

54-58 BEACONSFIELD STREET, NEW PORT
NEW SOUTH WALES 2106

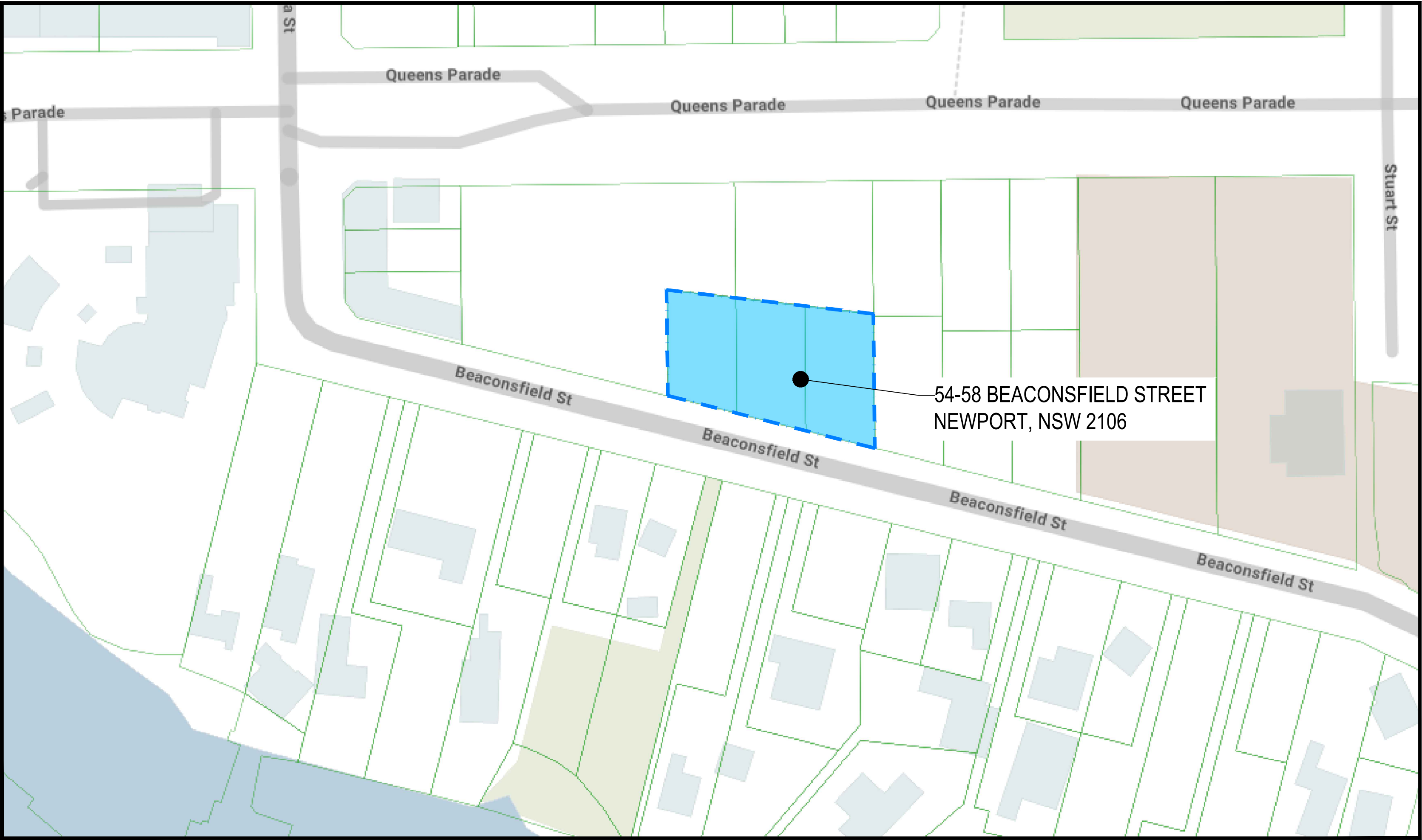
CLIENT:
RE.STREET.

LOT 5B on DP158658, 6 on DP1096088 and 7B on DP162021
LGA: NORTHERN BEACHES

CIVIL WORKS AND STORMWATER
S4.55 ISSUE

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SITE LOCATION PLAN
NOT TO SCALE

IMAGE COURTESY OF MOSAIC

14/32 PARRAMATTA ROAD, PETERSHAM
INFO@GOLDFISHBAY.COM.AU
1300 979 667

No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project
**RESIDENTIAL FLAT BUILDING
DA2023/1869**

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
**CIVIL SERVICES
COVER SHEET AND DRAWING LIST**

Project No. 24-1023
Drawing No. **24-1023-CIV-S4.55-000**

SCALE @ A1:	North	Revision
Chk: S.H.		A
Dm: G.J.		
Date: APRIL 2025		

S4.55 APPROVAL ISSUE

SURVEY NOTES

ORIGIN OF SURVEY
PROJECT: RESIDENTIAL FLAT BUILDING
SURVEYOR: SCS ENGINEERING SURVEYORS
SSM/PM: SSM24853
RL: 16.161 (mAHD)

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN SUPPLIED BY REGISTERED SURVEYORS TO PROVIDE A BASIS FOR DESIGN. THE USE OF THIS SURVEY FILE DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT THE SUPERINTENDENT OR THE PROJECT MANAGER

SURVEY NOTES

- 1. IF IT IS INTENDED TO BUILD ON OR NEAR THE BOUNDARIES OF THE PROPERTY FURTHER SURVEY SHOULD BE MADE TO MARK THE BOUNDARIES CONCERNED
- 2. DIMENSIONS AND AREAS HERON HAVE BEEN COMPILED FROM INFORMATION OBTAINED FROM THE LAND TITLES OFFICE
- 3. DETAIL SHOWN IS DIAGRAMMATIC AND SHOULD NOT BE USED TO DETERMINE SETBACKS FROM BOUNDARIES
- 4. NO INVESTIGATION HAS BEEN MADE OF UNDERGROUND SERVICES ON AND ADJACENT TO THIS LAND
- 5. RESTRICTION ON BUILDING MAY APPLY TO THIS LAND
- 6. ORIGIN OF LEVELS SSM24853 ADOPTED AS RL 16.161mAHD
- 7. BEARINGS SHOWN HERON ARE RELATED TO MGA2020

DETAILS AND SPECIFICATIONS

1. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH NORTHERN BEACHES 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 DISCREPNACY 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 IN METRES (m) U.N.O AND TO THE AUSTRALIAN HEIGHT DATUM (AHD)

EARTHWORKS

- 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 NATURALLY 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 DRUM 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 MATTER.
- 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.
- 7. ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM LAYER THICKNESS TO COUNCIL SPECIFICATIONS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289 E3.1 OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 E5.1.1.1:

LOCATION	COMPACTION REQUIREMENT
UNDER BUILDING SLABS	98% SMD
LANDSCAPED AREAS	95% SMD
ROADS & PAVED AREAS	100% SMD
- 8. FOR NON COHESIVE MATERIAL, COMPACT TO NOT LESS THAN

LOCATION	COMPACTION REQUIREMENT
UNDER ROAD	80% DENSITY
OTHER AREA	75% DENSITY
- 9. 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 COMPACTION 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.

CIVIL WORKS

- 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. 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 DRAWINGS AND SPECIFICATIONS PREPARED BY OTHER PROJECT CONSULTANTS.
- 11. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS. ALL LEVELS ARE IN METRES (m). UNO. 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. EPA AND COUNCIL 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.

PAVEMENT AND TRENCHES

- 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 AS3798 FOR PAVEMENTS. ALLOW FOR AT LEAST TWO SUCCESSFUL COMPACTION TESTS IN EACH LAYER.
- 4. 6 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 MIN 50mm 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 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.
- 6. 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.
- 7. 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 SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF HJ CONSULT.
- 8. 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.

STORMWATER DRAINAGE

- 1. STORMWATER DESIGN CRITERIA:
 - 1.1. ANNUAL EXCEEDANCE PROBABILITY :
 - 1% AEP ROOF TO OSD/RWT
 - 5% AEP EXTERNAL HARDSTAND
 - 1.2. RAINFALL INTENSITIES:
 - TIME OF CONCENTRATION: 5 MINS
 - 1% AEP: 273.0 mm/hr
 - 5% AEP: 203.0 mm/hr
 - 1.3. RUNOFF COEFFICIENT:
 - EXTERNAL HARDSTAND: C₁₀₀= 1.0
- 2. PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '4' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
- 3. 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.
- 3. PIPES UP TO 375 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS
- 4. EQUIVALENT STRENGTH BLACKMAXX (OR EQUIVALENT) OR FRC PIPES MAY BE USED, SUBJECT TO THE APPROVAL BY DESIGN ENGINEER INTERNAL TO THE SITE
- 5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
- 6. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- 7. PIPES WITHIN ROAD RESERVE ARE TO BE INSTALLED IN ACCORDANCE WITH LOCAL COUNCIL OR TNSW STANDARDS AS APPLICABLE
- 8. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS3500.1-3
- 9. GRATES AND COVERS SHALL CONFORM WITH AS 3996 AND AS 1428.1 FOR ACCESS REQUIREMENTS.
 - 9.1. USE NOT DIPPED GALVANISED GRATES AND CONCRETE FILLED COVERS WITH HINGES AND HOLD DOWN BOLTS COMPLYING WITH AS3996 AND OTHER RELEVANT AUSTRALIAN AND COUNCIL STANDARDS.
 - 9.2. ALL COVERS AND GRATES TO BE POSITIONED IN A FRAME AND MANUFACTURED AS A UNIT.
 - 9.3. ALL COVERS AND GRATES TO BE FITTED WITH POSITIVE COVER LIFTING KEYS AND BOLT LOCKABLE
 - 9.4. OBTAIN SUPERINTENDENTS APPROVAL FOR THE USE OF CAST IRON SOLID COVERS AND GRATES. CAST IRON SOLID COVERS (IF APPROVED) TO CONSIST OF CROSS-WEBBED, CELLULAR CONSTRUCTION WITH THE RIBS UPPERMOST TO ALLOW INFILLING WITH CONCRETE. INSTALL POSITIVE COVER LIFTING KEYS AND PLASTIC PLUGS.
 - 9.5. UNLESS DETAILED OR SPECIFIED OTHERWISE COVERS AND GRATES TO BE CLASS "D" IN VEHICULAR PAVEMENTS AND CLASS "B" ELSEWHERE.
- 10. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- 11. 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.
- 12. 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.
- 13. PROVIDE 3.0m LENGTH OF Ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN ANON-WOVEN GEOTEXTILE FABRIC, TO THE UPSTREAM SIDE OF STORMWATER PITS, LAID IN STORMWATER PIPE TRENCHES AND CONNECTED TO THE DRAINAGE PIT.
- 14. 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.
- 15. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- 16. 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
- 17. 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.
- 18. CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F_c) OF 32 MPa AT 28 DAYS.
- 19. REINFORCEMENT REFER TO STORMWATER DETAILS
- 20. ALL STORMWATER PITS ARE TO BE CAST IN-SITU IN ACCORDANCE WITH THE STORMWATER DETAILS, UNLESS APPROVED BY THE COUNCIL/PCA.
- 21. 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 FOUNDED ON SUBGRADE WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100kPA. UP TO 3.0M DEPTH TO INVERT OR 150kPA FROM 3.0m TO 6.0m DEPTH TO INVERT. (MIN 100mm DEEP 25MPA OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED).
- 22. PIT INSTALLATION AND JOINTING PIPES TO PITS SHALL BE UNDERTAKEN IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
- 23. ANY ADDITIONAL PENETRATIONS SHALL BE CORE DRILLED. DEMOLITION SAWS ARE NOT TO BE USED IN ANY CIRCUMSTANCES.
- 24. FINAL INTERNAL PIT DIMENSIONS ARE TO COMPLY WITH AS 3500.3

EXISTING SERVICES

- 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 ONSITE 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



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Environment

A: 14/32 PARRAMATTA ROAD, PETERSHAM

E: INFO@GOLDFISHBAY.COM.AU

PH: 1300 979 667



Client



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No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project

RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title

CIVIL SERVICES
GENERAL NOTES SHEET 1

Project No. 24-1023

Drawing No. 24-1023-CIV-S4.55-001

SCALE @ A1: North

Revision

CHK: S.H.

DRN: G.J.

Date: APRIL 2025

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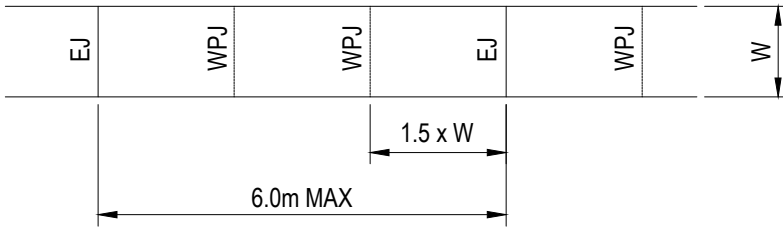


S4.55 APPROVAL ISSUE

JOINTING NOTES

PEDESTRIAN PAVEMENT

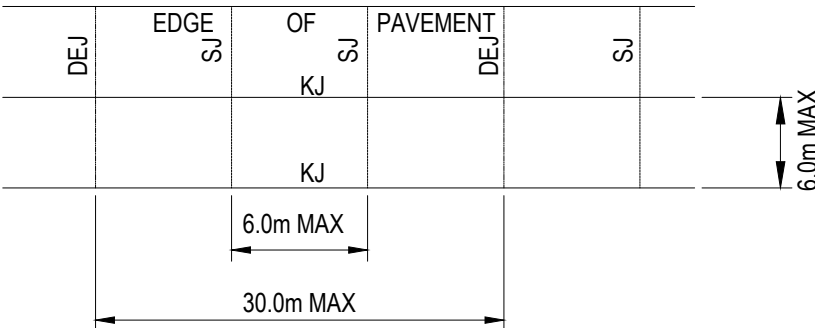
- 1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINED AS FOLLOWS. (U.N.O)
- 2. EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 6.0m CENTRES.
- 3. WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX. SPACING OF 1.5 x WIDTH OF THE PAVEMENT.
- 4. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
- 5. PEDESTRIAN PAVEMENT JOINT DETAIL.



NOTE: COUNCIL STANDARDS TAKE PRECEDENCE WITHIN ROAD RESERVE.

VEHICULAR PAVEMENT

- 6. ALL VEHICULAR PAVEMENTS TO BE JOINED AS FOLLOWS. (U.N.O)
- 7. TIED KEYED CONSTRUCTION JOINTS SHOULD GENERALLY BE LOCATED AT A MAX OF 6.0m CENTRES LONGITUDINALLY
- 8. SAWN JOINTS SHOULD GENERALLY BE LOCATED AT A MAX OF 6.0m CENTRES WITH DOWELED EXPANSION JOINTS AT MAX 30.0m CENTRES
- 9. TYPICAL VEHICULAR PAVEMENT JOINT DETAIL.



NOTE: COUNCIL STANDARDS TAKE PRECEDENCE WITHIN ROAD RESERVE.

- 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

CONCRETE NOTES

- 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

- CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379.

- 3. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY HJ CONSULT

- 4. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm TOP AND 70mm FOR EXTERNAL EDGES UNLESS NOTED OTHERWISE.

- 5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1m CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.

- 6. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED AND CURED IN ACCORDANCE WITH TNSW SPECIFICATION R83.

7. REINFORCEMENT SYMBOLS:

N DENOTES GRADE 450 N BARS TO AS/NZS 4671 GRADE N

R DENOTES Z30 R HOT ROLLED PLAIN BARS TO AS/NZS 4671

SL DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS/NZS 4671

NUMBER OF BARS IN GROUP

BAR GRADE AND TYPE

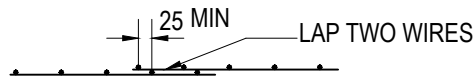
17 N 20 250

NOMINAL BAR SIZE IN mm

SPACING IN mm

THE FIGURE FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS/NZS 4671.

- 8. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:



KERBING NOTES

- 1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32MPa U.N.O IN REINFORCED CONCRETE NOTES.
- 2. ALL KERBS, CUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 5.2.1).
- 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 ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB AND GUTTER WITH 100mm DIA HOLE.

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

EROSION AND SEDIMENT CONTROL NOTES

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:

- 1. 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 EGRESS 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 BANKS AS CATCH DRAINS PARALLEL TO CONTOURS 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 LATER).
- 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. THE CONTRACTOR SHALL ENSURE THAT THE EXISTING VEGETATION AND GROUND COVER IS RETAINED AS MUCH AS POSSIBLE.
- 5. 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 HYDROSEEDDED, TURFED OR SEEDDED.

DUST CONTROL

- 1. DURING WINDY AND DRY WEATHER ANY UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. WHERE WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES, SOIL BINDERS OR DUST RETARDANTS TO BE USED FOR DUST 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 ONLY 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 SEEDDED. 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 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 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. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE 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.



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A: 14/32 PARRAMATTA ROAD, PETERSHAM
E: INFO@GOLDFISHBAY.COM.AU
PH: 1300 979 667

COMPETITIVE
GOLD MEDAL
SILVER MEDAL
BRONZE MEDAL

ENVIRONMENTAL
BEST PRACTICE
GOLD MEDAL



Client



Architect



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A	APPROVAL ISSUE	16.04.25	T.L.				

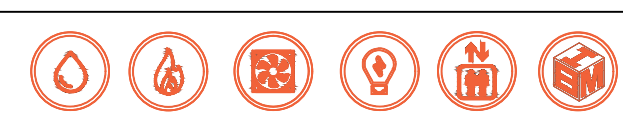
Project

RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title

CIVIL SERVICES
GENERAL NOTES SHEET 2

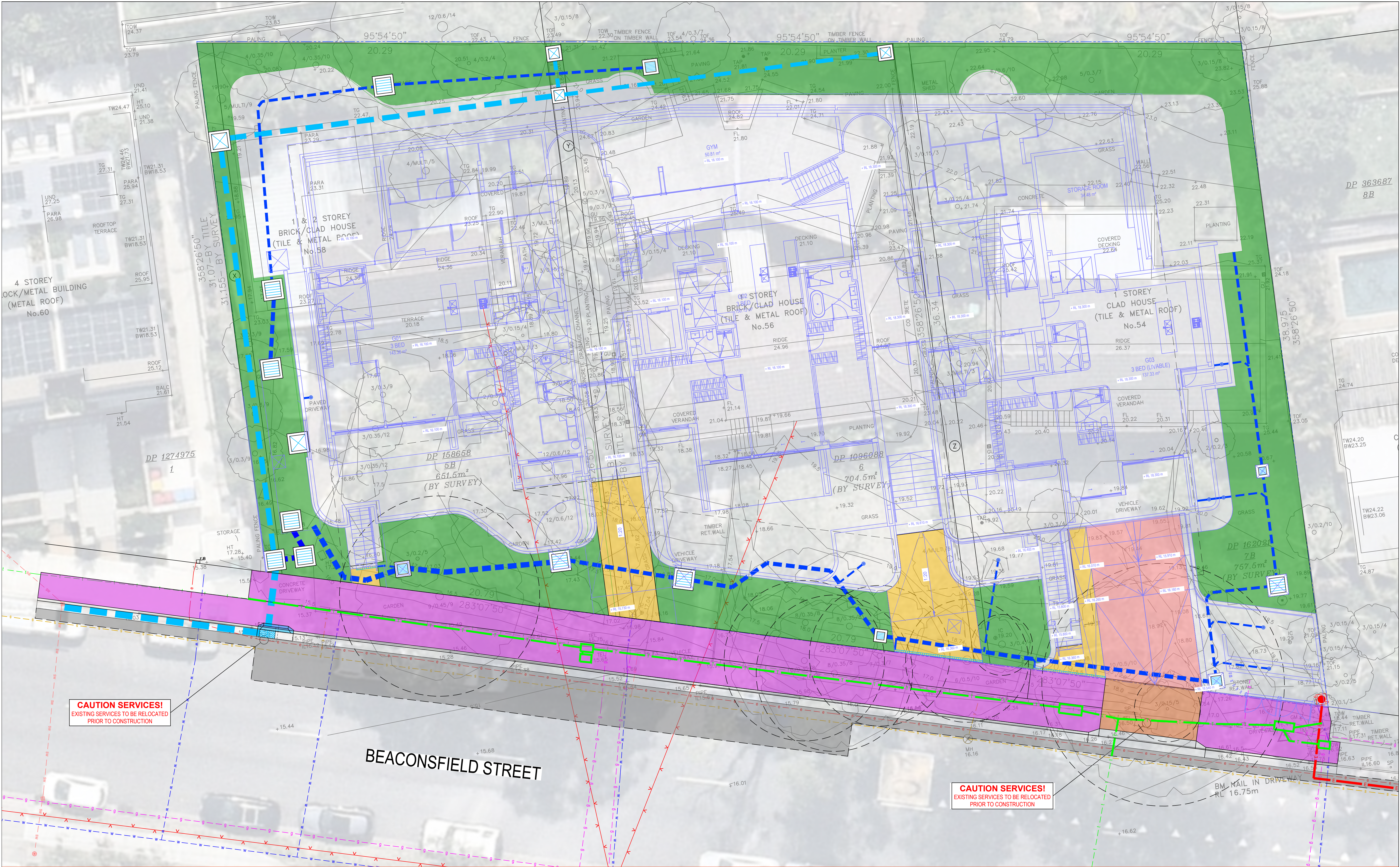


Project No. 24-1023

Drawing No. **24-1023-CIV-S4.55-002**

SCALE @ A1:	North	Revision
Chk: S.H.		A
Dm: G.J.		
Date: APRIL 2025		

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1432 PARRAMATTA ROAD, PETERSHAM
INFO@GOLDFISHBAY.COM.AU
1300 979 667



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Project
RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
CIVIL SERVICES
GENERAL ARRANGEMENT PLAN

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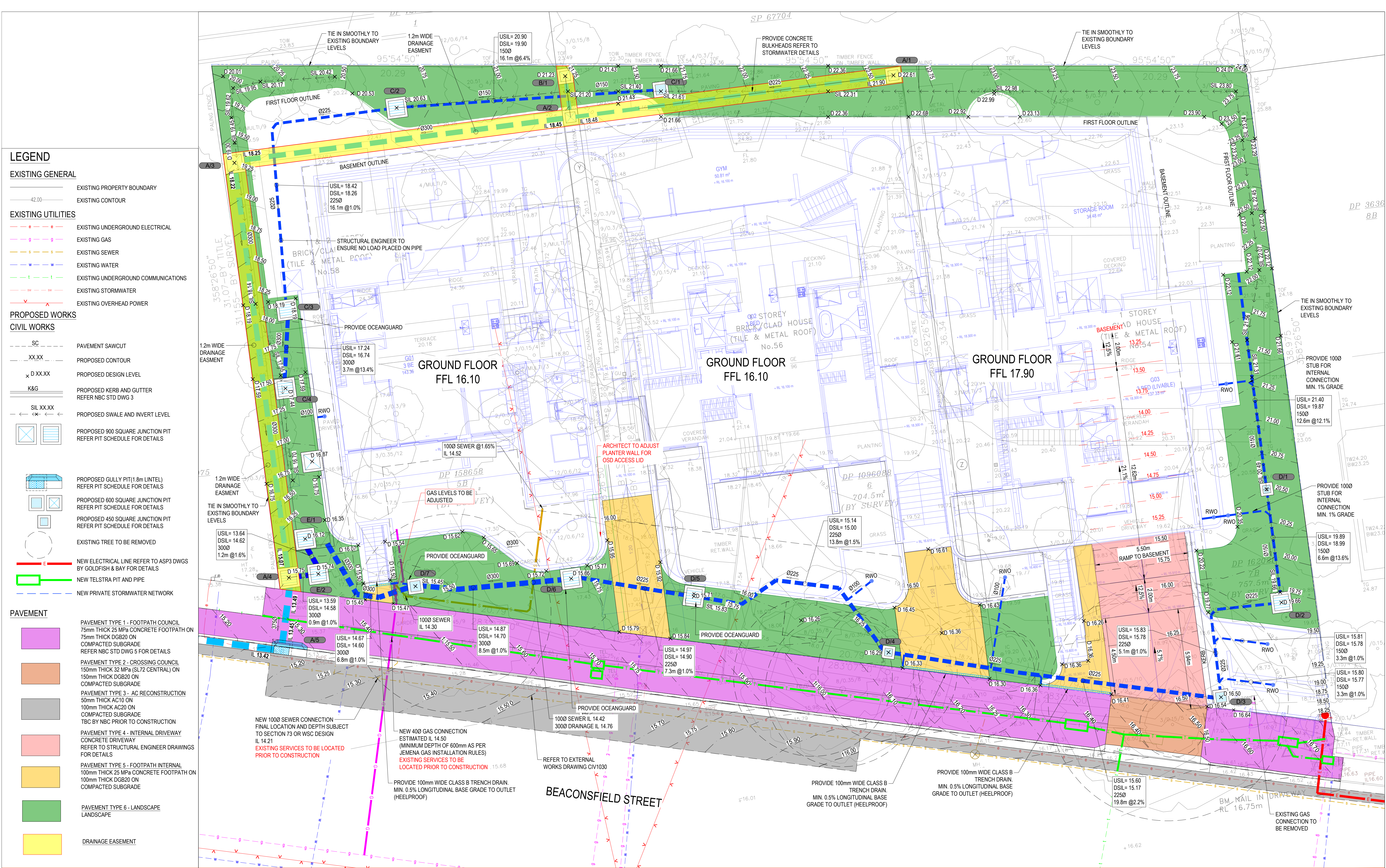


Project No. 24-1023
Drawing No. 24-1023-CIV-S4.55-005

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Chk: S.H.
Dm: G.J.
Date: APRIL 2025

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INFO@GOLDFISHBAY.COM.AU
PH: 1300 979 667



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Project
RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
**CIVIL SERVICES
CIVIL WORKS PLAN**

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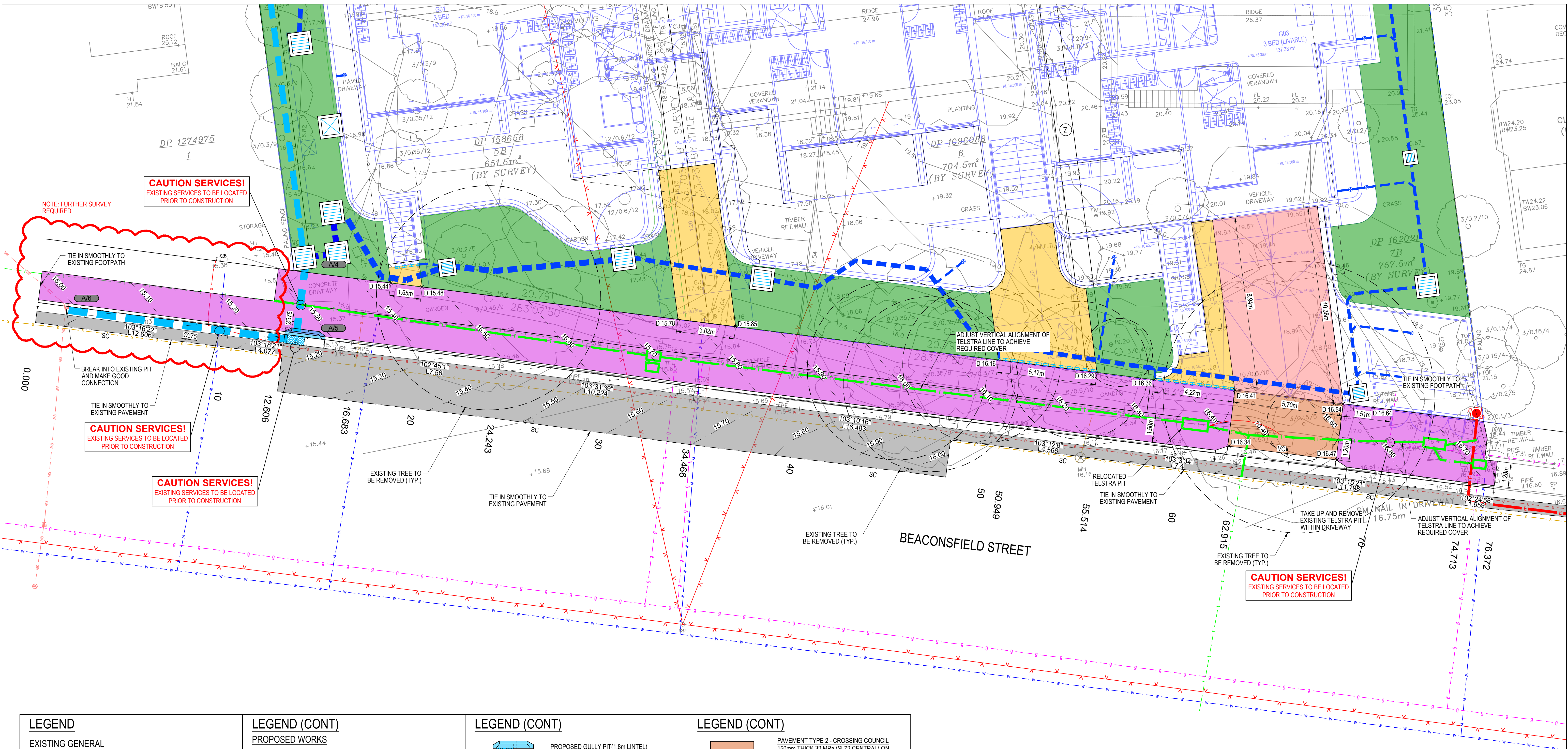


Project No. 24-1023
Drawing No. **24-1023-CIV-S4.55-020**

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Chk: S.H.
Dm: G.J.
Date: APRIL 2025

Revision
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S4.55 APPROVAL ISSUE



LEGEND		LEGEND (CONT)		LEGEND (CONT)		LEGEND (CONT)	
EXISTING GENERAL		PROPOSED WORKS		CIVIL WORKS			
	EXISTING PROPERTY BOUNDARY		PAVEMENT SAWCUT		PROPOSED GULLY PIT(1.8m LINTEL) REFER PIT SCHEDULE FOR DETAILS		PAVEMENT TYPE 2 - CROSSING COUNCIL 150mm THICK 32 MPa (SL72 CENTRAL) ON 150mm THICK DGB20 ON COMPACTED SUBGRADE
	EXISTING CONTOUR		PROPOSED CONTOUR		PROPOSED 600 SQUARE JUNCTION PIT REFER PIT SCHEDULE FOR DETAILS		PAVEMENT TYPE 3 - AC RECONSTRUCTION 50mm THICK AC10 ON 100mm THICK AC20 ON COMPACTED SUBGRADE TBC BY NBC PRIOR TO CONSTRUCTION
EXISTING UTILITIES			PROPOSED DESIGN LEVEL		EXISTING TREE TO BE REMOVED		PAVEMENT TYPE 4 - INTERNAL DRIVEWAY CONCRETE DRIVEWAY REFER TO STRUCTURAL ENGINEER DRAWINGS FOR DETAILS
	EXISTING UNDERGROUND ELECTRICAL		PROPOSED KERB AND GUTTER REFER NBC STD DWG 3		NEW ELECTRICAL LINE REFER TO ASP3 DWGS BY GOLDFISH & BAY FOR DETAILS		PAVEMENT TYPE 5 - FOOTPATH INTERNAL 100mm THICK 25 MPa CONCRETE FOOTPATH ON 100mm THICK DGB20 ON COMPACTED SUBGRADE
	EXISTING GAS		PROPOSED KERB AND GUTTER VC REFER NBC STD DWG 3		NEW TELSTRA PIT AND PIPE		PAVEMENT TYPE 6 - LANDSCAPE LANDSCAPE
	EXISTING SEWER		PROPOSED SWALE AND INVERT LEVEL		PAVEMENT TYPE 1 - FOOTPATH COUNCIL 75mm THICK 25 MPa CONCRETE FOOTPATH ON 75mm THICK DGB20 ON COMPACTED SUBGRADE REFER NBC STD DWG 5 FOR DETAILS		
	EXISTING WATER		PROPOSED 900 SQUARE JUNCTION PIT REFER PIT SCHEDULE FOR DETAILS				
	EXISTING UNDERGROUND COMMUNICATIONS						
	EXISTING STORMWATER						
	EXISTING OVERHEAD POWER						

14/32 PARRAMATTA ROAD, PETERSHAM
E: INFO@GOLDFISHBAY.COM.AU
PH: 1300 979 667

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Project
RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
**CIVIL SERVICES
EXTERNAL WORKS PLAN**

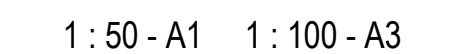
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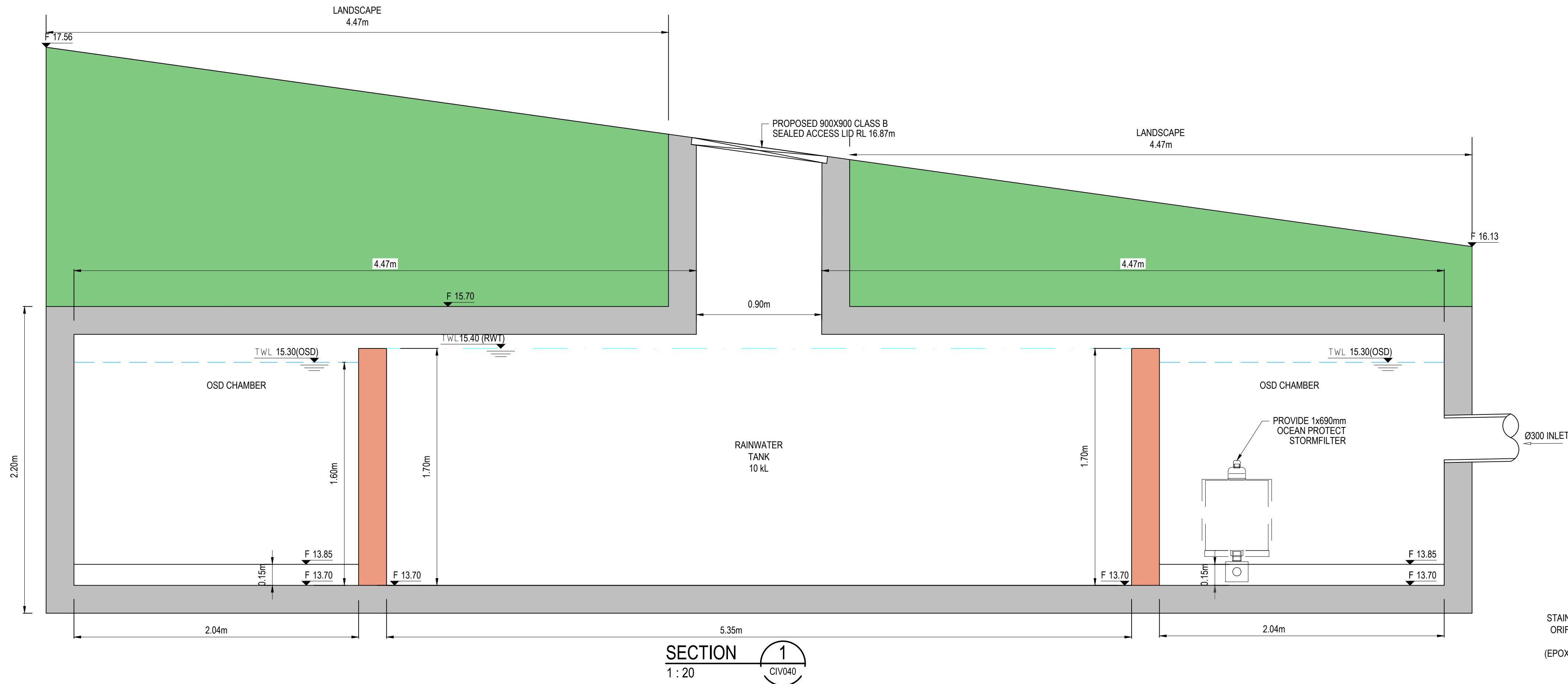
Project No. 24-1023
Drawing No. 24-1023-CIV-S4.55-030

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Drm: G.J.
Date: NOV. 2024

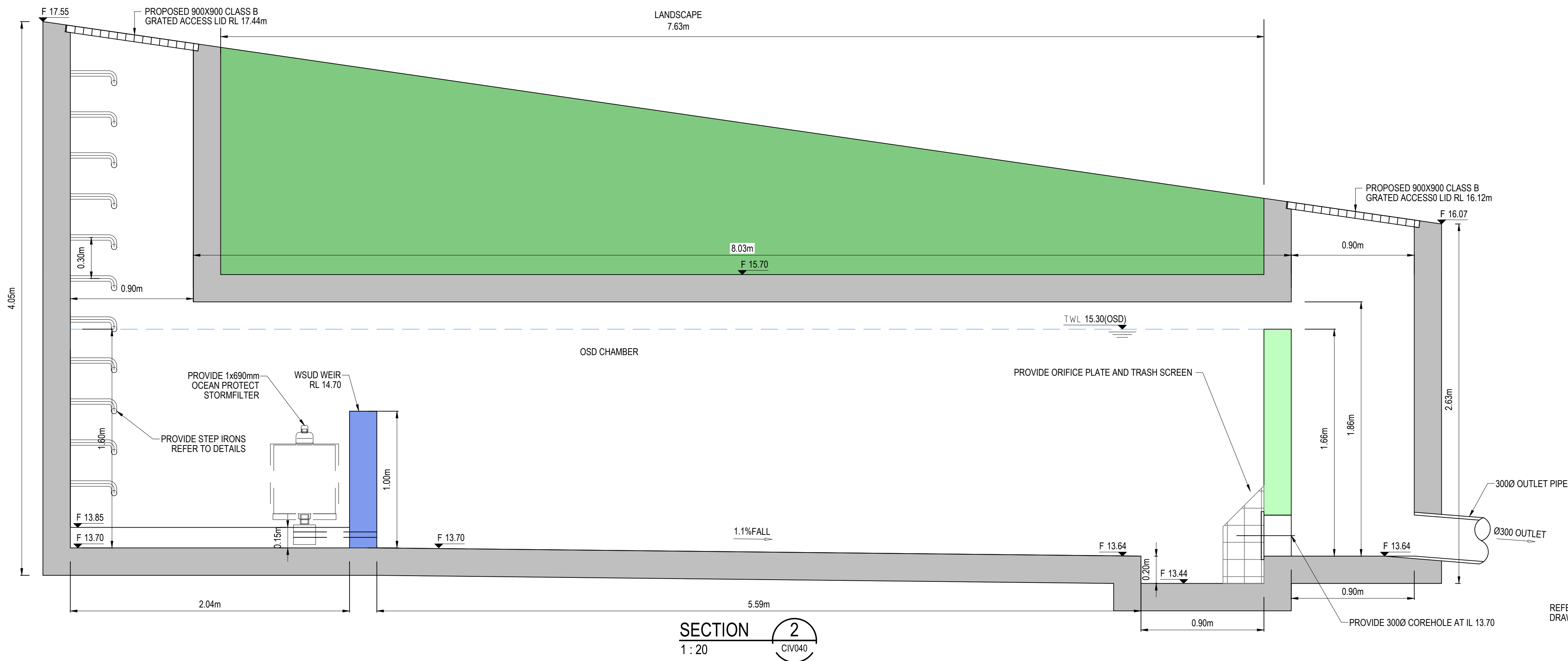
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S4.55 APPROVAL ISSUE

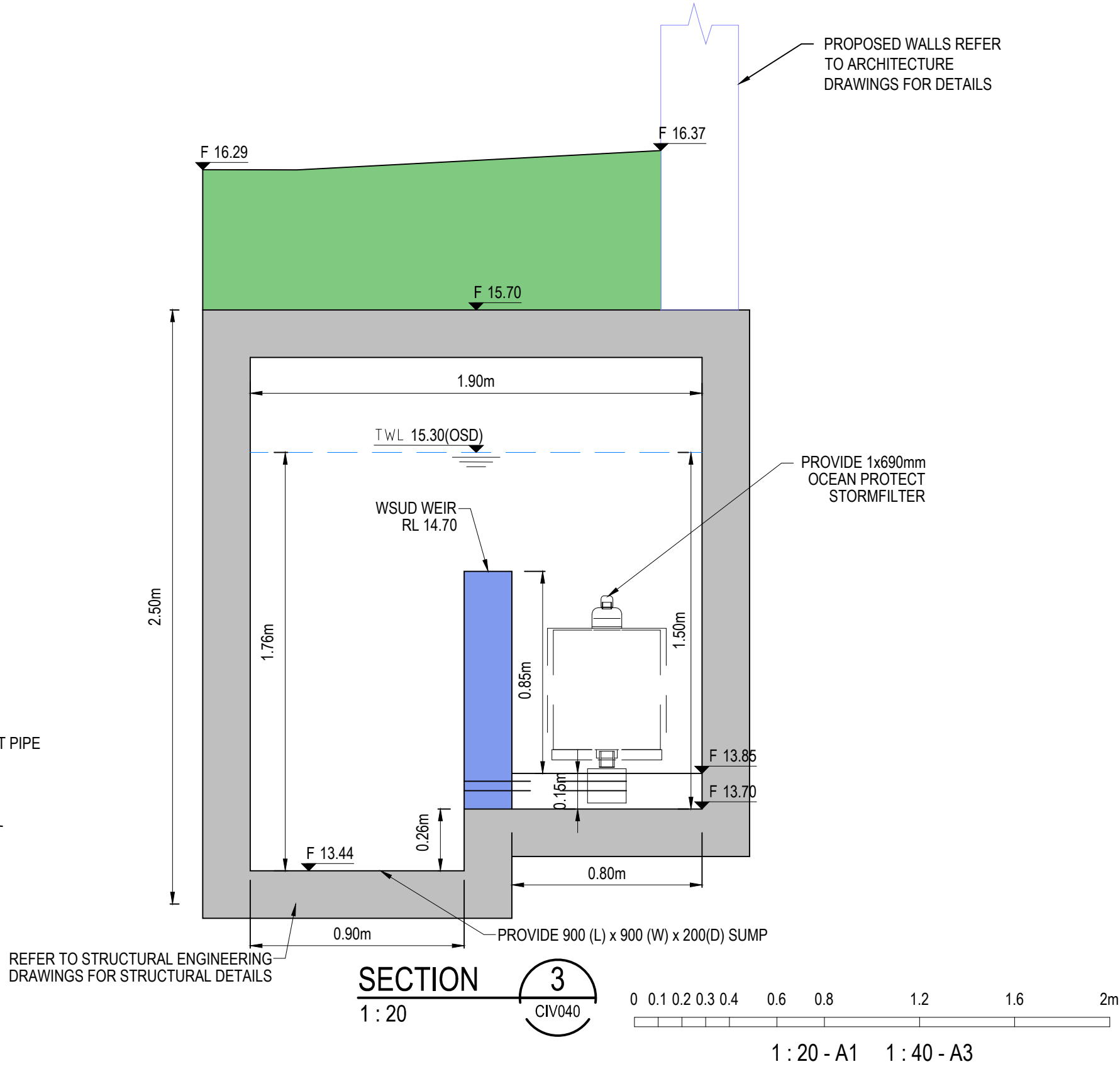
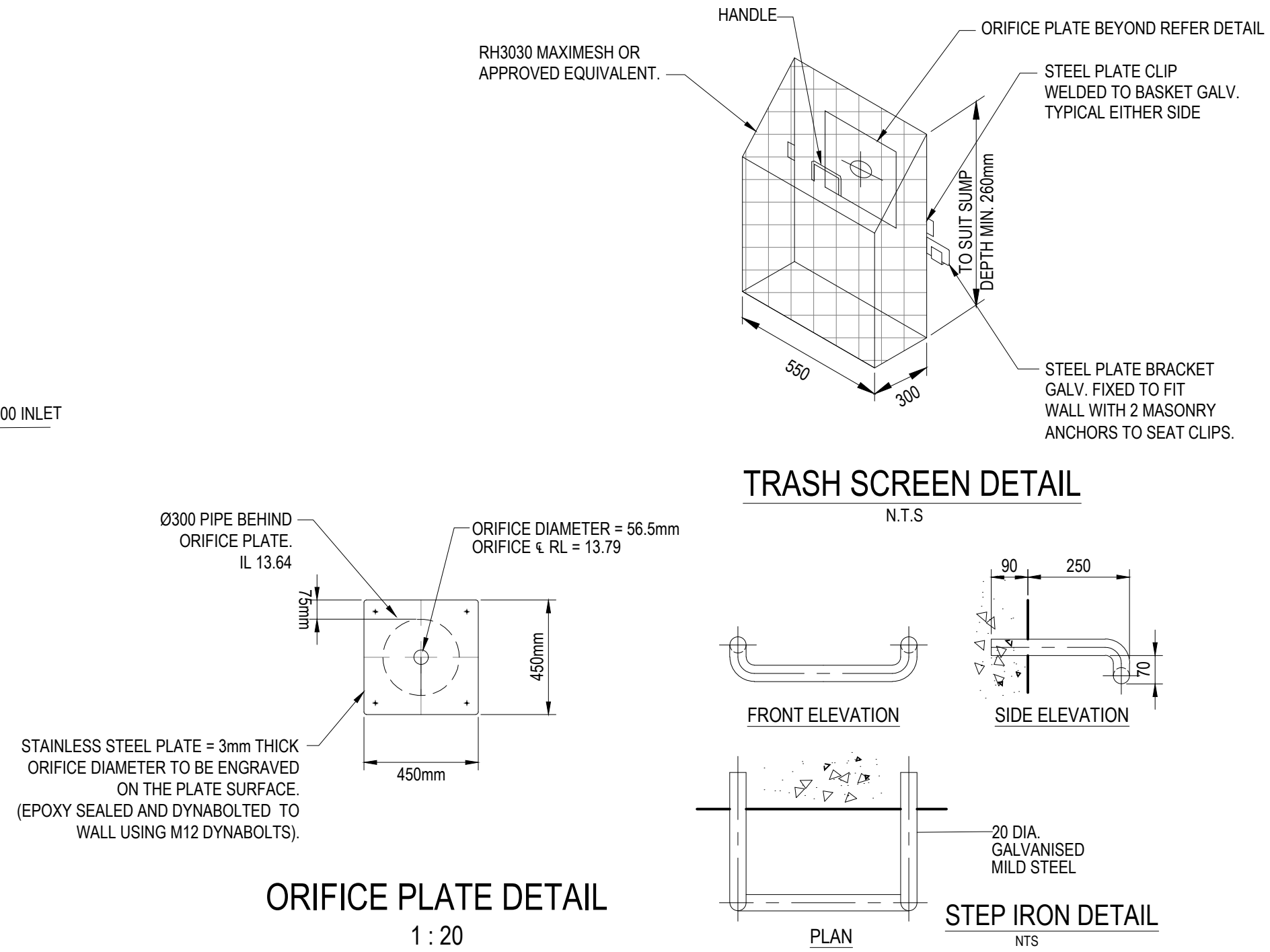




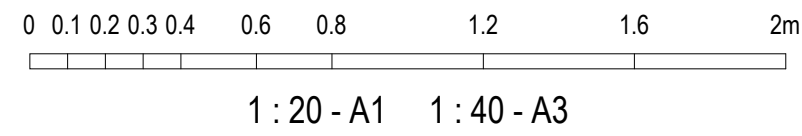
SECTION 1
1 : 20
CIV040



SECTION 2
1 : 20
CIV040

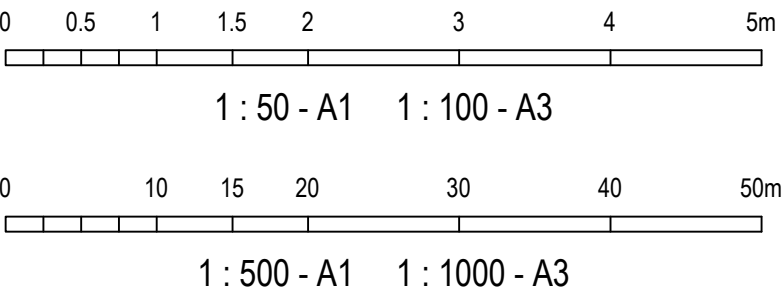
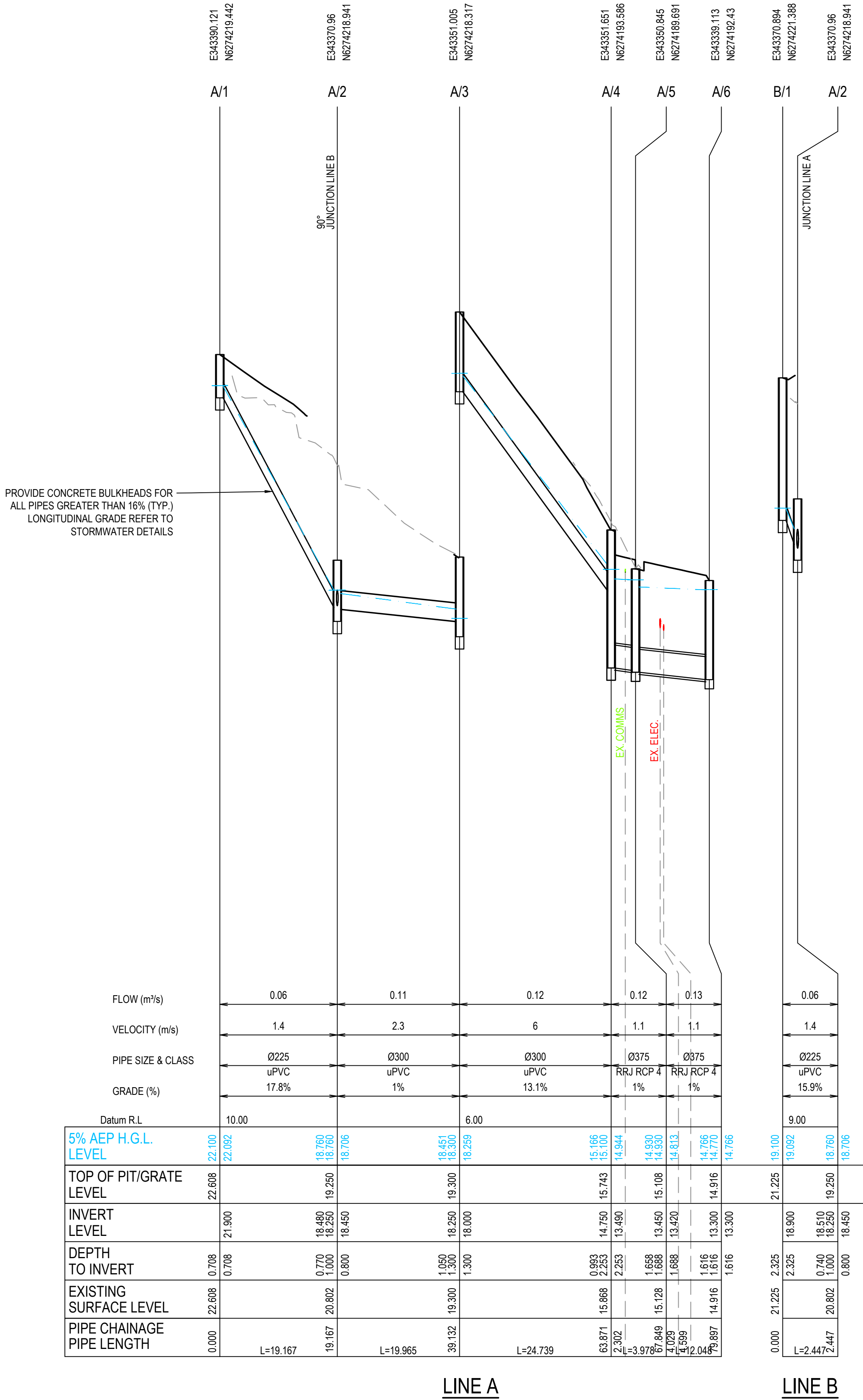


SECTION 3
1 : 20
CIV040



No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

EASEMENT / COUNCIL STORMWATER PIT SCHEDULE		
PIT No.	TYPE	COMMENTS
A/1	600 x 600 SQUARE FIELD INLET PIT - CLASS B SEALED LID - TYPE 1 REFER TO DRAWING C1046	
A/2	600 x 600 SQUARE FIELD INLET PIT - CLASS B SEALED LID - TYPE 1 REFER TO DRAWING C1046	
A/3	900 x 900 SQUARE FIELD INLET PIT - CLASS B SEALED LID - TYPE 1 REFER TO DRAWING C1046	
A/4	900 x 900 SQUARE FIELD INLET PIT - CLASS B GRATED LID - TYPE 1 REFER TO DRAWING C1046	
A/5	KERB INLET (1.8m LINTEL) - BIKE-SAFE GRATE - TYPE 2 REFER TO DRAWING C1046	
A/6	EXISTING GULLY PIT	RECONSTRUCT AS REQUIRED
B/1	600 x 600 SQUARE FIELD INLET PIT - CLASS B SEALED LID - TYPE 1 REFER TO DRAWING C1046	





goldfish&bay

A: 1/432 PARRAMATTA ROAD, PETERSHAM
E: INFO@GOLDFISHBAY.COM.AU
PH: 1300 979 667



re.
street.

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No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project
**RESIDENTIAL FLAT BUILDING
DA2023/1869**

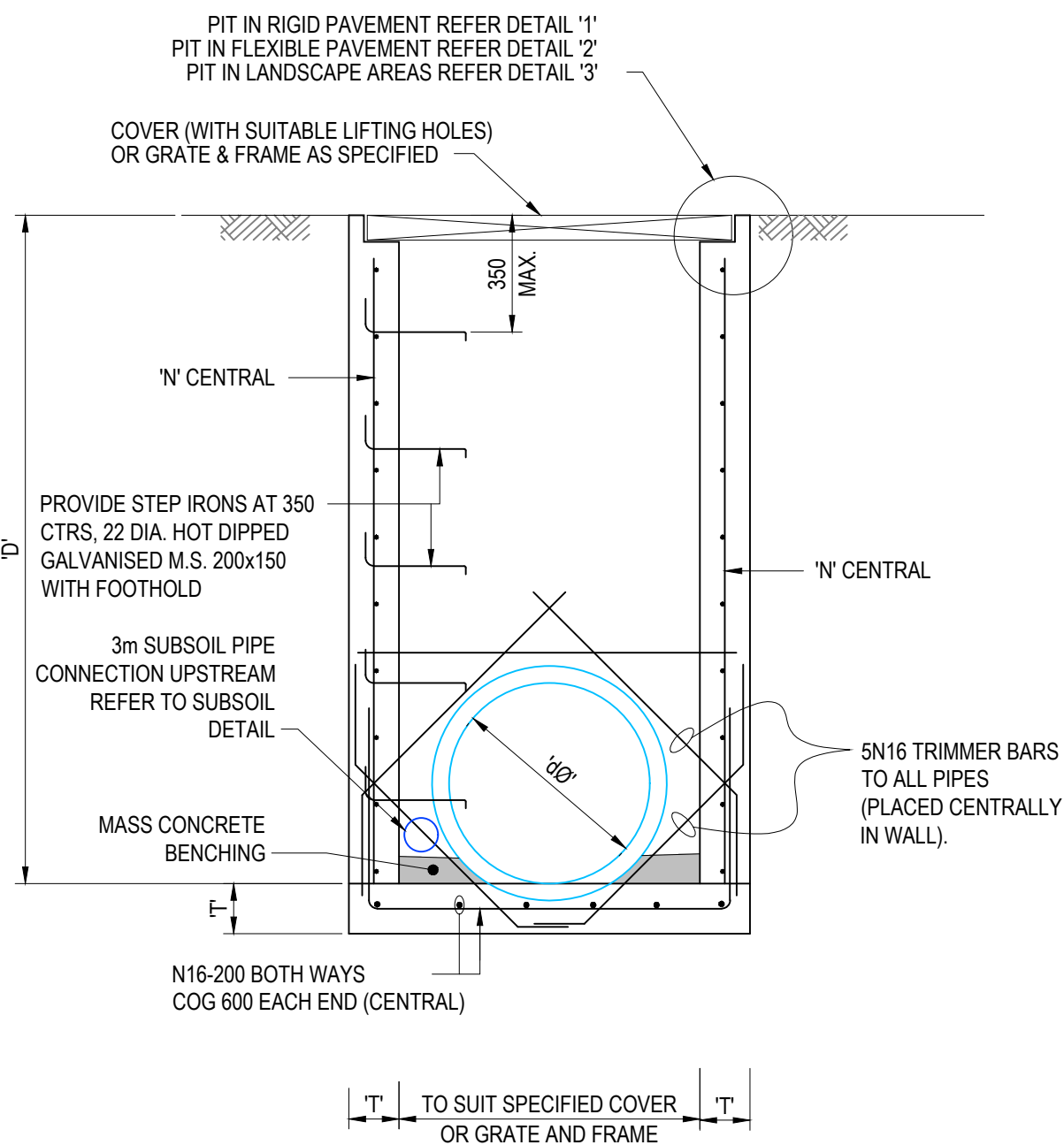
54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
**CIVIL SERVICES
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS**

Project No. 24-1023		
Drawing No. 24-1023-CIVS4.55-045		
SCALE @ A1:	North	Revision
Chk: S.H.	A	
Dwn: G.J.		
Date: APRIL 2025		



S4.55 APPROVAL ISSUE



SQUARE FIELD INLET/JUNCTION PIT - TYPE 1

SCALE: 1:20

PIPE DIA. 'Ø'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	BAR'S 'N'
100-525	600/900	600	150	N12-200
	600/900	1200	150	N12-200
	600/900	1600	150	N12-200
	600/900	2000	150	N12-200
	600/900	2400	150	N12-200

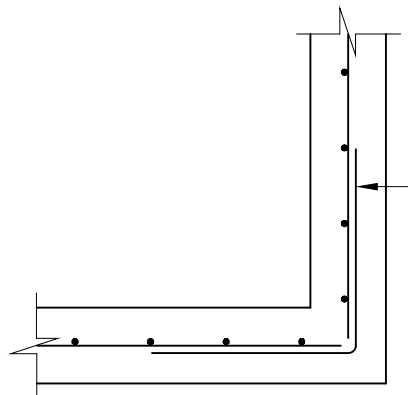
NOTE

- FOR PIT SIZE REFER TO DWG CIV1045 (600 MIN LONG).
- REINFORCING MESH IS TO BE BENT TO LAP 300 AROUND ALL CORNERS. VERTICAL BARS ARE NOT TO BE CUT. ALTERNATLY PROVIDE N12 "L" BARS (500x500) AT 400 VERTICAL CTS.
- COMPRESSIVE STRENGTH (F_c) FOR CAST IN SITU CONCRETE SHALL BE A MINIMUM 32 MPa AT 28 DAYS.
- TOP OF BENCHING SHALL BE $\frac{1}{2}$ OF OUTLET PIPE DIAMETER.
- 100mm SUBSOIL DRAINAGE PIPE 3000 LONG WRAPPED IN FABRIC SOCK TO BE PROVIDE ADJACENT TO INLET PIPES.
- ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP.
- PIT GRATE TO BE HEEL-SAFE (GRATE AND FRAME CLASS REFER TO PIT SCHEDULE ON C1045)
- DURING INSTALLATION OF GRATE AND FRAME CONTRACTOR IS TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE (REFER TO INSTALLATION TOLERANCE).
- PROVIDE STEP IRONS AS INDICATED FOR PITS DEEPER THAN 1200.
- ALL PITS TO BE FOUNDED ON MINIMUM 150 kPa GROUND, TO BE APPROVED ON SITE BY THE GEOTECHNICAL ENGINEER.
- CONCRETE STRENGTH - U.N.O

ELEMENT	F _c MPa (28 DAYS)	SLUMP	MAX. AGG. SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

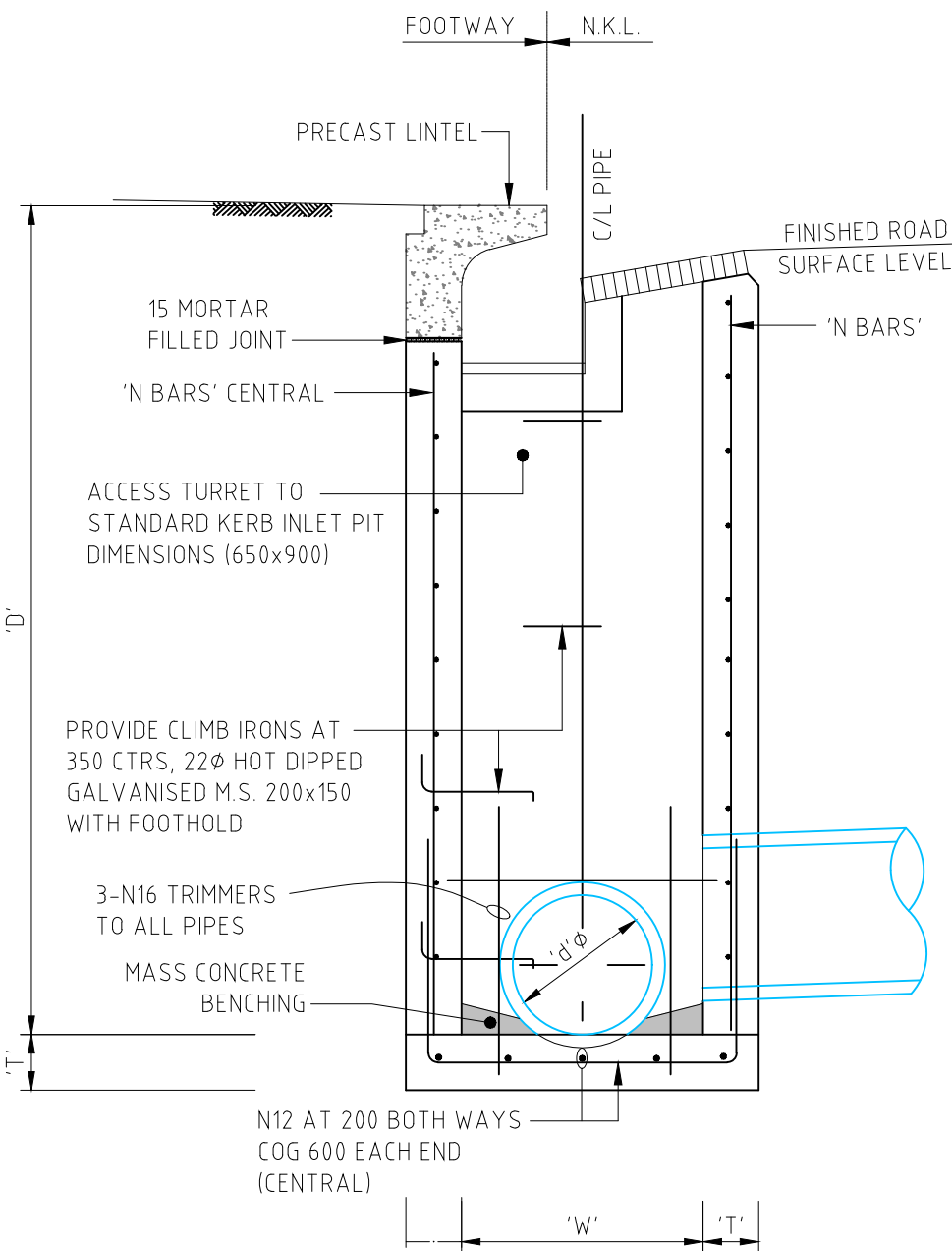
12. MINIMUM COVER - U.N.O

ELEMENT	INTERIOR	EXTERIOR
PITS		45mm
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm



TYP. CORNER DETAIL

SCALE 1:20



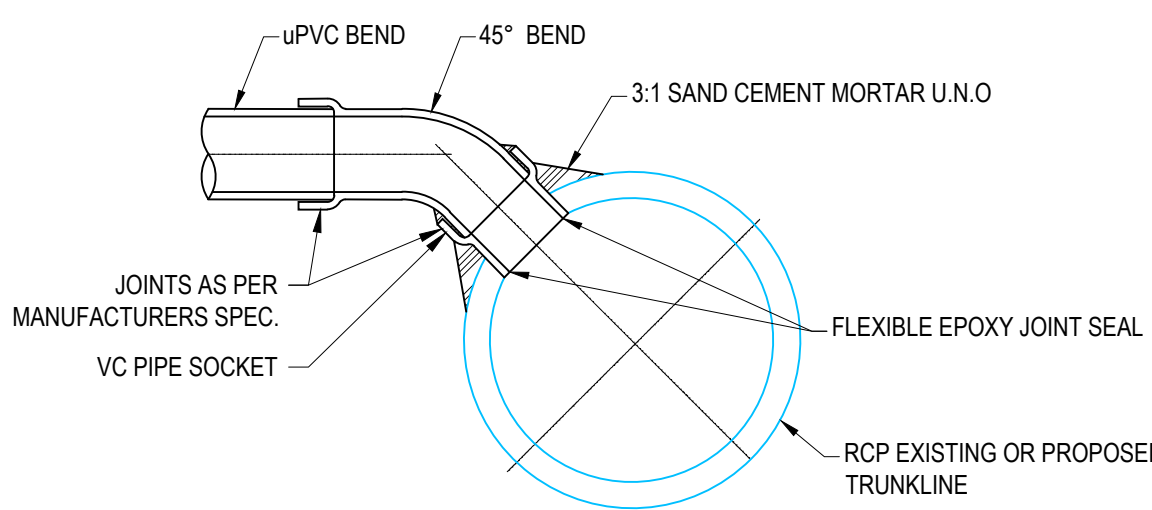
KERB INLET PIT - TYPE 2

SCALE: 1:20

PIPE DIA. 'Ø'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	BAR'S 'N'
375-525	650	1200	150	N12-200
	650	1600	150	N12-200
	650	2000	150	N12-200
	650	2400	150	N12-200
	650	3000	180	N12-200

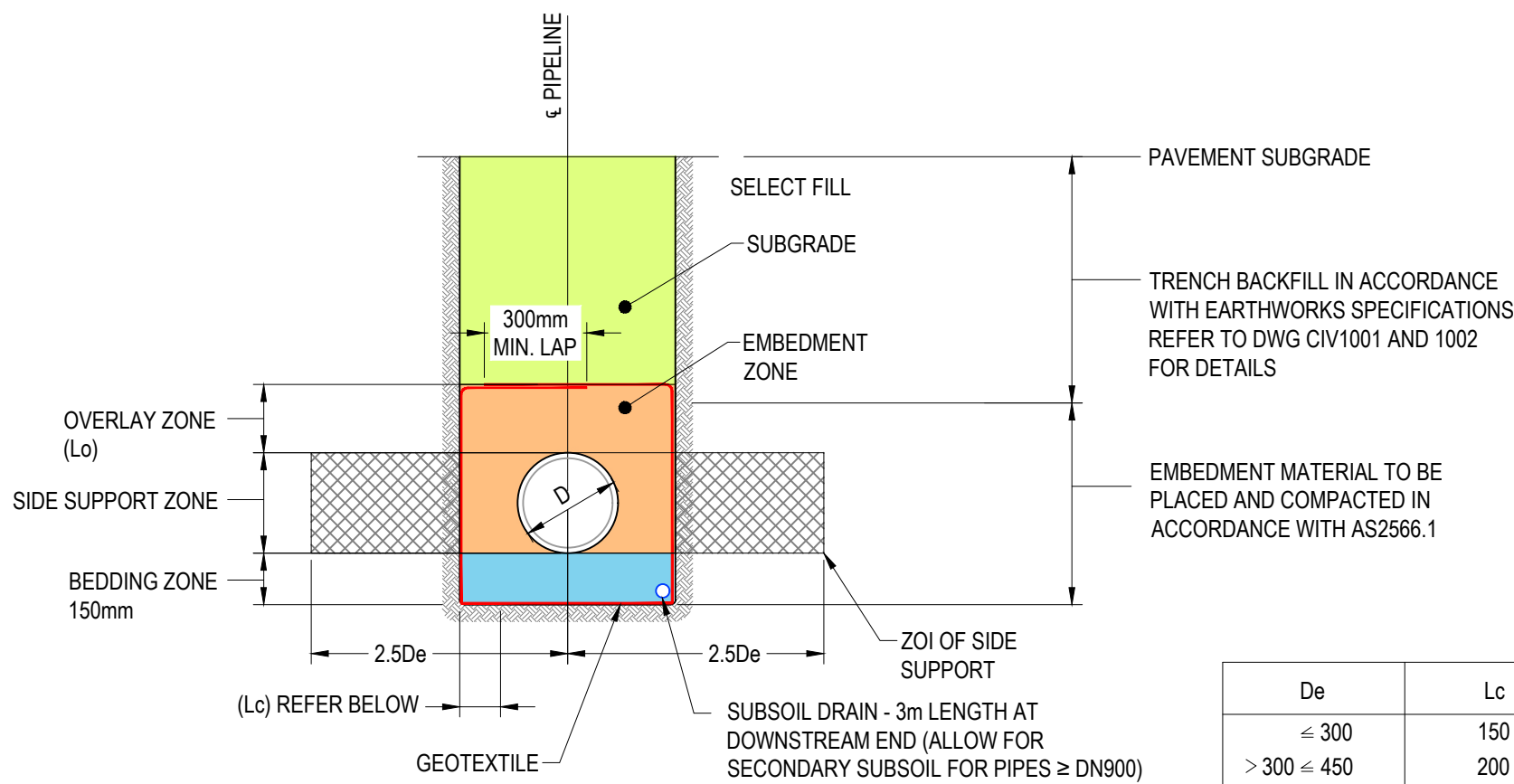
NOTE

- FOR PIT SIZE REFER TO DWG CIV1045.
- REINFORCING MESH IS TO BE BENT TO LAP 300 AROUND ALL CORNERS. VERTICAL BARS ARE NOT TO BE CUT. ALTERNATLY PROVIDE N12 "L" BARS (500x500) AT 400 VERTICAL CTS.
- COMPRESSIVE STRENGTH (F_c) FOR CAST IN SITU CONCRETE SHALL BE A MINIMUM 32 MPa AT 28 DAYS.
- TOP OF BENCHING SHALL BE $\frac{1}{2}$ OF OUTLET PIPE DIAMETER.
- 100mm SUBSOIL DRAINAGE PIPE 3000 LONG WRAPPED IN FABRIC SOCK TO BE PROVIDE ADJACENT TO INLET PIPES.
- ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP.
- PIT GRATE TO BE WELDLOK GULLY GRATE GG 78-50 OR APPROVED EQUIVALENT (
- DURING INSTALLATION OF GRATE AND LINTEL CONTRACTOR IS TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE (REFER TO INSTALLATION TOLERANCE).
- PROVIDE STEP IRONS AS INDICATED FOR PITS DEEPER THAN 1200.
- ALL PITS TO BE FOUNDED ON MINIMUM 150 kPa GROUND, TO BE APPROVED ON S' GEOTECHNICAL ENGINEER.



DIRECT PIPE CONNECTION DETAIL

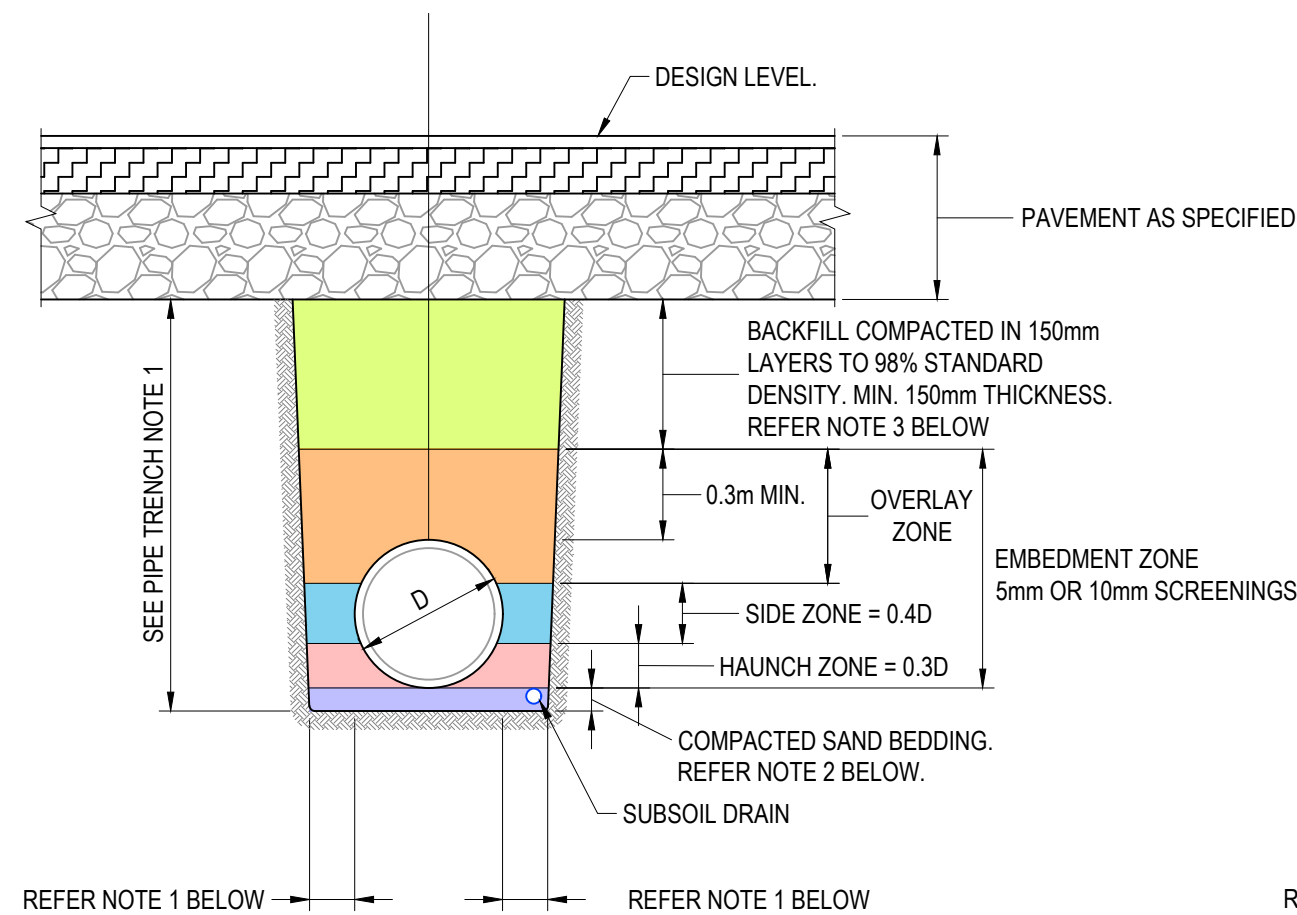
SCALE 1:10



TRENCH DETAIL FLEXIBLE PIPE

N.T.S.

De	Lc	Lo
≤ 300	150	150
> 300 ≤ 450	200	150
> 450 ≤ 900	300	150
> 900 ≤ 1500	350	200
> 1500	400 OR 0.25De WHICHEVER IS THE LARGER	300

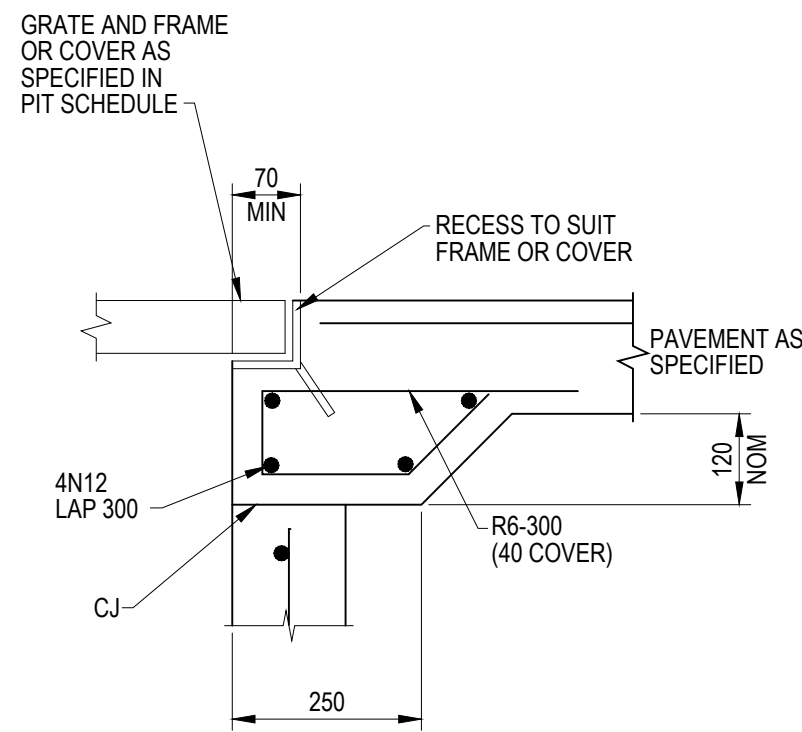


RIGID PIPE TRENCH BELOW PAVEMENT

N.T.S.

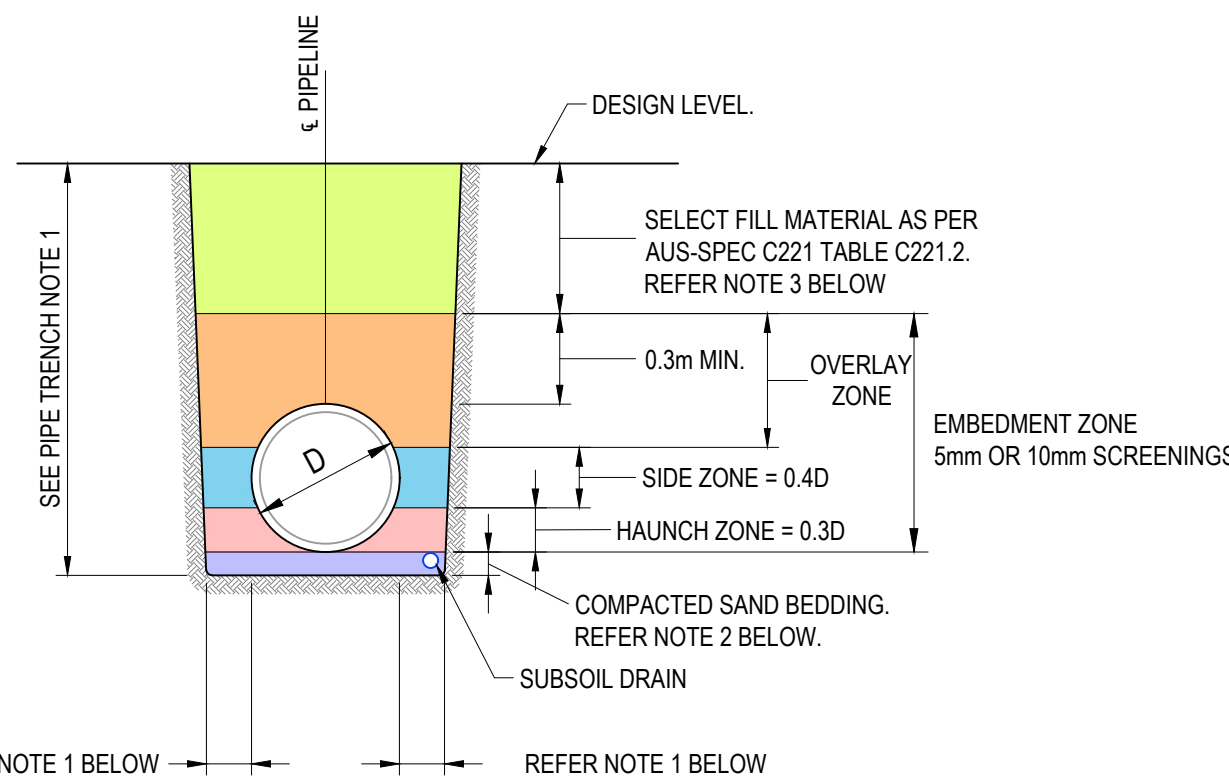
NOTE

- ≥ 0.2D OR 0.3m (WHICHEVER IS GREATER)
- 100mm FOR PIPE DIA. ≤ 1500
- COMPACTED BACKFILL UNDER TRAFFICABLE AREAS: GRANULAR FILL COMPRISING CRUSHED ROCK (75mm MAXIMUM SIZE, NON PLASTIC OPEN GRADED MATERIAL) OR CRUSHER RUN RECYCLED CONCRETE WHERE APPROVED UNDER SPECIAL CIRCUMSTANCES, STABILISED SAND (1 CEMENT TO 12 PARTS SAND BY VOLUME) OR CONTROLLED LONG STRENGTH MATERIAL OR LEAN MIX CONCRETE OR CLASS 3 MATERIAL MAY BE PERMITTED



DETAIL "1"

SCALE 1:10

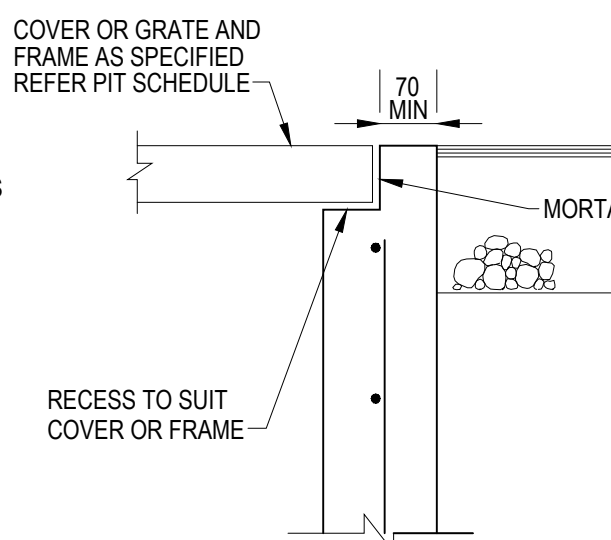


RIGID PIPE TRENCH BELOW LANDSCAPING (HS3)

N.T.S.

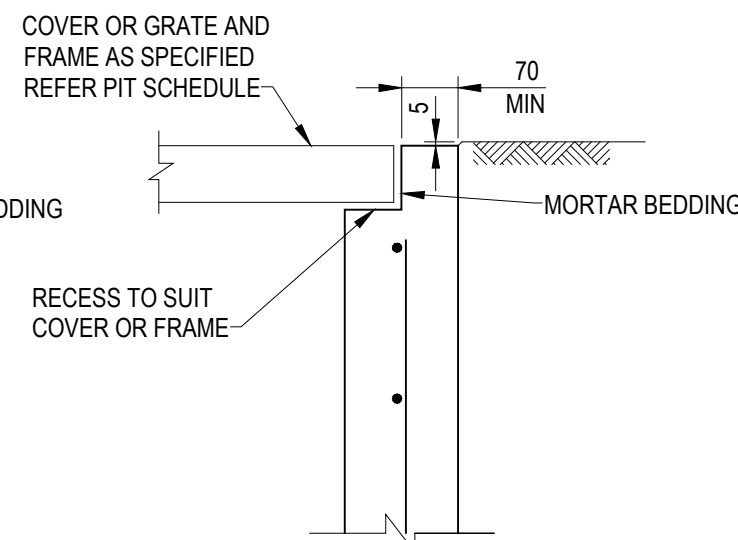
NOTE

- ≥ 0.2D OR 0.3m (WHICHEVER IS GREATER)
- 100mm FOR PIPE DIA. ≤ 1500
- COMPACTED BACKFILL UNDER NON-TRAFFICABLE AREAS: EXCAVATED MATERIALS PROVIDED ADEQUATE COMPACTION CAN BE OBTAINED. ALTERNATIVELY USE GRANULAR FILL SAND



DETAIL "2"

SCALE 1:10



DETAIL "3"

SCALE 1:10

0 100 200 300 400 600 800 1000mm

1 : 10 - A1 1 : 20 - A3

0 200 500 750 1000 1500 2000mm

1 : 20 - A1 1 : 40 - A3



Client

re.
street.

Architect

ARCHICORE

No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project

RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title

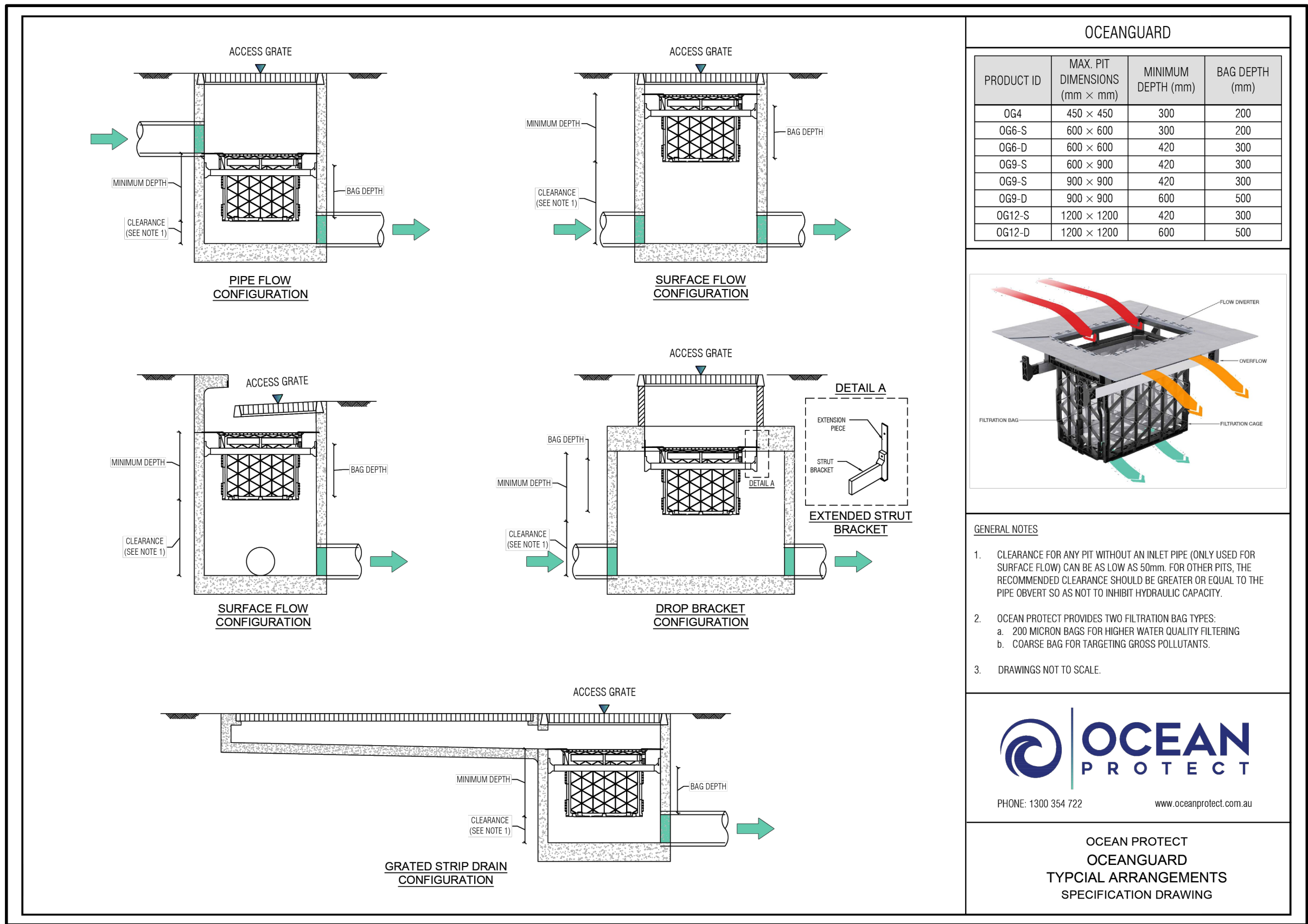
CIVIL SERVICES
STORMWATER DRAINAGE DETAILS
SHEET 1

Project No. 24-1023

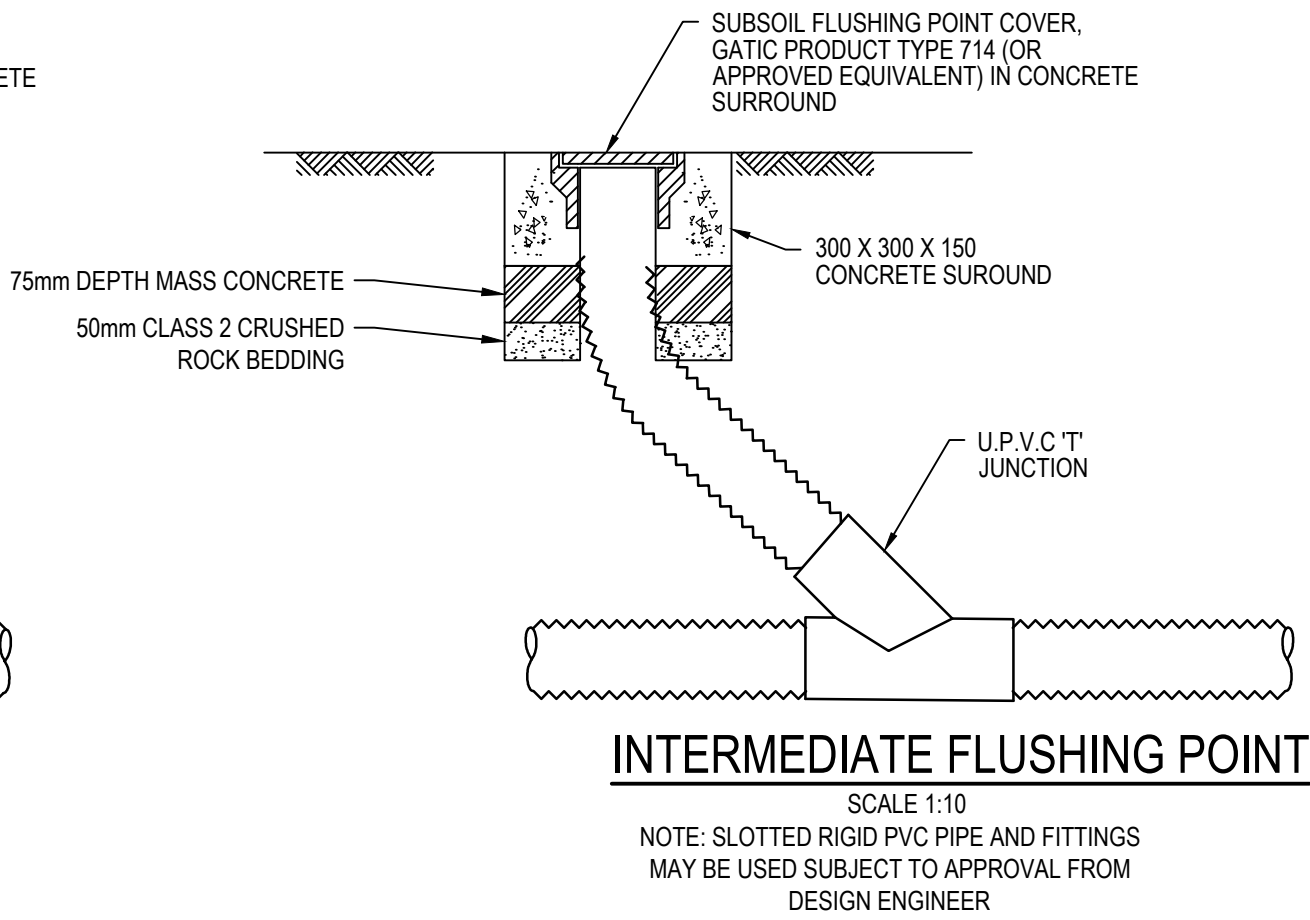
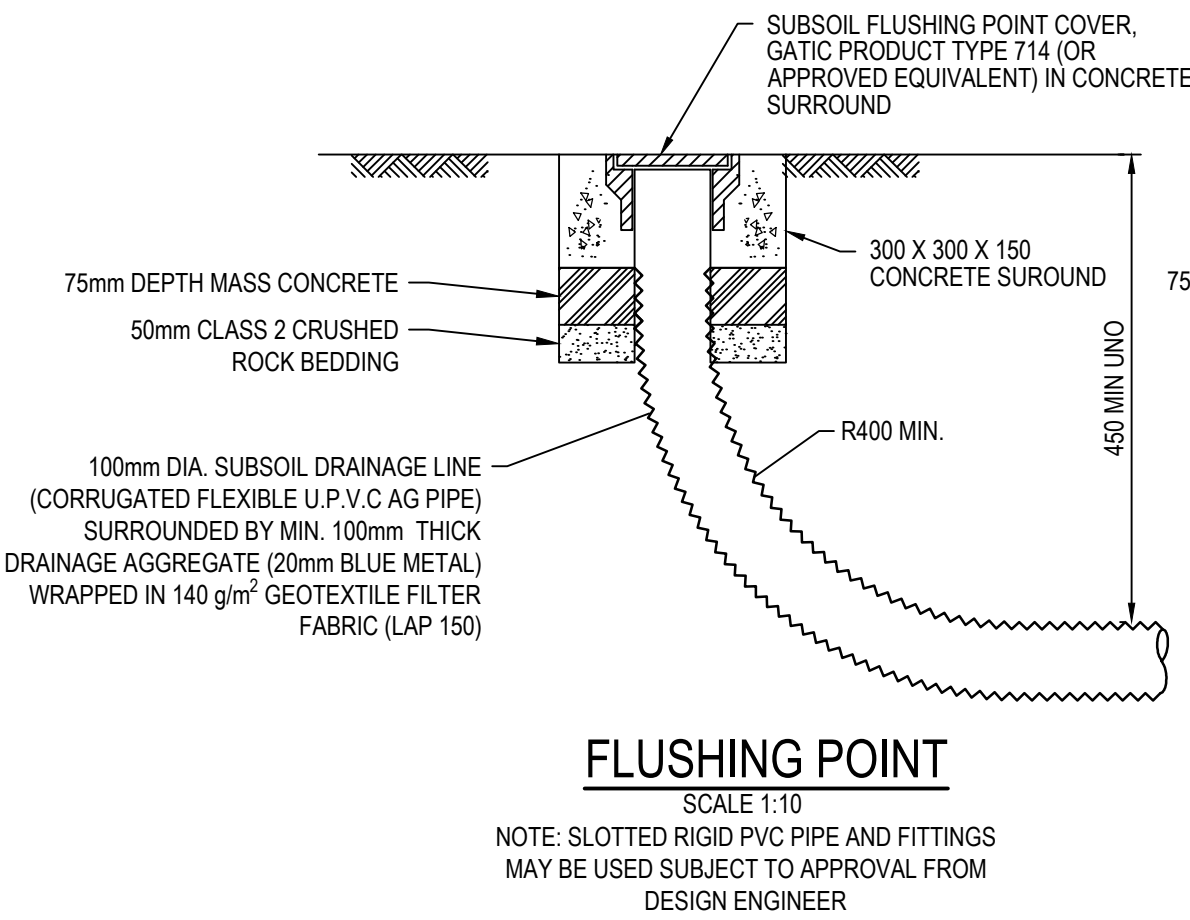
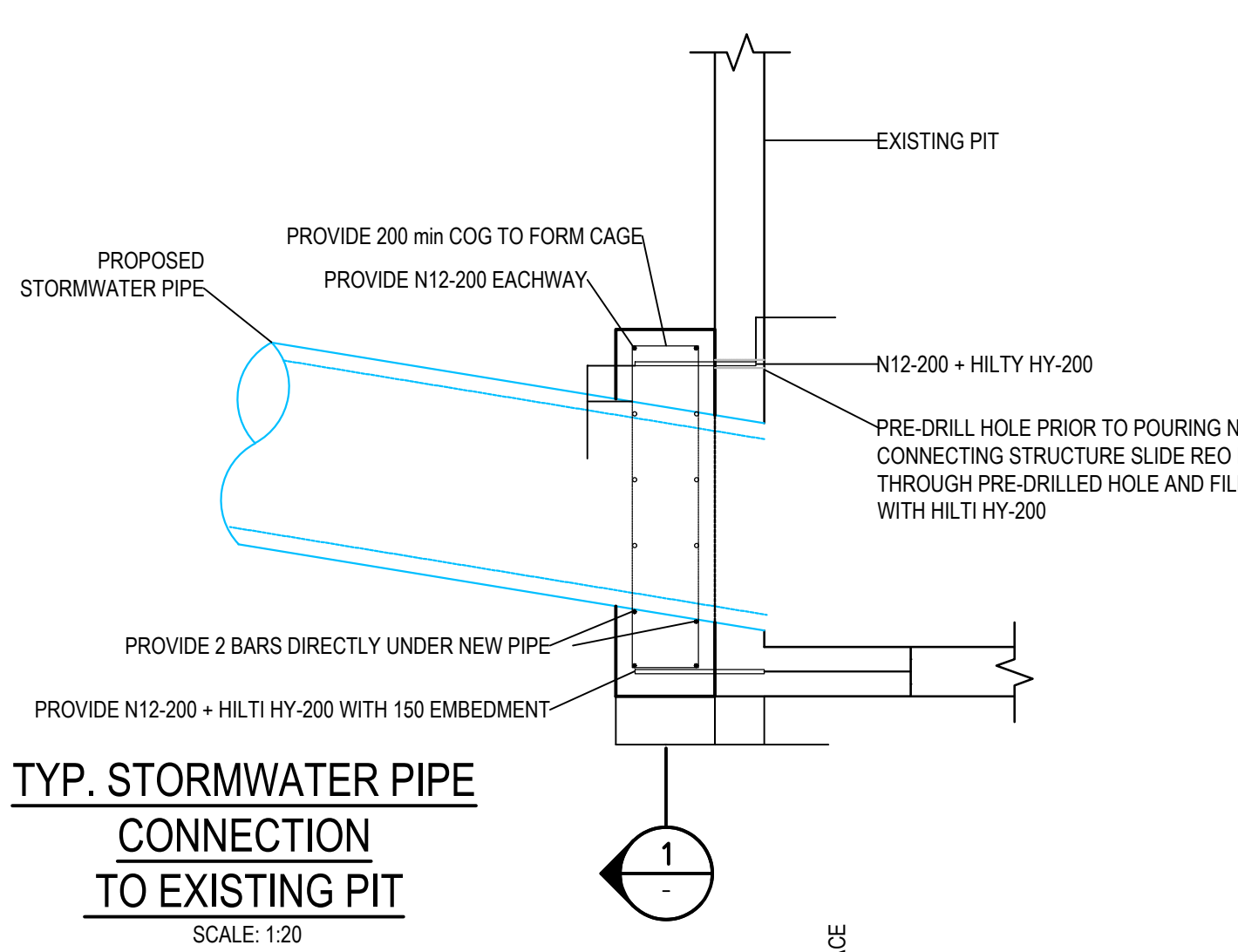
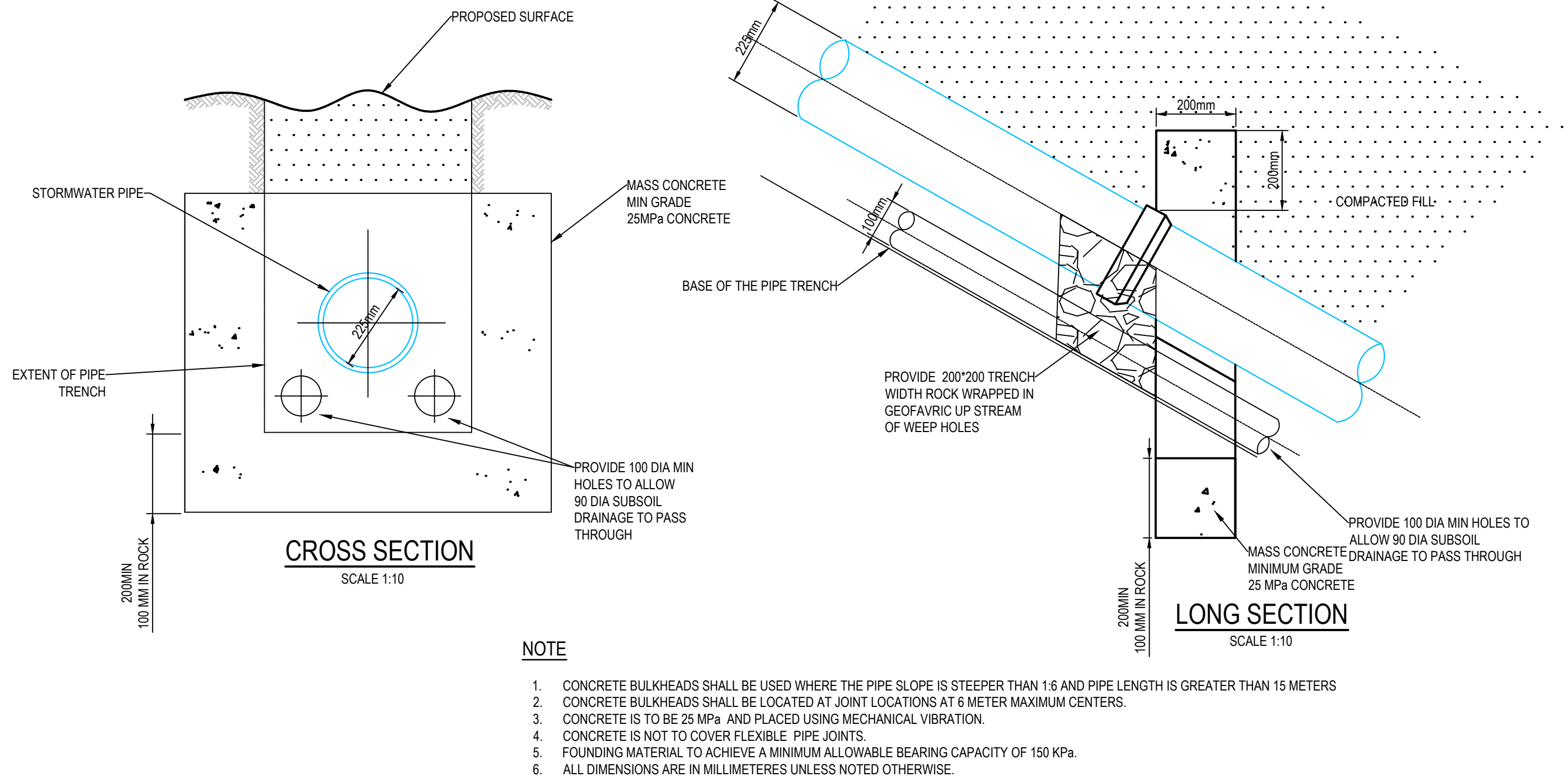
Drawing No. 24-1023-CIV-S4.55-046

SCALE @ A1:	North	Revision
Chk:	S.H.	A
Dm:	G.J.	
Date:	APRIL 2025	

S4.55 APPROVAL ISSUE



ACO POWERDRAIN S100K
SCALE 1:20



SPECIFICATION CLAUSE
POWERDRAIN S100K - LOAD CLASS B

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE ACO'S POWERDRAIN S300K POLYMER CONCRETE V-PROFILE CHANNEL SYSTEM WITH DUCTILE IRON EDGE RAILS AS MANUFACTURED BY ACO.

MATERIALS
S300K CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN DUCTILE IRON EDGE RAIL. PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS WITH SUPPORTING DOCUMENTATION:

COMPRESSIVE STRENGTH:	98 MPa
FLEXURAL STRENGTH:	26 MPa
TENSILE STRENGTH:	14 MPa
WATER ABSORPTION:	0.07%
FROST PROOF:	YES
COEFFICIENT OF EXPANSION/CONTRACTION:	2.02x10 ⁻⁶ /°C
WATER VAPOUR TRANSMISSION:	0.0364g/m²
NON FLAMMABLE:	YES
COEFFICIENT OF ROUGHNESS (MANNINGS):	n=0.011
RESISTANT TO WEATHERING:	YES
DILUTE ACID AND ALKALI RESISTANT:	YES
SF SEALANT GROOVE	YES

CHANNELS
S200K CHANNEL SHALL BE 200mm NOMINAL INTERNAL WIDTH WITH AN OVERALL WIDTH OF 260mm. CHANNEL INVERT SHALL HAVE A V-PROFILE TO ALLOW EFFICIENT DRAINAGE. S200K SLOPED CHANNELS SHALL HAVE A BUILT-IN SLOPE OF 0.5%. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

GRATES
THE GRATE SHALL BE ACO S200K/H200SK* IRON SLOTTED GRATE WITH POWERLOK BOLTLESS LOCKING SYSTEM AS MANUFACTURED BY ACO. THIS GRATE HAS AN OVERALL WIDTH OF 252MM AND OVERALL LENGTH OF 1000MM. SLOT WIDTHS MEASURE AT A MAXIMUM OF 18MM.

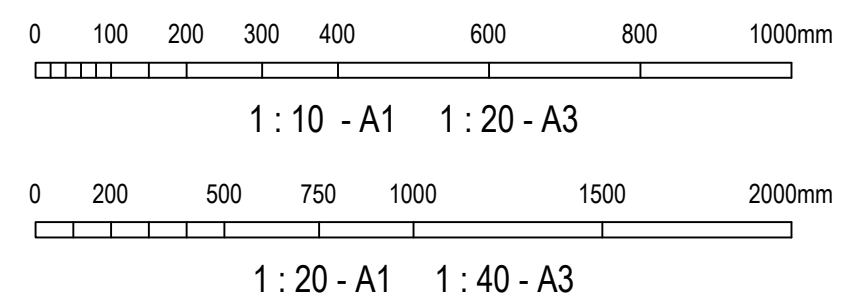
THE GRATE SHALL BE MANUFACTURED FROM DUCTILE IRON AND HAVE MINIMUM PROPERTIES AND CHARACTERISTICS AS FOLLOWS:

- MANUFACTURED FROM DUCTILE IRON TO ASTM A536-84 GRADE 65-45-12 WHICH IS SIMILAR TO AS 1831 GRADE 400-15
- CERTIFIED TO AS 3996 LOAD CLASS B (80KN)
- MEETS AS 3996 (CLAUSE 3.3.6)
- INTAKE AREA OF 75,500MM² PER HALF METRE OF GRATE

INSTALLATION
THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO AND TO BE INSTALLED FOR ITS INTENDED PURPOSE. ANY DEVIATION OR PARTIAL USE OF THE SPECIFIED SYSTEM AND/OR IMPROPER INSTALLATION WILL VOID ALL WARRANTIES PROVIDED BY ACO.

NOTES:

- SPECIFIC SITE CONDITIONS MAY REQUIRE AN INCREASE IN CONCRETE ENCASEMENT DIMENSIONS AND/OR REINFORCEMENT. IT IS THE CUSTOMER'S RESPONSIBILITY TO ENSURE THE CONCRETE ENCASEMENT IS DESIGNED FOR THE APPLICATION. A MINIMUM CONCRETE STRENGTH OF 25MPa IS RECOMMENDED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
- THE FINISHED LEVEL OF THE CONCRETE ENCASEMENT MUST BE APPROXIMATELY 3MM ABOVE THE TOP OF THE CHANNEL EDGE.
- FOR FURTHER DETAILS, REFER TO ACO'S DESIGN & SITE INSTALLATION FILES AT WWW.ACODRAIN.COM/RESOURCES.



No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project
RESIDENTIAL FLAT BUILDING

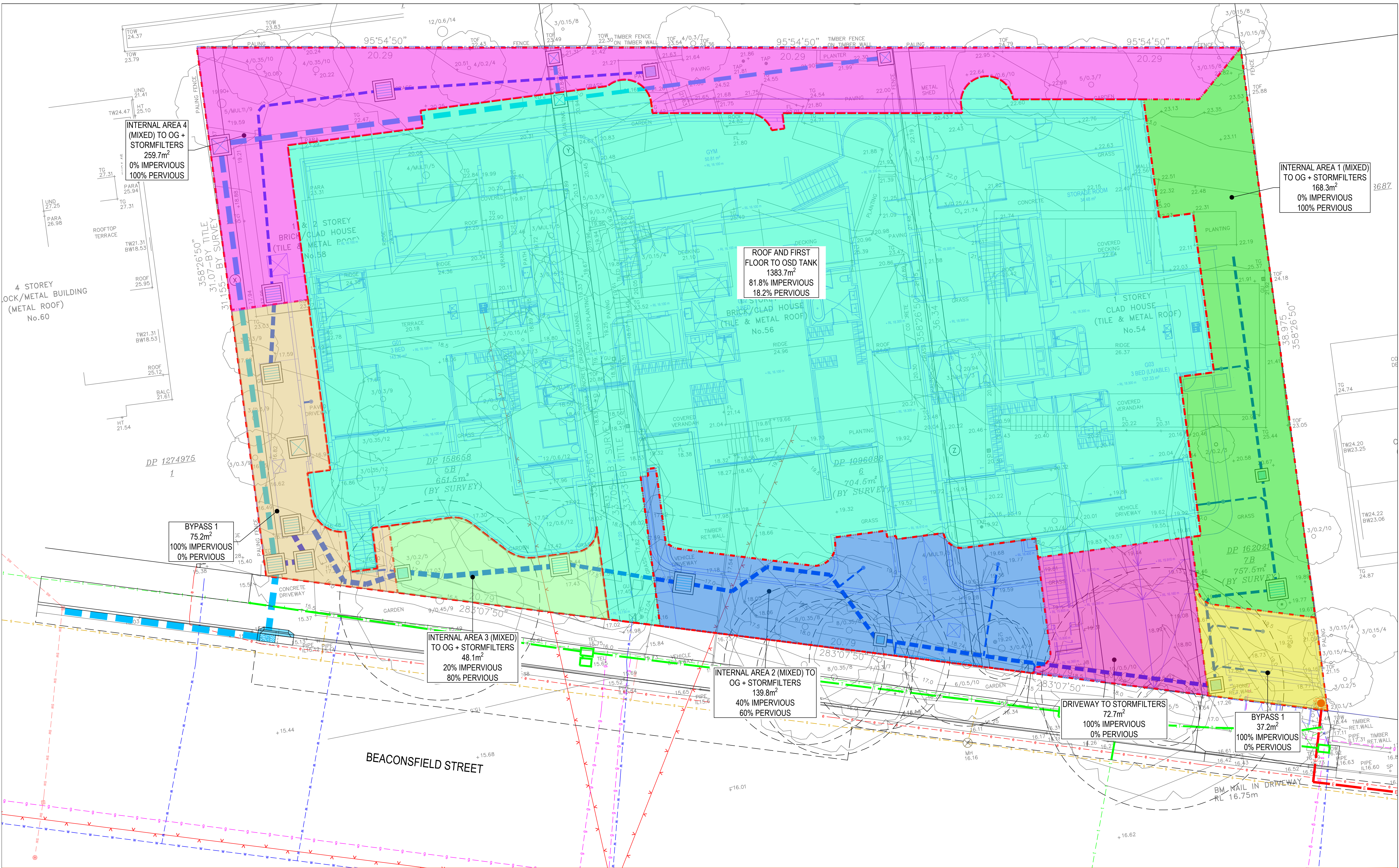
54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
CIVIL SERVICES
STORMWATER DRAINAGE DETAILS
SHEET 2

Project No.	24-1023
Drawing No.	24-1023-CIV-S4.55-047
SCALE @ A1:	North
Chk:	S.H.
Drm:	G.J.
Date:	APRIL 2025
Revision	A



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1432 PARRAMATTA ROAD, PETERSHAM
E: INFO@GOLDFISHBAY.COM.AU
PH: 1300 979 667





No.	Description	Date	In	No.	Description	Date	In
A	APPROVAL ISSUE	16.04.25	T.L.				

Project
RESIDENTIAL FLAT BUILDING

54-58 BEACONSFIELD STREET
NEWPORT

Drawing Title
CIVIL SERVICES
MUSIC CATCHMENT PLAN

0 0.5 1 1.5 2 3 4 6 8 10m

1: 100 @ A1 1: 200 @ A3

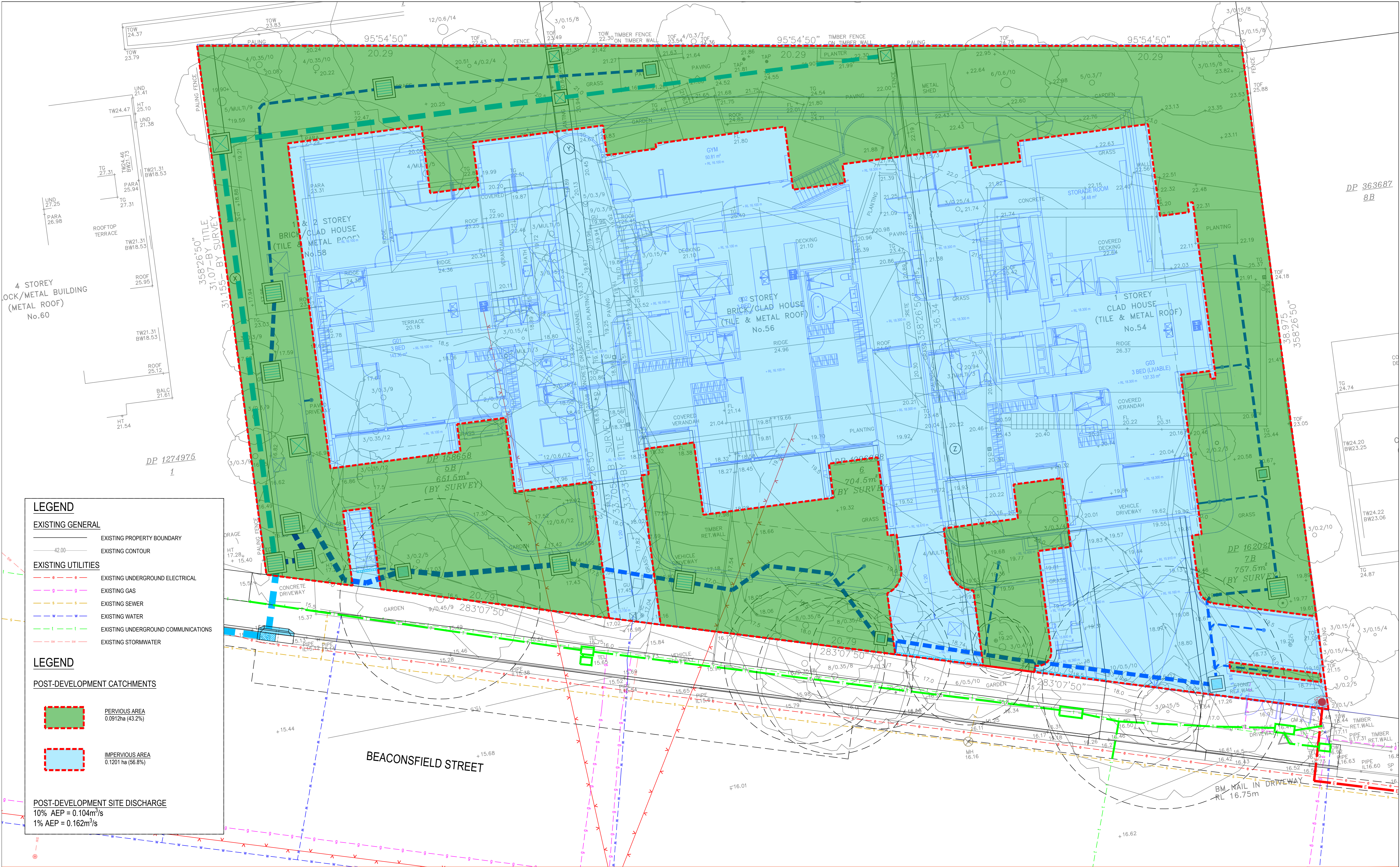


Project No. 24-1023
Drawing No. **24-1023-CIV-S4.55-050**

SCALE @ A1: North
Chk: S.H.
Dm: G.J.
Date: APRIL 2025

Revision
A

S4.55 APPROVAL ISSUE



LEGEND

EXISTING GENERAL

- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOUR

EXISTING UTILITIES

- EXISTING UNDERGROUND ELECTRICAL
- EXISTING GAS
- EXISTING SEWER
- EXISTING WATER
- EXISTING UNDERGROUND COMMUNICATIONS
- EXISTING STORMWATER

LEGEND

POST-DEVELOPMENT CATCHMENTS

- PERVIOUS AREA
0.0912ha (43.2%)
- IMPERVIOUS AREA
0.1201ha (56.8%)

POST-DEVELOPMENT SITE DISCHARGE

10% AEP = 0.104m³/s
1% AEP = 0.162m³/s

 14/32 PARRAMATTA ROAD, PETERSHAM E: INFO@GOLDFISHBAY.COM.AU PH: 1300 979 667	Client 	Architect 	No.	Description	Date	In	No.	Description	Date	In	Project RESIDENTIAL FLAT BUILDING 54-58 BEACONSFIELD STREET NEWPORT	Drawing Title CIVIL SERVICES STORMWATER CATCHMENTS POST-DEVELOPMENT PLAN 0 0.5 1 1.5 2 3 4 6 8 10m 1: 100 @ A1 1: 200 @ A3	Project No. 24-1023 Drawing No. 24-1023-CIV-S4.55-053 SCALE @ A1: S.H. G.J. APRIL 2025	North Revision A	S4.55 APPROVAL ISSUE
			A	APPROVAL ISSUE	16.04.25	T.L.									