

NICHOLSON PLACE, ST LEONARDS
59-67 CHRISTIE STREET AND 46-50 NICHOLSON
STREET, ST LEONARDS

CLIENT:

CORONATION

LOT(S): LOT 1 on DP949064, LOT B on DP334878,
LOT 2 on DP528060, LOT 2 on DP945933, SP18047,
SP54127, LOT A on DP334878 & LOT 11 on DP654462
LGA: LANE COVE

CIVIL WORKS AND STORMWATER
APPROVAL DRAWINGS

PLAN INDEX

24-1018-CIV-1000	COVER SHEET
24-1018-CIV-1001	GENERAL NOTES SHEET 1
24-1018-CIV-1002	GENERAL NOTES SHEET 2
24-1018-CIV-1004	EXISTING SITE PLAN
24-1018-CIV-1005	GENERAL ARRANGEMENT PLAN
24-1018-CIV-1020	CIVIL WORKS PLAN SHEET 1 LOWER GROUND
24-1018-CIV-1021	CIVIL WORKS PLAN SHEET 2 UPPER GROUND
24-1018-CIV-1040	OSD TANK PLAN
24-1018-CIV-1041	OSD TANK SECTIONS AND DETAILS
24-1018-CIV-1050	MUSIC CATCHMENT PLAN
24-1018-CIV-1051	STORMWATER CATCHMENT PRE-DEVELOPMENT PLAN
24-1018-CIV-1052	STORMWATER CATCHMENT POST-DEVELOPMENT PLAN
24-1018-CIV-1060	EROSION AND SEDIMENT CONTROL PLAN
24-1018-CIV-1061	EROSION AND SEDIMENT CONTROL DETAILS



NICHOLSON PLACE, ST LEONARDS

SITE LOCATION PLAN
NOT TO SCALE

IMAGE COURTESY OF SIX MAPS

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ORIGIN OF SURVEY
PROJECT: NICHOLSON PLACE ST LEONARDS
SURVEYOR: SDG PTY LTD
SSM/PM: SSM86492 83.697
LOCATION: -
RL: 83.697 (mAHD)

CONTOURS ARE INDICATIVE AT GROUND FORM ONLY. SPOT LEVELS ONLY SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION.

ALL SETOUT LEVELS MUST BE REFERRED TO THE BENCH MARK SHOWN ON THIS PLAN.

A BASIC BOUNDARY SURVEY HAS BEEN DONE SUITABLE FOR DA LODGEMENT PURPOSES.

SURVEY INFORMATION NOTES

THE ORIENTATION OF THIS PLAN IS MGA NORTH WHICH HAS BEEN DETERMINED BY DP1267230.

THE FOLLOWING INFORMATION RELATES TO THE RESPECTIVE CERTIFICATE
OF TITLE OF EACH LOTS:

- LOT 1 IN DP459533
(CT EDITION 14 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
LOT 11 IN DP654462
(CT EDITION 8 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
LOT A IN DP334878
(CT EDITION 10 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
LOT B IN DP334878
(CT EDITION 15 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
LOT 1 IN DP49064
(CT EDITION 15 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
LOT CP IN SP18047
(CT EDITION 1 DATED 04/10/1995 SEARCH DATE 20/05/2025)
- THERE ARE NO NOTATIONS ON THE CERTIFICATE OF TITLE
- LOT 2 IN DP528060
(CT EDITION 17 DATED 08/11/2024 SEARCH DATE 20/05/2025)
- AFFECTED BY:
- RIGHT OF CARRIAGEWAY 3.05 WIDE SHOWN (A)
(DP528060)
- EASEMENT TO PERMIT ENCROACHING STRUCTURE
0.04 WIDE SHOWN (B) (SP54127)
LOT CP IN SP54127
(CT EDITION 1 DATED 07/04/1997 SEARCH DATE 20/05/2025)
- BENEFITED BY:
- RIGHT OF CARRIAGEWAY 3.05 WIDE SHOWN (A)
(DP528060)
- EASEMENT TO PERMIT ENCROACHING STRUCTURE
0.04 WIDE SHOWN (B) (SP54127)

SERVICES NOTES

UNDERGROUND SERVICES HAVE BEEN PLOTTED FROM 'DIAL-BEFORE-YOU-DIG' PLANS, ARE QUALITY LEVEL D AS DEFINED BY AS 5488.1:2022 AND ARE ONLY CURRENT AT THE DATE OF SEARCH.

ALL RELEVANT AUTHORITIES MUST BE CONTACTED TO DETERMINE THE FULL
EXTENT OF SERVICES PRIOR TO ANY PLANNING OR WORKS NEAR THE SITE.

1. AT THE COMMENCEMENT OF THE CUT AND FILLING OPERATIONS FOR BULK EARTHWORKS A GEOTECHNICAL ENGINEER IS TO VISIT THE SITE AND CONFIRM THE SUITABILITY OF THE METHODOLOGY OF ACHIEVING THE REQUIRED BUILDING PLATFORMS AND COMPACTION REQUIREMENTS SUBSEQUENTLY, THE HEAD CONTRACTOR IS TO CONFIRM, IN WRITING TO THE SUPERINTENDENT THAT THE METHODOLOGY APPROVED AT THE TIME OF THE GEOTECHNICAL ENGINEERS VISIT WAS MAINTAINED DURING ALL THE BULK EARTHWORKS PROCESS.
2. STRIP TOPSOIL, ORGANIC MATTER AND RUBBLE FROM CONSTRUCTION AREA TO EXPOSE NATURAL OCCURRING MATERIAL AND STOCKPILE ON SITE AS DIRECTED BY THE SUPERINTENDENT.
3. WHERE FILLING, STRUCTURAL SLABS OR PAVEMENTS ARE REQUIRED, PROOF ROLL THE EXPOSED NATURAL SURFACE WITH A MINIMUM OF TEN PASSES OF A SMOOTH DRYUM NON-VIBRATING ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER) IN THE PRESENCE OF THE SUPERINTENDENT. THE CONTRACTOR IS TO ALLOW TO REMOVE AND REPLACE A PROVISIONAL QUANTITY OF UNSUITABLE SUBGRADE MATERIAL.
4. ALL SOFT, WET OR UNSUITABLE MATERIAL IS TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
5. EXCAVATED MATERIAL IS NOT TO BE USED AS STRUCTURAL FILL UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER.
6. THE CONTRACTOR IS TO PROVIDE CERTIFICATES VERIFYING THE QUALITY OF IMPORTED MATERIAL FOR THE SUPERINTENDENTS APPROVAL.

LOCATION	COMPACTION REQUIREMENT
UNDER BUILDING SLABS	98% SMDD
LANDSCAPED AREAS	95% SMDD
ROADS & PAVED AREAS	100% SMDD
8. FOR NON COHESIVE MATERIAL, COMPACT TO NOT LESS THAN	
LOCATION	COMPACTION REQUIREMENT
UNDER ROAD	80% DENSITY
OTHER AREA	75% DENSITY

- THE CONTRACTOR IS TO ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR PLATFORMS AND FILL LAYERS IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 - FOR TYPE 1 OPERATIONS (MINIMUM 3 TESTS PER LAYER).
10. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN:
 - 10.1. 1 TEST PER 200m² OF FILL PLACED PER LAYER OF FILL
 - 10.2. 3 TESTS PER VISIT
 - 10.3. 1 TEST PER 1000m² OF EXPOSED SUBGRADE
11. TESTING SHALL BE "LEVEL 1" UNDERTAKEN IN ACCORDANCE WITH AS 3798.
12. WHERE TEST RESULTS ARE BELOW THE SPECIFIED COMPACTION, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION STANDARD IS ACHIEVED.
13. ALLOW FOR EXCAVATION IN ALL MATERIALS AS FOUND U.N.O. NO ADDITIONAL PAYMENTS WILL BE MADE FOR EXCAVATION IN WET OR HARD GROUND.
14. WHERE THERE IS INSUFFICIENT EXCAVATED MATERIAL SUITABLE FOR FILLING OR SUBGRADE REPLACEMENT, THE CONTRACTOR IS TO ALLOW TO IMPORT FILL. IMPORTED FILL SHALL COMPLY WITH THE FOLLOWING:
 - 14.1. MAXIMUM SIZE 50mm; PASSING 75 MICRON SIEVE (<25%).
 - 14.2. PLASTICITY INDEX BETWEEN 2-15% AND CBR=8.
 - 14.3. FREE FROM ORGANIC AND PERISHABLE MATTER.
15. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF 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 UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED AT THEIR COST.
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND MAINTAIN THE INTEGRITY OF ALL SERVICES, CONDUITS AND PIPES DURING CONSTRUCTION. SPECIFICALLY DURING THE BACKFILLING AND THE PROTECTION PROCEDURE. ANY AND ALL DAMAGE TO NEW OR EXISTING SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST.
17. PROTECT FINAL SURFACE WITH EITHER A TEMPORARY LOOSE SOIL LAYER OR A GRANULAR SUB-BASE LAYER TO PREVENT DRYING OUT PRIOR TO ON-GROUND SLAB CONSTRUCTION.

1. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH LANE COVE COUNCIL TECHNICAL SPECIFICATIONS

2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT OR PROJECT MANAGER BEFORE PROCEEDING WITH THE WORK

3. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS. ALL LEVELS ARE IN METRES (m) U.N.O AND TO THE AUSTRALIAN HEIGHT DATUM (AHD)

1. ALL WORKS TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, SPECIFICATIONS AND AUSTRALIAN STANDARDS. CONFLICTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION.
2. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO THE SUPERINTENDENT OR PROJECT MANAGER
3. THE CONTRACTOR IS TO DESIGN, OBTAIN APPROVALS AND CARRY OUT REQUIRED TEMPORARY TRAFFIC CONTROL PROCEDURES DURING CONSTRUCTION IN ACCORDANCE WITH TNSW AND LOCAL AUTHORITY REGULATIONS AND REQUIREMENTS.
4. THE CONTRACTOR IS TO OBTAIN ALL AUTHORITY APPROVALS AS REQUIRED.
5. RESTORE ALL PAVED, COVERED, GRASSED AND LANDSCAPED AREAS TO THEIR ORIGINAL CONDITION ON COMPLETION OF WORKS.
6. ON COMPLETION OF ANY TRENCHING WORKS, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL, GRASSED AREAS AND ROAD PAVEMENTS.
7. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR
8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO LODGMENT OF TENDER AND ON SITE WORKS. THE PRICE AS TENDERED SHALL BE INCLUSIVE OF ALL WORKS SHOWN ON THE TENDER PROJECT DRAWINGS. ADDITIONAL PAYMENTS FOR WORKS SHOWN ON THE TENDER PROJECT DRAWINGS WILL NOT BE APPROVED.
9. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND SPECIFICATIONS, AND ANY OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING TO DEVELOPMENT OF THE SUBJECT SITE.
10. THESE PLANS SHALL BE READ IN CONJUNCTION WITH ALL APPROVED DRAINAGES AND SPECIFICATIONS PREPARED BY OTHER PROJECT CONSULTANTS.
11. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS. ALL LEVELS ARE IN METRES (m), UNL. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
12. IN CASE OF DOUBT OR DISCREPANCY REFER TO THE SUPERINTENDENT FOR CLARIFICATION OR CONFIRMATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. OTHERWISE THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REMEDIATION WORKS.
13. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
14. THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AND INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
15. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO ALL BUILDINGS ADJACENT THE WORKS IS NOT DISRUPTED.
16. WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE SITE.
17. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
18. ALL VARIATIONS TO SPECIFIED PRODUCTS OR DESIGNS SHALL BE REFERRED TO THE DESIGN ENGINEER IN WRITING FOR APPROVAL.
19. ALL NOISE AND VIBRATION REQUIREMENTS MUST BE ADHERED TO REGARDING THE LEVEL OF NOISE AND WORKING HOURS, TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBOURS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.

STORMWATER DESIGN CRITERIA:

1. ANNUAL EXCEEDANCE PROBABILITY :
1% AEP ROOF TO OSD/RWT
5% AEP EXTERNAL ROAD/GROUND FLOOR
2. RAINFALL INTENSITIES
TIME OF CONCENTRATION: 5 MINS
1% AEP: 265 mm/hr
5% AEP: 200 mm/hr
3. RUNOFF COEFFICIENT:
EXTERNAL HARDESTADT: $C_{ROFF} = 1.0$
4. PIPES 375 DIA AND LARGER SHALL BE REINFORCED CONCRETE CLASS '4' APPROVED SPOUT AND SOCKET WITH RUBBER RING JOINTS, U.N.O.
5. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 TO DETERMINE THE APPROPRIATE PIPE CLASS. ANY CHANGES IN PROPOSED PIPE CLASS SHALL BE SUBMITTED TO THE SUPERINTENDENT AND PROJECT MANAGER FOR APPROVAL PRIOR TO INSTALLATION.
6. PIPES UP TO 375 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
7. EQUIVALENT STRENGTH BLACKMAXX (OR EQUIVALENT) OR FRC PIPES MAY BE USED, SUBJECT TO THE APPROVAL BY DESIGN ENGINEER INTERNAL TO THE SITE
8. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE ENSURE ALL VERTICALS AND DOWNPIPPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
9. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
10. PIPES WITHIN ROAD RESERVE ARE TO BE INSTALLED IN ACCORDANCE WITH LOCAL COUNCIL OR TRNSW STANDARDS AS APPLICABLE
11. ALL INTERNAL WORKS WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS3500.1-3
12. GRATES AND COVERS SHALL CONFORM WITH AS 3996 AND AS 1428.1 FOR ACCESS REQUIREMENTS.
13. USE HOT DIPPED GALVANISED GRATES AND CONCRETE FILLED COVERS WITH HINGES AND HOLD DOWN BOLTS COMPLYING WITH AS3996 AND OTHER RELEVANT AUSTRALIAN AND COUNCIL STANDARDS.
14. ALL COVERS AND GRATES TO BE POSITIONED IN A FRAME AND MANUFACTURED AS A UNIT.
15. ALL COVERS AND GRATES TO BE FITTED WITH POSITIVE COVER LIFTING KEYS AND LOCK LOCKABLE.
16. OBTAIN SUPERINTENDENT'S APPROVAL FOR THE USE OF CAST IRON SOLID COVERS TO CONIST OF CROSS-WEBBED, CELLULAR CONSTRUCTION WITH THE RIBS UPPERMOST TO ALLOW INFILLING WITH CONCRETE. INSTALL POSITIVE COVER LIFTING KEYS AND PLASTIC PLUGS.
17. UNLESS DETAILED OR SPECIFIED OTHERWISE COVERS AND GRATES TO BE CLASS 'D' IN VEHICULAR PAVEMENTS AND CLASS 'B' ELSEWHERE
18. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
19. SUBSOIL Ø100mm DRAINAGE LINES SHALL BE CONNECTED TO A STORMWATER DRAINAGE PIT AND PROVIDED IN THE FOLLOWING LOCATIONS:
 - 11.1. ADJACENT ALL TRAFFICKED AND CARPARK PAVEMENT AREAS (BEHIND KERB);
 - 11.2. ALL PLANTER AND TREE BEDS PROPOSED ADJACENT TO PAVEMENT AREAS;
 - 11.3. BEHIND RETAINING WALLS (IN ACCORDANCE WITH DRAWINGS);
 - 11.4. BELOW ALL TRAFFICABLE DISH DRAINS;
 - 11.5. ALL OTHER AREAS SHOWN ON THE DRAWINGS.
20. THE CONTRACTOR SHALL INSTALL FLUSHING POINTS TO ALL SUBSOIL DRAINAGE LINES AND DOWNPIPE LINES AS SPECIFIED ON DRAWINGS, AT MAXIMUM CENTRES TO COUNCIL SPECIFICATION AND AT ALL UPSTREAM ENDPOINTS.
21. PROVIDE 3.0m LENGTH OF Ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC, TO THE UPSTREAM SIDE OF STORMWATER PITS, LAID IN STORMWATER PIPE TRENCHES AND CONNECTED TO THE DRAINAGE PIT.
22. SUBSOIL TRENCHES SHALL BE BACKFILLED WITH SINGLE SIZED 10mm AGGREGATE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC. SUBSOIL TRENCHES BELOW TRAFFICABLE PAVEMENTS SHALL BE BACKFILLED WITH NO FINES CONCRETE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC, U.N.O.
23. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES ARE NOT TO BE REDUCED WITHOUT APPROVAL.
24. THE CONTRACTOR SHALL ENSURE AND PROTECT THE INTEGRITY OF ALL STORMWATER PIPES DURING CONSTRUCTION. ANY AND ALL DAMAGE TO THESE PIPES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA COST
25. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT FOR FURTHER DIRECTIONS.
26. CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F_{CD}) OF 32 MPa AT 28 DAYS.
27. REINFORCEMENT REFER TO STORMWATER DETAILS
28. ALL STORMWATER PITS ARE TO BE CAST IN-SITU IN ACCORDANCE WITH THE STORMWATER DETAILS, UNLESS APPROVED BY THE COUNCIL/UPCA.
29. IF APPROVED BY THE DESIGN ENGINEER, PRE-CAST STORMWATER PITS CAN BE USED WITHIN THE SITE BOUNDARIES. ALL PRE CAST PITS TO BE PLACED ON A 150mm LAYER OF COMPACTED GRANULAR BEDDING MATERIAL. FOUND ON SUBGRADE WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPA UP TO 3.0m DEPTH TO INVERT OR 150KPA FROM 3.0m TO 5.0m DEPTH TO INVERT. (MIN 100mm DEEP 28MPa OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED)
30. PIT INSTALLATION AND JOINTING PITS TO PITS SHALL BE UNDERTAKEN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
31. ANY ADDITIONAL PENETRATIONS SHALL BE CORE DRILLED. DEMOLITION SALS ARE NOT TO BE USED IN ANY CIRCUMSTANCES.
32. FINAL INTERNAL PIT DIMENSIONS ARE TO COMPLY WITH AS 3500.3

1. ALL UTILITY SERVICES INDICATED ON THE DRAWINGS ORIGINATE FROM SUPPLIED DATA. THEREFORE THEIR ACCURACY AND COMPLETENESS IS NOT GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
2. CARE TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER ALL LIVE SERVICES. HAND EXCAVATION ONLY IN THESE AREAS.
3. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING SERVICES THAT ARE TO BE RETAINED IN THE VICINITY OF THE PROPOSED WORKS. ANY AND ALL DAMAGE TO THESE SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA COST.
4. THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR ADJUSTMENT (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS.
5. THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS UNLESS DIRECTED OTHERWISE ON THE DRAWINGS OR BY THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
7. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THE PROGRAM FOR THE RELOCATION AND/OR CONSTRUCTION OF TEMPORARY SERVICES AND FOR ANY ASSOCIATED INTERRUPTION OF SUPPLY.
8. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
9. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION A THOROUGH SEARCH OF ALL SERVICE AUTHORITIES SHOULD BE MADE TO DETERMINE THE POSSIBLE LOCATION OF ANY FURTHER UNDERGROUND SERVICES.
10. AUTHORITY PLANS GENERALLY SHOW ONLY THE PRESENCE OF CABLES AND PLANT AND DO NOT WARRANT OR GUARANTEE THAT SUCH PLANS ARE ACCURATE. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR EXISTING SERVICES AND PLANT. BEFORE USING MACHINE EXCAVATORS SERVICES MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION.
11. THE CONTRACTOR IS TO UNDERTAKE A DIAL-BEFORE-YOU-DIG SEARCH PRIOR TO ANY EXCAVATION AND MAINTAIN A CURRENT SET ON-SITE DURING EXCAVATION WORKS.
12. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. HJ CONSULT CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
13. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ON-SITE INCLUDING HAND EXCAVATION WHERE NECESSARY. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES

1. MAKE SMOOTH CONNECTION WITH EXISTING WORKS. MATCH NEW PAVEMENT LAYERS NEATLY AND FLUSH WITH EXISTING WHERE REQUIRED.
2. THE CONTRACTOR SHALL CONFIRM THE DESIGN CBR WITH A MINIMUM OF 3 TESTS TAKEN AT SUBGRADE LEVEL. WHERE DISCREPANCY IS FOUND, CONTACT THE SUPERINTENDENT AND PROJECT MANAGER
3. ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR: BASE LAYER, SUBBASE LAYER, SUBGRADE IN ACCORDANCE WITH THE LATEST VERSION OF AS3789 FOR PAVEMENTS. ALLOW FOR AT LEAST TWO COMPACTION TESTS IN EACH LAYER
4. KEY NEW BASE AND SUBBASE LAYERS INTO EXISTING WITH 150mm+ WIDE STEPS. ASPHALTIC CONCRETE WEARING COURSE IS TO EXTEND 150mm (MIN) PAST BASECOURSE INTERFACE.
5. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENT SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A 50mm MIN IN BITUMINOUS PAVING.
6. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL
7. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL. COMPACTED IN 150mm+ LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
8. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
9. ALL ASPHALTIC CONCRETE (AC) WORK TO BE PREPARED AND CARRIED OUT IN ACCORDANCE WITH GOOD ASPHALTIC PAVING PRACTICE AS DESCRIBED IN AS2734 'ASPHALT' (HOT-MIXED) PAVING - GUIDE TO GOOD PRACTICE' AND CURRENT TNSW SPECIFICATIONS (R116).
10. WHERE NOMINATED, THE CONTRACTOR SHALL ALLOW FOR ALL COMPONENTS OF PROPRIETARY JOINTING SYSTEMS INCLUDING FIXING, TEMPLATES & PEGGING TO ENSURE THAT ALL DOWEL BARS REMAIN IN THE CORRECT ALIGNMENT AND POSITION.
11. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW FORM 3051 (UNBOUND), RMS FORM 3052 (BOUND) COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m² OF BASECOURSE MATERIAL PLACED.
12. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH RMS FORM 3051 (UNBOUND), TNSW FORM 3052 (BOUND) COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m² OF BASECOURSE MATERIAL PLACED.
13. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL, AS PER ABOVE A CERTIFIED RECYCLED CONCRETE MATERIAL, COMPLYING WITH TNSW SPECIFICATION 3051 WILL BE CONSIDERED SUBJECT TO MATERIAL MANUFACTURER AND APPROVED CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF HJ CONSULT.
14. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.

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1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. CONCRETE QUALITY
ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F _c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS, PATHS, AND PITS	32	80	20

-
- 25 MIN
- LAP TWO WIRES

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32MPa U.N.O IN REINFORCED CONCRETE NOTES.
2. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 S 2.1).
3. EXPANSION JOINTS (E.J) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
5. BROOMED FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
6. IN THE REPLACEMENT OF KERB AND GUTTER -
 EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O FROM THE LIP OF GUTTER, UPON COMPLETION OF THE NEW KERB AND GUTTER, NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.

EXISTING KERB AND GUTTER IS TO BE COMPLETELY REMOVED
WHERE NEW KERB AND GUTTER IS SHOWN

PEDESTRIAN PAVEMENT

-
- Diagram showing the maximum length of a single section of the cable. The cable is divided into five segments: EJ, WPJ, WPJ, EJ, and WPJ. The total length is labeled as 6.0m MAX. A dimension line indicates that the length of the EJ segments is 1.5 x W.

VEHICULAR PAVEMENT

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- The diagram illustrates a cross-section of a two-lane road. The central section is labeled 'PAVEMENT' and contains two lanes, each labeled 'KJ'. The width of the pavement is indicated as '30.0m MAX'. On either side of the pavement is a shoulder labeled 'EDGE OF SHOULDER'. The width of each shoulder is indicated as '6.0m MAX'. The total width of the road section shown is '30.0m MAX'.

10. PROVIDE 10mm EXPANSION FOAM BETWEEN NEW CONCRETE WORKS AND EXISTING STRUCTURES
11. DOWELS TO BE PLACED ON PROPRIETARY CRADLES TO ENSURE CORRECT SPACING AND ALIGNMENT

10. PROVIDE 10mm EXPANSION FOAM BETWEEN NEW CONCRETE WORKS AND EXISTING STRUCTURES
11. DOWELS TO BE PLACED ON PROPRIETARY CRADLES TO ENSURE CORRECT SPACING AND ALIGNMENT

GENERAL INSTRUCTIONS

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION INCLUDING THE MAINTENANCE PERIOD.
2. THE EXTENT AND POSITION OF THE EROSION AND SEDIMENT CONTROL MEASURES TO BE DETERMINED ON SITE BY THE CONTRACTOR TO SUIT THE CONSTRUCTION PROGRAM.
3. THESE PLANS PRESENT CONCEPTS ONLY AND THE MEASURES SHOWN ON THIS DRAWING(S) ARE MINIMUM REQUIREMENTS ONLY.
4. THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHMENT, MANAGEMENT AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES TO MEET COUNCIL/EPA STANDARDS.
5. LARGE OPEN AREAS OR STEEP BATTERS SHOULD NOT BE LEFT EXPOSED/UNSTABILISED FOR MORE THAN 10 DAYS OR IF WET WEATHER IS FORECAST.
6. EXPOSED AREAS INCLUDING BATTERS WHICH REMAIN UN-WORKED FOR MORE THEN 10 DAYS SHOULD BE STABILISED USING TEMPORARY HYDROMULCHING, HYDROSEEDING OR MULCHING, EVEN IF AREAS WILL BE WORKED AT A LATER TIME.
7. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH :-
 - a) LOCAL AUTHORITY REQUIREMENTS
 - b) NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION" 4th EDITION, MARCH 2004
 - c) EPA REQUIREMENTS
8. THE CONTRACTOR SHALL BE AWARE OF ITS RESPONSIBILITIES FOR PROTECTING THE DOWNSTREAM ENVIRONMENT AND RECEIVING WATER FROM POLLUTION AND ENVIRONMENTAL HARM, UNDER THE ENVIRONMENTAL PROTECTION ACT 1994.
9. ADDITIONALLY THE CONTRACTOR SHALL BE AWARE OF ITS DUTY TO NOTIFY THE LOCAL AUTHORITY AND THE ENVIRONMENTAL PROTECTION AGENCY (NSW) OF A POTENTIAL OR ACTUAL INCIDENT OF ENVIRONMENTAL HARM, UNDER THE ENVIRONMENTAL PROTECTION ACT 1994.

RECOMMENDED IMPLEMENTATION SEQUENCE:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO WORKS COMMENCING AND IN THE FOLLOWING SEQUENCE.
- a. CONSTRUCT TEMPORARY STABILISED SITE ACCESS, ENSURING ADJACENT STORMWATER RUN OFF IS DIVERTED AWAY FROM ACCESS
 - b. INSTALL SEDIMENT FENCING AND/OR BARRIER FENCING TO CONFINE INGRESS TO AND ACCESS FROM THE SITE TO STABILISED ACCESS POINT(S) ONLY
 - c. PROVIDE INLET PROTECTION TO STORMWATER INLETS AND GULLIES ON ALL ROADS ADJOINING THE SITE.
 - d. CONSTRUCT BARRIER FENCING AROUND RESTRICTED 'NO-GO' ZONES OF RETAINED VEGETATION, AREAS NOT TO BE DISTURBED AND AREAS WHICH WILL REMAIN UN-WORKED AS REQUIRED.
 - e. CONSTRUCT UPSTREAM DIVERSION CHANNELS TO DIVERT CLEAN WATER AROUND WORKSITE, AND INSTALL APPROPRIATE CHANNEL STABILISATION.
 - f. CONSTRUCT LOW FLOW EARTH BANS AS CATCH DRAINS PARALLEL TO COURTS TO LIMIT LARGE SLOPE LENGTHS (SLOPES SHOULD BE LESS THEN 80M IN LENGTH).
 - g. INSTALL ALL TEMPORARY SEDIMENT FENCES
 - h. CONSTRUCT ANY NOMINATED SEDIMENT BASINS AND SEDIMENT TRAPS.
 - i. STABILISE ALL DISTURBED AREAS ASAP AND PROGRESSIVELY AS WORKS ARE COMPLETED. TEMPORARY STABILISATION TO BE DONE USING MULCHING, HYDROMULCHING, HYDROSEEDING OR DIRECT SEEDING TO GIVE A 70% COVERAGE OF GROUND SURFACE WITHIN 14 DAYS OF WORKS COMPLETING (EVEN IF WORKS MAY CONTINUE AFTER)
2. UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO MINIMUM WORKABLE AREAS.
3. DISTURBED AREAS TO EXTEND NO MORE THAN 5 METRES (PREFERABLY 2 METRES) FROM ESSENTIAL WORKS AREAS.
4. WORK AREAS TO BE DELINEATED BY BARRIER FENCING AND DIVERSION CHANNEL UPSLOPE AND SEDIMENT FENCING DOWNSLOPE.
5. THE CONTRACTOR SHALL ENSURE THAT THE EXISTING VEGETATION AND GROUND COVER IS RETAINED AS MUCH AS POSSIBLE.
6. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR LATER USE ONSITE.
7. SITE VEGETATION APPROVED FOR CLEARING SHOULD BE MULCHED AND STOCKPILED FOR LATER USE IN LANDSCAPING, STABILISATION AND/OR SITE REHABILITATION WORKS.
8. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND RECEIVING ENVIRONMENTS.
9. EROSION AND SEDIMENT CONTROL PROTECTION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONTRACT.
10. PLANS AND CONTROL MEASURES FOR LARGE SITES WILL NEED TO BE REVISED AND UPDATED TO REFLECT THE SITE STAGES AND PROGRESSION OF WORKS.
11. MEASURES INCLUDING SEDIMENT FENCES SHOULD BE MOVED AND REINSTATED AS WORKS PROGRESS.
12. FOOT AND VEHICULAR TRAFFIC TO BE RESTRICTED IN RECENTLY STABILISED AREAS INCLUDING THOSE HYDROSEEDED, TURFED OR SEEDED.
4. ALL VEHICLE AND EQUIPMENT WASHING SHOULD BE CONTAINED IN SPECIFIC BUNDED AREAS, DISCONNECTED FROM CONCENTRATED FLOW PATHS AND THE STORMWATER SYSTEM.
5. ANY NECESSARY VEHICLE OR EQUIPMENT REFUELLING SHOULD BE UNDERTAKEN AWAY FROM CONCENTRATED FLOW PATHS AND PREFERABLY WITHIN A BUNDED AREA.
6. ANY ONSITE FUEL STORAGE AREAS SHOULD BE COVERED AND BUNDED.
- MAINTENANCE OF PUBLIC ROADS
1. ALL CONSTRUCTION VEHICLES DEPARTING FROM THE SITE SHALL HAVE THEIR TYRES WASHED DOWN OR SEDIMENT REMOVED BY A STABILISED SITE ACCESS DEVICE.
 2. THE STABILISED SITE ACCESS AREAS SHALL BE LOCATED SUCH THAT SILTED WATER IS FILTERED THROUGH A SUITABLE SEDIMENT TRAP (SUCH AS A SEDIMENT FENCE) INSTALLED DOWNSTREAM OF ACCESS.
 3. THE CONTRACTOR SHALL INSPECT THE PUBLIC ROADS ADJACENT TO THE SITE DAILY AND MANUALLY REMOVE ANY SEDIMENT DEPOSITS (BY SWEEPING NOT WASH DOWN).
- SITE INSPECTION AND MAINTENANCE
1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED REGULARLY, IMMEDIATELY BEFORE SITE CLOSURE, PRIOR TO PREDICTED LARGE STORM EVENTS AND AFTER EVERY SIGNIFICANT (> 5mm) RAINFALL EVENT OR AT LEAST ON A WEEKLY BASIS.
 2. THE CONTRACTOR WILL AS A MINIMUM CONDUCT EACH INSPECTION IN LINE WITH THE FOLLOWING:
 - a. RECORD TYPE OF DEVICE/CONTROL MEASURE BEING INSPECTED AND ITS LOCATION.
 - b. RECORD THE CONDITION OF EVERY CONTROL MEASURE;
 - c. RECORD MAINTENANCE REQUIREMENTS FOR EVERY CONTROL DEVICE;
 - d. RECORD SEDIMENT VOLUMES REMOVED FROM SEDIMENT TRAPPING DEVICES;
 - e. RECORD DETAILS OF SEDIMENT BASIN TREATMENT, FLOCCULANT DOSAGE AND CLEANOUT;
 - f. RECORD SEDIMENT DISPOSAL PROCEDURES AND LOCATION.
 3. REPAIRS AND MAINTENANCE OF ALL DEVICES AND MEASURES INCLUDING DIVERSION CHANNELS SHALL BE UNDERTAKEN AS REQUIRED, ENSURING ALL MEASURES ARE FULLY FUNCTIONAL AT ALL TIMES.
 4. ENSURE SEDIMENT LADEN WATER HAS NOT BEEN DIVERTED AROUND DEVICES.
 5. REPAIR SCOUR DAMAGE TO SEDIMENT CONTROL MEASURES AFTER RAINFALL EVENTS AND REINSTATE DEVICES AS NECESSARY.
 6. SEDIMENT FENCES WILL REQUIRE CLEANING WHEN SEDIMENT REACHES 300MM DEPTH OR ONE-HALF THE HEIGHT OF THE FILTER FABRIC AND ALL OTHER SIED TRAP TUBS WILL REQUIRE CLEANING OUT WHEN 30% OF DESIGN CAPACITY IS REACHED.
 7. ALL INLET AND GULLY LIDS SHOULD BE INSPECTED AND HOLES REPAIRED

DUST CONTROL

1. DURING WINDY AND DRY WEATHER ANY UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP SOIL UNDER CONTROL. WHERE WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES, SOIL BINDERS OR RETARDANTS TO BE USED FOR SOIL SUPPRESSION.
2. EXPOSED SURFACES INCLUDING BATTERS SHOULD BE LEFT ROUGH TO REDUCE WIND SPEEDS AND POTENTIAL FOR WIND EROSION.
3. USE OPEN WEAVE BARRIER FENCING ON WINDWARD SIDE OF SITE IF REQUIRED. FENCING IS GENERALLY REQUIRED WHERE AREA OF DISTURBANCE IS >5000m².

CONTROL MEASURES

1. FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS OF CONSTRUCTION COMPLETION.
2. SEDIMENT LADEN WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM BY USING INLET PROTECTION.
3. ALL PERIMETER BANKS AND CHANNEL DRAINS SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED ONCE SITE IS STABILISED AND UPSTREAM WORKS HAVE BEEN COMPLETED.
5. AT CONSTRUCTION COMPLETION ALL TEMPORARY EARTH STRUCTURES, INCLUDING SOIL STOCKPILES ARE TO BE TRACK ROLLED AND SEEDED. THE CONTRACTOR IS TO ENSURE A 70% COVERAGE WITHIN 14 DAYS.

OTHER MATTERS

1. ACCEPTABLE RECEPTORS AND DISPOSAL PRACTICES WILL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHERS, LITTER AND GENERAL WASTE MATERIALS.
2. ANY EXISTING TREES WHICH ARE NOT REQUIRED OR APPROVED TO BE CLEARED FOR THE WORKS AND/OR FORM PART OF THE FINAL LANDSCAPING PLAN SHOULD BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - a. PROTECTING THEM WITH BARRIER FENCING OR MARKERS.
 - b. ENSURING NOTHING IS NAILED TO THEM.
 - c. PROHIBITING PAVING, GRADING OR PLACING OF STOCKPILES WITHIN DRIP LINE.
3. ALL VEHICLE AND EQUIPMENT WASHING SHOULD BE CONTAINED IN SPECIFIC BUNDED AREAS, DISCONNECTED FROM CONCENTRATED FLOW PATHS AND THE STORMWATER SYSTEM.
4. ANY NECESSARY VEHICLE OR EQUIPMENT REFUELING SHOULD BE UNDERTAKEN AWAY FROM CONCENTRATED FLOW PATHS AND PREFERABLY WITHIN A BUNDED AREA.
5. ANY ONSITE FUEL STORAGE AREAS SHOULD BE COVERED AND BUNDED.

MAINTENANCE OF PUBLIC ROADS

1. ALL CONSTRUCTION VEHICLES DEPARTING FROM THE SITE SHALL HAVE THEIR TYRES WASHED DOWN OR SEDIMENT REMOVED BY A STABILISED SITE ACCESS DEVICES
2. THE STABILISED SITE ACCESS AREAS SHALL BE LOCATED SUCH THAT SILETED WATER IS FILTERED THROUGH A SUITABLE SEDIMENT TRAP (SUCH AS A SEDIMENT FENCE) INSTALLED DOWNSTREAM OF ACCESS.
3. THE CONTRACTOR SHALL INSPECT THE PUBLIC ROADS ADJACENT TO THE SITE DAILY AND MANUALLY REMOVE ANY SEDIMENT DEPOSITS (BY SWEeping NOT WASH DOWN).

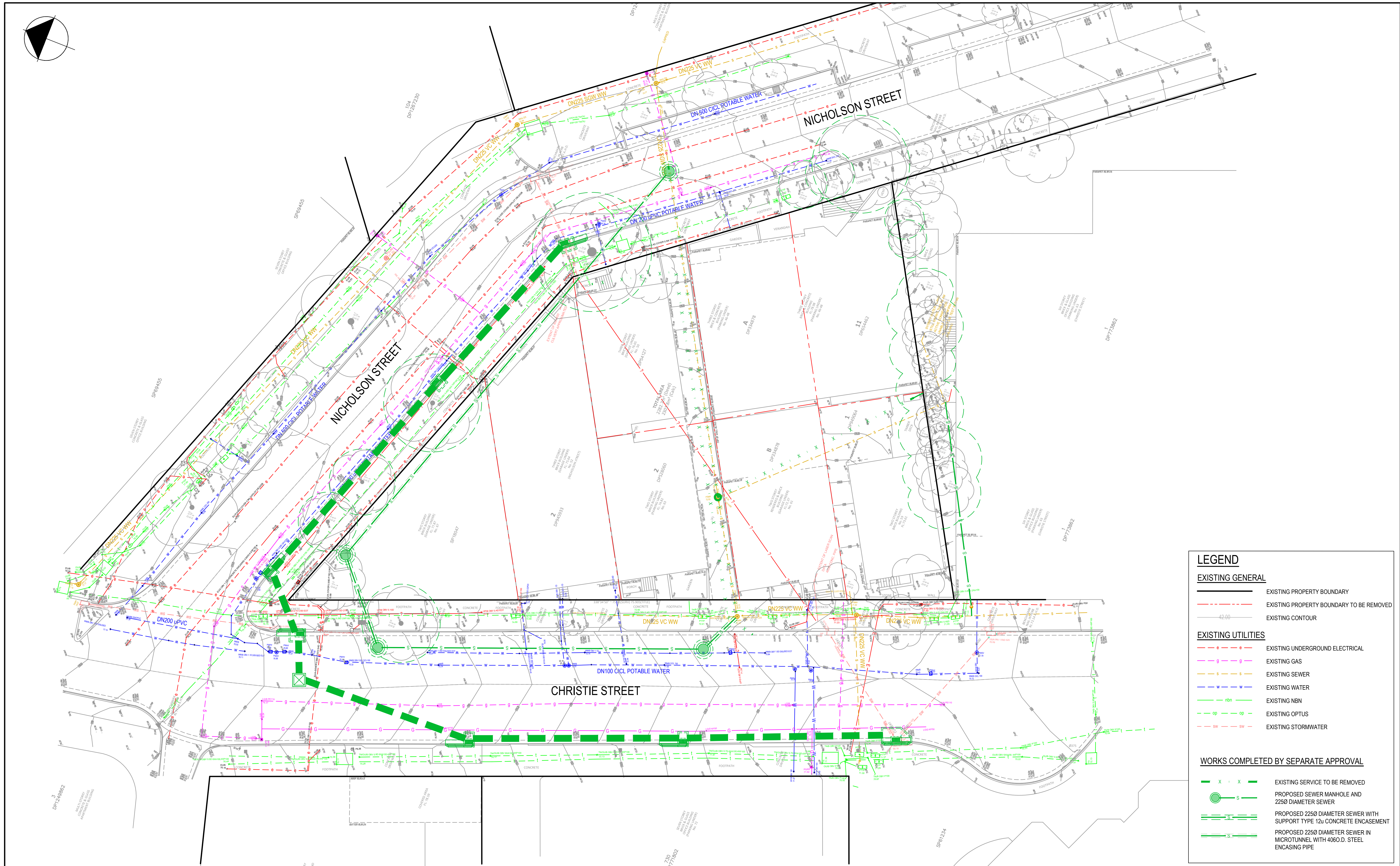
SITE INSPECTION AND MAINTENANCE

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED REGULARLY, IMMEDIATELY BEFORE SITE CLOSURE, PRIOR TO PREDICTED LARGE STORM EVENTS AND AFTER EVERY SIGNIFICANT (> 5mm) RAINFALL EVENT OR AT LEAST ON A WEEKLY BASIS.
2. THE CONTRACTOR WILL AS A MINIMUM CONDUCT EACH INSPECTION IN LINE WITH THE FOLLOWING
 - a. RECORD TYPE OF DEVICE/CONTROL MEASURE BEING INSPECTED AND ITS LOCATION;
 - b. RECORD THE CONDITION OF EVERY CONTROL MEASURE;
 - c. RECORD MAINTENANCE REQUIREMENTS FOR EVERY CONTROL DEVICE;
 - d. RECORD SEDIMENT VOLUMES REMOVED FROM SEDIMENT TRAPPING DEVICES;
 - e. RECORD DETAILS OF SEDIMENT BASIN TREATMENT, FLOCCULANT DOSAGE AND CLEANOUT;
 - f. RECORD SEDIMENT DISPOSAL PROCEDURES AND LOCATION
3. REPAIRS AND MAINTENANCE OF ALL DEVICES AND MEASURES INCLUDING DIVERSION CHANNELS SHALL BE UNDERTAKEN AS REQUIRED, ENSURING ALL MEASURES ARE FULLY FUNCTIONAL AT ALL TIMES.
4. ENSURE SEDIMENT LADEN WATER HAS NOT BEEN DIVERTED AROUND DEVICES.
5. REPAIR SCOUR DAMAGE TO SEDIMENT CONTROL MEASURES AFTER RAINFALL EVENTS AND REINSTATE DEVICES AS NECESSARY.
6. SEDIMENT FENCES WILL REQUIRE CLEANING WHEN SEDIMENT REACHES 300MM DEPTH OR ONE-HALF THE HEIGHT OF THE FILTER FABRIC AND ALL OTHER SEDIMENT TRAPS WILL REQUIRE CLEANING OUT WHEN 30% OF DESIGN CAPACITY IS REACHED.
7. ALL INLET AND GULLY TRAPS TO BE CLEANED NOT HOSED AFTER EVERY RAINFALL EVENT, (1>5mm) OR AT LEAST ON A WEEKLY BASIS.
8. SEDIMENT REMOVED FROM ANY TRAPPING DEVICES TO BE RELOCATED, ENSURING FURTHER POLLUTION TO DOWNSTREAM ENVIRONMENTS WILL NOT OCCUR.

9. ALL SEEDING, HYDROSEEDING AND TURFING REQUIRES REGULAR WATERING, UNTIL EFFECTIVE COVER ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. WATERING SHOULD VARY DEPENDING ON WEATHER AND SOIL CONDITIONS.
10. WATERING SHOULD START IMMEDIATELY AFTER PLANTING AND SHOULD COMPLY WITH THE FOLLOWING AS A MINIMUM:

WEEK 1	3 WATERINGS/WEEK
WEEK 2-6	2 WATERINGS/WEEK
WEEK 7-12	1 WATERING/WEEK
11. EXCESSIVE VEGETATION GROWTH WILL BE CONTROLLED THROUGH MOWING OR SLASHING.
12. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE INSPECTION, MAINTENANCE AND TESTING OF DEVICES IS UNDERTAKEN ON SITE.
13. THE CONTRACTOR TO KEEP DETAILED AND LEGIBLE RECORDS OF ALL INSPECTION AND MAINTENANCE UNDERTAKEN ON THE EROSION AND SEDIMENT CONTROL DEVICES.
14. ALL SITE WASTE INCLUDING GENERAL RUBBISH TO BE DISPOSED OF IN AN ENVIRONMENTALLY RESPONSIBLE MANNER IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION (WASTE MANAGEMENT) POLICY 2000 AND ENVIRONMENTAL PROTECTION (WASTE MANAGEMENT) REGULATION 2000.
15. THE CONTRACTOR SHALL CONSTRUCT AND IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO ENSURE PROTECTION OF DOWNSTREAM ENVIRONMENTS.

[illegible]



LEGEND

EXISTING GENERAL

EXISTING PROPERTY BOUNDARY

EXISTING PROPERTY BOUNDARY TO BE REMOVED

42.00

EXISTING UTILITIES

e

EXISTING UNDERGROUND ELECTRICAL

g

s

w

nbn

op

sw

WORKS COMPLETED BY SEPARATE APPROVAL

x

x

EXISTING SERVICE TO BE REMOVED

s

PROPOSED SEWER MANHOLE AND 2250 DIAMETER SEWER

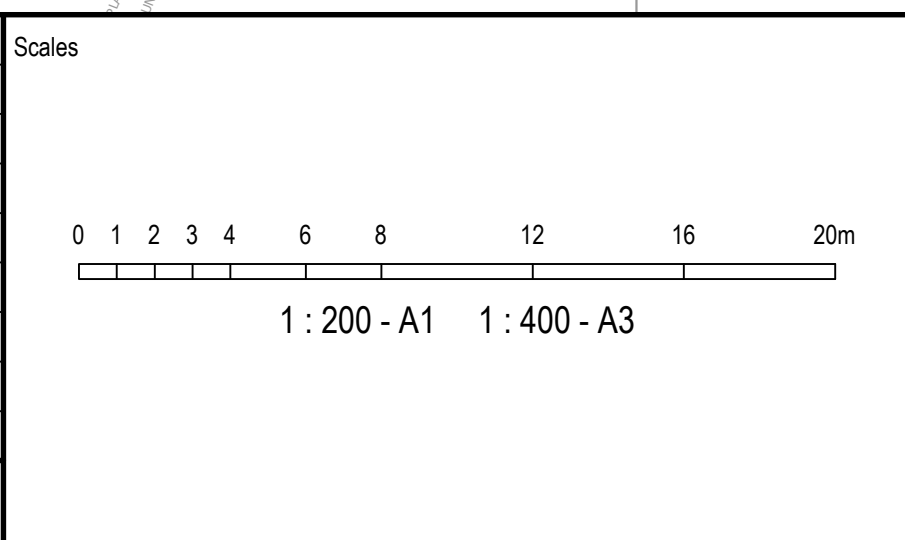
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PROPOSED 2250 DIAMETER SEWER WITH SUPPORT TYPE 12u CONCRETE ENCASEMENT

s

PROPOSED 2250 DIAMETER SEWER IN MICROTUNNEL WITH 4060.D. STEEL ENCASING PIPE

A	ISSUE FOR APPROVAL	GJ	SH	SH	10-09-25
Issue	Description	DR	CH	VE	Date



Surveyor

Architect

Client

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Original Issue Signatures			
Drawn	GJ	Original Size	A1
Designed	GJ	Height Datum	AHD
Checked	SH	Grid	MGA(GDA20)
Approved	SH		

Project

NICHOLSON PLACE
ST LEONARDS

Title

EXISTING SITE
PLAN

email: info@hjconsult.com.au

www.hjconsult.com.au

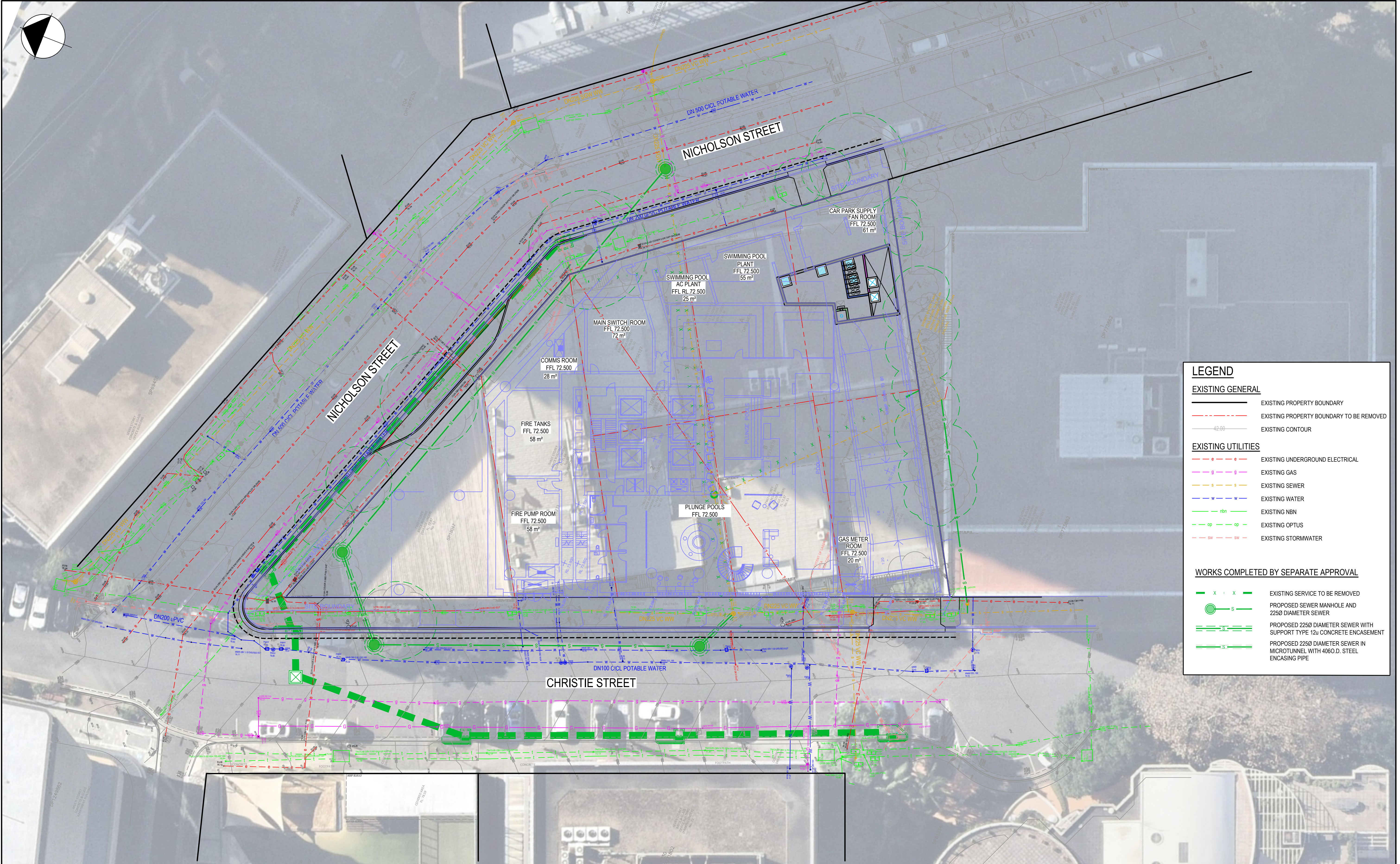
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841

Issue

24-1018-CIV-1004

A



LEGEND

EXISTING GENERAL

EXISTING PROPERTY BOUNDARY

EXISTING PROPERTY BOUNDARY TO BE REMOVED

42.00

EXISTING UTILITIESEXISTING UNDERGROUND ELECTRICALEXISTING GASEXISTING SEWEREXISTING WATER

nbn

EXISTING NBN

op

EXISTING OPTUS

sw

EXISTING STORMWATER**WORKS COMPLETED BY SEPARATE APPROVAL**

x x

EXISTING SERVICE TO BE REMOVED

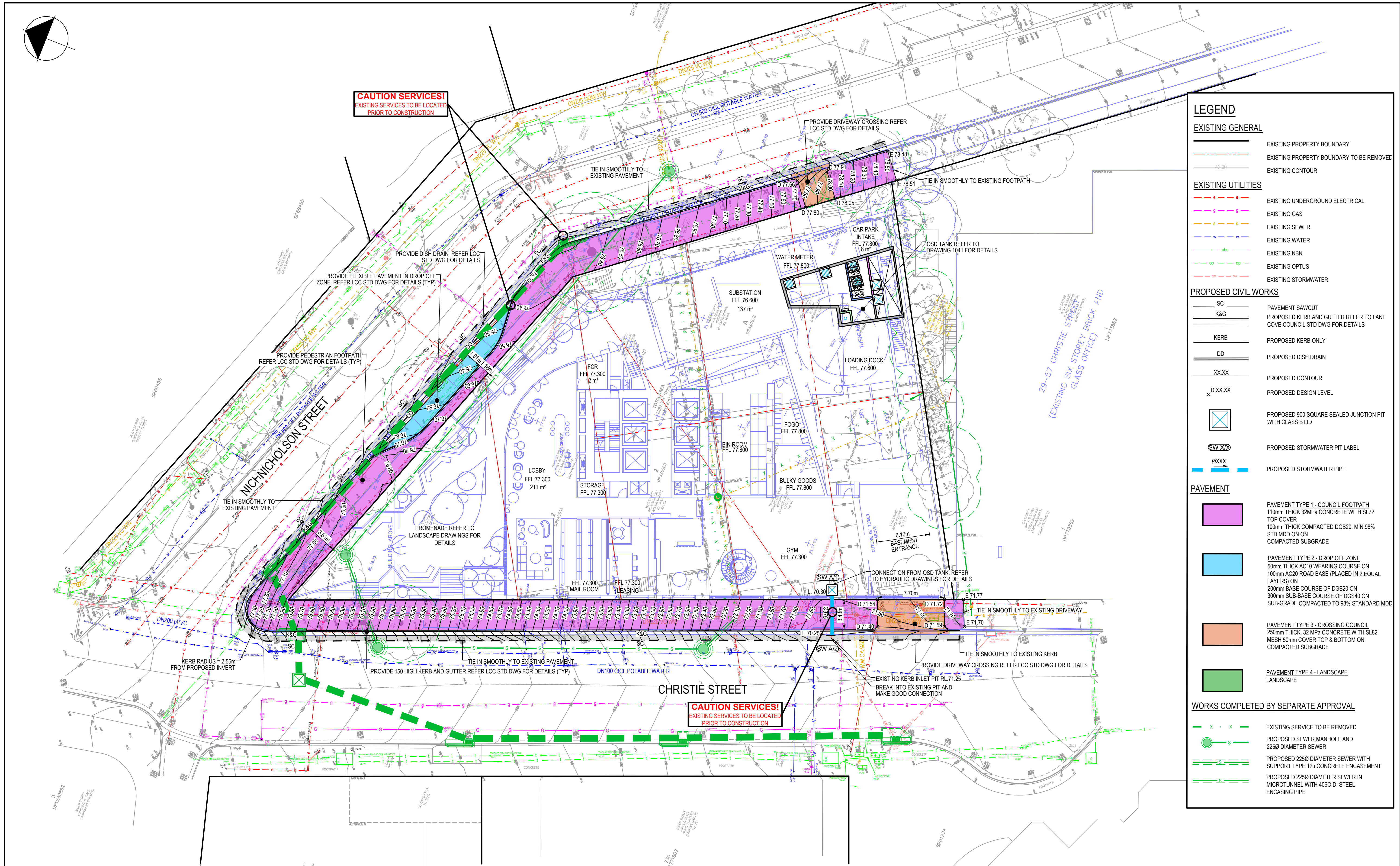
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PROPOSED SEWER MANHOLE AND 2250 DIAMETER SEWERPROPOSED 2250 DIAMETER SEWER WITH SUPPORT TYPE 12u CONCRETE ENCASEMENT

s

PROPOSED 2250 DIAMETER SEWER IN MICROTUNNEL WITH 4060.D. STEEL ENCASING PIPE

							Scales 0123468121620m 1 : 200 - A1 1 : 400 - A3	Surveyor S d G		Client CORONATION		Status FOR APPROVAL NOT FOR CONSTRUCTION © Copyright reserved Original Issue Signatures Drawn GJ Original Size A1		Project NICHOLSON PLACE ST LEONARDS		H J HJ CONSULT email: info@hjconsult.com.au www.hjconsult.com.au ABN: 70 676 907 841	
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										Checked SH Grid MGA(GDA20)							
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A ISSUE FOR APPROVAL GJ SH SH 10-09-25																	
Issue Description DR CH VE Date																	



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EXISTING GENERAL

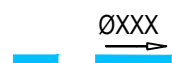
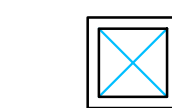
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- EXISTING PROPERTY BOUNDARY TO BE REMOVED
- EXISTING CONTOUR

EXISTING UTILITIES

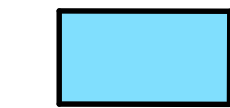
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- EXISTING GAS
- EXISTING SEWER
- EXISTING WATER
- EXISTING NBN
- EXISTING OPTUS
- EXISTING STORMWATER

PROPOSED CIVIL WORKS

- SC PAVEMENT SAWCUT
- K&G PROPOSED KERB AND GUTTER REFER TO LANE COVE COUNCIL STD DWG FOR DETAILS
- KERB PROPOSED KERB ONLY
- DD PROPOSED DISH DRAIN
- XX.XX PROPOSED CONTOUR
- X D XX.XX PROPOSED DESIGN LEVEL



PAVEMENT



WORKS COMPLETED BY SEPARATE APPROVAL

- EXISTING SERVICE TO BE REMOVED
- PROPOSED SEWER MANHOLE AND 2250 DIAMETER SEWER
- PROPOSED 2250 DIAMETER SEWER WITH SUPPORT TYPE 12u CONCRETE ENCASEMENT
- PROPOSED 2250 DIAMETER SEWER IN MICROTUNNEL WITH 4060.D. STEEL ENCASEMENT PIPE

A	ISSUE FOR APPROVAL	GJ	SH	SH	10-09-25
Issue	Description	DR	CH	VE	Date

Scales
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1 : 200 - A1 1 : 400 - A3

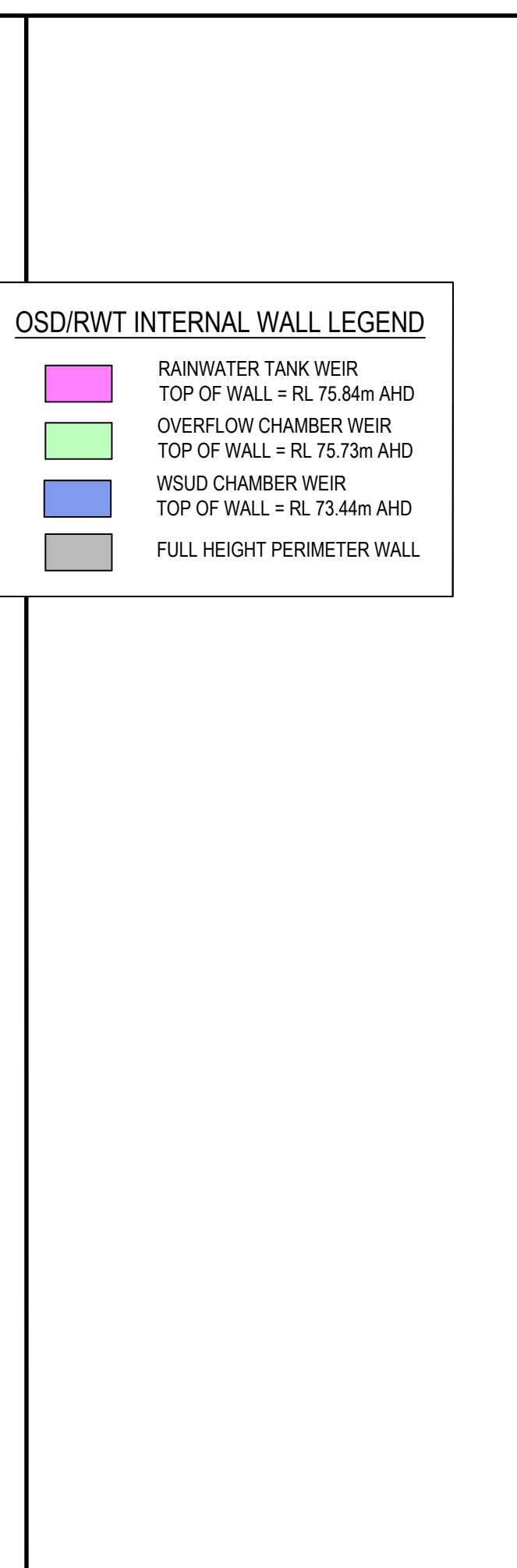
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Architect	

Client	
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Status	FOR APPROVAL NOT FOR CONSTRUCTION
Original Issue Signatures	
Drawn	GJ
Designed	GJ
Checked	SH
Approved	SH

Project	NICHOLSON PLACE ST LEONARDS
Title	CIVIL WORKS PLAN SHEET 2 UPPER GROUND

email: info@hjconsult.com.au www.hjconsult.com.au ABN: 70 676 907 841
Drawing No. 24-1018-CIV-1021
Issue A



OSD ROOF PLAN
1 : 50



NOTES:

1. A CONFINED SPACE DANGER SIGN SHALL BE PLACED NEXT TO EACH AND EVERY ACCESS POINT SO THAT THEY ARE VISIBLE TO PERSONS ENTERING ANY BELOW GROUND TANK OR PIT.
2. COLOURS:

"DANGER" AND BACKGROUND	-	WHITE
ELLIPTICAL AREA	-	RED
RECTANGLE CONTAINING ELLIPSE	-	BLACK
LETTERING AND BORDER	-	BLACK
3. MINIMUM DIMENSIONS OF THE SIGN:

LARGE ENTRIES:-	-	300mm x 450mm
SMALL ENTRIES:-	-	250mm x 180mm
4. SIGN TO BE MADE FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.
5. SIGN FIXED USING HILTI CHEMSETS OR EPOXY



NOTES:

1. CORNERS SQUARE
2. COLOURS: ETCHED AND FILLED BLACK LEDGEND ON A NATURAL SILVER BACKGROUND.
3. CONSTRUCTED FROM ALUMINIUM 0.9mm MILL.
4. THIS SIGN SHALL BE PLACED IN A VISIBLE LOCATION NEAR A DISCHARGE CONTROL PIT OR AT THE ACCESS TO ONE.
5. SIGN FIXED USING HILTI CHEMSETS OR EXPOXY



NOTES:

- NOTES:**
1. SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION AT EACH DETENTION BASIN.
 2. COLOURS:

TRIANGLE AND "WARNING"	-	RED
WATER	-	BLUE
FIGURE AND LETTERING	-	BLACK
 3. SIGN TO BE MADE FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.
 4. SIGN FIXED USING HILTI CHMSETS OR EXPOXY

Scales

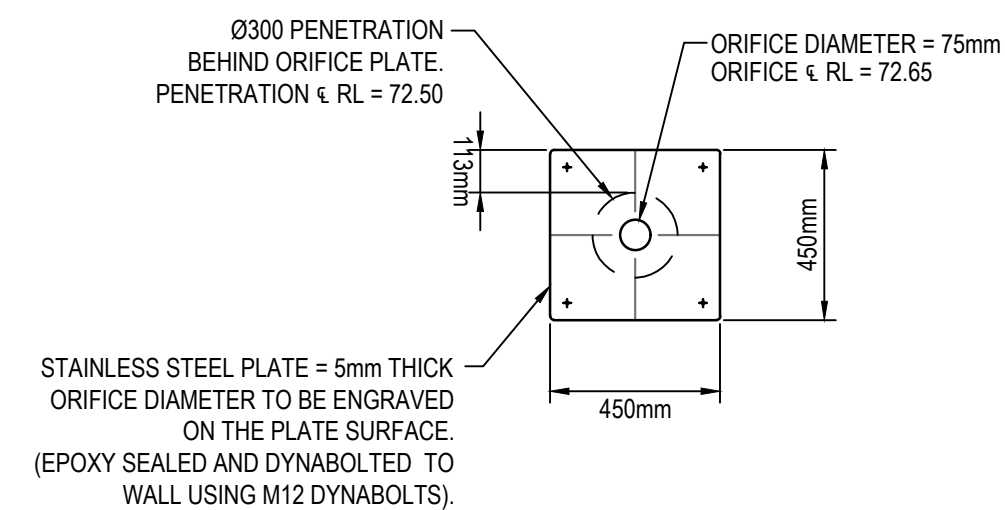
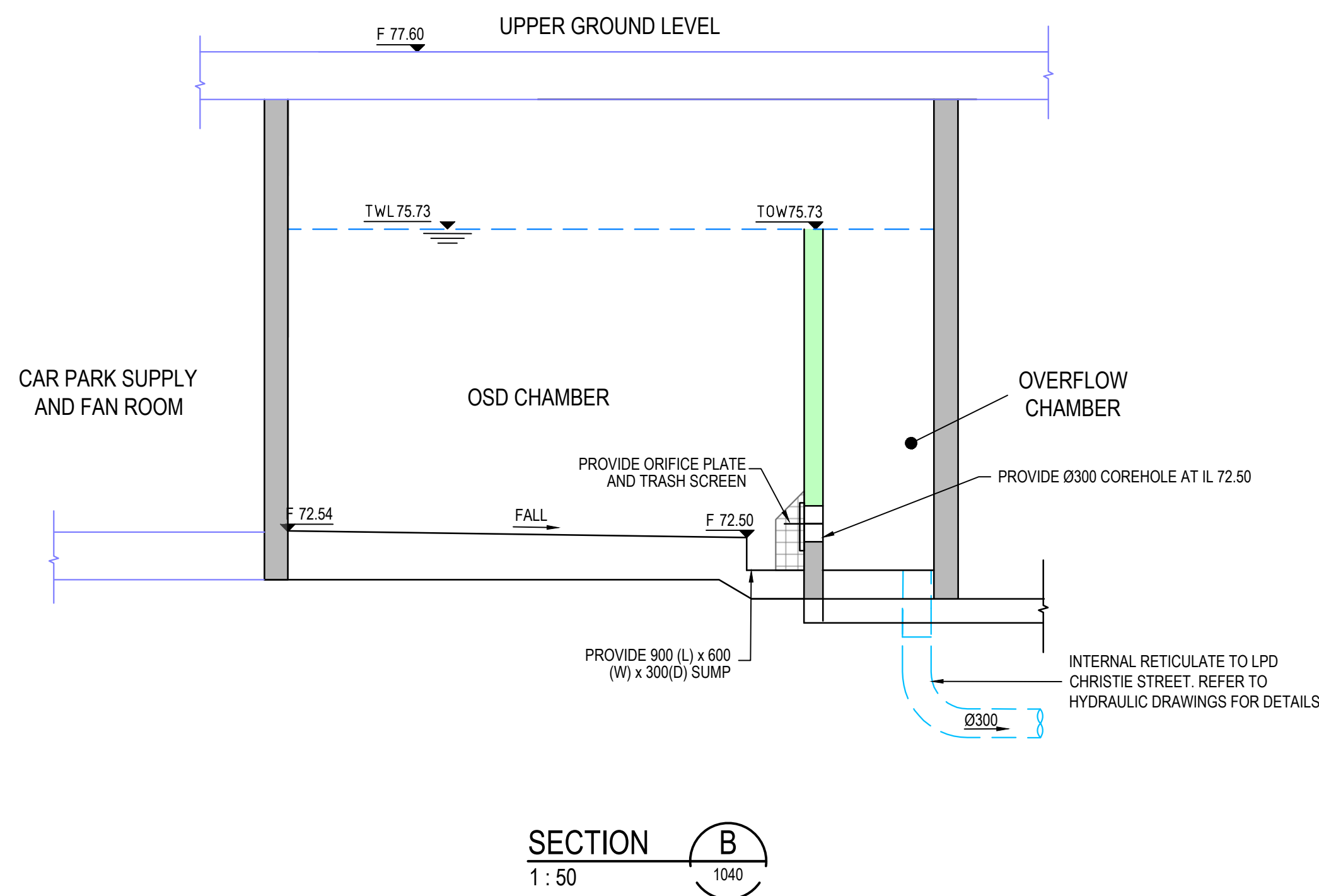
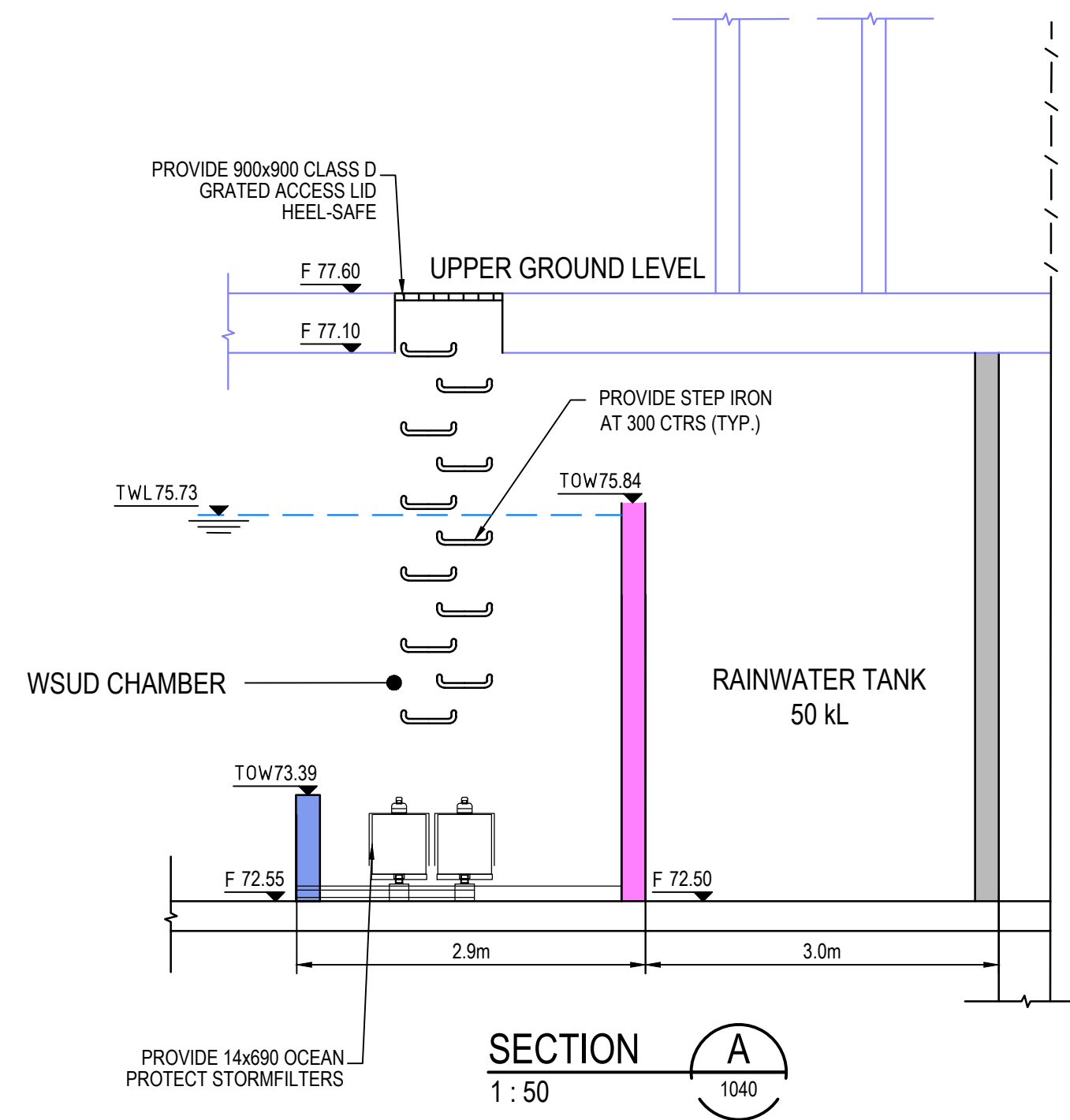
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1 : 50 - A1 1 : 100 - A3

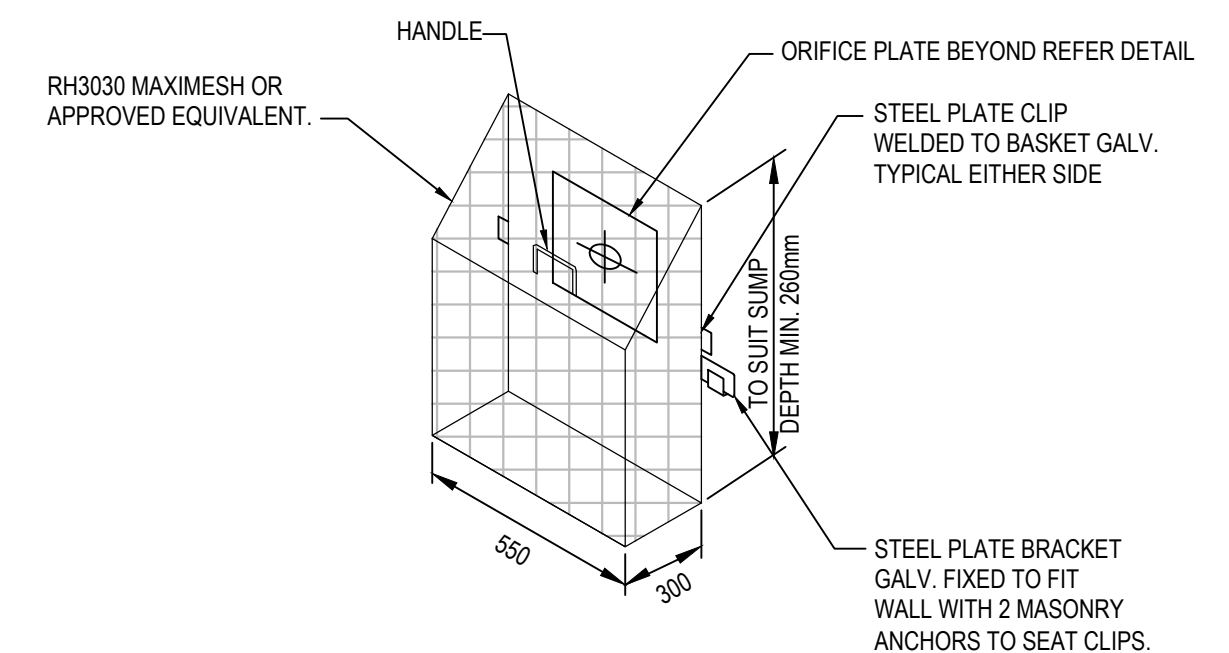
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CORONATION

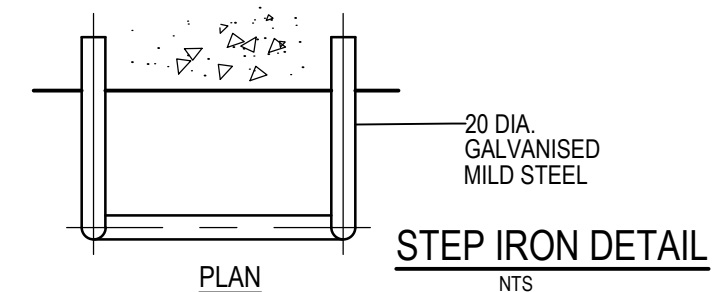
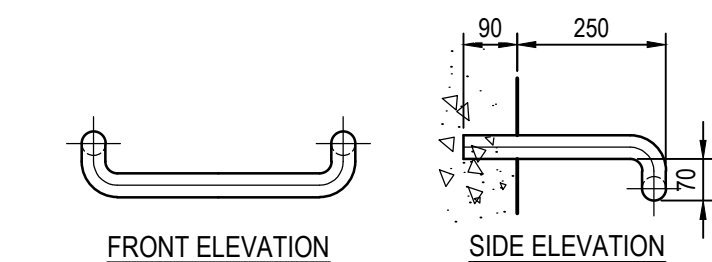
Project	NICHOLSON PLACE ST LEONARDS
Title	OSD TANK PLAN



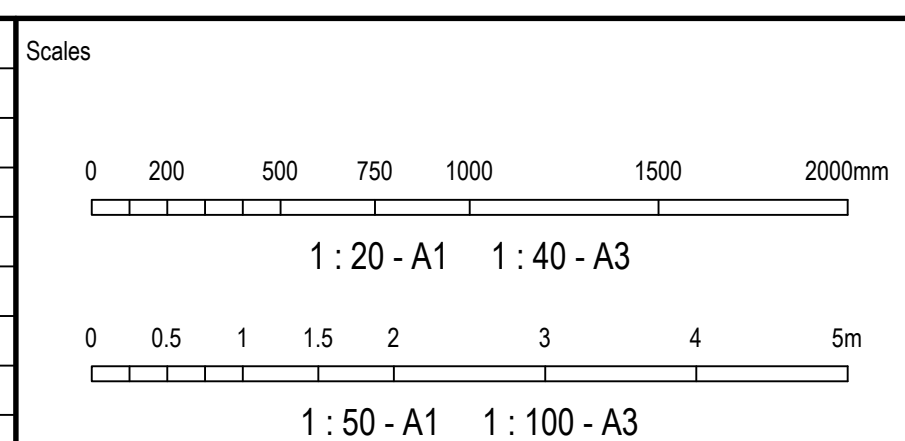
ORIFICE PLATE DETAIL
1 : 20



TRASH SCREEN DETAIL
N.T.S



A	ISSUED FOR APPROVAL	AM	GJ	GJ	08-09-25
Issue	Description	DR	CH	VE	Date



Surveyor

Architect

Client

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Original Issue Signatures			
Drawn	GJ	Original Size	A1
Designed	GJ	Height Datum	AHD
Checked	SH	Grid	MGA(GDA20)
Approved	SH		

Project

NICHOLSON PLACE
ST LEONARDS

Title

OSD TANK
SECTIONS AND DETAILS

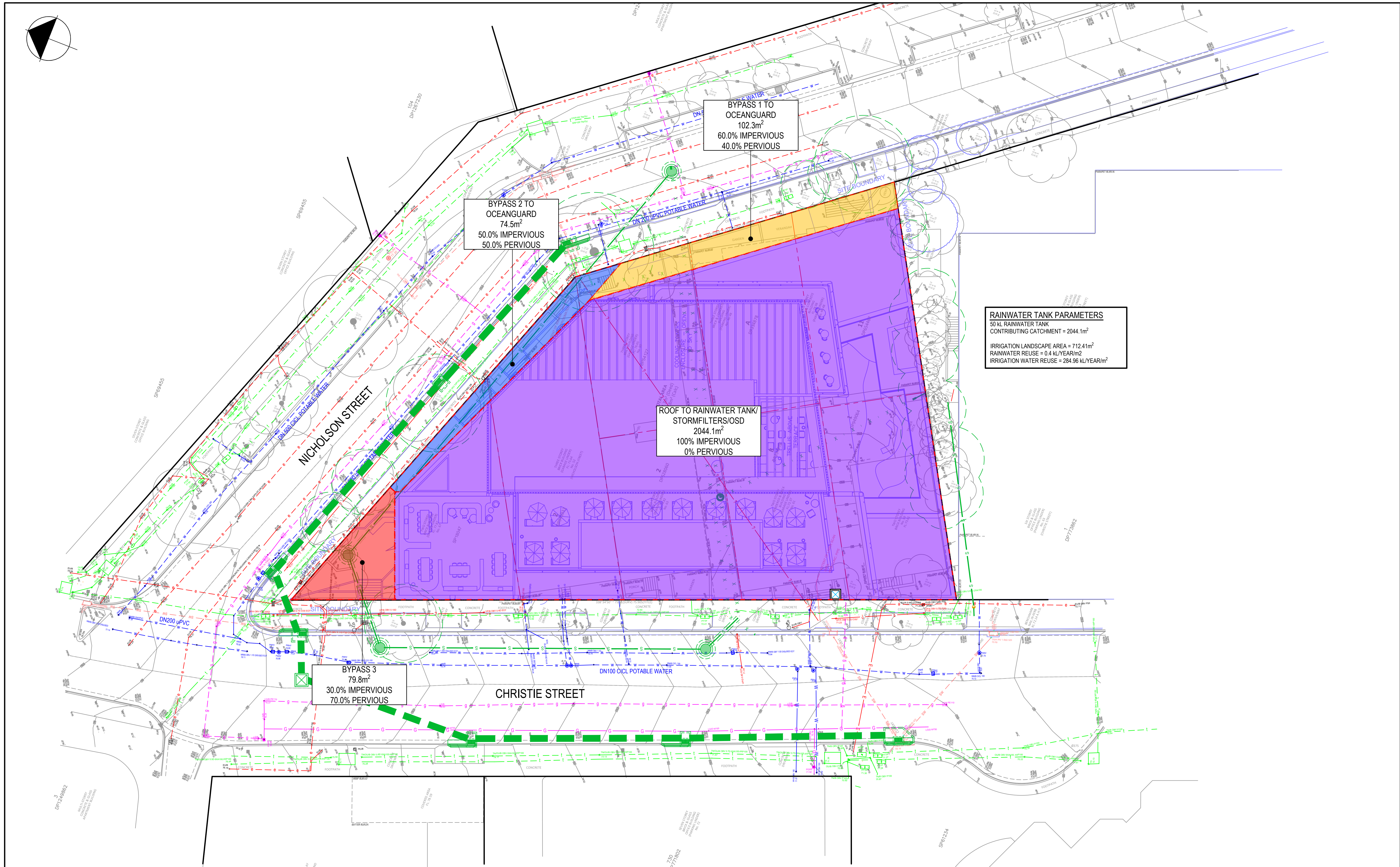
email: info@hjconsult.com.au
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ABN: 70 676 907 841

Drawing No.

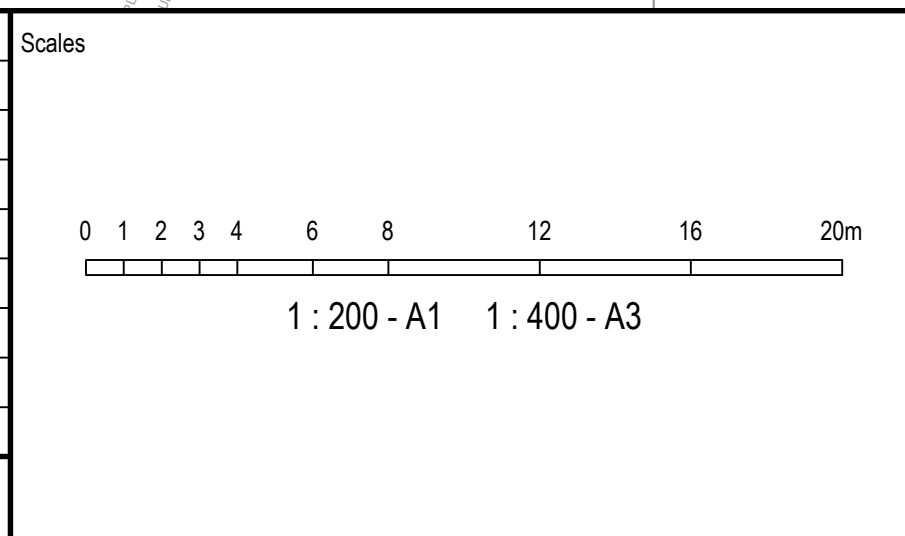
24-1018-CIV-1041

Issue

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A	ISSUE FOR APPROVAL	GJ	SH	SH	05-09-25
Issue	Description	DR	CH	VE	Date



Surveyor

Sdg

Architect

COX

Client

CORONATION

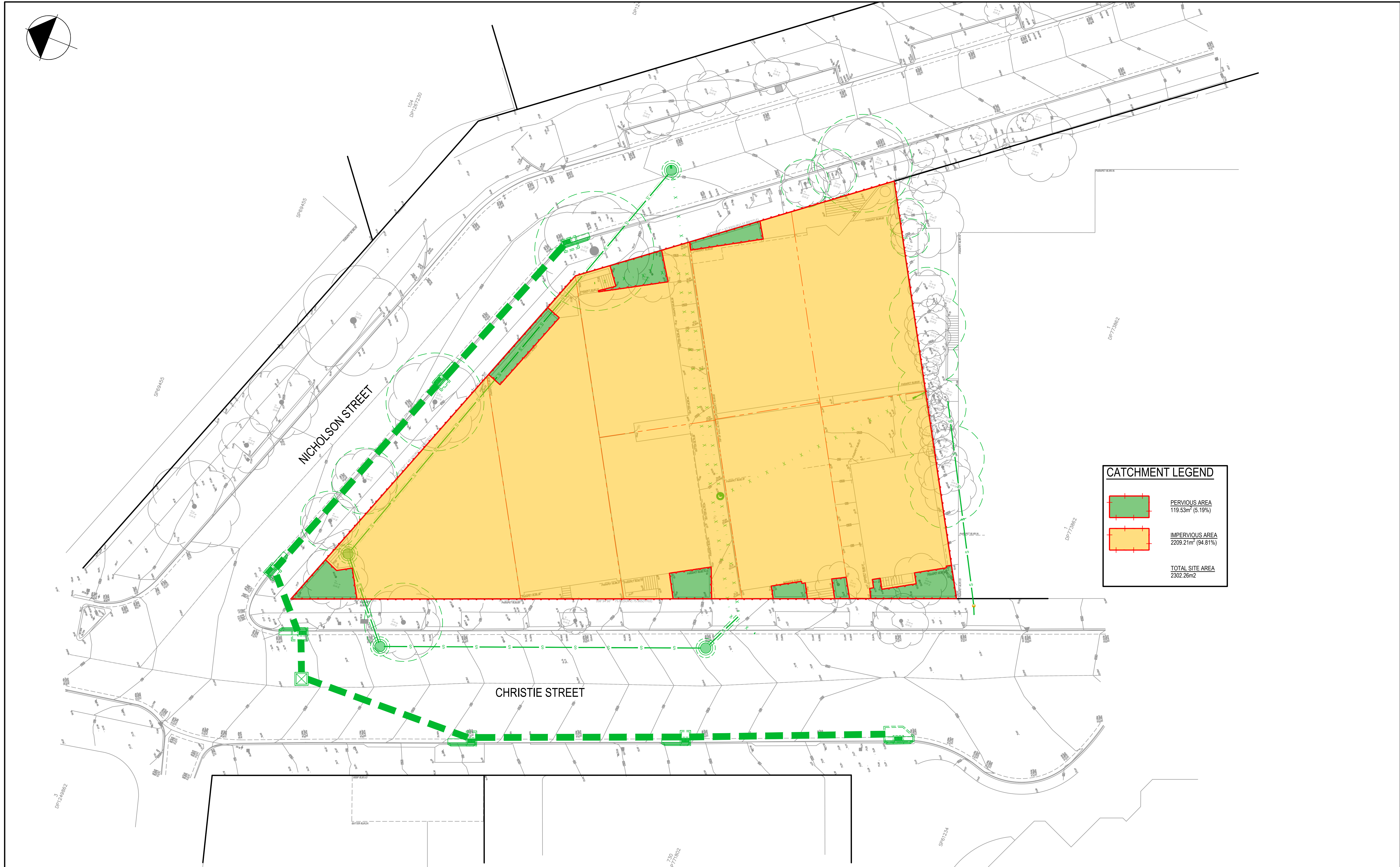
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Original Issue Signatures			
Drawn	GJ	Original Size	A1
Designed	GJ	Height Datum	AHD
Checked	SH	Grid	MGA(GDA20)
Approved	SH		

Project	NICHOLSON PLACE ST LEONARDS
Title	MUSIC CATCHMENT PLAN

HJ CONSULT

email: info@hjconsult.com.au www.hjconsult.com.au ABN: 70 676 907 841

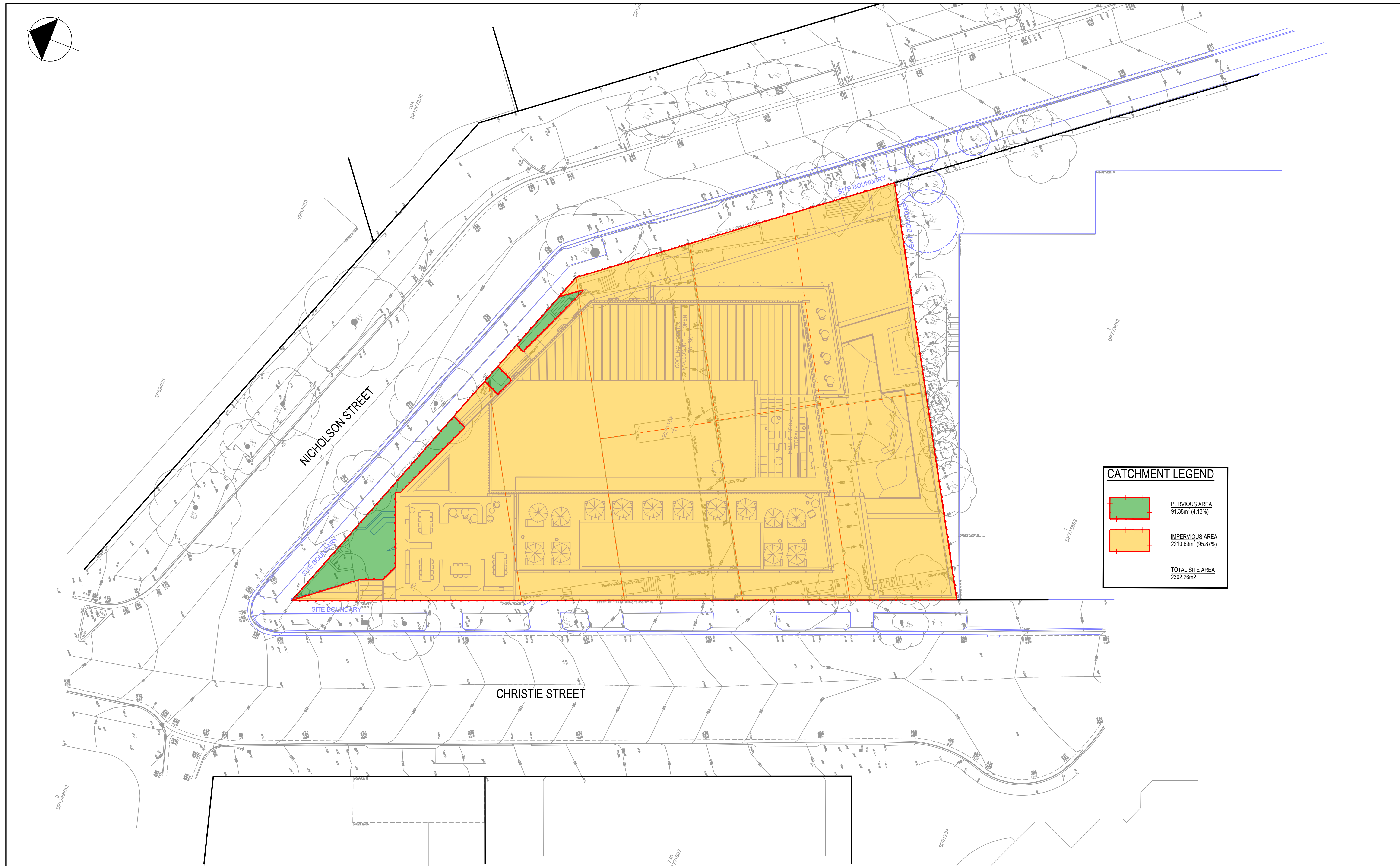
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				1 : 200 - A1 1 : 400 - A3				Architect								Original Issue Signatures				Title			
																Drawn				STORMWATER CATCHMENT PRE-DEVELOPMENT PLAN			
																Designed							
																Checked							
																Approved							
A				ISSUE FOR APPROVAL				GJ				SH				SH				05-09-25			
Issue				Description				DR				CH				VE				Date			

email: info@hjconsult.com.au www.hjconsult.com.au ABN: 70 676 907 841

Drawing No. 24-1018-CIV-1051 Issue A



1. SEDIMENT FENCE TO BE INSTALLED ALONG A LINE OF CONSTANT GROUND ELEVATION WHEREVER PRACTICAL.
2. BOTH ENDS OF THE SEDIMENT FENCE TO EXTEND UP THE SLOPE AT LEAST 1m.
3. SUPPORT POST TO BE SPACED A MAXIMUM 2m UNLESS THE FENCE IS SUPPORTED BY A TOP WIRE OR MESH BACKING, IN WHICH CASE 3m MAXIMUM SPACING.
4. FENCE 'RETURNS' SHALL BE INSTALLED AT MAXIMUM 20m SPACING IF FENCE IS INSTALLED ALONG THE CONTOUR, OTHERWISE 5 TO 10m MAXIMUM SPACING DEPENDING ON SLOPE.
5. MINIMUM 4 STAPLES OR TIE WIRES PER STAKE.

1. **FABRIC:** POLYPROPYLENE, POLYAMIDE, NYLON, POLYESTER, OR POLYETHYLENE WOVEN OR NON-WOVEN FABRIC, AT LEAST 700mm IN WIDTH AND A MINIMUM UNIT WEIGHT OF 140GSM. ALL FABRICS TO CONTAIN ULTRAVIOLET INHIBITORS AND STABILISERS TO PROVIDE A MINIMUM OF 6 MONTHS OF USEABLE CONSTRUCTION LIFE (ULTRAVIOLET STABILITY EXCEEDING 70%).
2. **FABRIC REINFORCEMENTS:** WIRE OR STEEL MESH MINIMUM 14-GAUGE WITH A MAXIMUM MESH SPACING OF 200mm.
3. **SUPPORT POSTS/STAKES:** 1500mm² (MIN.) HARDWOOD, 2500mm² (MIN.) SOFTWOOD, OR 1.5kg/m (MIN) STEEL STAR PICKETS SUITABLE FOR ATTACHING FABRIC.

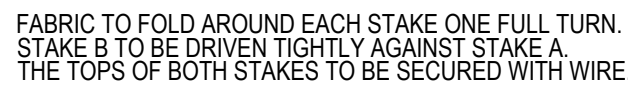
1. LOCATE THE SPILL-THROUGH WEIR SUCH THAT THE WEIR CREST WILL BE LOWER THAN THE GROUND LEVEL AT EACH END OF THE FENCE.
2. ENSURE THE CREST OF THE SPILL-THROUGH WEIR IS AT LEAST 300mm ABOVE THE GROUND ELEVATION.
3. SECURELY TIE A HORIZONTAL CROSS MEMBER (WEIR) TO THE SUPPORT POSTS/STAKES EACH SIDE OF THE WEIR. CUT THE FABRIC DOWN THE SIDE OF EACH POST AND FOLD THE FABRIC OVER THE CROSS MEMBER AND APPROPRIATELY SECURE THE FABRIC.
4. INSTALL A SUITABLE SPLASH PAD AND/OR CHUTE IMMEDIATELY DOWN-SLOPE OF THE SPILL-THROUGH WEIR TO CONTROL SOIL EROSION AND APPROPRIATELY DISCHARGE THE CONCENTRATED FLOW PASSING OVER THE WEIR.

1. SOCKS: MINIMUM Ø200mm SYNTHETIC OR BIODEGRADABLE TUBES MANUFACTURED FROM NON-WOVEN OR COMPOSITE FABRIC SUITABLE FOR THE "FILTRATION" OF COARSE SEDIMENT.
2. FILL MATERIALS: STRAW, CANE MULCH, COMPOSTED MATERIAL (AS4454), COARSE SAND, OR CLEAN AGGREGATE

INSTALLATION:

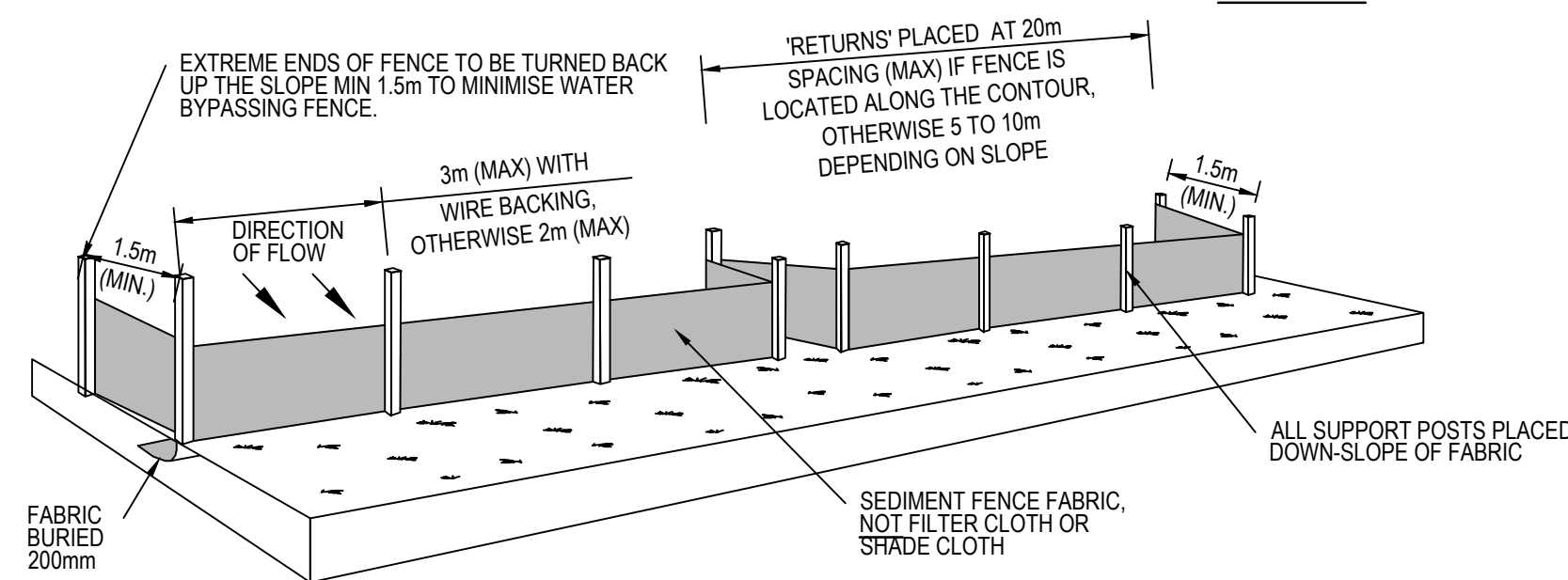
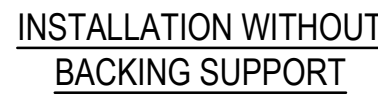
3. ENSURE THE SOCKS ARE PLACED INDIVIDUALLY OR COLLECTIVELY (AS A SINGLE SEDIMENT TRAP) SUCH THAT:
 - i) LEAKAGE AROUND OR UNDER THE SOCKS IS MINIMISED;
 - ii) ADJOINING SOCKS ARE TIGHTLY BUTTED OR OVERLAPPED AT LEAST 450mm.
 - iii) THE SURFACE AREA OF POTENTIAL WATER PONDING UP-SLOPE OF EACH SEDIMENT TRAP IS MAXIMISED.
 - iv) TO THE MAXIMUM DEGREE PRACTICAL, ALL SEDIMENT-LADEN WATER WILL PASS THROUGH THE FORMED POND BEFORE FLOWING OVER THE DOWN-SLOPE END OF THE SEDIMENT TRAP.

1. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.
2. DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAT PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.
3. TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LEGAL POINT OF DISCHARGE.
4. DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.



JOINING FABRIC

METHOD 1



SEDIMENT FENCE

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