWRM---- STORMWATER RISING MAIN

- ABBREVIATIONS:
  - CLEAR OUT
  - DISH DRAIN OUTLET
- DOWNPIPE
- EXISTING
- FINISHED FLOOR LEVEL
- GRATED TRENCH DRAIN
- GRATED SURFACE INLET PIT
- INVERT LEVEL
- KERB INLET PIT
- NATURAL GROUND LEVEL
- OVERLAND FLOWPATH
- ON-SITE DETENTION
- REINFORCED CONCRETE PIPE
- REDUCED LEVEL
- RAINWATER TANK
- STORMWATER
- STORMWATER PIT
- STORMWATER RISING MAIN
- STORMWATER SUMP
  - TOP OF KERB
  - TOP OF WALL UNPLASTICISED POLYVINYL CHLORIDE

SITEWORKS LEGEND

DISH DRAIN OUTLET STORMWATER RISING MAIN

RAIN WATER OUTLET

OVERLAND FLOW PATH

JUNCTION PIT

---- EXISTING BOUNDARY

EXISTING KERB LINE

FINISH FLOOR LEVEL

GSIP 450x450

GRATED DRAIN

SURVEY LEGEND GSIP 600x600

GSIP 900x900

DROP PIPE

DOWN PIPE

PROJECT

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG! APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES

PRIOR TO ANY WORK COMMENCING ONSITE. RAIN WATER DOWNPIPE

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SPECIFICATION SHEET NOTE & LEGENDS SHEET 2 OF 2

Drawing No Revision No

Engineering Value

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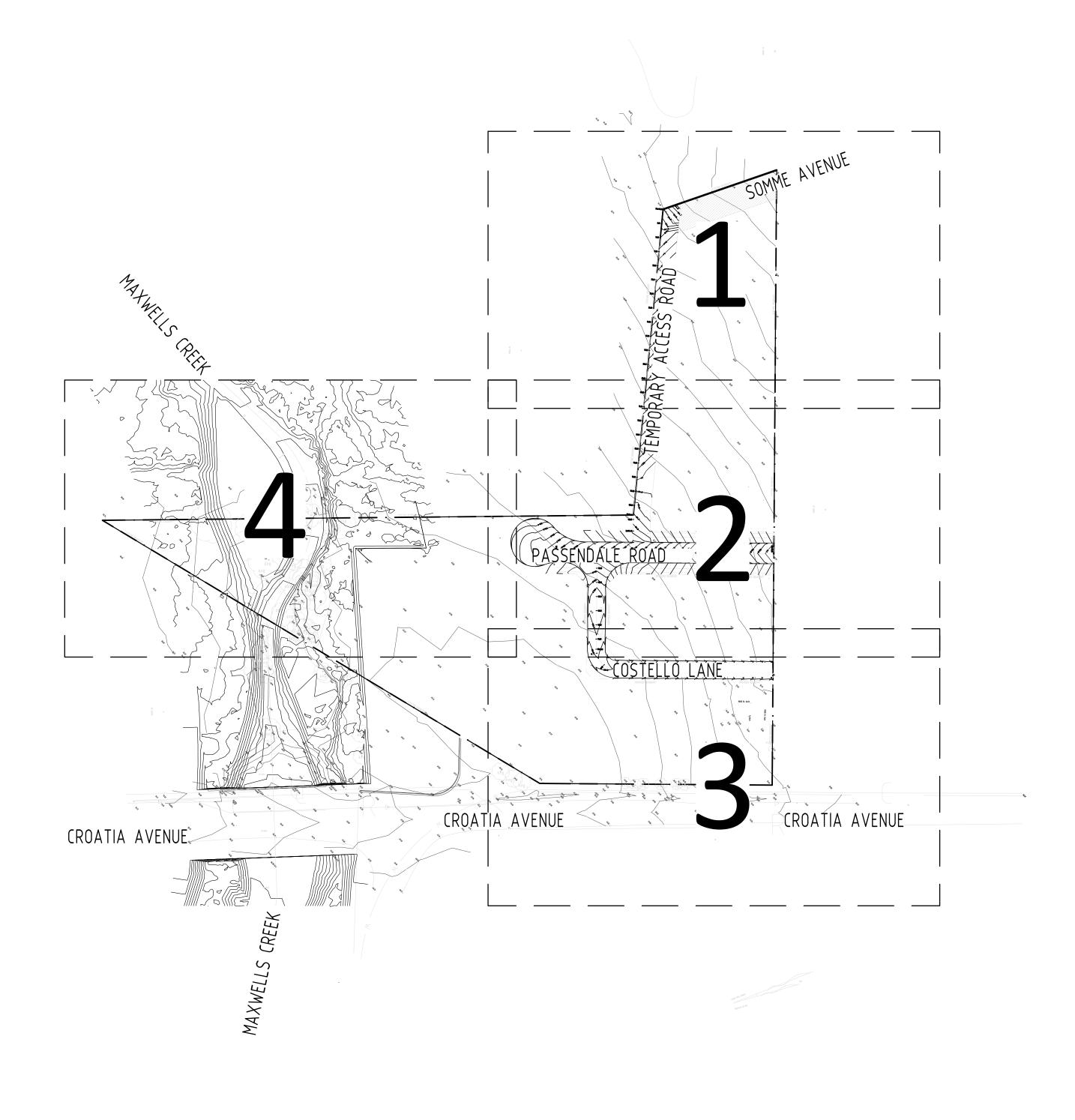
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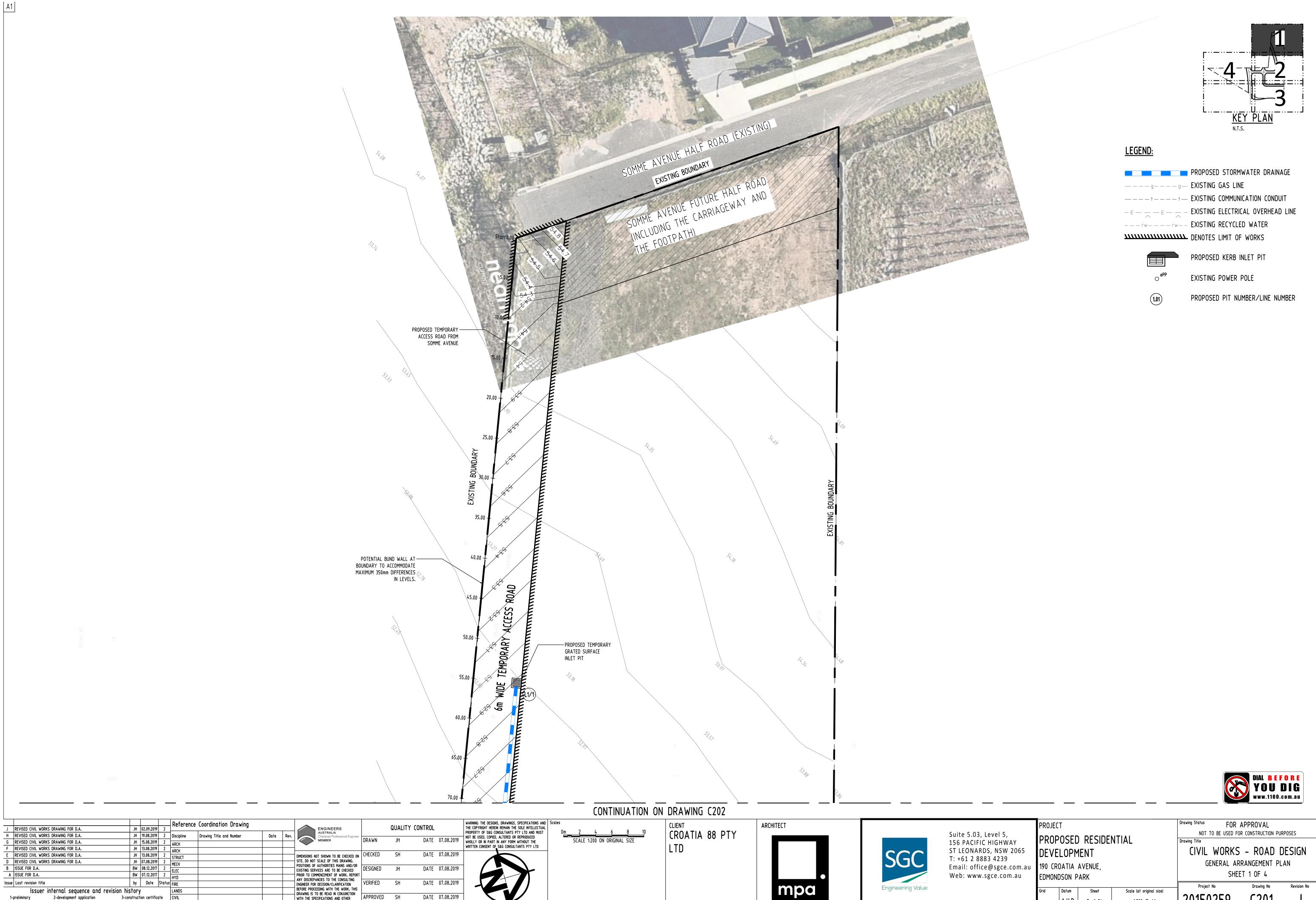


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A ISSUE FOR D.A. DATE 07.08.2019 Web: www.sgce.com.au EDMONDSON PARK ANY DISCREPANCIES TO THE CONSULTING VERIFIED DATE 07.08.2019 Issue Last revision title ENGINEER FOR DECISION/CLARIFICATION

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2-development application

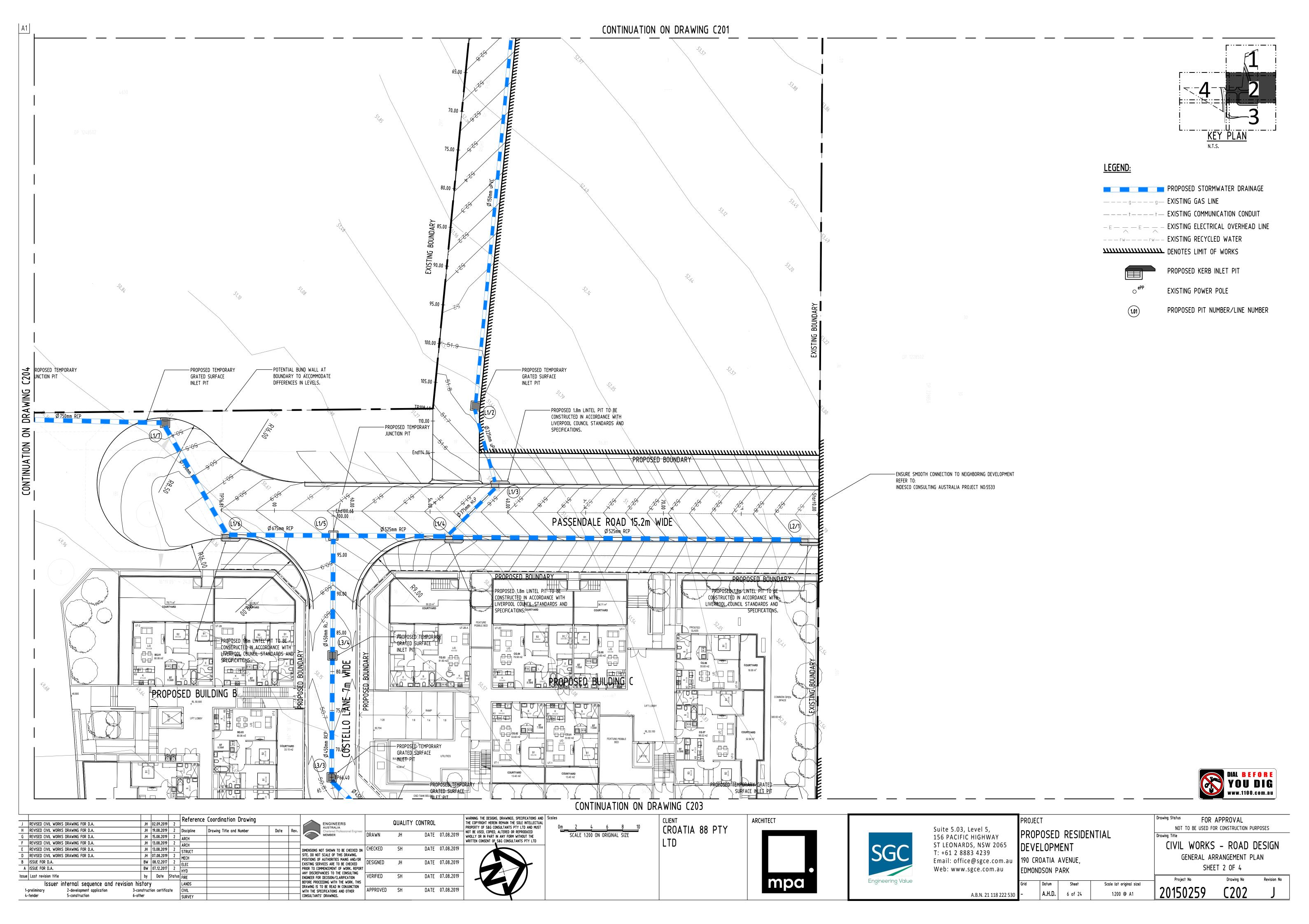
20150259

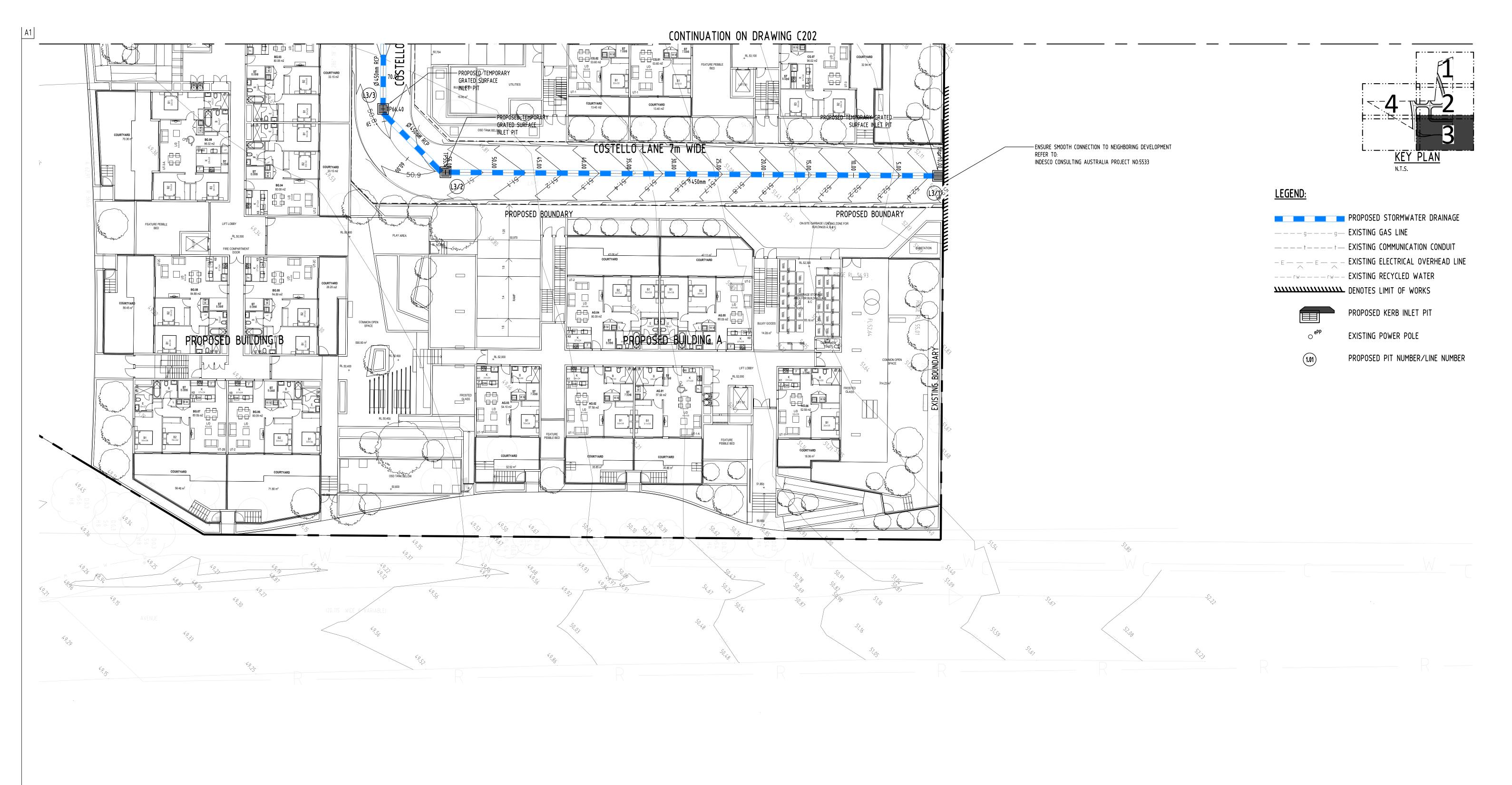
A.H.D. 1:200 @ A1 A.B.N. 21 118 222 530

Engineering Value

Scale (at original size)

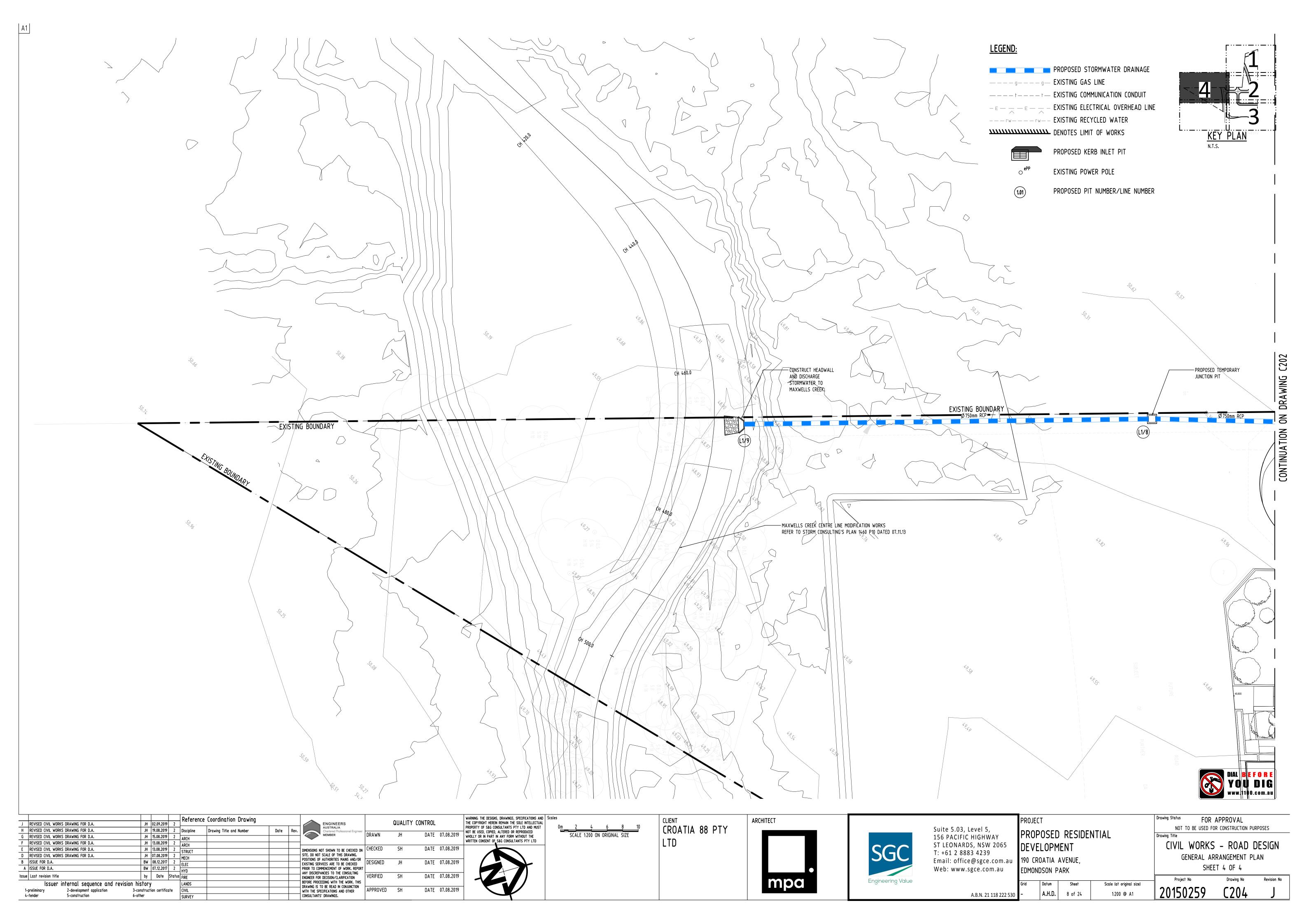
Drawing No

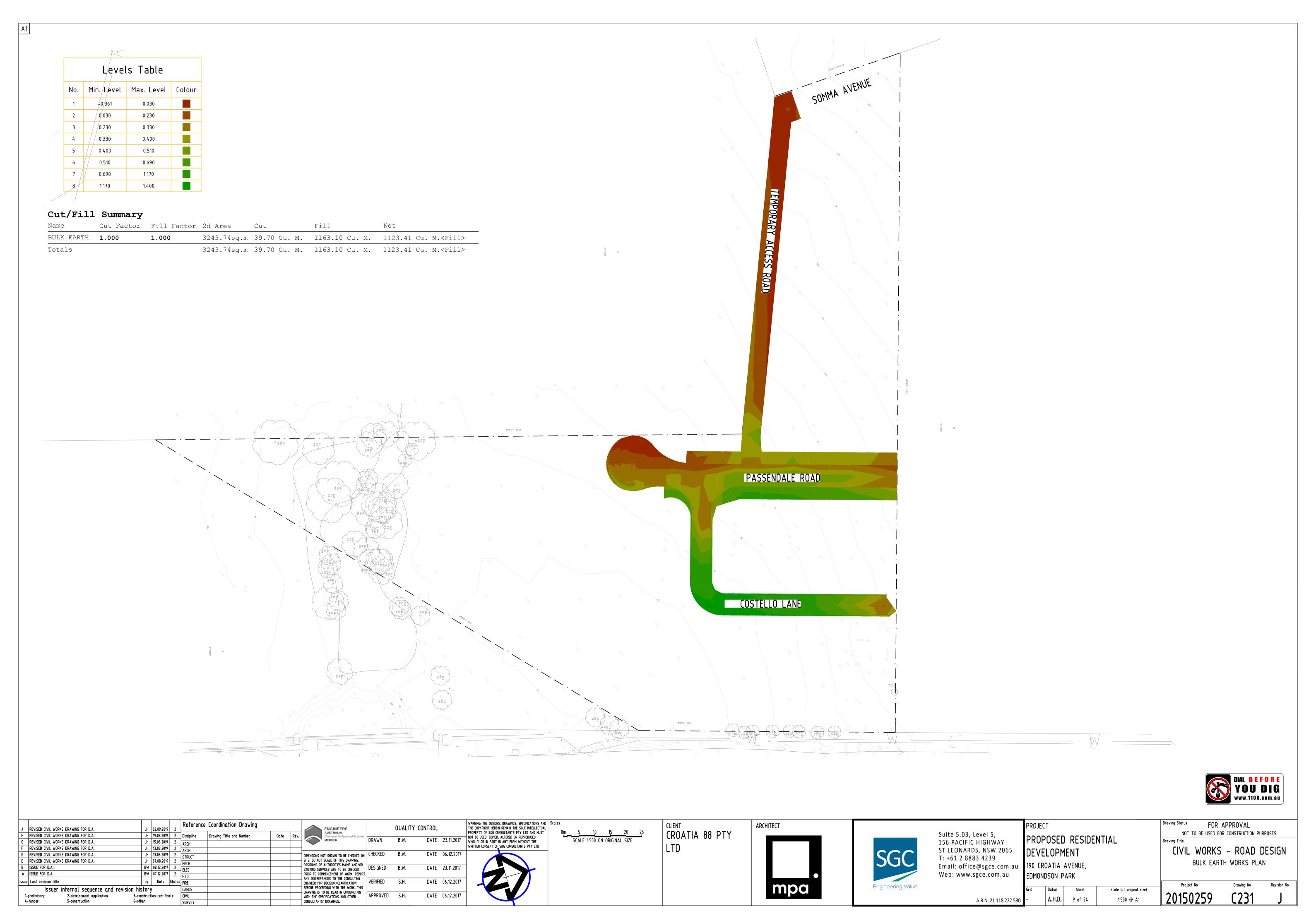






J REVISED CIVIL WORKS DRAWING FOR D.A.	JH 02.09.2019 2	Reference Coordination Drawing	ENGINEERS	QUALITY CONTROL	WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL	icales	CLIENT	ARCHITECT			PROJECT		R APPROVAL	
H REVISED CIVIL WORKS DRAWING FOR D.A.	JH 19.08.2019 2 D	Discipline Drawing Title and Number Date	ev. AUSTRALIA Chartered Professional Engineer		PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED	UM 2 4 6 8 10	CROATIA 88 PTY			Suite 5.03, Level 5,	DDODOCED DECIDENTIAL	NOT TO BE USED	FOR CONSTRUCTION PU	JRPOSES
G REVISED CIVIL WORKS DRAWING FOR D.A.	JH 15.08.2019 2	ARCH .	MEMBER URAWN	JH DATE 07.08.20	WHOLLY OR IN PART IN ANY FORM WITHOUT THE	SCALE 1:200 ON ORIGINAL SIZE	1.70			156 PACIFIC HIGHWAY	PROPOSED RESIDENTIAL	Drawing Title		
F REVISED CIVIL WORKS DRAWING FOR D.A.	JH 13.08.2019 2	ARCH .			WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD		LID		CCC	ST LEONARDS, NSW 2065	DEVELOPMENT	CIVIL WORK	(S _ RNAN I	DESIGN
E REVISED CIVIL WORKS DRAWING FOR D.A.	JH  13.08.2019   2   S	STRUCT	DIMENSIONS NOT SHOWN TO BE CHECKED ON CHECKED	SH DATE 07.08.20	9					T: +61 2 8883 4239	DEVELOPMENT			
D REVISED CIVIL WORKS DRAWING FOR D.A.	JH  07.08.2019   2   M	1ECH	SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES MAINS AND/OR						300	Email: office@sgce.com.au	100 CDOATIA AVENUE	GENERAL	ARRANGEMENT PI	<b>LAN</b>
B ISSUE FOR D.A.	BW 08.12.2017 2 E	LEC	EXISTING SERVICES ARE TO BE CHECKED DESIGNED	JH DATE 07.08.20										
A ISSUE FOR D.A.	BW 07.12.2017 2 H	IYD	PRIOR TO COMMENCEMENT OF WORK. REPORT							Web: www.sgce.com.au	EDMONDSON PARK	317	HEET 3 OF 4	
Issue Last revision title	by Date Status F	IRE	ENGINEER FOR DECISION/CLARIFICATION VERIFIED	SH DATE 07.08.20	19				Engine oning Value			Project No	Drawing No	Revision No
Issuer internal sequence and revision	history	ANDS	BEFORE PROCEEDING WITH THE WORK. THIS  DRAWING IS TO BE READ IN CONJUNCTION					mpa	Engineering Value		Grid Datum Sheet Scale (at original s	size)	•	
1-preliminary 2-development application 4-tender 5-construction	3-construction certificate C 6-other c	IVIL	WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.  APPROVED	D SH DATE 07.08.20	9					A.B.N. 21 118 222 530	- A.H.D. 7 of 24 1:200 @ A1	20150259	C203	1





REVISED CIVIL WORKS DRAWING FOR D.A. JH   02.09.20	Reference Coordination Drawing	ENGINEERS	QUALITY CONTROL	WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL	CLIENT	ARCHITECT			PROJECT
REVISED CIVIL WORKS DRAWING FOR D.A.  REVISED CIVIL WORKS DRAWING FOR D.A.  JH 19.08.20  REVISED CIVIL WORKS DRAWING FOR D.A.  JH 13.08.20  REVISED CIVIL WORKS DRAWING FOR D.A.  JH 13.08.20	9 2 ARCH	Date Rev.  AUSTRALIA Chartered Professional Engineer MEMBER  DRAWN	JH DATE 07.08.2019	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  Om 0.5 1 1.5 2 2.5  SCALE 1:50 ON ORIGINAL SIZE  Om 2.5 5 7.5 10 12.5	CROATIA 88 PTY   LTD				PROPOSED RESIDENTIAL
REVISED CIVIL WORKS DRAWING FOR D.A. JH 13.08.20 REVISED CIVIL WORKS DRAWING FOR D.A. JH 07.08.20	9 2 STRUCT	DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING.	SH DATE 07.08.2019	SCALE 1:250 ON ORIGINAL SIZE			SGC	1: +61 2 8883 4239	DEVELOPMENT
ISSUE FOR D.A.         BW 08.12.20           ISSUE FOR D.A.         BW 07.12.20	<del></del>  F F	POSITIONS OF AUTHORITIES MAINS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT	JH DATE 07.08.2019				SUC	- •	190 CROATIA AVENUE, EDMONDSON PARK
	Status FIRE	ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK, THIS	SH DATE 07.08.2019			mpa	Engineering Value	0.000	
Issuer internal sequence and revision history -preliminary 2-development application 3-construction certit -tender 5-construction 6-other	cate CIVIL SURVEY	DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.  APPROVED	SH DATE 07.08.2019			Шра		A.B.N. 21 118 222 530	Grid Datum Sheet Scale (at original size)  - A.H.D. 10 of 24 AS SHOWN @ A1



NOT TO BE USED FOR CONSTRUCTION PURPOSES

CIVIL WORKS - ROAD DESIGN

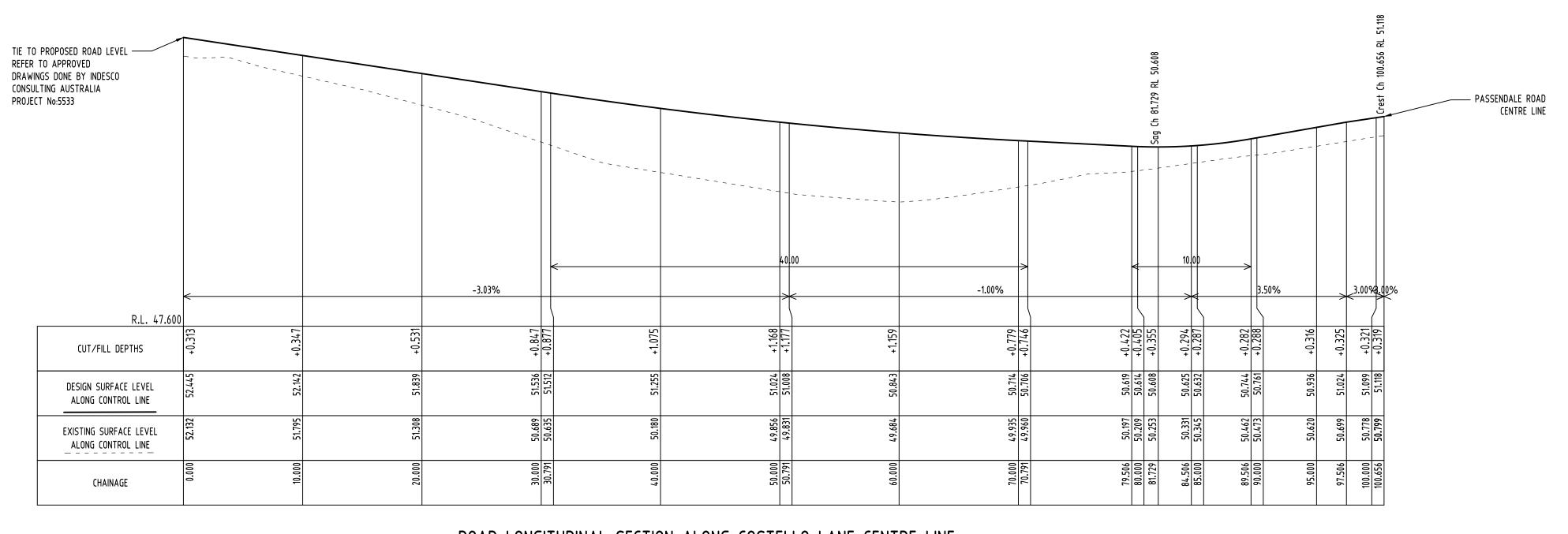
ROAD LONGITUDINAL SECTIONS ALONG COSTELLO LANE & PASSENDALE ROAD.

C301

Drawing Status FOR APPROVAL

20150259

# ROAD LONGITUDINAL SECTION ALONG COSTELLO LANE CENTRE LINE SCALE H:1:250 V:1:50



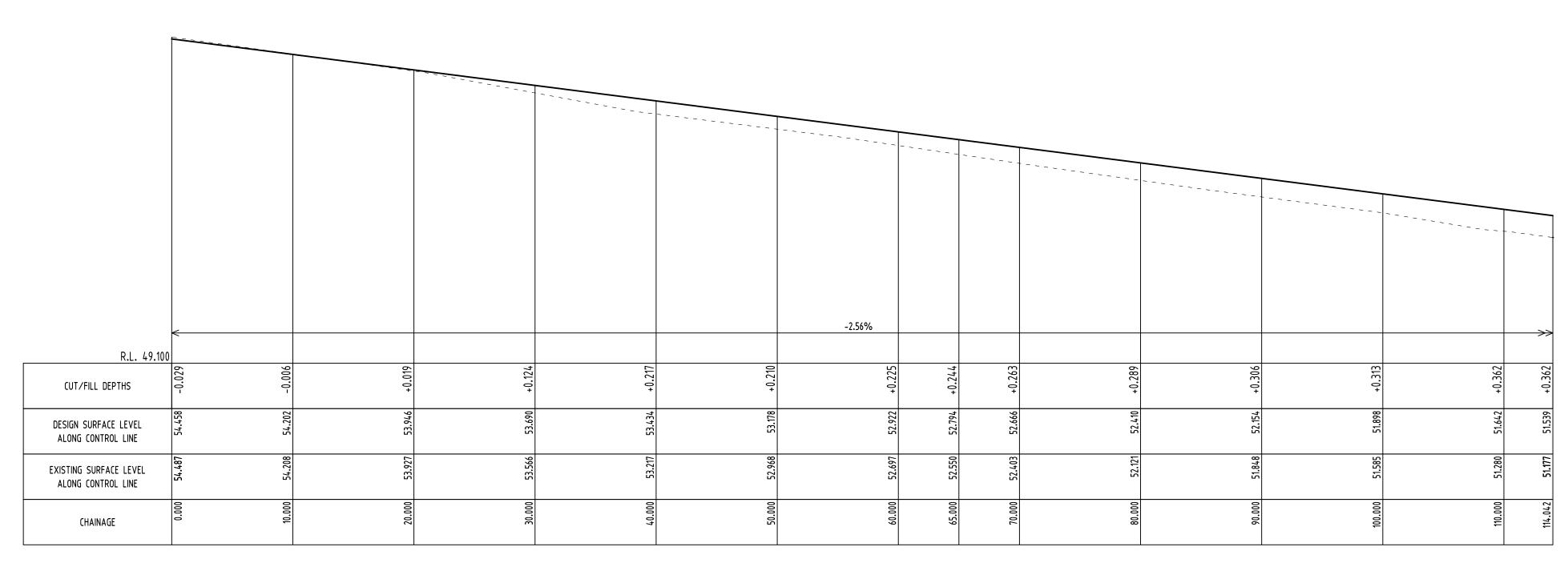
# ROAD LONGITUDINAL SECTION ALONG PASSENDALE ROAD CENTRE LINE SCALE H:1:250 V:1:50

TIE TO PROPOSED ROAD LEVEL  REFER TO APPROVED  DRAWINGS DONE BY INDESCO  CONSULTING AUSTRALIA  PROJECT No:5533								
		-3.67%	40,	00	-2.1	9%		
R.L. 48.300						\		
CUT/FILL DEPTHS	+0.298	+0.423	+0.467	+0.454	+0.320	+0.337	+0.321	+0.313
DESIGN SURFACE LEVEL ALONG CONTROL LINE	53.111	52.290	51.702	51,418	51.119	50.952	50.733	50.637
EXISTING SURFACE LEVEL ALONG CONTROL LINE	52.813	51.867	51.235	796.05	50.799	50.615	50.412	50.324
CHAINAGE	0.000	22.390	40.000	50.000	62.390	70.000	80.000	84.381

J REVISED CIVIL WORKS DRAWING FOR D.A.  H REVISED CIVIL WORKS DRAWING FOR D.A.  G REVISED CIVIL WORKS DRAWING FOR D.A.  F 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  ARCH  STRUCT  MECH  B ISSUE FOR D.A.  BW 08.12.2017 2  HYD	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	QUALITY CONTROL  AWN JH DATE 07.08.2019  ECKED SH DATE 07.08.2019  SIGNED JH DATE 07.08.2019	CROATIA 88 PTY LTD	ARCHITECT	SGC	Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK	Drawing Status FOR A  NOT TO BE USED FOR  Drawing Title  CIVIL WORKS  ROAD LONGITUDIN  SOMMA AVENUE & T	- ROAD D	DESIGN ALONG
Issue Last revision title  Issuer internal sequence and revision history  1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other  1-preliminary 2-development application 6-other SURVEY	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.	PROVED SH DATE 07.08.2019  OF THE OFFICE OF THE OFFICE OF THE OFFICE OF THE OFFICE OF THE OFFI OFFI OFFI OFFI OFFI OFFI OFFI OFF		mpa	Engineering Value		Grid Datum Sheet Scale (at original size)	Project No 20150259	Drawing No	Revision No



# ROAD LONGITUDINAL SECTION ALONG TEMPORARY ACCESS ROAD RIGHT HAND SIDE EDGE SCALE H:1:250 V:1:50

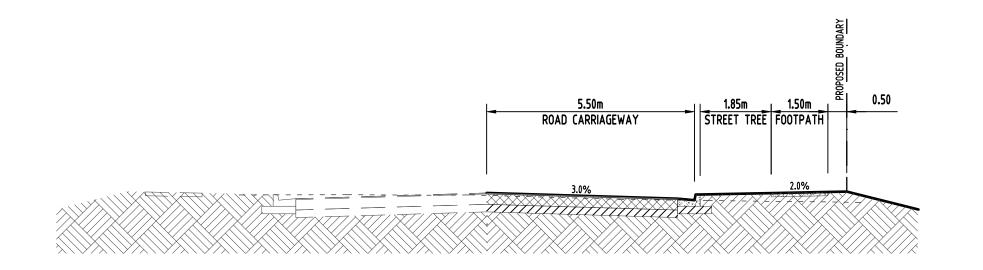


# ROAD LONGITUDINAL SECTION ALONG SOMMA AVENUE CENTRE LINE SCALE H:1:250 V:1:50

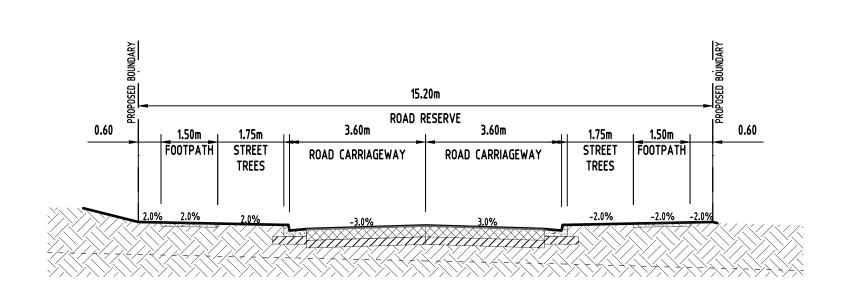
FER TO	ROPOSED ROAD LEVEL  APPROVED  5 DONE BY INDESCO  NG AUSTRALIA  No:5533									
		<	-4.59%	<b>→</b>	<−4.36% >	€	-3.95%	-6.33%		->>
	R.L. 52.40	-0.033		+0.000	+0.000		0.00.0+		-0.002	+0.000
	DESIGN SURFACE LEVEL ALONG CONTROL LINE	56.564		56.104	899:25		55.273		54.641	54.487
	EXISTING SURFACE LEVEL ALONG CONTROL LINE	56.597		56.104	55.668		55.773		54.643	54.487
	CHAINAGE	0.000		10.000	20.000		000 <sup>.</sup> 0£		40.000	42.430

	9   2   Discipline   Drawing Title and Number	Date Rev.    Date   Rev.   ENGINEERS AUSTRALIA   Chartered Professional Engineer   DRAWN	QUALITY CONTROL           JH         DATE         07.08.20           SH         DATE         07.08.20           JH         DATE         07.08.20	19	Om	CLIENT CROATIA 88 PTY LTD	ARCHITECT	SGC	Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK		NOT TO BE USED FOR CO	ROAD DE	ESIGN
Issue Last revision title  Issuer internal sequence and revision history  1-preliminary 2-development application 3-construction certification 5-construction 6-other	Status FIRE  LANDS  icate CIVIL  SURVEY	ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.  VERIFIED  VERIFIED  APPROVED	SH DATE 07.08.20  SH DATE 07.08.20				mpa	Engineering Value	A.B.N. 21 118 222 530		ale (at original size) S SHOWN @ A1	•	C351	Revision No

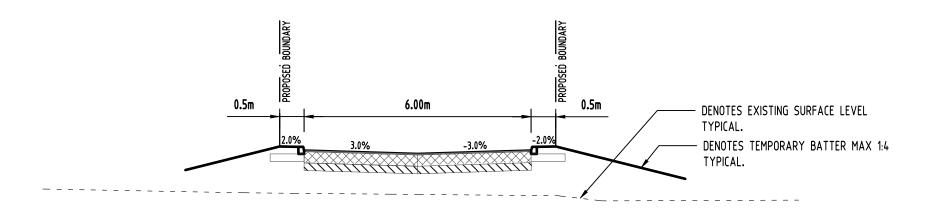
TYPICAL CROSS SECTION SOMME AVENUE (HALF ROAD)
SCALE 1:100

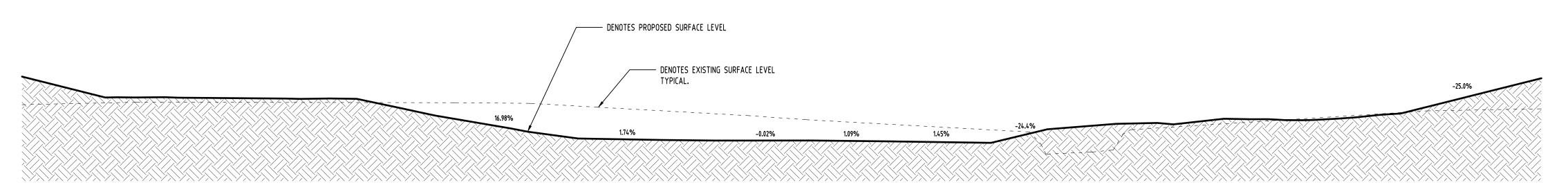


TYPICAL CROSS SECTION PASSENDALE ROAD
SCALE 1:100



TYPICAL CROSS SECTION COSTELLO LANE
SCALE 1:100

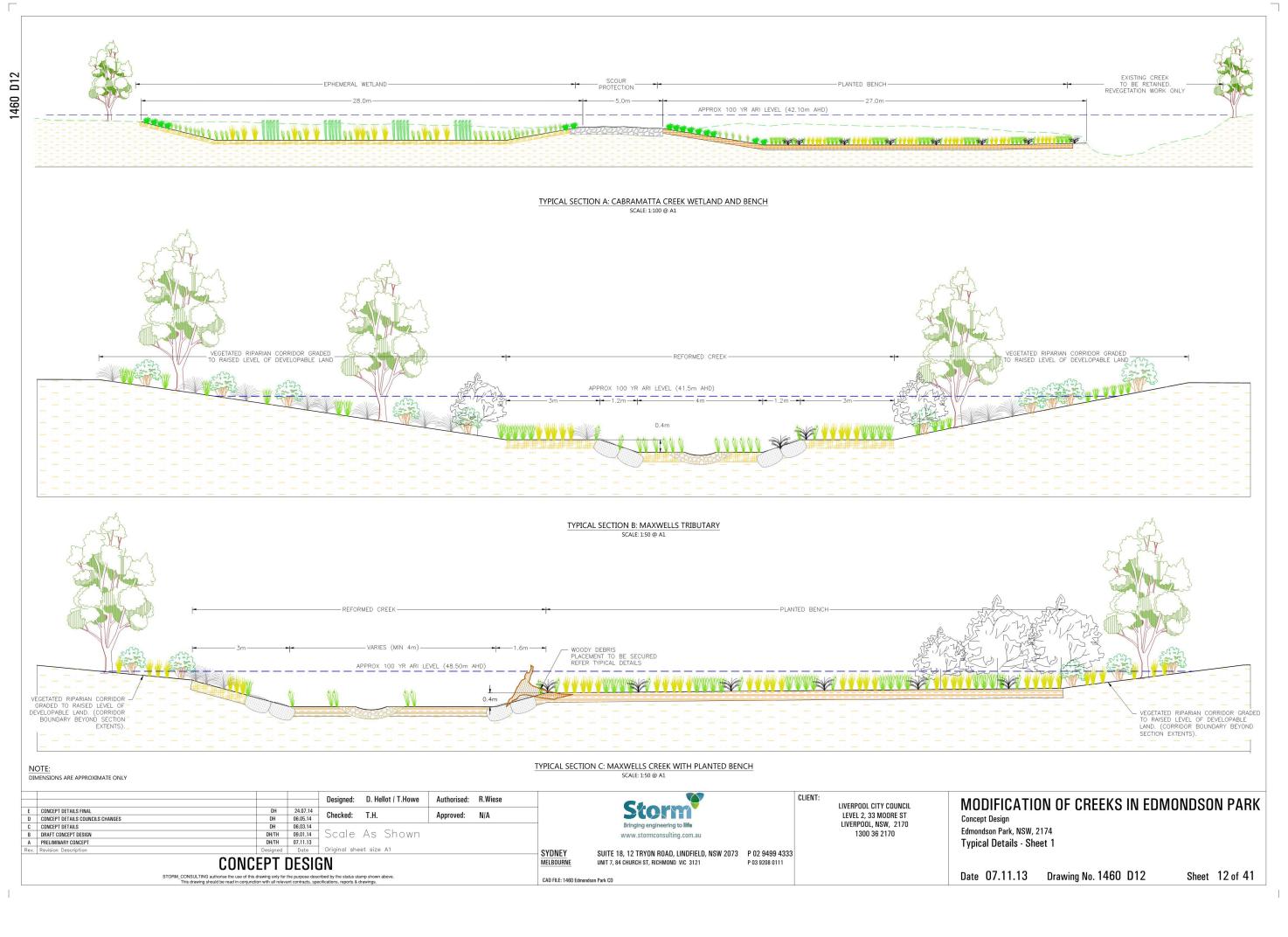


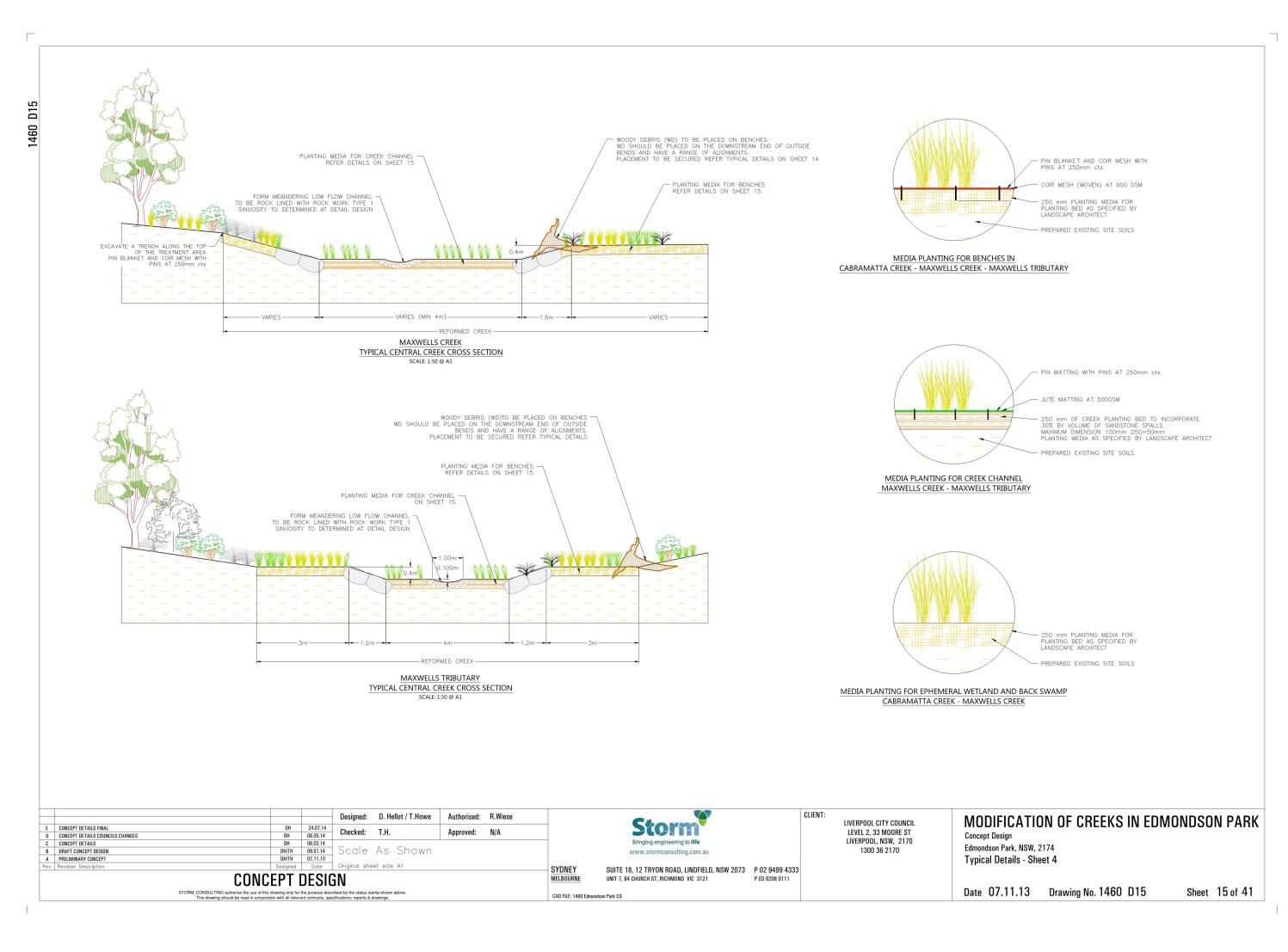


# MAXWELLS CREEK CROSS SECTION AT CH+510.00 SCALE 1:100

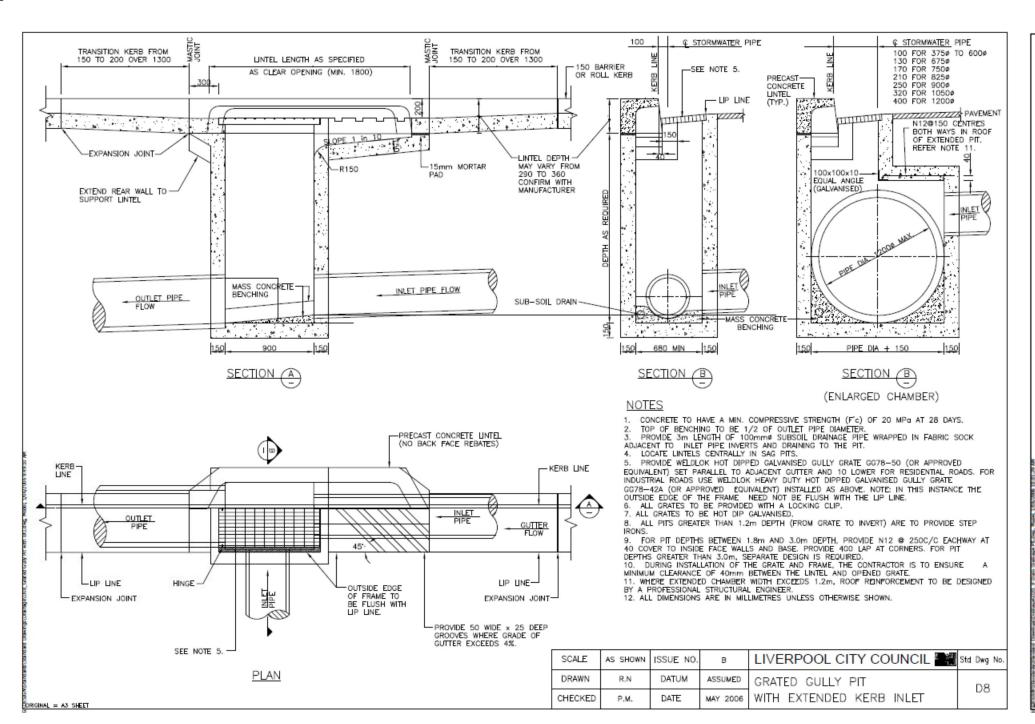
MAXWELLS CREEK CROSS SECTION IS TO BE READ IN CONJUNCTION WITH STORM CONSULTING PLAN DRAWING No: 1460 P10, REVISION E

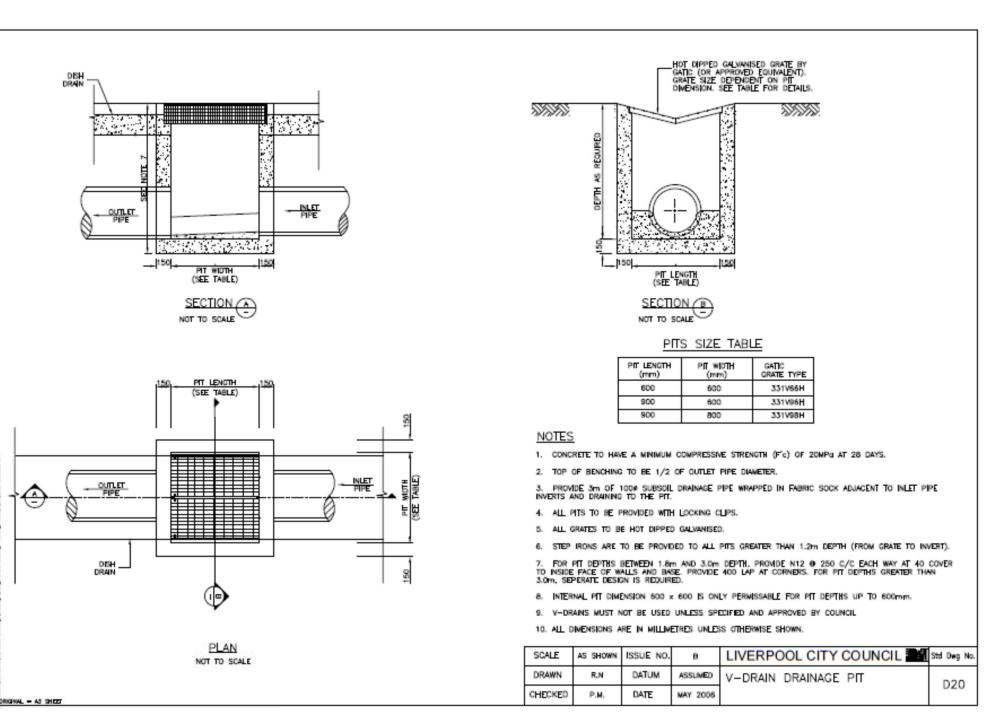
DATED 24.07.2014

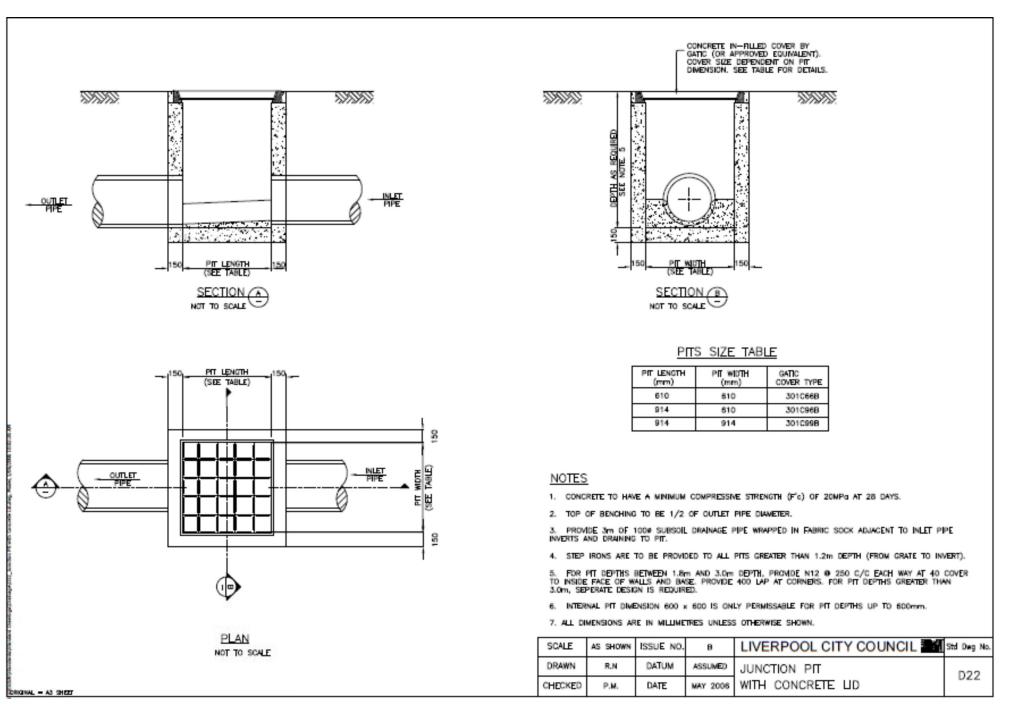


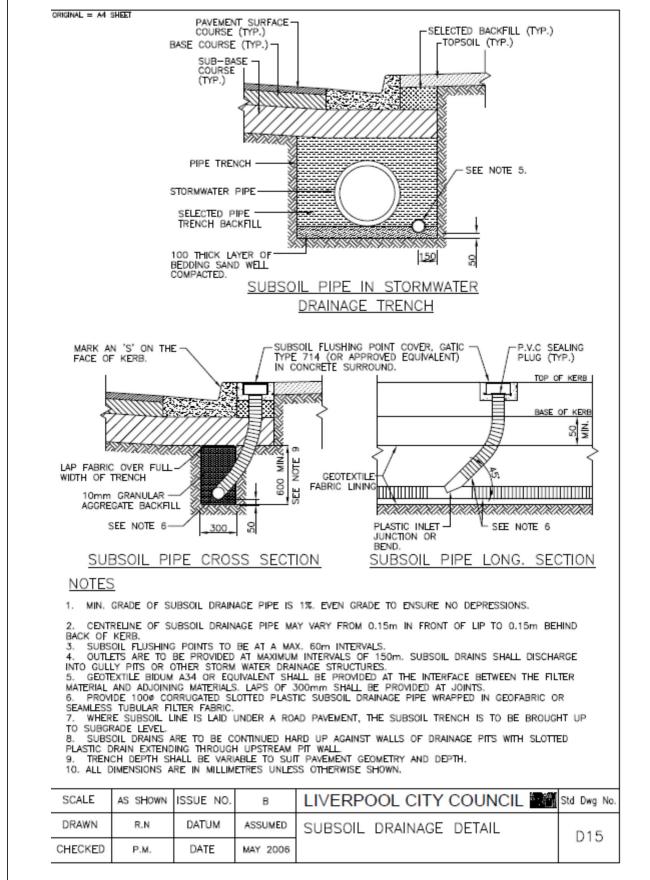


J REVISED CIVIL WORKS DRAWING FOR D.A.	JH 02.09.2019 2 Reference Coordination Drawing	ENGINEERS AUSTRALIA Q	UALITY CONTROL	WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST	es 0m 1 2 3 4 5	CLIENT CROATIA 88 PTY	ARCHITECT		Cuita F O2 Laval F	PROJECT		FOR APPROVAL SED FOR CONSTRUCTION PL	PURPOSES
H REVISED CIVIL WORKS DRAWING FOR D.A.  G REVISED CIVIL WORKS DRAWING FOR D.A.  F REVISED CIVIL WORKS DRAWING FOR D.A.  E REVISED CIVIL WORKS DRAWING FOR D.A.  D REVISED CIVIL WORKS DRAWING FOR D.A.  B ISSUE FOR D.A.  A ISSUE FOR D.A.	JH   19.08.2019   2   Discipline   Drawing Title and Number   Date   R	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	JH         DATE         07.08.2019           SH         DATE         07.08.2019           JH         DATE         07.08.2019		SCALE 1:100 ON ORIGINAL SIZE	LTD		SGC	156 PACIFIC HIGHWAY ST LEONARDS, NSW 2065 T: +61 2 8883 4239	PROPOSED RESIDENTIAL DEVELOPMENT  190 CROATIA AVENUE, EDMONDSON PARK	Drawing Title	IVIL WORKS REEK MODIFICATION & DETAILS	
	by Date Status FIRE  history LANDS 3-construction certificate 5-other SURVEY	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.  VERIFIED  APPROVED	SH         DATE         07.08.2019           SH         DATE         07.08.2019				mpa	Engineering Value	A.B.N. 21 118 222 530	Grid Datum Sheet Scale (at original size	20150259	Drawing No C352	Revision N





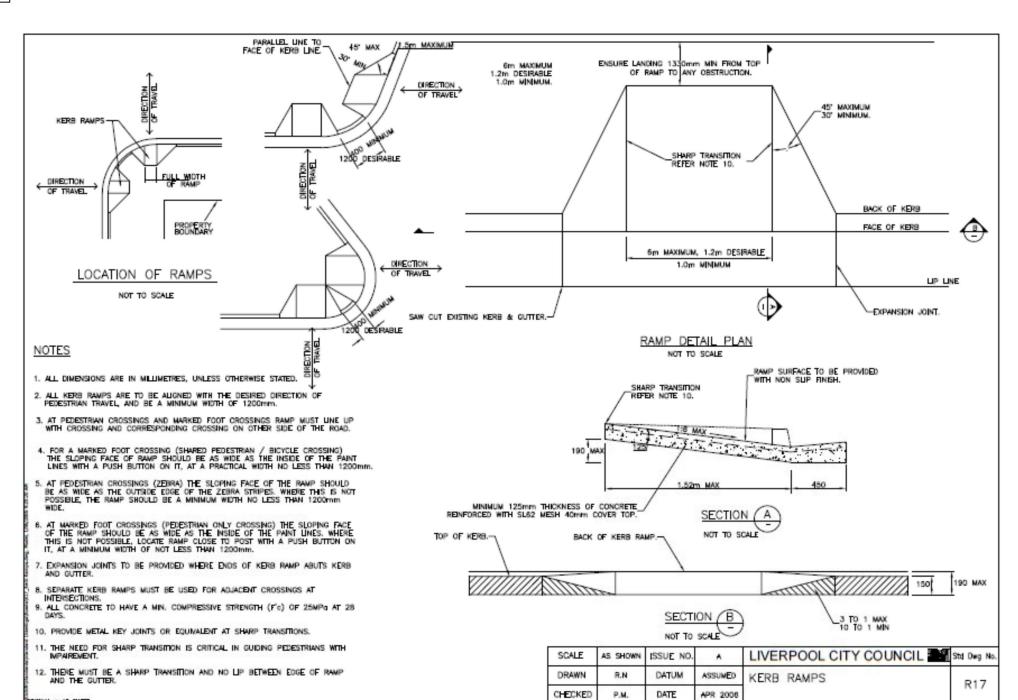


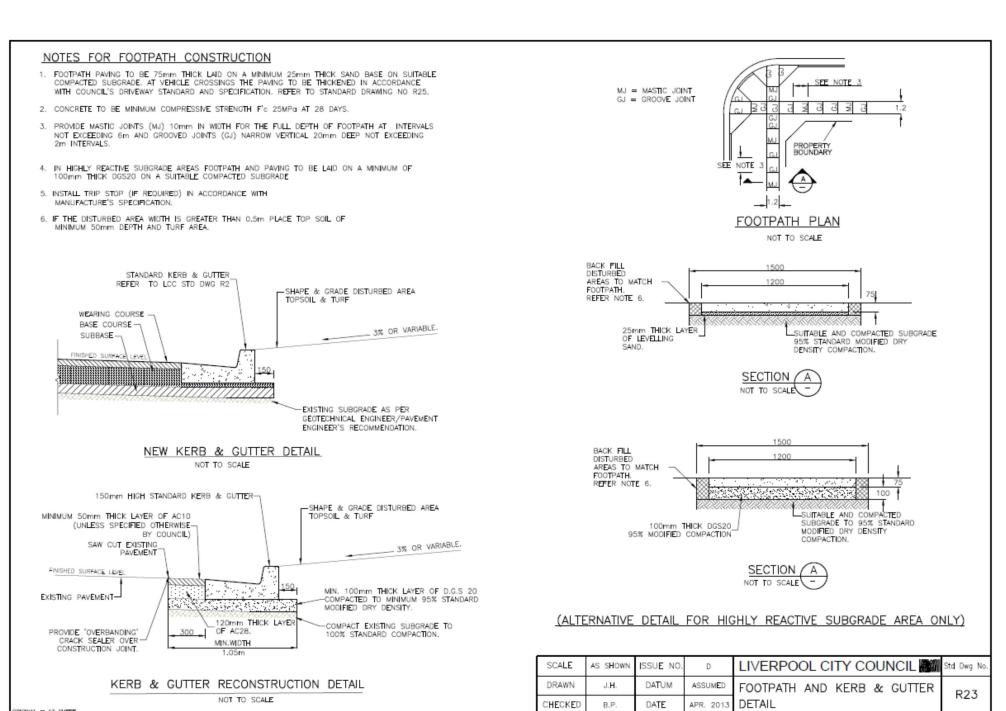


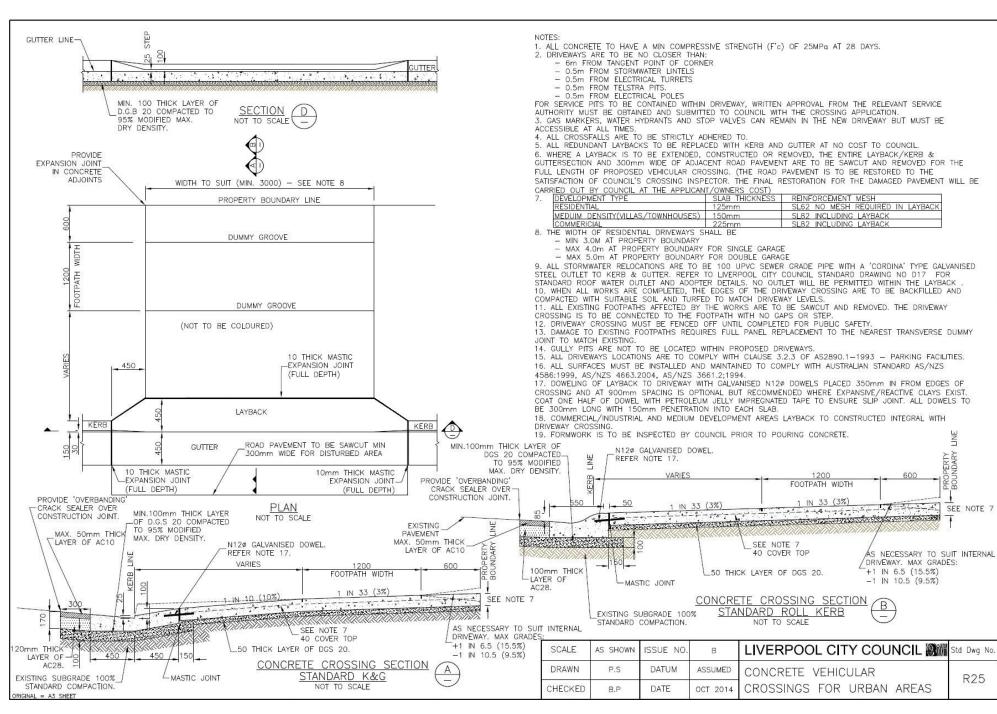


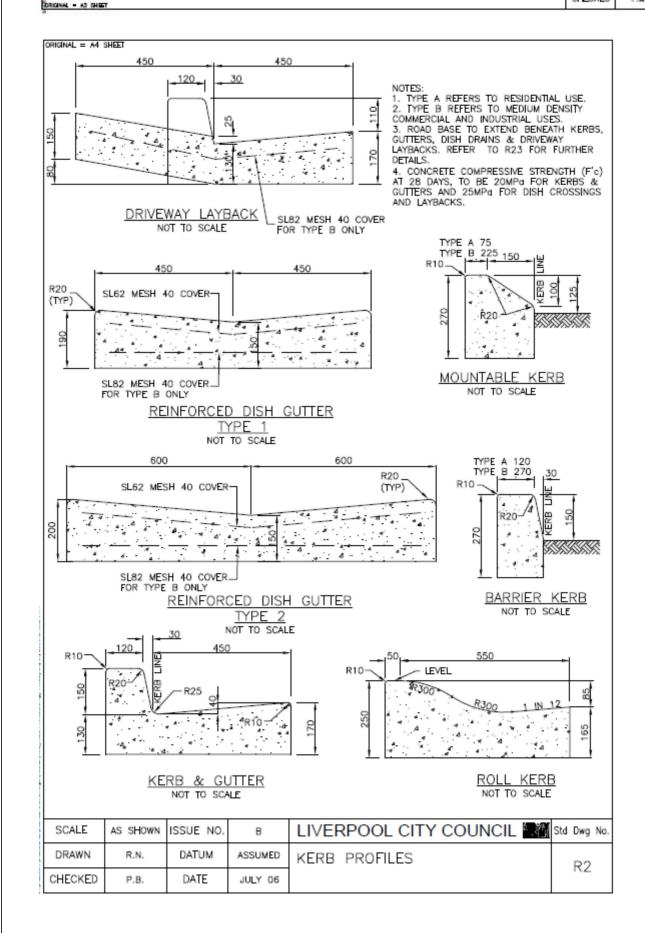
J REVISED CIVIL WORKS DRAWING FOR D.A.  H REVISED CIVIL WORKS DRAWING FOR D.A.  G REVISED CIVIL WORKS DRAWING FOR D.A.  F REVISED CIVIL WORKS DRAWING FOR D.A.  E REVISED CIVIL WORKS DRAWING FOR D.A.  D REVISED CIVIL WORKS DRAWING FOR D.A.  B ISSUE FOR D.A.  A ISSUE FOR D.A.	JH     15.08.2019     2       JH     13.08.2019     2       JH     13.08.2019     2       JH     07.08.2019     2       BW     08.12.2017     2       BW     07.12.2017     2       HYD     ELEC	Rev.    Chartered Professional Engineer MEMBER   QUALITY CONTROL	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	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK	NOT TO BE USED FOR Drawing Title  CIVIL WORKS  TYPIC	APPROVAL  PROCONSTRUCTION PURPO  REPORT OF AL DETAILS  ET 1 OF 2	
Issue Last revision title  Issuer internal sequence and revision hi 1-preliminary 2-development application 3-co 4-tender 5-construction 6-ot	nstruction certificate CIVIL	ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK, THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.  VERIFIED SH DATE 07.08.201  VERIFIED SH DATE 07.08.201		mpa	Engineering Value	A.B.N. 21 118 222 530	Grid Datum Sheet Scale (at origina - A.H.D. 14 of 24 AS SHOWN (	20450250	Drawing No	Revision No





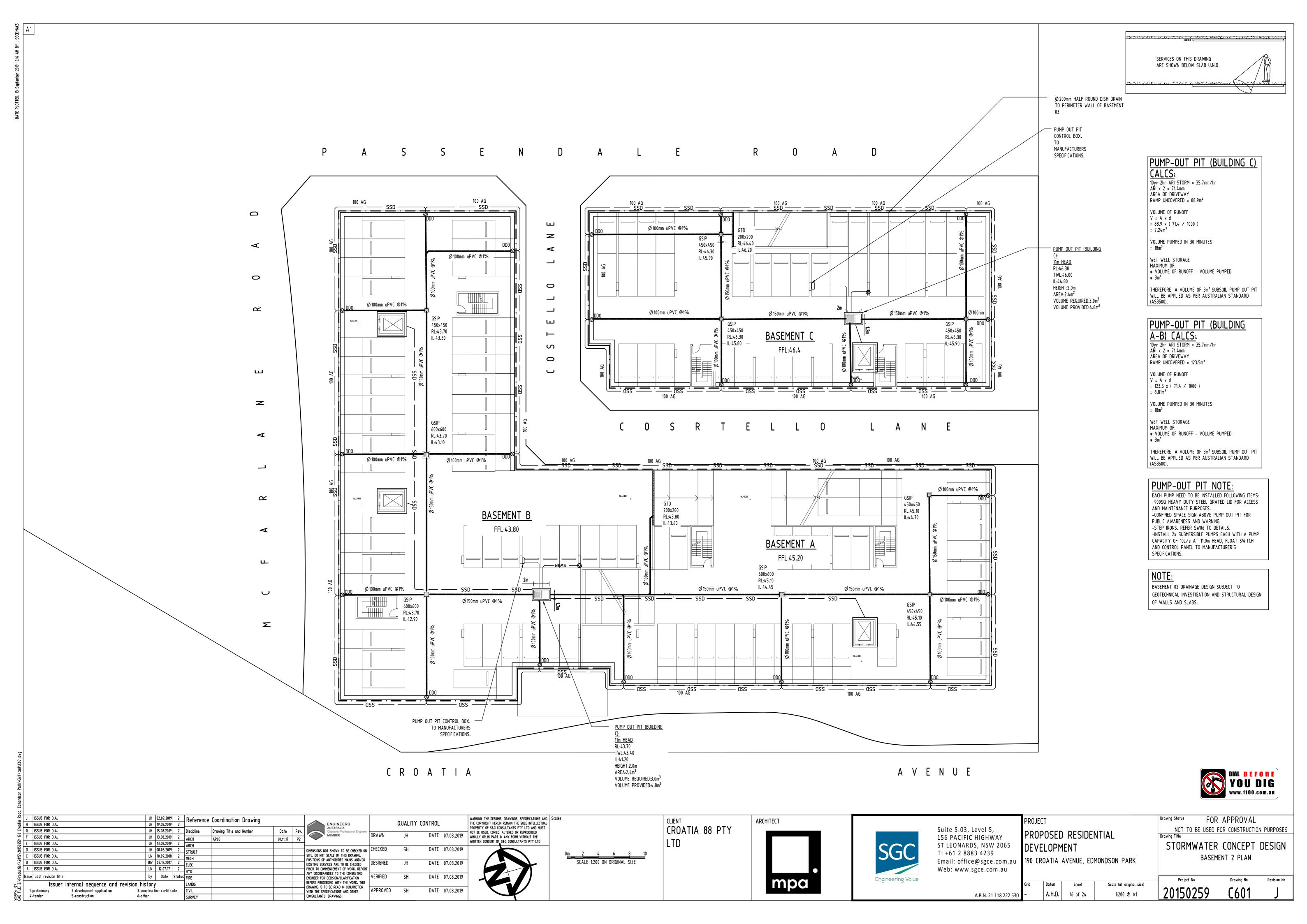


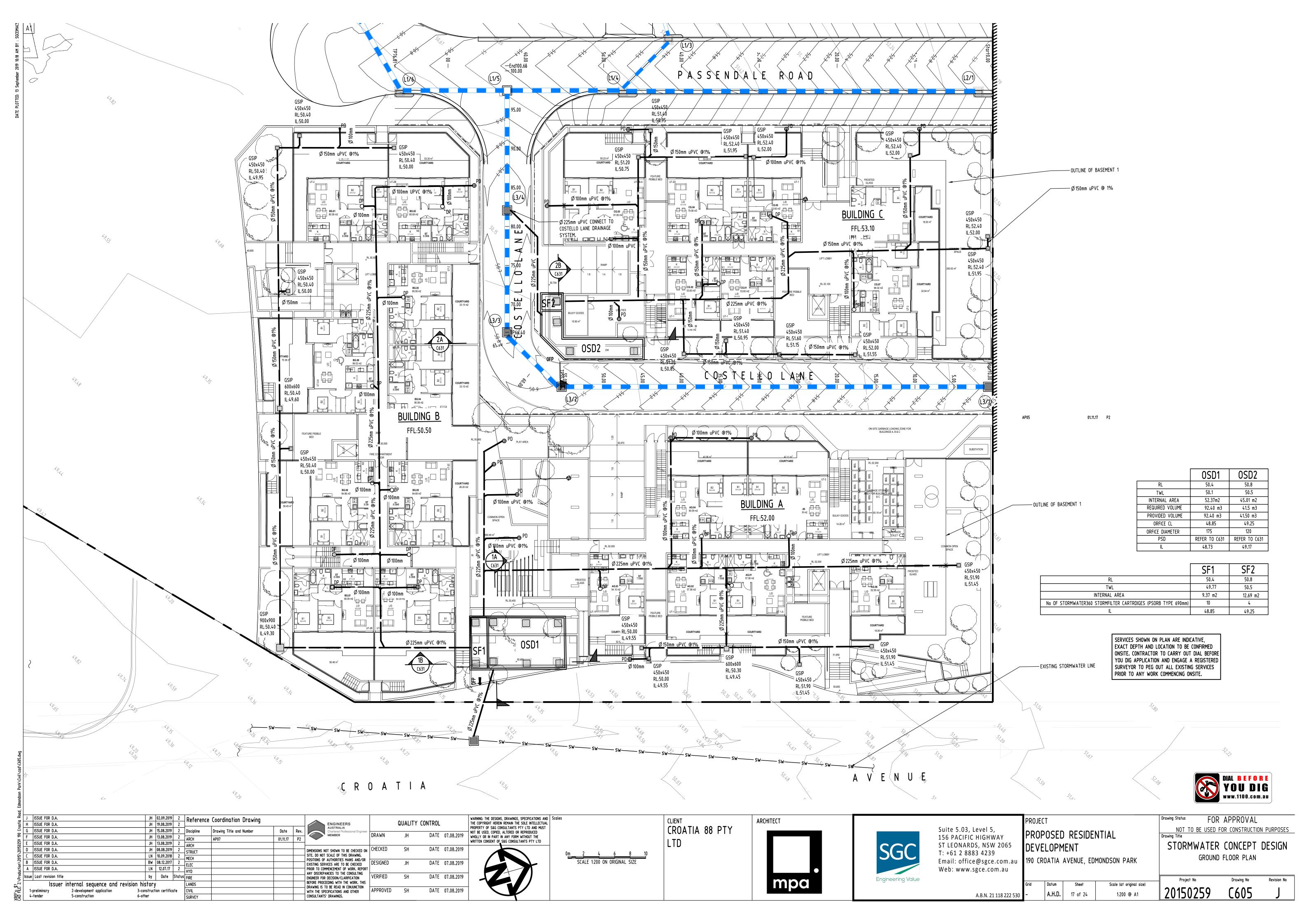


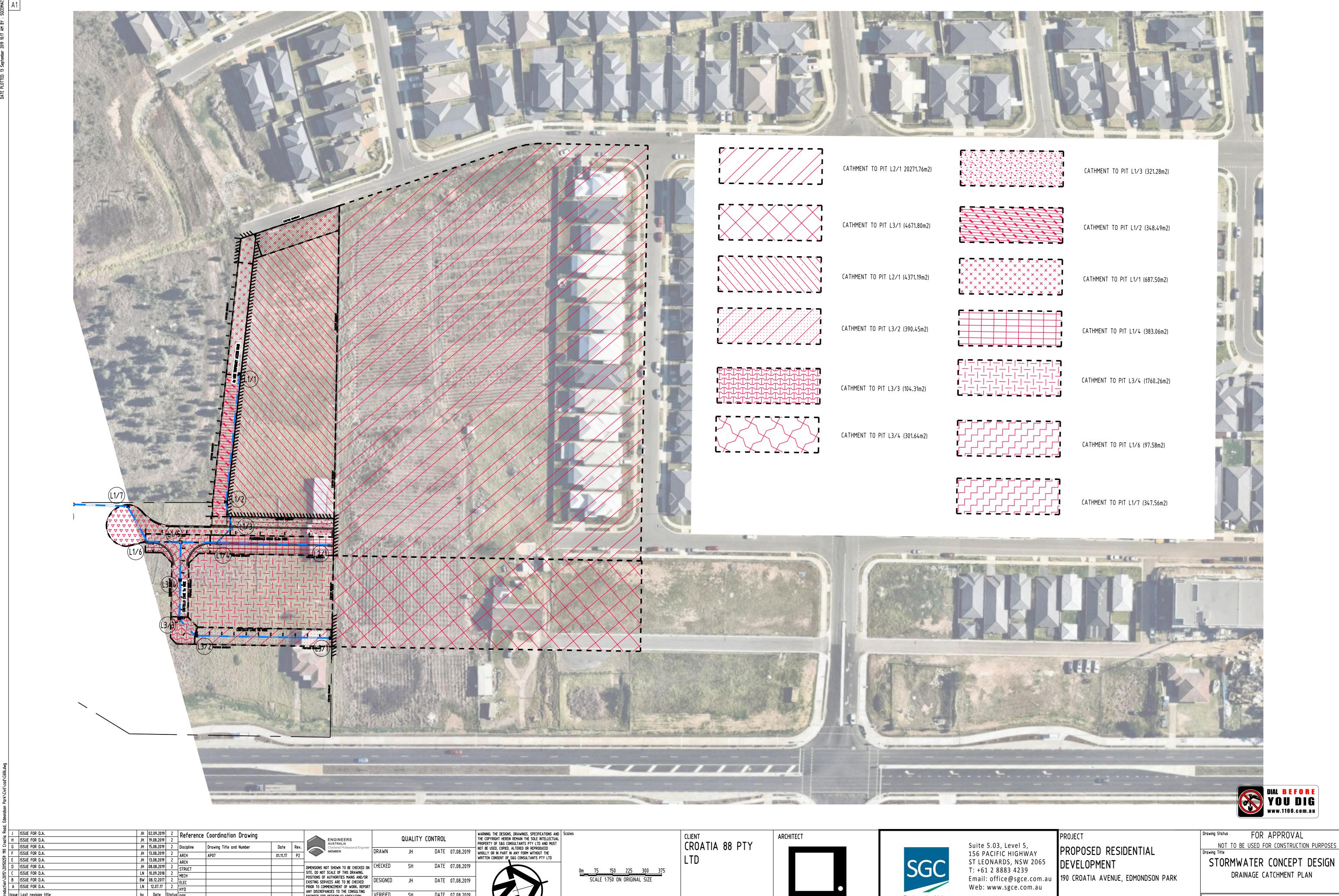




J REVISED CIVIL WORKS DRAWING FOR D.A.  H REVISED CIVIL WORKS DRAWING FOR D.A.  G REVISED CIVIL WORKS DRAWING FOR D.A.  JH 19.08.2019  F REVISED CIVIL WORKS DRAWING FOR D.A.  JH 13.08.2019  E REVISED CIVIL WORKS DRAWING FOR D.A.  JH 13.08.2019  D REVISED CIVIL WORKS DRAWING FOR D.A.  JH 07.08.2019  B ISSUE FOR D.A.  BW 08.12.2017  A ISSUE FOR D.A.  BW 07.12.2017	MECH 2 ELEC HYD	Date Rev.    Chartered Professional Engineer   DRAWN   JH	DATE 07.08.2019  DATE 07.08.2019  DATE 07.08.2019  DATE 07.08.2019  DATE 07.08.2019  DATE 07.08.2019	CLIENT CROATIA 88 PTY LTD	ARCHITECT	SGC	ST LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au	PROPOSED RESIDENTIAL DEVELOPMENT  190 CROATIA AVENUE, EDMONDSON PARK	NOT TO BE USED FO  Drawing Title  CIVIL WORKS  TYPICA		
Issue Last revision title by Date St  Issuer internal sequence and revision history	LANDS	ENGINEER FOR DECISION/CLARIFICATION VERIFIED SH  BEFORE PROCEEDING WITH THE WORK. THIS	DATE 07.08.2019		mpa	Engineering Value		Grid Datum Sheet Scale (at original size)	Project No	Drawing No	Revision No
1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other	CIVIL SURVEY	DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.  APPROVED SH	DATE 07.08.2019		TIP G		A.B.N. 21 118 222 530	- A.H.D. 15 of 24 AS SHOWN @ A1	20150259	C502	J







DATE 07.08.2019

DATE 07.08.2019

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BEFORE PROCEEDING WITH THE WORK. THIS

DRAWING IS TO BE READ IN CONJUNCTION

WITH THE SPECIFICATIONS AND OTHER

Issue Last revision title

Issuer internal sequence and revision history

2-development application

by Date Status FIRE

3-construction certificate

6-other

Datum

A.B.N. 21 118 222 530

**A.H.D.** 18 of 24

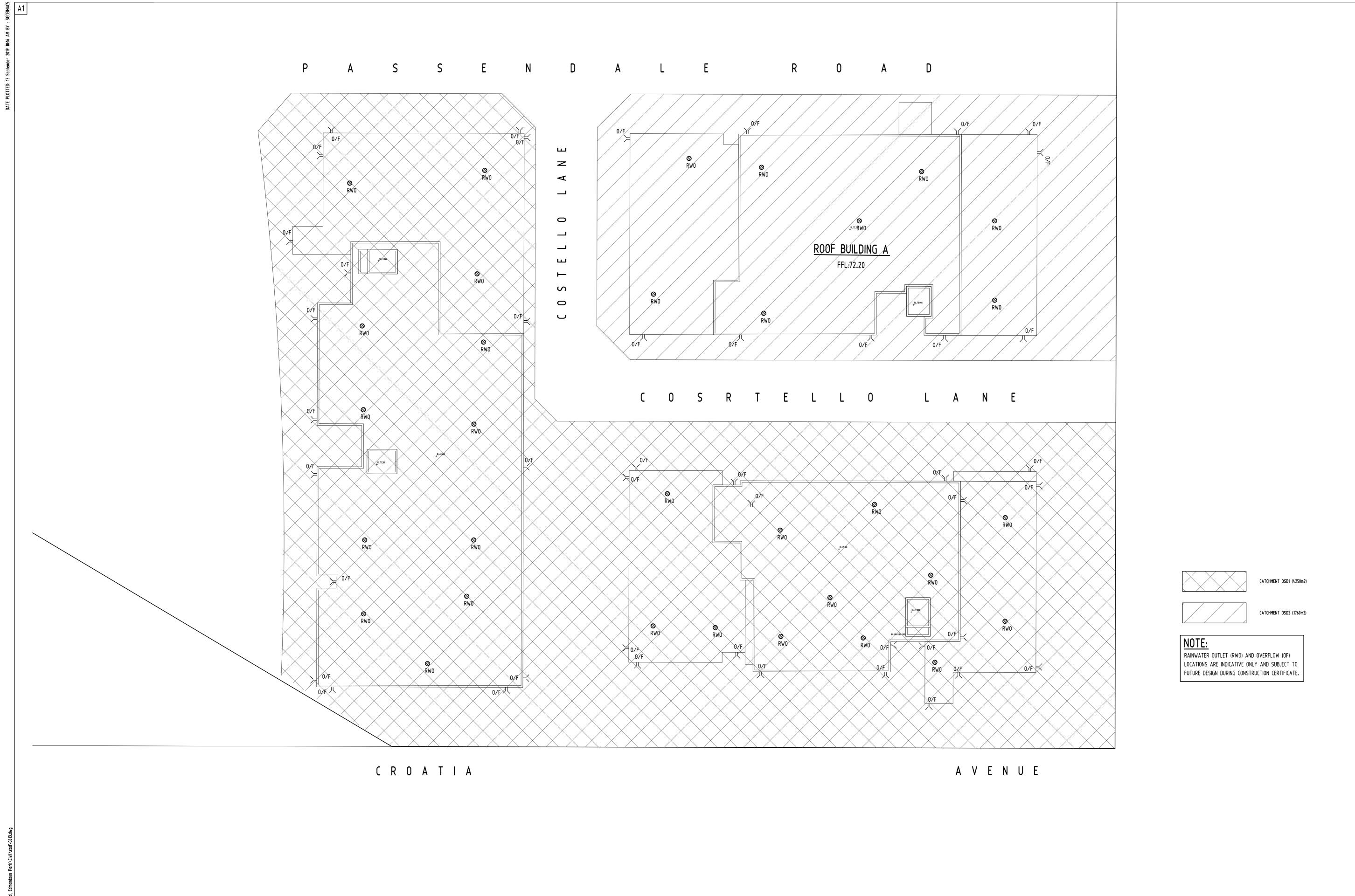
Engineering Value

mpa

DRAINAGE CATCHMENT PLAN

Scale (at original size) 1:1000 @ A1

20150259 **C606** 



J ISSUE FOR D.A.
H ISSUE FOR D.A. FOR APPROVAL WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL ARCHITECT PROJECT QUALITY CONTROL ENGINEERS AUSTRALIA CROATIA 88 PTY PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST Suite 5.03, Level 5, NOT TO BE USED FOR CONSTRUCTION PURPOSES G ISSUE FOR D.A. JH 15.08.2019 2 Discipline Drawing Title and Number NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD PROPOSED RESIDENTIAL JH 13.08.2019 2 ARCH 156 PACIFIC HIGHWAY DRAWN F ISSUE FOR D.A. JH 13.08.2019 2 ARCH

JH 08.08.2019 2 STRUCT

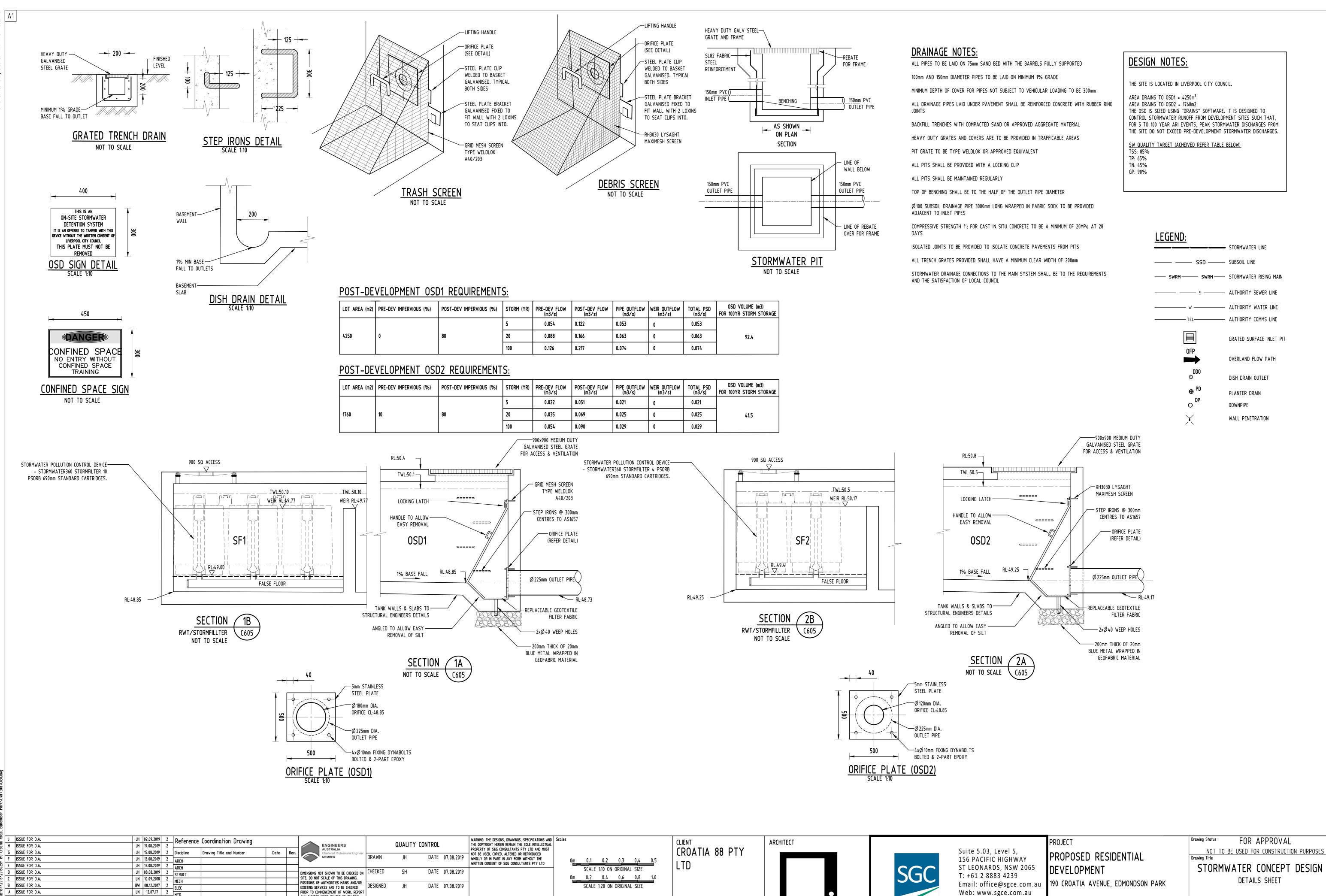
LN 10.09.2018 2 MECH

BW 08.12.2017 2 ELEC

LN 12.07.17 2 HYD E ISSUE FOR D.A.
D ISSUE FOR D.A.
C ISSUE FOR D.A.
B ISSUE FOR D.A.
A ISSUE FOR D.A. STORMWATER CONCEPT DESIGN ST LEONARDS, NSW 2065 DEVELOPMENT SCALE 1:200 ON ORIGINAL SIZE 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 DATE 07.08.2019 T: +61 2 8883 4239 ROOF PLAN Email: office@sgce.com.au 190 CROATIA AVENUE, EDMONDSON PARK DATE 07.08.2019 Web: www.sgce.com.au ANY DISCREPANCIES TO THE CONSULTING Issue Last revision title by Date Status FIRE DATE 07.08.2019 ENGINEER FOR DECISION/CLARIFICATION

BEFORE PROCEEDING WITH THE WORK. THIS Engineering Value mpa Issuer internal sequence and revision history Datum Scale (at original size) — DRAWING IS TO BE READ IN CONJUNCTION 20150259 C613 APPROVED SH DATE 07.08.2019 3-construction certificate 1-preliminary 4-tender 2-development application WITH THE SPECIFICATIONS AND OTHER **A.H.D.** 19 of 24 1:200 @ A1 A.B.N. 21 118 222 530 5-construction 6-other SURVEY CONSULTANTS' DRAWINGS.





Engineering Value

Datum

A.B.N. 21 118 222 530

**A.H.D.** 21 of 24

Scale (at original size)

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ssue Last revision title

Issuer internal sequence and revision history

2-development application

5-construction

by Date Status FIRE

SURVEY

3-construction certificate

6-other

DATE 07.08.2019

DATE 07.08.2019

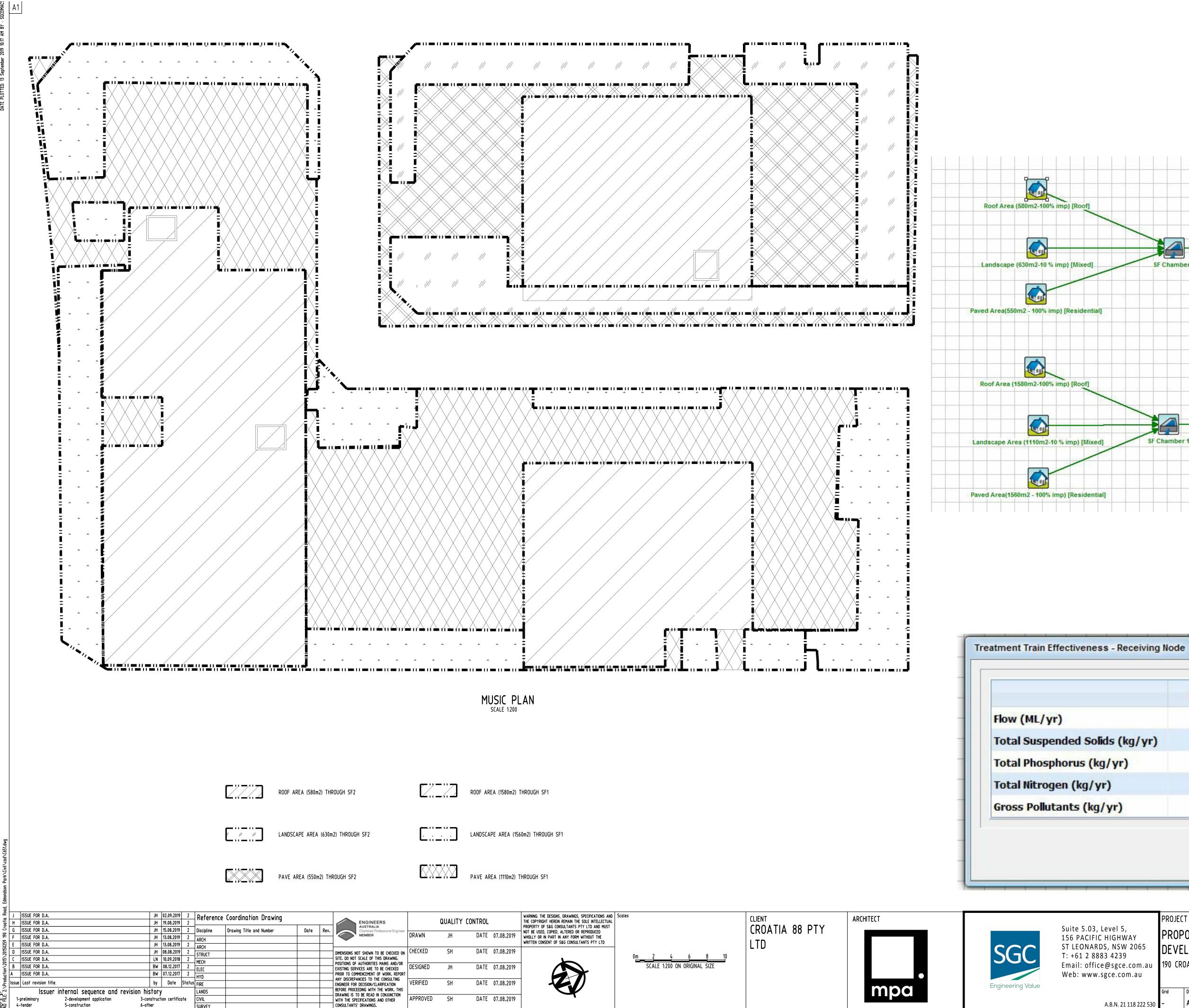
APPROVED SH

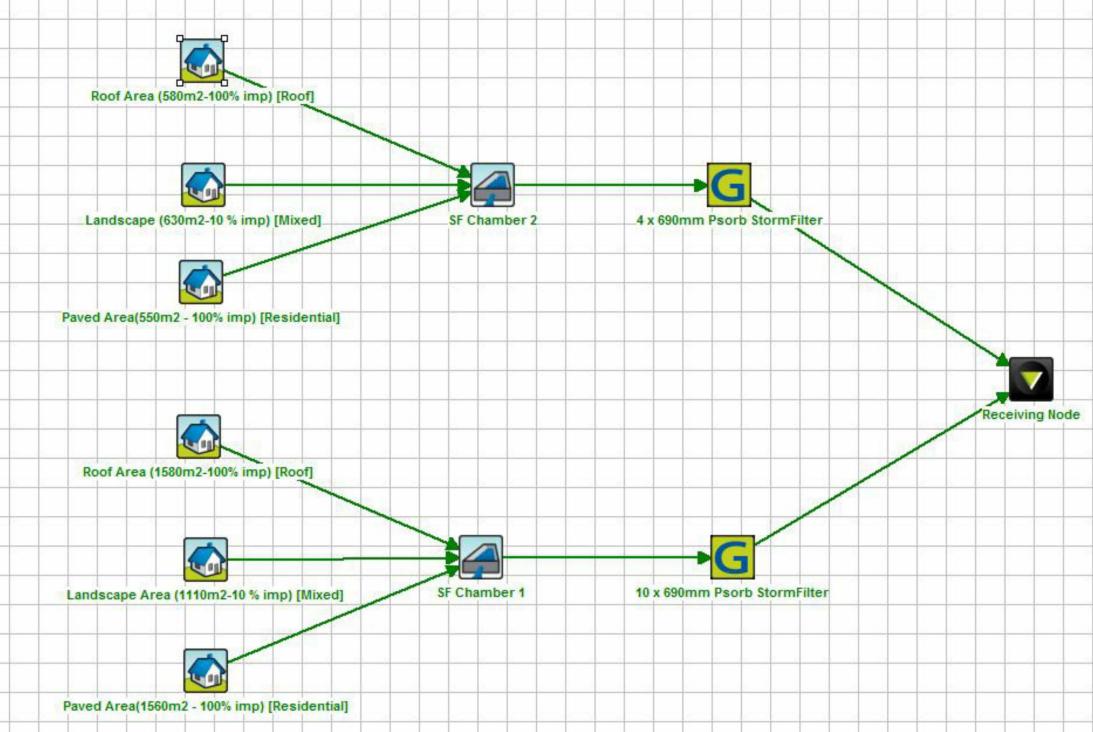
ENGINEER FOR DECISION/CLARIFICATION

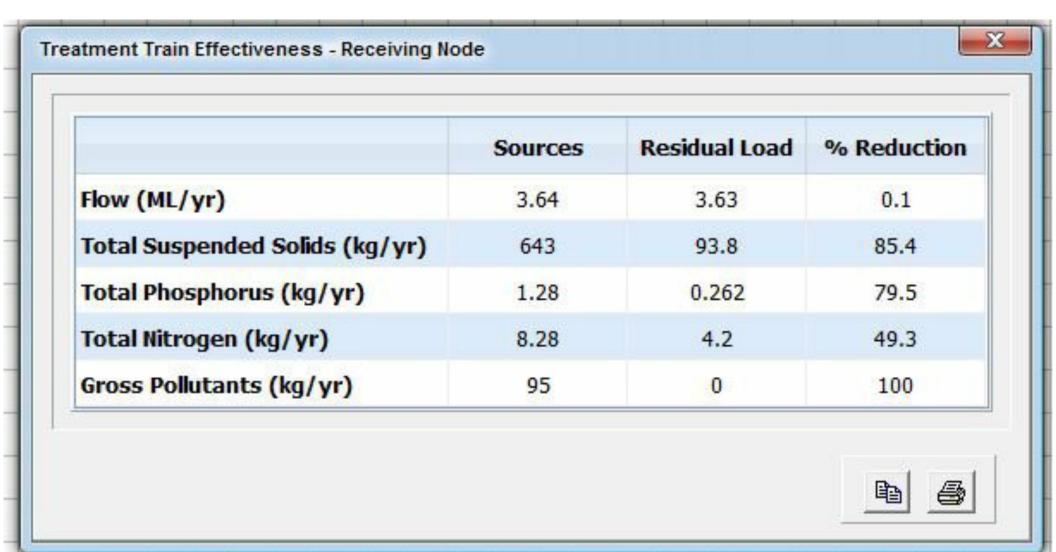
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WITH THE SPECIFICATIONS AND OTHER







PROPOSED RESIDENTIAL
DEVELOPMENT
190 CROATIA AVENUE, EDMONDSON PARK

AS SHOWN

Datum

**A.H.D.** 22 of 24

Prawing Status FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

Prawing Title

STORMWATER CONCEPT DESIGN

MUSIC CATCHMENT PLAN

Project No Drawing No Revision No 20150259 C651 J

4-tender

E ISSUE FOR D.A.
D ISSUE FOR D.A.
C ISSUE FOR D.A. JH 08.08.2019 2 STRUCT ISSUE FOR D.A. 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

2-development application

5-construction

3-construction certificate

SURVEY

6-other

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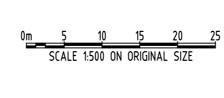
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DEVELOPMENT 190 CROATIA AVENUE, EDMONDSON PARK

EROSION AND SEDIMENT CONTROL PLAN AND DETAILS

FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

EXISTING ROAD

600mm<sub>1</sub>MAX

Datum Scale (at original size) 20150259 **A.H.D.** 23 of 24 AS SHOWN A.B.N. 21 118 222 530

