

# MIXED-USED DEVELOPMENT 1102 BARRENJOEY ROAD PALM BEACH NSW 2108

## CIVIL DRAWING LIST

C000	COVER SHEET
C001	STANDARD NOTES
C201	BULK EARTHWORKS
C210	EROSION & SEDIMENT CONTROL PLAN
C401	DRAINAGE LAYOUT - BASEMENT
C402	DRAINAGE LAYOUT - GROUND
C403	DRAINAGE DETAILS



LOCALITY PLAN  
NTS

<b>REVISIONS:</b> <table border="1"> <thead> <tr> <th>No.</th> <th>REVISION DESCRIPTION</th> <th>DRAWN</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>ISSUED FOR INFORMATION</td> <td>HB</td> <td>26.11.21</td> </tr> <tr> <td>A</td> <td>ISSUED FOR S.4.55 APPLICATION</td> <td>HB</td> <td>19.04.21</td> </tr> </tbody> </table>		No.	REVISION DESCRIPTION	DRAWN	DATE	B	ISSUED FOR INFORMATION	HB	26.11.21	A	ISSUED FOR S.4.55 APPLICATION	HB	19.04.21	SCALE BAR  <small>COPYRIGHT © THE DRAWING IS COPYRIGHT AND THE PROPERTY OF VAN DER MEER (NSW) PTY LTD. IT MUST NOT BE REPRODUCED, COPIED OR USED WITHOUT THE AUTHORITY OF VAN DER MEER (NSW) PTY LTD. THIS DRAWING AND ITS CONTENTS ARE ELECTRONICALLY GENERATED. VAN DER MEER (NSW) PTY LTD. WILL NOT ACCEPT RESPONSIBILITY FOR ANY CONSEQUENCES ARISING FROM THE USE OF THE DRAWING FOR OTHER THAN ITS INTENDED PURPOSE OR WHERE THE DRAWING HAS BEEN ALTERED, AMENDED OR CHANGED EITHER MANUALLY OR ELECTRONICALLY BY ANY THIRD PARTY. NOTE: THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION PURPOSES ONLY. UNLESS SIGNED, FIGURES DIMENSIONS TAKE PRECEDENCE OVER SCALES. DO NOT SCALE REDUCED SIZE DRAWINGS. VERIFY DIMENSIONS PRIOR TO COMMENCING ANY ON-SITE OR OFF-SITE WORKS OR FABRICATION. IF IN DOUBT - ASK.</small>	 van der Meer Consulting LEVEL 6, 39 CHANDOS STREET ST LEONARDS NSW 2065 Telephone 61-2-9436 0433 Fax 61-2-9436 1370 www.vandermeer.com.au van der Meer (NSW) Pty Ltd A.B.N. 56 158 266 301	CLIENT <b>REFORM PROJECTS</b> 15/108 DUNNING AVENUE ROSEBERY NSW 2018  ARCHITECT <b>ROB MILLS ARCHITECTURE</b> 51 QUEEN STREET WOOLLAHRA NSW 2065	PROJECT TITLE <b>MIXED-USE DEVELOPMENT</b> 1102 BARRENJOEY ROAD PALM BEACH, NSW 2108  DRAWING TITLE <b>COVER SHEET</b>	DRAWING STATUS <b>FOR INFORMATION</b> NOT TO BE USED FOR CONSTRUCTION <table border="1"> <thead> <tr> <th>PROJECT LEADER</th> <th>DESIGNER</th> <th colspan="2">SIGNATURE</th> </tr> </thead> <tbody> <tr> <td>AW</td> <td>HB</td> <td colspan="2"></td> </tr> <tr> <th>DRAFTSPERSON</th> <th>SCALE</th> <th>DATE</th> <th>SHEET SIZE</th> </tr> <tr> <td>LO</td> <td></td> <td>NOV. 2021</td> <td>A1</td> </tr> <tr> <th>JOB No.</th> <th>DRAWING No.</th> <th>REVISION</th> <th></th> </tr> <tr> <td>SY202-105</td> <td>C000</td> <td>B</td> <td></td> </tr> </tbody> </table>	PROJECT LEADER	DESIGNER	SIGNATURE		AW	HB			DRAFTSPERSON	SCALE	DATE	SHEET SIZE	LO		NOV. 2021	A1	JOB No.	DRAWING No.	REVISION		SY202-105	C000	B	
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## GENERAL NOTES

- G1. ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BMS OR SSM.
- G2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
- G3. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH COUNCIL'S SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
- G4. DIMENSIONS MUST NOT BE SCALED FROM DRAWINGS.
- G5. CONTRACTOR TO ENSURE THAT ALL ROADWORKS ARE SMOOTHLY TRANSITIONED TO EXISTING LEVELS FREE FROM ABRUPT CHANGES.
- G6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR. FURTHER, THE LOCATION OF RECOVERY MARKS SHOULD BE VERIFIED AND CONFIRMED BY THE CONTRACTOR AND ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE SUPERINTENDENT PRIOR TO THE COMMENCEMENT OF WORK.
- G7. AT COMPLETION OF WORKS ALL ADJOINING DISTURBED AREAS ARE TO BE REINSTATED TO THE 'AS FOUND' CONDITION.
- G8. THE CONTRACTOR SHALL ENSURE ALL AREAS DRAIN WITH A MINIMUM FALL OF 1% (1:100) GRADE TO OUTLETS UNLESS INDICATED OTHERWISE. NO WORKS SHALL CAUSE PONDING OF STORMWATER ON UPSTREAM PROPERTIES OR CONCENTRATE RUNOFF ONTO DOWNSTREAM PROPERTIES.
- G9. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED LANDSCAPE, ARCHITECTURAL, ELECTRICAL, RETICULATION, WATER & SEWER DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
- G10. THE CONTRACTOR SHALL ENSURE THAT ALL PAVEMENTS GRADE EVENLY BETWEEN NOMINATED RL'S ON PLAN AND NO POND OF WATER OCCURS.
- G11. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METERS.
- G12. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
- G13. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- G14. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER. BUT IS NOT AN AUTHORIZATION FOR AN EXTRA. ANY EXTRAS INVOLVED MUST BE TAKEN UP WITH THE SUPERINTENDENT BEFORE THE WORK COMMENCES.
- G15. THE CONTRACTOR IS TO EMPLOY A QUALIFIED GEOTECHNICAL ENGINEER AS REQUIRED FOR ALL GEOTECHNICAL ASPECTS OF THE BUILDING WORKS. REFER TO FOUNDATION, GROUNDWORKS AND RETENTION/SHORING NOTES. REFER ALSO TO THE GEOTECHNICAL REPORT FOR THIS PROJECT.

## SUBGRADE PREPARATION

- RW1. REMOVE ALL VEGETATION, TOPSOIL AND DELETERIOUS MATERIAL FROM AREA OF PROPOSED BUILDING PLATFORM AND PAVEMENTS.
- RW2. PROOF ROLL EXPOSED SUB GRADE TO ACHIEVE A MINIMUM COMPACTION OF 98% STANDARD MAXIMUM DRY DENSITY (SMDD), DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1.
- RW3. REMOVE ANY SOFT, HEAVING, WET OR UNSTABLE AREAS IDENTIFIED DURING PROOF ROLLING AND REPLACE USING SELECT IMPORTED FILL COMPACTED IN LAYERS NOT EXCEEDING 200mm MEASURED LOOSE TO ACHIEVE A MINIMUM 98% STANDARD MAXIMUM DRY DENSITY.
- RW4. NOTE THAT THE SITE IS UNDERLAIN BY EXISTING SERVICES AND COMPACTION UTILISING VIBRATION MAY NOT BE SUITABLE IN THE VICINITY OF UNDERGROUND SERVICES.
- RW5. ANY FILL REQUIRED TO RAISE LEVELS TO BULK EARTHWORKS TO WITHIN 50mm OF NOMINATED LEVELS IS TO BE APPROVED GRANULAR MATERIAL COMPACTED IN LAYERS NOT EXCEEDING 300mm MEASURED LOOSE TO 98% STANDARD MAXIMUM DRY DENSITY WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT (SOMC).
- RW6. THE CONTRACTOR IS TO PROVIDE CERTIFICATION TO THE EFFECT THAT EARTHWORKS COMPACTION TO 98% STANDARD MAXIMUM DRY DENSITY, (AS 1289 E1.1, E4.1) HAS BEEN ACHIEVED, UNLESS OTHERWISE AGREED IN WRITING BY SITE SUPERINTENDENT.
- RW7. THE CONTRACTOR IS TO PROVIDE TO THE SITE SUPERINTENDENT A SURVEY CONFIRMATION FROM A REGISTERED SURVEYOR, CONFIRMING BULK EARTHWORKS LEVELS AS WITHIN +/-50mm OF LEVELS NOMINATED.
- RW8. SUBGRADE REPLACEMENT MATERIAL IS TO CONSIST OF CLEAN, UNCONTAMINATED, WELL-GRADED MATERIAL WITH A MAXIMUM PARTICLE SIZE OF 75mm, WITH 80% LESS THAN 20mm, AND A SOAKED C.B.R. GREATER THAN 10% AND A PLASTICITY INDEX LESS THAN 12.
- RW9. BACK FILLING FOR SERVICE TRENCHES AND REMOVED SERVICES OR PITS OR FOUNDATIONS IS TO USE APPROVED WELL-GRADED GRANULAR MATERIAL WITH MINIMUM VOIDS, (EITHER SELECT INSITU OR IMPORTED FILL), COMPACTION AS SPECIFIED ABOVE.
- RW10. ALL EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH AS3798-1996: GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS.

## GENERAL EARTHWORKS

- E1. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
- E2. COMPACT SUBGRADE TO 98% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 1289 TESTS E.1.1, OR E.1.2. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, AND TO BE PLACED IN LAYERS NOT EXCEEDING 300mm LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD MAXIMUM DRY DENSITY WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
- E3. NO STORMWATER IS TO POND ON ADJOINING PROPERTIES. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE DWELLING AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
- E4. ENSURE ALL RETAINING WALLS ARE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

## GROUND WORKS & EXCAVATION

- GW1. ALL GROUND WORKS & EXCAVATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT.
- GW2. SEPARATE AND REMOVE ALL TOPSOIL, NON SOIL MATERIAL, CONCRETE, VEGETATION, BRICKGATS, TIMBER, ROOT AFFECTED SOIL AND EXISTING FILL, STORE TOPSOIL IF REQUIRED.
- GW3. ALL EXCAVATIONS SHALL BE FINISHED CLEAN AND HORIZONTAL AND SHALL NOT UNDERMINE FOOTINGS, WALLS etc...
- GW4. PROOF ROLL WITH AN 8 TONNE ROLLER, REPLACE ANY SOFT MATERIAL WITH APPROVED FILL AND RE-COMPACT. GEOTECHNICAL ENGINEER TO APPROVE.
- GW5. THE FILL IS TO BE PLACED AND COMPACTED IN LAYERS OF MAXIMUM LOOSE THICKNESS 300mm.
- GW6. TOP LAYER OF PAVED AREAS TO BE COMPACTED TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY. GEOTECHNICAL ENGINEER TO VERIFY.
- GW7. ALL PERMANENT EMBANKMENTS TO BE COMPACTED IN 200 mm LAYERS AS PER NOTE GW6 AND AT A MAXIMUM SLOPE OF 1 VERTICAL TO 2.5 HORIZONTAL UNLESS NOTED OTHERWISE. SHOULD DRAINAGE BE REQUIRED THEN SUBMIT DETAILS TO THE ENGINEER.
- GW8. ALL GROUND WORKS SHALL BE TESTED BY AN APPROVED GEOTECHNICAL ENGINEER TO A LEVEL 1 STANDARD IN ACCORDANCE WITH AS 3798 - 1996.
- GW9. ALL EXCAVATIONS TO BE INSPECTED AT REGULAR INTERVALS BY A GEOTECHNICAL ENGINEER.
- GW10. REFER TO ARCHITECTURAL DRAWINGS TO CONFIRM SETOUT OF BUILDINGS, CARPARKS ETC.
- GW11. THE LEVELS SHOWN ARE ONLY RELEVANT TO THE PLAN UPON WHICH THEY ARE SHOWN.
- GW12. ALL CONTOURS AND LEVELS USED TO PRODUCE EARTHWORK DETAILS HAVE BEEN BASED ON SURVEYOR AND ARCHITECTS SURVEY INFORMATION.
- GW13. ALL FINISHED FLOOR LEVELS ARE TO BE CONFIRMED BY ARCHITECT.
- GW14. ALL EXISTING SERVICES ARE TO BE CAPPED OFF PRIOR TO ANY WORKS.
- GW15. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, THE GEOTECHNICAL ENGINEER, AND THE EARTHWORKS CONTRACTOR TO UNDERSTAND POTENTIAL DIFFICULTIES AND TO ORGANISE TESTING PROCEDURES. THE CONTRACTOR SHALL CONFIRM TO THE ENGINEER THAT THE MEETING HAS BEEN HELD.

## DRAINAGE NOTES

- D1. PIT LEVELS SHOWN ON STORMWATER DRAINAGE PLANS ARE FOR INFORMATION. EXACT PIT LEVELS TO BE ADJUSTED TO SUIT FALLS IN PAVEMENT/LANDSCAPED AREA.
- D2. PITS GREATER THAN 1.2m DEEP TO BE FITTED WITH STEP IRONS.
- D3. DRAINAGE PIPES SHALL BE BACKFILLED WITH COMPACTED CLEAN SHARP SAND TO 200 ABOVE PIPE OBVERT. ADDITIONAL BACKFILL UNDER ROADS SHALL CONSIST OF CLASS 2 F.C.R. MATERIAL COMPACTED IN 200mm LAYERS TO 98% SMDD. UNDER LANDSCAPED AREAS ADDITIONAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL COMPACTED IN 200mm LAYERS TO 95% SMDD. A 3m LENGTH OF 100 Ø SLOTTED AGRICULTURAL LINE SURROUNDED BY GEOTECH STOCKING SHALL BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS.
- D4. CONCRETE STORMWATER PIPES TO BE CLASS '3' UNDER ROADS AND CLASS '2' IN NON-TRAFFICED AREAS. ALL PIPES GREATER THAN 3000 ARE TO BE RUBBER RING JOINTS U.N.O. UPVC PIPE TO BE CLASS S80 UNO.
- D5. CONCRETE PITS GREATER THAN 1.0m DEEP TO BE REINFORCED WITH N12-200 EACH WAY CENTRED, MIN. 300 LAP. CONCRETE - Fc 25MPa
- D6. 1500, 2250 & 3000 uPVC PIPES TO BE SEWER GRADE PIPE UNDER TRAFFICABLE PAVEMENT. MIN. 400 COVER UNDER NON-TRAFFICABLE PAVEMENT.
- D7. PIT COVERS & GRATED DRAINS IN TRAFFICABLE PAVEMENT TO BE AS 3996 CLASS D "HEAVY DUTY" & IN NON-TRAFFICABLE AREAS TO BE AS 3996 CLASS C "LIGHT DUTY".
- D8. GPT UNITS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- D9. MAINTENANCE OF GPT UNITS TO BE INCORPORATED IN THE BUILDING ENVIRONMENTAL MANAGEMENT PLAN & MUST BE SUPPLEMENTED WITH A REGULAR ROAD SWEEPING PROGRAM.

## UTILITY SERVICES

- S1. CONDUITS TO BE PROVIDED FOR WATER AND ENERGY AUTHORITIES, TELSTRA AND OTHER SERVICES AS REQUIRED.
- S2. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM SURVEY AND 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.
- S3. VAN DER MEER CANNOT 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 ARISING FROM ANY CAUSE WHATSOEVER.
- S4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH 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.
- S5. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ON SITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
- S6. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION OR FUTURE WORKS.
- S7. 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.

TELSTRA - DUTY OF CARE NOTE:  
TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR UPHOLD THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY.

THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT. BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POT HOLING TO IDENTIFY ITS LOCATION. TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO ITS PROPERTY AND LOSSES CAUSED TO TELSTRA AND ITS CUSTOMERS.

ELECTRICAL & GAS NETWORK:  
A MINIMUM OF 30 DAYS PRIOR TO COMMENCEMENT OF EXCAVATION WORKS THE SUBCONTRACTOR MUST CONTACT DIAL BEFORE YOU DIG.

## RETAINING WALL GENERAL

- GR1. BASE MATERIAL SHALL BE COMPACTED TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY (SMDD) WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT (SMOC) DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1. MINIMUM ALLOWABLE BEARING PRESSURE OF 150 kPa. GEOTECHNICAL ENGINEER EMPLOYED BY CONTRACTOR TO INSPECT AND CONFIRM.
- GR2. DRAINAGE MATERIAL WITHIN AND IMMEDIATELY BEHIND THE WALL SHALL BE 12-20mm CLEAN AGGREGATE. DRAINAGE MATERIAL TO EXTEND A MINIMUM 300 mm BEHIND WALL. COMPACT DRAINAGE MATERIAL. ALTERNATIVELY, USE NO FINES CONCRETE, AS FOLLOWS:-
  - CONCRETE STRENGTH N15.
  - 210kg/m<sup>3</sup> PORTLAND CEMENT
  - MAXIMUM AGGREGATE SIZE 20 mm.
  - W/C RATIO 0.45 TO 0.55.
  - DENSITY 1600 TO 2000 kg/m<sup>3</sup>.
- GR3. INFILL SOIL SHALL BE CLASS 1 CONTROLLED FILL TO AS4678, OR AS SPECIFIED ON THE DRAWINGS. UNSUITABLE SOILS, SUCH AS HEAVY CLAYS OR ORGANIC SOILS WITH HIGH PLASTICITY, SHALL NOT BE USED IN THE REINFORCED SOIL MASS.
- GR4. SPREAD BACKFILL IN UNIFORM LIFTS OF 200 mm UNCOMPACTED THICKNESS. COMPACT TO MINIMUM 95% OF SMDD. COMPACTION WITHIN 1.0 m BEHIND THE WALL SHALL BE ACCOMPLISHED BY USING A HAND-OPERATED PLATE COMPACTOR AND SHALL BEGIN BY RUNNING THE PLATE DIRECTLY ON THE BLOCK, THEN COMPACTING IN PARALLEL PATHS, PROGRESSIVELY AWAY FROM THE WALL FACE.
- GR5. WHERE ROADWAYS OR BUILDING STRUCTURES ARE LOCATED ABOVE THE REINFORCED ZONE, COMPACT TO 98% SMDD WITHIN 2% OF SOMC DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1. COMPACTION TESTING SHALL BE TAKEN AT 1.2 m BEHIND THE WALL.

## PAVEMENT

- F1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- F2. PAVEMENT MATERIAL SHALL CONSIST OF APPROVED OR RIPPED SANDSTONE, NATURAL GRAVEL OR FINE CRUSH ROCK AS PER COUNCIL SPECIFICATION.
- F3. PAVEMENT MATERIALS SHALL BE SPREAD IN LAYERS NOT EXCEEDING 150mm AND NOT LESS THAN 75mm COMPACTED THICKNESS. PAVEMENT MATERIALS SHALL BE SIZED AND OF A STANDARD OUTLINED IN AS1141.
- F4. CRUSHED OR RIPPED SANDSTONE SHALL BE MINUS 75mm NOMINAL SIZE DERIVED FROM SOUND, CLEAN SANDSTONE FREE FROM OVERBURDEN, CLAY SEAMS, SHALE AND OTHER DELETERIOUS MATERIAL.
- F5. PAVEMENT MATERIALS SHALL BE COMPACTED BY SUITABLE MEANS TO SATISFY THE FOLLOWING MINIMUM SPECIFICATIONS (AS PER AS1289.52)
- | DESCRIPTION        | MODIFIED DENSITY RATIO |
|--------------------|------------------------|
| SUB-BASE           | 98% MDD                |
| BASE COURSE        | 98% MDD                |
| ASPHALTIC CONCRETE | 97% MDD                |
- AND SUBJECT TO COUNCIL'S CONSTRUCTION SPECIFICATION.
- F6. TESTING FOR EACH LAYER SHALL BE UNDERTAKEN BY A N.A.T.A. REGISTERED LABORATORY IN ACCORDANCE WITH AS1289, AT NOT MORE THAN 50m INTERVALS AND A MINIMUM OF TWO PER LAYER. FURTHER FREQUENCY OF TESTING SHALL BE NO LESS THAN THAT REQUIRED BY AS3978-1996.

## REINFORCED CONCRETE BLOCKWORK

M1. CONCRETE BLOCKS SHALL BE BORAL 'CORE FILL BLOCKS', DOUBLE-U TYPE, OR SIMILAR APPROVED.

M2. MINIMUM DURABILITY REQUIREMENTS:

LOCATION	SALT ATTACK RESISTANCE GRADE OF MASONRY UNIT	MORTAR CLASS	DURABILITY CLASS OF WALL TIES AND BUILT-IN COMPONENTS
INTERIOR MASONRY	GENERAL PURPOSE	M3	R3
EXTERIOR MASONRY ABOVE DAMP PROOF COURSE	GENERAL PURPOSE	M3	R3
BELOW DAMP PROOF COURSE OR IN CONTACT WITH GROUND	EXPOSURE	M4	R4

M3. MINIMUM STRENGTH REQUIREMENTS:

ELEMENT	STRENGTH OF MASONRY UNIT	MORTAR CLASS #
CONCRETE BLOCKWORK (REINF)	f <sub>uc</sub> = 15 MPa	M3

- # UNLESS A HIGHER CLASSIFICATION IS REQUIRED FOR DURABILITY (REFER NOTE M2).
- M4. LAY BOTTOM COURSE OF BLOCKS ON FULL MORTAR BED. ALL PERPENDS SHALL BE FILLED WITH MORTAR, EXCEPT WEEPHOLES.
- M5. ALL CORES SHALL BE GROUTED UNLESS NOTED OTHERWISE.
- M6. GROUT FOR CORE FILLING SHALL BE IN ACCORDANCE WITH AS3600, WITH THE FOLLOWING PROPERTIES:
  - STRENGTH GRADE S20
  - MAX. AGGREGATE SIZE 10mm
  - SLUMP 230mm ± 25mm
  - MIN. CEMENT CONTENT 300 kg/m<sup>3</sup>
- M7. PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS:

WALL TYPE	JOINT WIDTH	MAX JOINT SPACING
CONCRETE BLOCKWORK (REINF)	15mm	12m

- AT CORNERS, CONTROL JOINTS SHALL BE WITHIN HALF THE SPECIFIED JOINTS SPACING FROM THE CORNER. JOINTS SHALL BE SEALED WITH AN APPROVED FLEXIBLE SEALANT. PROVIDE JOINTS TO MATCH JOINTS IN SUPPORTING SLABS.
- M8. PROVIDE CLEANOUT OPENINGS AT THE BASE OF ALL REINFORCED CORES AND REMOVE ALL MORTAR PROTRUSIONS BEFORE GROUTING. ADDITIONAL CLEANOUT OPENINGS SHALL BE PROVIDED ABOVE EACH HORIZONTAL POUR BREAK.
- M9. MAXIMUM HEIGHT OF POUR FOR GROUTING SHALL NOT EXCEED 3.6m FOR 190 BLOCKWORK AND 0.8m FOR 140 BLOCKWORK. STOP POUR 50mm BELOW TOP OF BLOCK TO PROVIDE KEY FOR SUBSEQUENT POUR.
- M10. GROUT SHALL BE THOROUGHLY COMPACTED IN THE CORES BY RODDING OR MECHANICAL VIBRATION.

## CONCRETE

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 AND OTHER RELEVANT AUSTRALIAN STANDARDS.
- C2. CONCRETE SHALL BE SUPPLIED BY AN APPROVED MANUFACTURER IN ACCORDANCE WITH AS1379.
- C3. CONCRETE SHALL HAVE THE FOLLOWING PARAMETERS:
- | ELEMENT               | SLUMP (mm) | AGGREGATE | f <sub>c</sub> (MPa) | OTHER REQ |
|-----------------------|------------|-----------|----------------------|-----------|
| EXTERNAL VEHICLE SLAB | + 80       | 20        | N32                  | (1)       |
- + DENOTES SLUMP AT PLANT  
(1) DENOTES MAXIMUM BASE SHRINKAGE STRAIN 600 x 10<sup>-6</sup> AT 56 DAYS (TO AS 1012 PART 13)
- C4. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C5. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C6. HOLES, CHASES OR EMBEDMENT ITEMS, INCLUDING PIPES AND CONDUITS SHALL NOT BE PLACED IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- C7. CONDUITS, PIPES AND LIKE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER, NOR DISPLACE THE REINFORCEMENT LAYERS.
- C8. CONSTRUCTION JOINTS (C-J) SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY SCABBLED.
- C9. THE MAXIMUM HEIGHT OF POUR FOR CONCRETE ELEMENTS SHALL BE 3.0m UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY THE ENGINEER. COLUMNS SHALL NOT BE POURED WITH THE SLAB OVER.
- C10. CONCRETE SHALL BE THOROUGHLY COMPACTED IN THE FORMS BY MEANS OF MECHANICAL VIBRATION.
- C11. WHEN THE SHADE TEMPERATURE EXCEEDS 35°C, THE EXPOSED SURFACE OF CONCRETE SHALL BE SPRAYED WITH A FINE FILM OF APPROVED ALIPHATIC ALCOHOL DURING CONCRETE PLACEMENT AND FINISHING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ENSURING ADEQUATE SUPPLY OF ALIPHATIC ALCOHOL ON SITE BEFORE COMMENCING CONCRETE WORK.
- C12. CURING OF CONCRETE SHALL COMMENCE WITHIN 2 HOURS OF FINISHING OPERATIONS AND SHALL BE MAINTAINED FOR A MINIMUM OF 7 DAYS USING AN APPROVED PROPRIETARY CURING COMPOUND IN ACCORDANCE WITH AS 3799 AND COMPATIBLE WITH THE PROPOSED FINISH OR CONTINUOUS PONDING WITH POTABLE WATER. THE CONTRACTOR TO SUBMIT PROPOSED CURING PROCEDURE FOR APPROVAL OF THE ENGINEER.
- C13. ALL CONCRETE DELIVERED TO SITE SHALL BE SUBJECT TO PROJECT ASSESSMENT IN ACCORDANCE WITH AS 1379.
- C14. THE CONTRACTOR SHALL NOMINATE A CONCRETE DELIVERY SUPERVISOR WHO SHALL BE A SUITABLE EXPERIENCED PERSON FOR THE APPROVAL OF THE ENGINEER, TO MONITOR THE DELIVERY AND PLACING OF THE CONCRETE FOR EACH POUR ON THE PROJECT. IN ADDITION, THE MANUFACTURER SHALL SAMPLE AND TEST FOR DRYING SHRINKAGE EACH TYPE OF CONCRETE SUPPLIED, AT LEAST EVERY MONTH DURING THE COURSE OF THE PROJECT OR FOR EVERY 1000 CUBIC METRES PLACED. NATA TEST CERTIFICATES SHALL BE FORWARDED TO THE ENGINEER. THE RESULTS OF THESE TESTS SHALL ALSO BE KEPT ON SITE.
- C15. ALL CONCRETE ELEMENTS TO HAVE B2 EXPOSURE CLASSIFICATION.

## CONCRETE SAMPLES AND TESTS

- ARRANGE FOR A NATA REGISTERED TESTING LABORATORY TO TAKE SAMPLES OF AND TEST CONCRETE FOR COMPRESSION, FLEXURAL TENSILE STRENGTH (SLABS ON CONCRETE ONLY) AND SLUMP.
- COMPRESSION TEST SAMPLES SHALL CONSIST OF 3 STANDARD CYLINDERS (4 STANDARD CYLINDERS FOR POST-TENSIONED CONCRETE), TESTED FOR COMPRESSIVE STRENGTH AS FOLLOWS:
- ONE (1) CYLINDER AT 3 DAYS FOR POST-TENSIONED CONCRETE ONLY.  
ONE (1) CYLINDER AT 7 DAYS.  
TWO (2) CYLINDERS AT 28 DAYS.
- THE MINIMUM NUMBER OF DAILY SAMPLES SHALL BE AS FOLLOWS:
- IN COLUMNS/WALLS: 1 SAMPLE PER TRUCK
- ALL OTHER CONCRETE OF ANY ONE TYPE AS FOLLOWS:  
1 TRUCK PER DAY - 1 SAMPLE  
2 TO 5 TRUCKS PER DAY - 2 SAMPLES  
6 TO 10 TRUCKS PER DAY - 3 SAMPLES  
10 TO 20 TRUCKS PER DAY - 4 SAMPLES  
FOR EACH ADDITIONAL 10 TRUCKS PER DAY, 1 SAMPLE.
- SLUMP: 1 SAMPLE PER TRUCK AT TIME OF POURING.
- C17. REFER TO TYPICAL STRIPPING AND PROPPING DETAIL.

REVISIONS:		SCALE BAR	
No.	REVISION DESCRIPTION	DRAWN	DATE
B	ISSUED FOR INFORMATION	HB	26.11.21
A	ISSUED FOR S.4.55 APPLICATION	HB	19.04.21

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**van der meer**

CLIENT  
**REFORM PROJECTS**  
15/108 DUNNING AVENUE  
ROSEBERY NSW 2018

ARCHITECT  
**ROB MILLS ARCHITECTURE**  
51 QUEEN STREET WOOLLAHRA NSW 2065

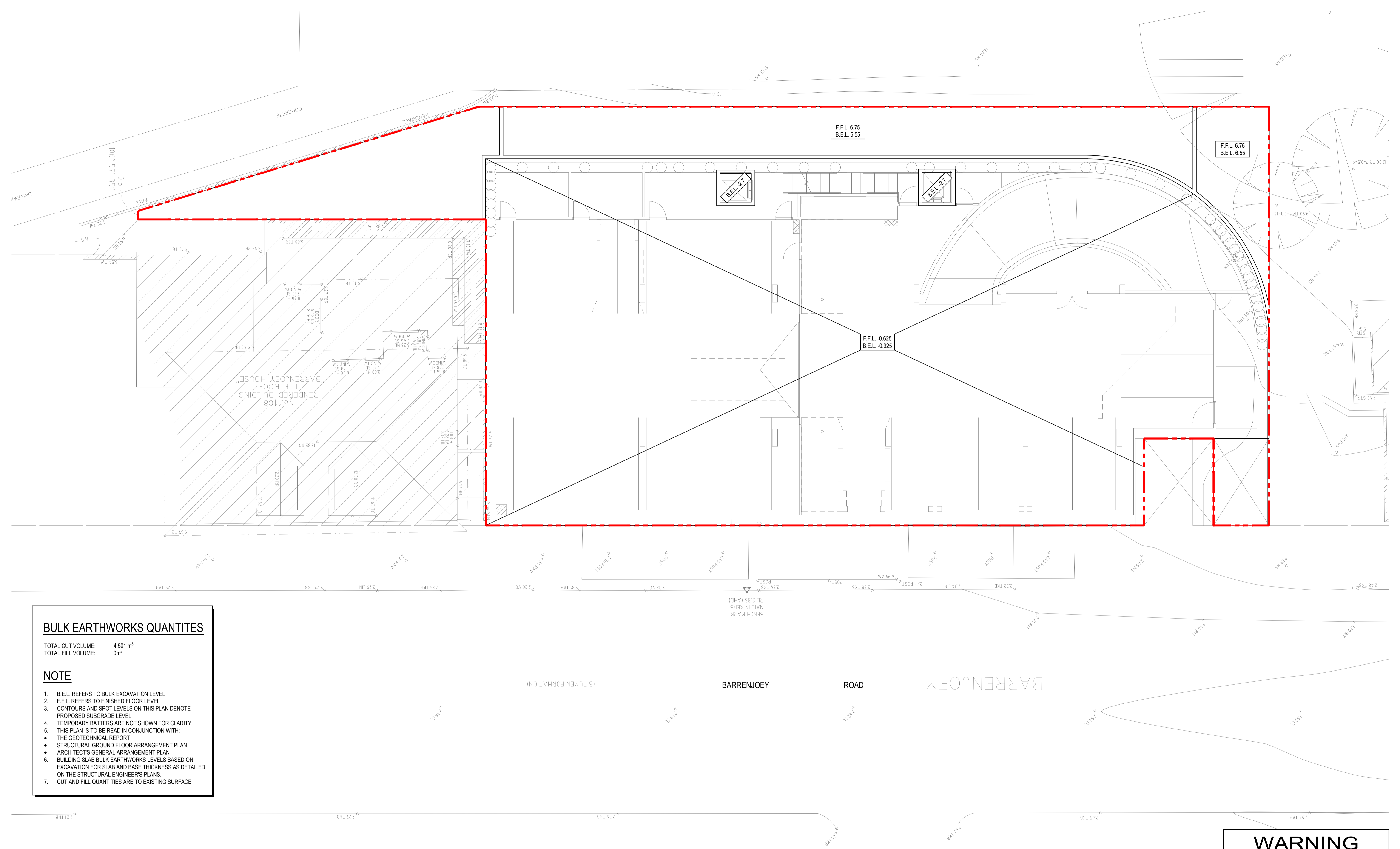
CLIENT  
**MIXED-USE DEVELOPMENT**  
1102 BARRENJOEY ROAD  
PALM BEACH, NSW 2108

PROJECT TITLE  
**STANDARD NOTES**

DRAWING STATUS  
**FOR INFORMATION**  
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER	DESIGNER	SIGNATURE	
AW	HB		
DRAFTERPERSON	SCALE	DATE	SHEET SIZE
LO		NOV. 2021	A1
JOB No.	DRAWING No.	REVISION	
SY202-105	C001	B	





**BULK EARTHWORKS QUANTITIES**

TOTAL CUT VOLUME: 4,501 m<sup>3</sup>  
 TOTAL FILL VOLUME: 0m<sup>3</sup>

**NOTE**

1. B.E.L. REFERS TO BULK EXCAVATION LEVEL
2. F.F.L. REFERS TO FINISHED FLOOR LEVEL
3. CONTOURS AND SPOT LEVELS ON THIS PLAN DENOTE PROPOSED SUBGRADE LEVEL
4. TEMPORARY BATTERS ARE NOT SHOWN FOR CLARITY
5. THIS PLAN IS TO BE READ IN CONJUNCTION WITH:
  - THE GEOTECHNICAL REPORT
  - STRUCTURAL GROUND FLOOR ARRANGEMENT PLAN
  - ARCHITECT'S GENERAL ARRANGEMENT PLAN
6. BUILDING SLAB BULK EARTHWORKS LEVELS BASED ON EXCAVATION FOR SLAB AND BASE THICKNESS AS DETAILED ON THE STRUCTURAL ENGINEER'S PLANS.
7. CUT AND FILL QUANTITIES ARE TO EXISTING SURFACE

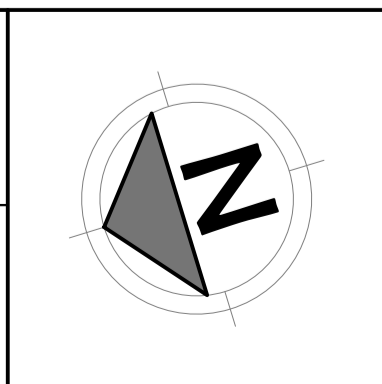
PLAN  
SCALE 1:100

**WARNING**  
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REVISIONS:	
No.	REVISION DESCRIPTION
B	ISSUED FOR INFORMATION
A	ISSUED FOR S.4.55 APPLICATION

SCALE BAR  
 0 1 2 3 4 5m 10m  
 SCALE 1:100

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 ROSEBERY NSW 2018

ARCHITECT  
**ROB MILLS ARCHITECTURE**  
 51 QUEEN STREET WOOLLAHRA NSW 2065

PROJECT TITLE  
**MIXED-USE DEVELOPMENT**  
 1102 BARENJOEY ROAD  
 PALM BEACH, NSW 2108

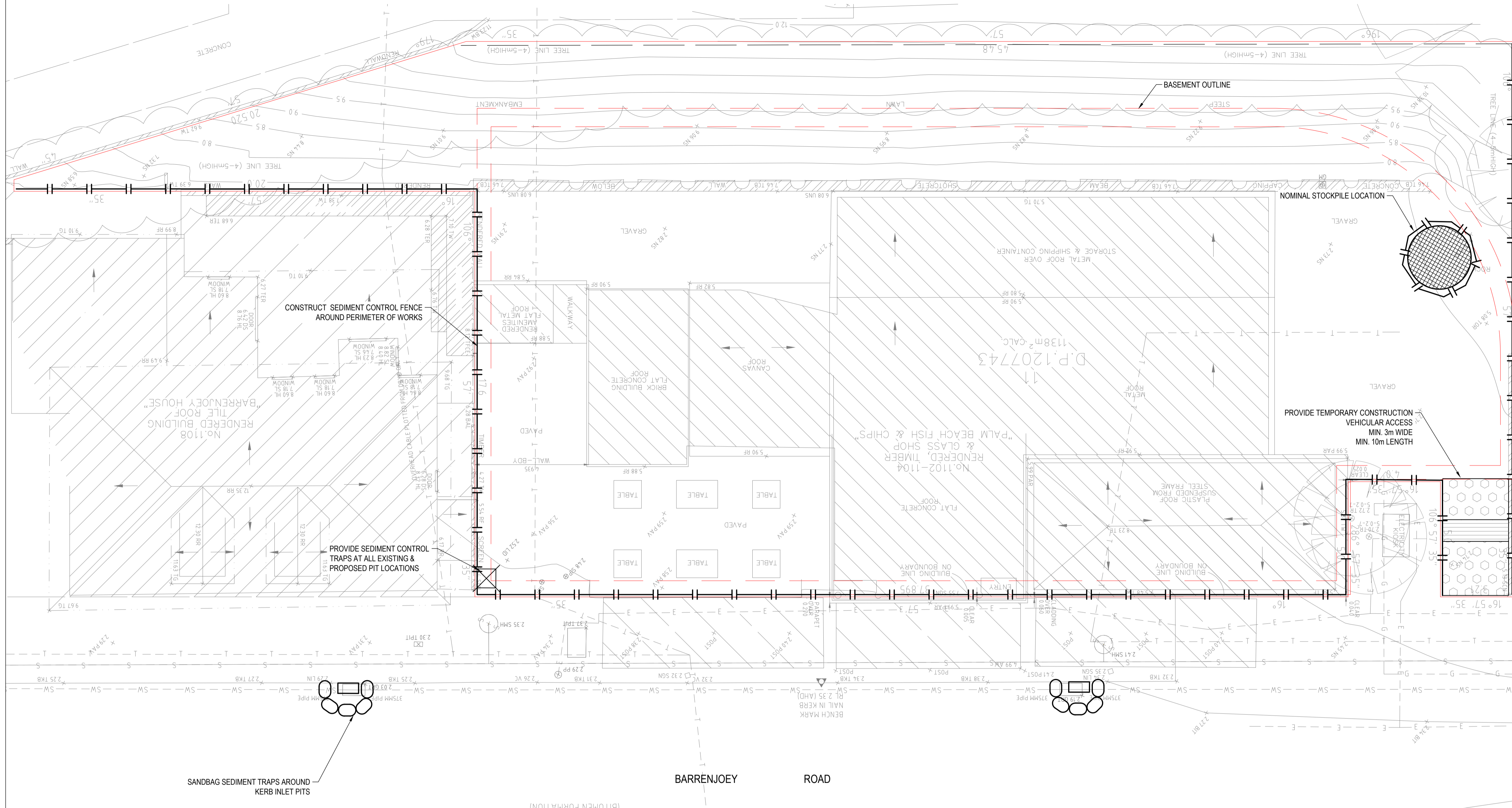
DRAWING TITLE  
**BULK EARTHWORKS**

DRAWING STATUS			
<b>FOR INFORMATION</b>			
NOT TO BE USED FOR CONSTRUCTION			
PROJECT LEADER	DESIGNER	SIGNATURE	
AW	HB		
DRAFTSPERSON	SCALE	DATE	SHEET SIZE
LO	AS SHOWN	NOV. 2021	A1
JOB No.	DRAWING No.	REVISION	
SY202-105	C201		B



**EROSION AND SEDIMENT NOTES**

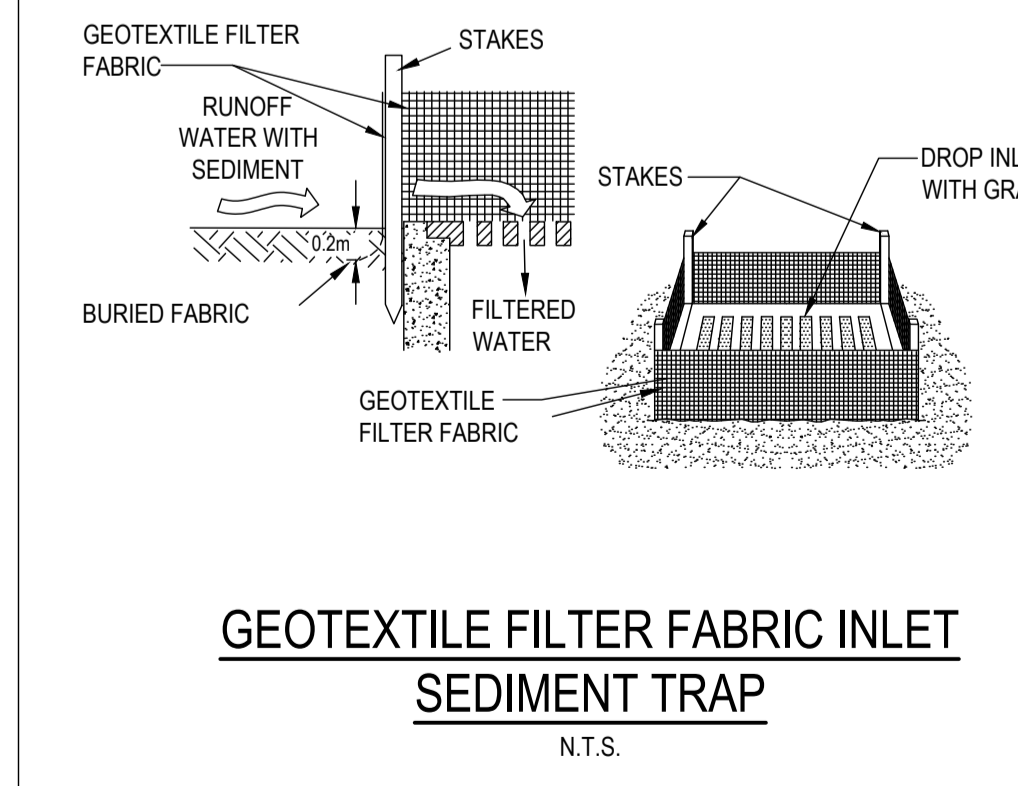
- B1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS SHOWN
- B2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF COUNCIL PRIOR TO THE COMMENCEMENT OF AND DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT COUNCIL'S APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS".
- B3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOPSOIL IS TO BE RESPALED LATER ON AREAS TO BE REVEGETATED AND STABILISED ONLY. (I.E. ALL FOOTPATHS, BATTERS, SITE REGARDING AREAS, BASINS AND CATCHDRAINS). TOPSOIL SHALL NOT BE RESPALED ON ANY OTHER AREAS UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN FOR LONGER THAN ONE MONTH STOCKPILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETAIN SILT LADEN RUNOFF.
- B4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM DEVICES SUCH THAT NO MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED OR AS DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
- B5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFIRMING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS.
- B6. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.
- B7. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENTS ARE REVEGETATED OR PAVED.
- B8. REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.
- B9. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL :  
A) DOWNPIPES CONNECTED  
B) PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER
- B10. SILT FENCE MAINTENANCE INSPECTION TO BE CARRIED OUT EVERY 3 MONTHS AND AFTER EACH RAINFALL EVENT.
- B11. EROSION & SEDIMENT CONTROL SIGNAGE AVAILABLE FROM COUNCIL MUST BE ATTACHED TO THE MOST PROMINENT AVAILABLE STRUCTURE AND BE VISIBLE AT ALL TIMES WHEN ENTERING THE SITE FOR THE DURATION OF CONSTRUCTION.



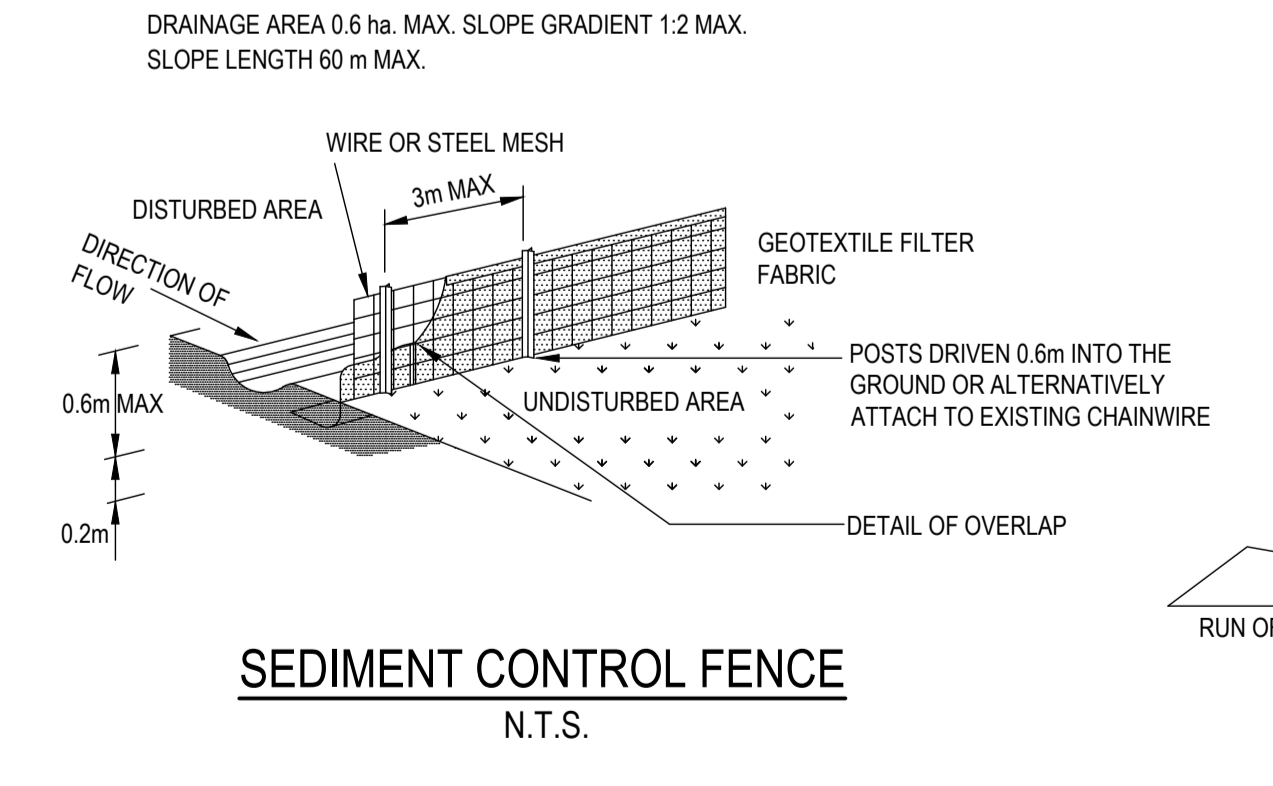
PLAN  
SCALE 1:100

**LEGEND**

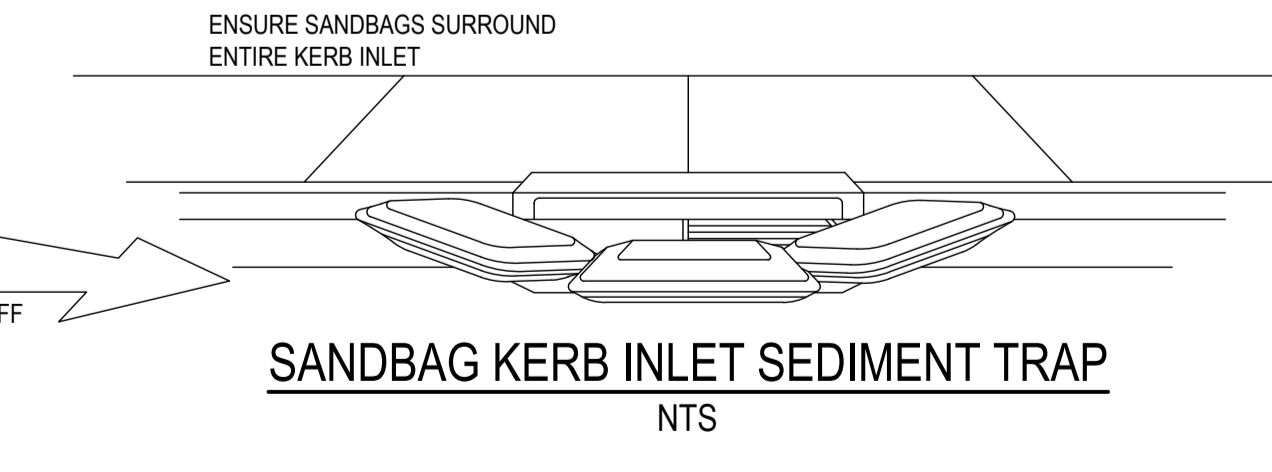
- STORMWATER SEDIMENT TRAPS AT ALL PROPOSED PIT INLETS
- TEMPORARY CONSTRUCTION VEHICLE EXIT
- SEDIMENT CONTROL FENCE
- STOCKPILE AREA
- SANDBAG KERB INLET SEDIMENT TRAP
- PERIMETER BANK WITH CHANNEL



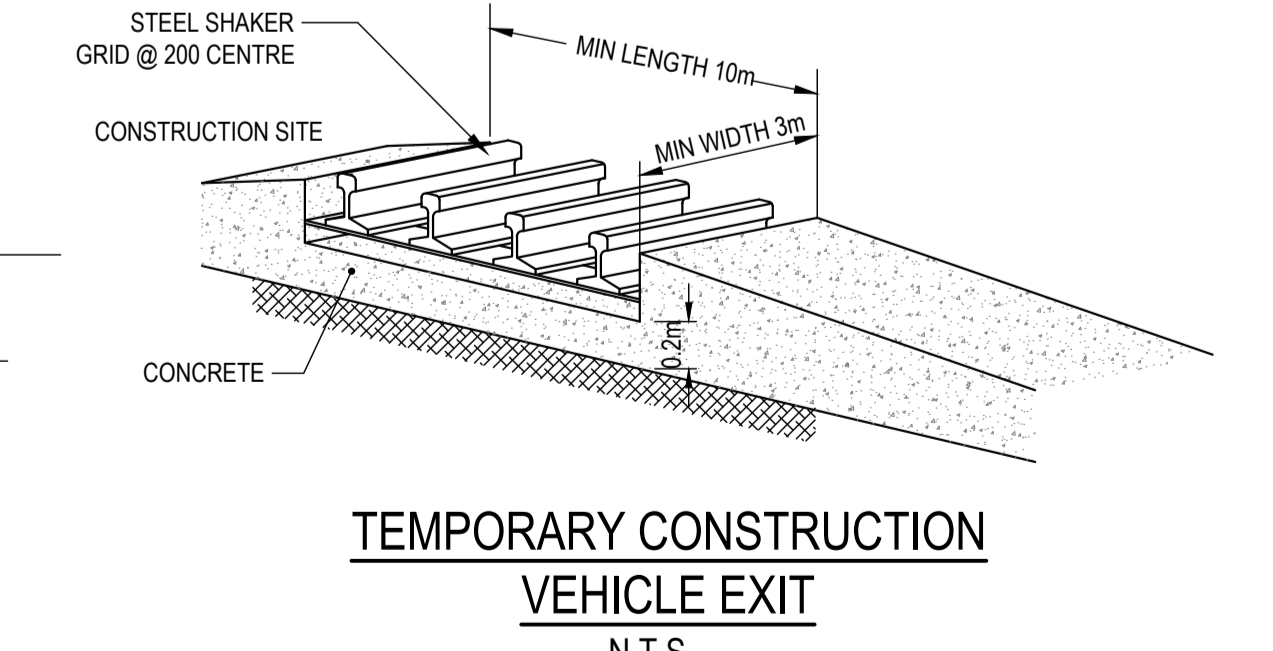
**GEOTEXTILE FILTER FABRIC INLET SEDIMENT TRAP**  
N.T.S.



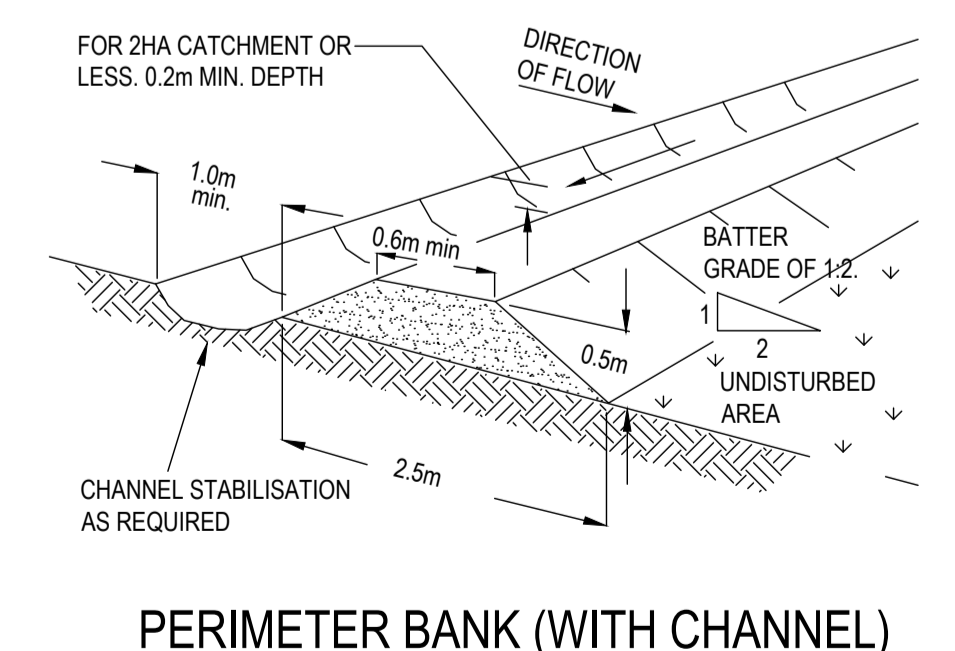
**SEDIMENT CONTROL FENCE**  
N.T.S.



**SANDBAG KERB INLET SEDIMENT TRAP**  
N.T.S.



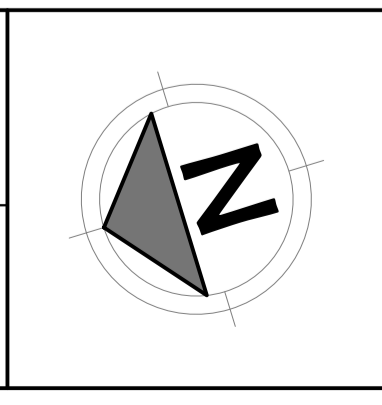
**TEMPORARY CONSTRUCTION VEHICLE EXIT**  
N.T.S.



**PERIMETER BANK (WITH CHANNEL)**  
N.T.S.

REVISIONS:	SCALE BAR												
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**REFORM PROJECTS**  
15/108 DUNNING AVENUE  
ROSEBERY NSW 2018

PROJECT TITLE  
**MIXED-USE DEVELOPMENT**  
1102 BARRENJOEY ROAD  
PALM BEACH, NSW 2108

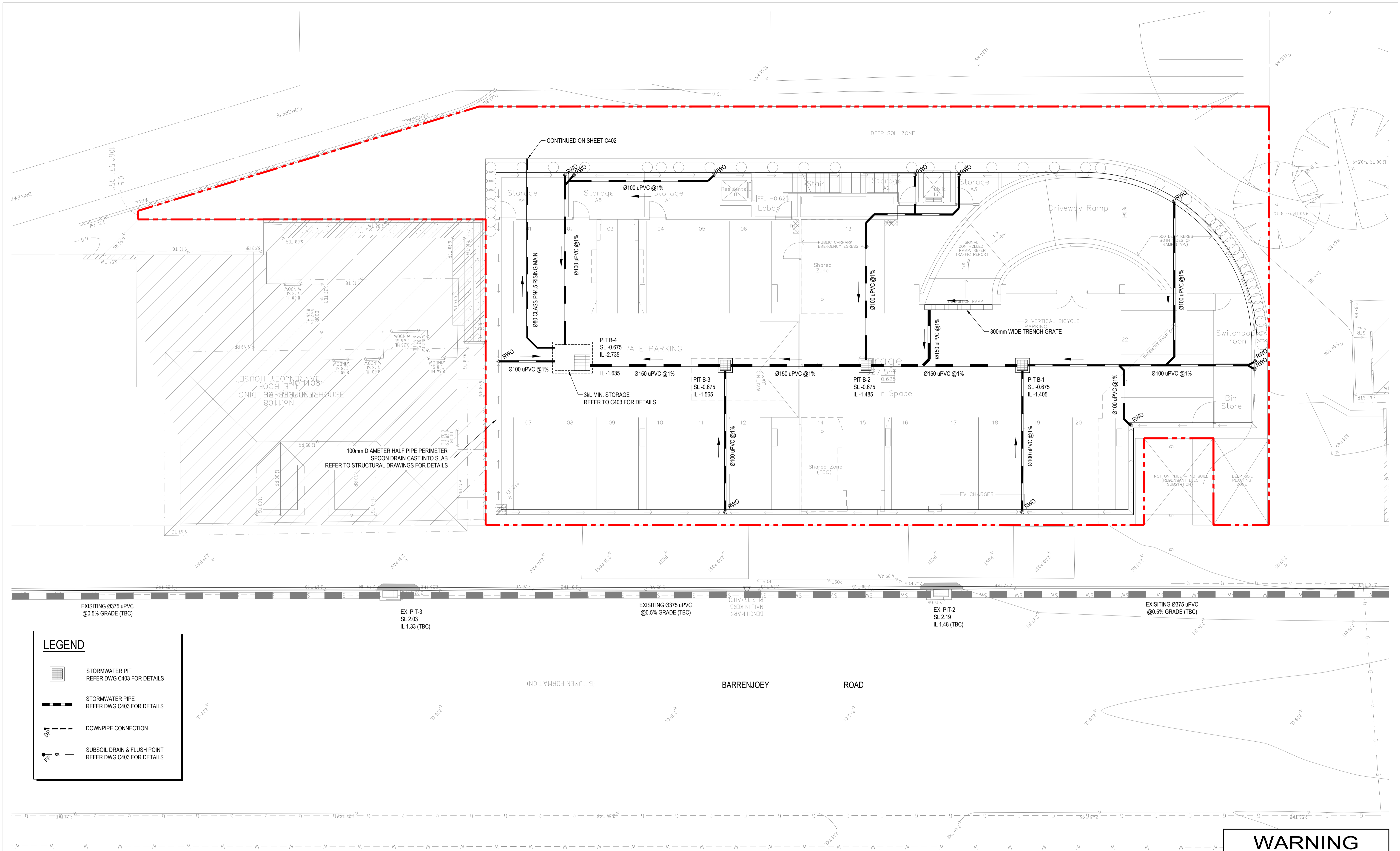
ARCHITECT  
**ROB MILLS ARCHITECTURE**  
51 QUEEN STREET WOOLLAHRA NSW 2065

DRAWING TITLE  
**EROSION AND SEDIMENT CONTROL PLAN**



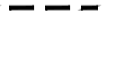

DRAWING STATUS  
**FOR INFORMATION**  
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER AW	DESIGNER HB	SIGNATURE
DRAFTSPERSON LO	SCALE AS SHOWN	DATE NOV. 2021
JOB No. SY202-105	DRAWING No. C210	SHEET SIZE A1
		REVISION B





**LEGEND**

-  STORMWATER PIT  
REFER DWG C403 FOR DETAILS
-  STORMWATER PIPE  
REFER DWG C403 FOR DETAILS
-  DOWNPIPE CONNECTION
-  SUBSOIL DRAIN & FLUSH POINT  
REFER DWG C403 FOR DETAILS

**WARNING**  
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**PLAN**  
 SCALE 1:100

REVISIONS:	No.	REVISION DESCRIPTION	DRAWN	DATE
B	ISSUED FOR INFORMATION	HB	26.11.21	
A	ISSUED FOR S.4.55 APPLICATION	HB	19.04.21	

SCALE BAR  
 0 1 2 3 4 5m 10m  
 SCALE 1:100

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 ROSEBERY NSW 2018

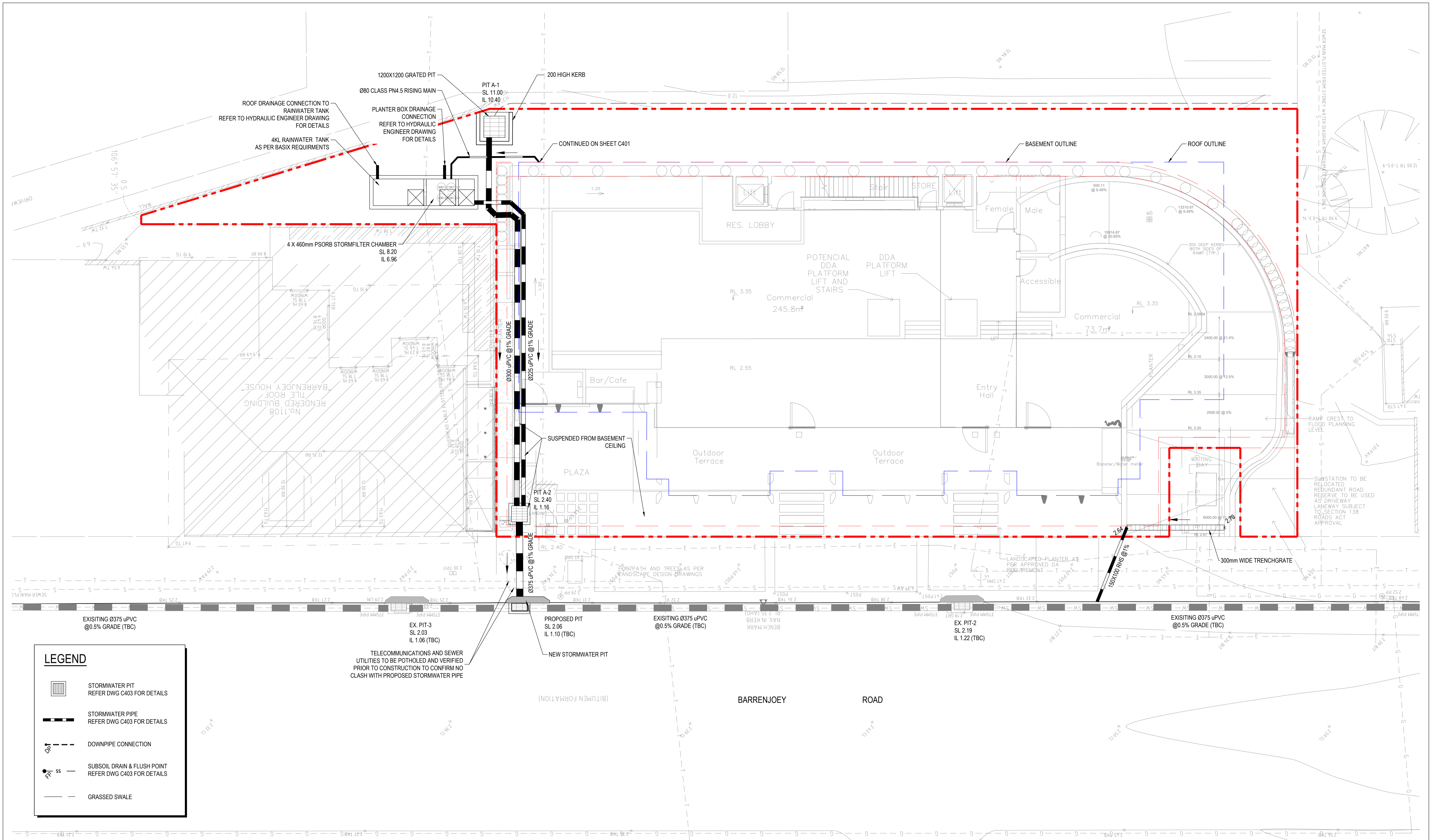
ARCHITECT  
**ROB MILLS ARCHITECTURE**  
 51 QUEEN STREET WOOLLAHRA NSW 2065

PROJECT TITLE  
**MIXED-USE DEVELOPMENT**  
 1102 BARRENJOEY ROAD  
 PALM BEACH, NSW 2108

DRAWING TITLE  
**DRAINAGE LAYOUT - BASEMENT**

DRAWING STATUS			
<b>FOR INFORMATION</b>			
NOT TO BE USED FOR CONSTRUCTION			
PROJECT LEADER AW	DESIGNER HB	SIGNATURE	
DRAFTSPERSON LO	SCALE AS SHOWN	DATE NOV. 2021	SHEET SIZE A1
JOB No. SY202-105	DRAWING No. C401	REVISION	
		B	





**LEGEND**

- STORMWATER PIT  
REFER DWG C403 FOR DETAILS
- STORMWATER PIPE  
REFER DWG C403 FOR DETAILS
- DOWNPIPE CONNECTION
- SUBSOIL DRAIN & FLUSH POINT  
REFER DWG C403 FOR DETAILS
- GRASSED SWALE

TELECOMMUNICATIONS AND SEWER UTILITIES TO BE POTHOLED AND VERIFIED PRIOR TO CONSTRUCTION TO CONFIRM NO CLASH WITH PROPOSED STORMWATER PIPE

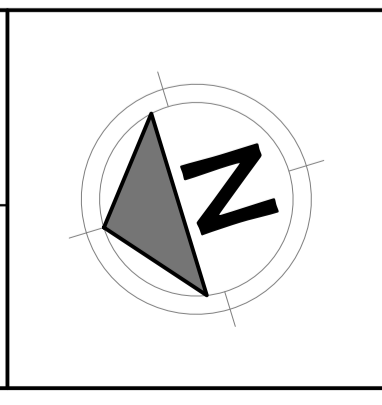
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PLAN  
SCALE 1:100

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SCALE BAR  
0 1 2 3 4 5m  
SCALE 1:100

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ROSEBERY NSW 2018

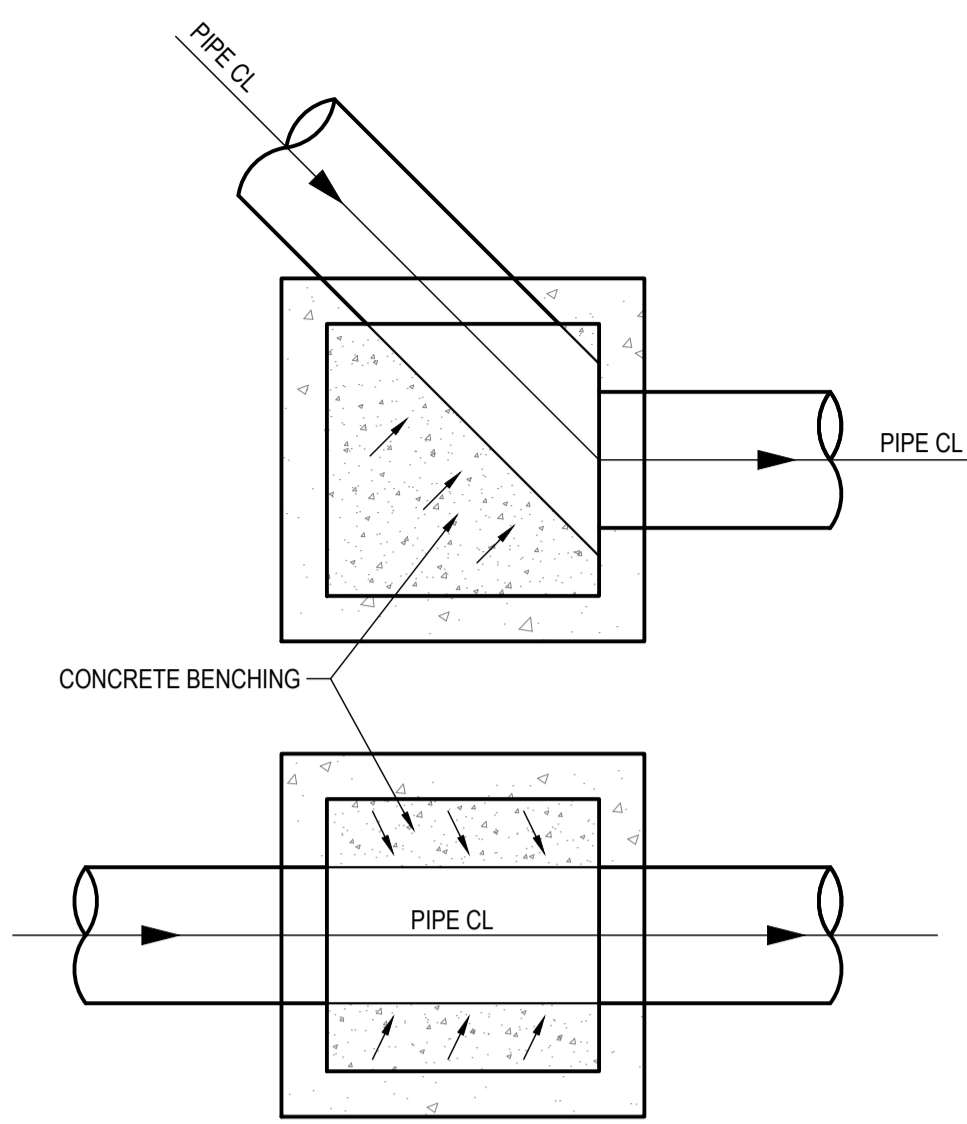
ARCHITECT  
**ROB MILLS ARCHITECTURE**  
51 QUEEN STREET WOOLLAHRA NSW 2065

PROJECT TITLE  
**MIXED-USE DEVELOPMENT**  
1102 BARRENJOEY ROAD  
PALM BEACH, NSW 2108

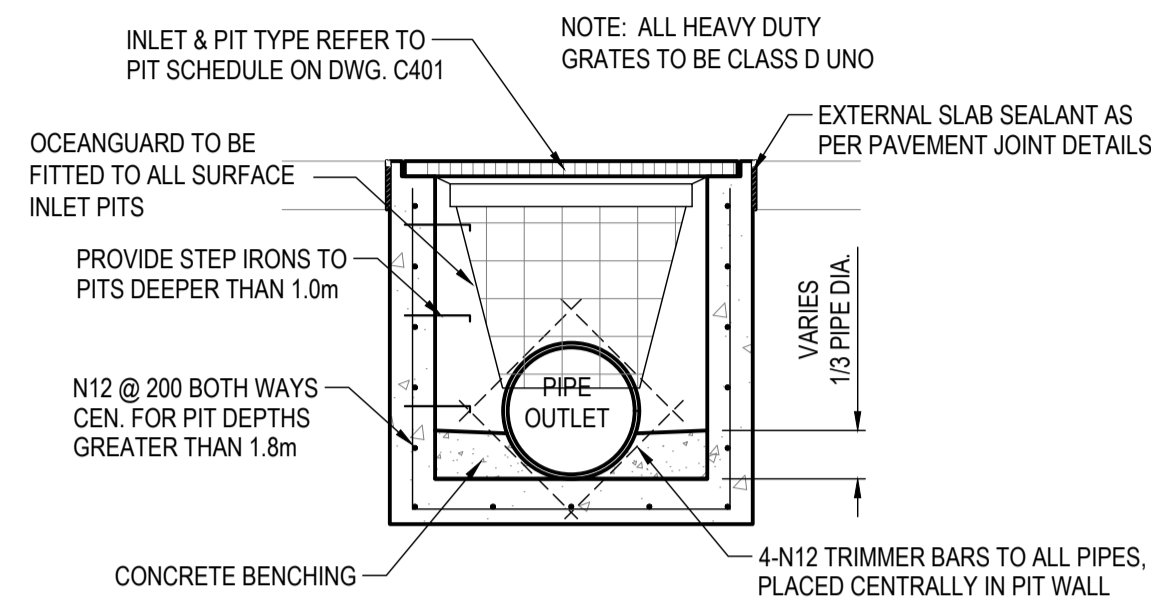
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**DRAINAGE LAYOUT - GROUND**

DRAWING STATUS			
<b>FOR INFORMATION</b>			
NOT TO BE USED FOR CONSTRUCTION			
PROJECT LEADER AW	DESIGNER HB	SIGNATURE	
DRAFTSPERSON LO	SCALE AS SHOWN	DATE NOV. 2021	SHEET SIZE A1
JOB No. SY202-105	DRAWING No. C402	REVISION	B

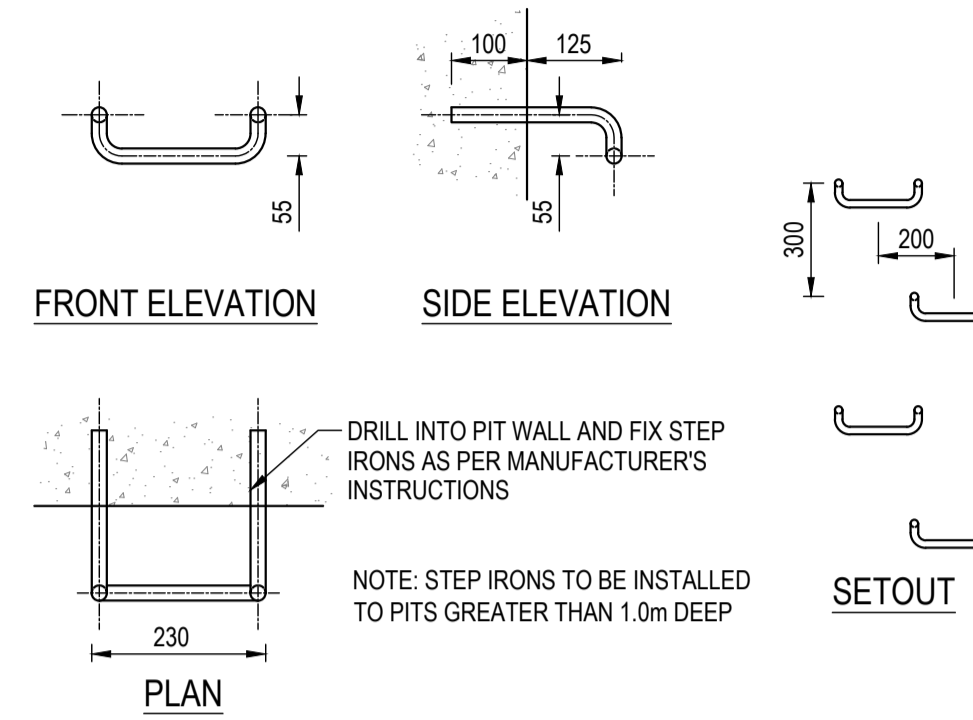




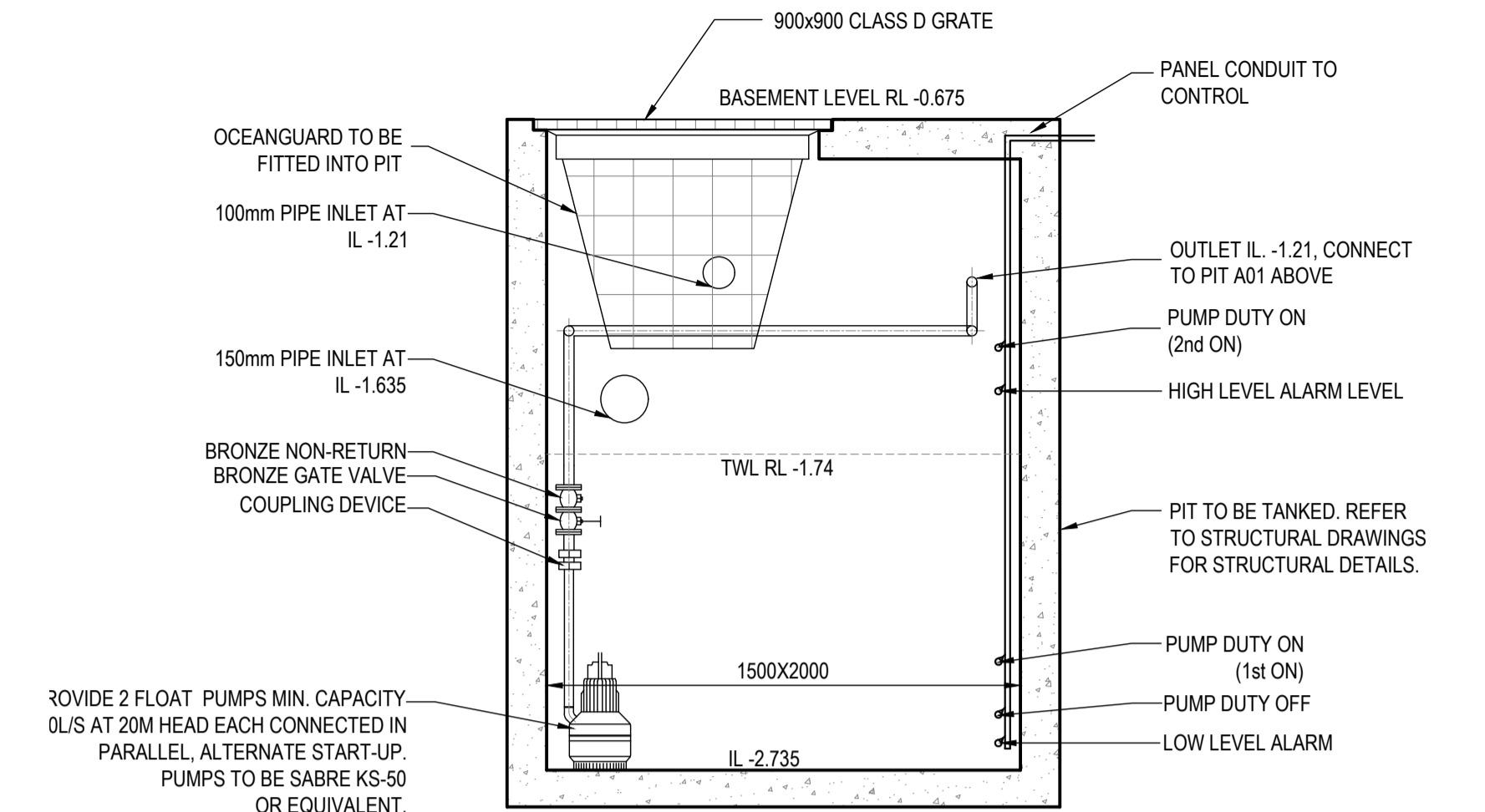
**TYPICAL CONCRETE BENCHING**  
SCALE 1:25



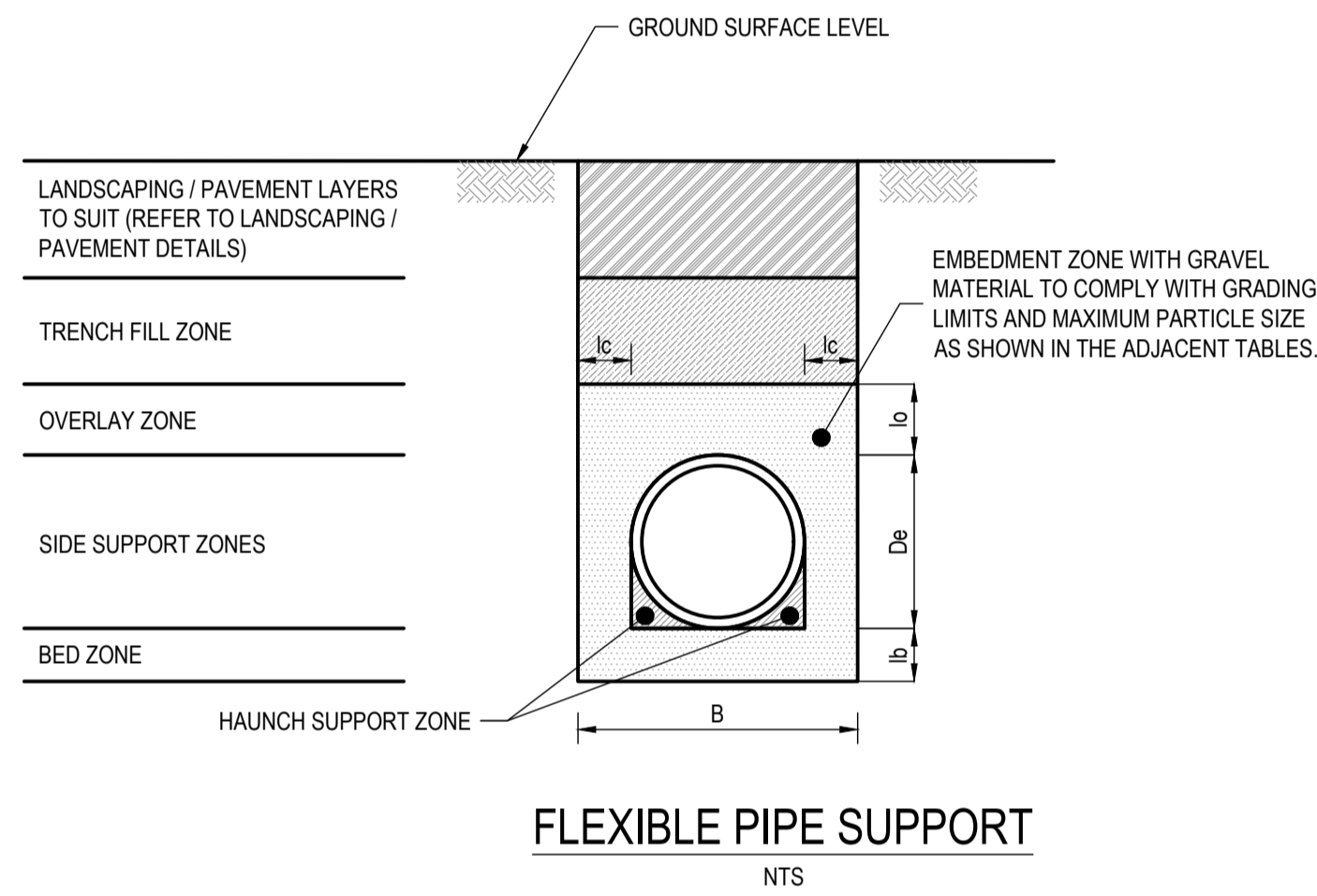
**TYPICAL INLET PIT & JUNCTION PIT**  
SCALE 1:25



**TYPICAL STEP IRON DETAIL**  
NTS



**PIT B4 DETAIL**  
SCALE 1:20



**FLEXIBLE PIPE SUPPORT**  
NTS

**COARSE AGGREGATE - LIMITS OF DEVIATION**

SIEVE APERTURE (mm)	LIMITS OF DEVIATION (%)											
	NOMINAL SIZE OF GRADED AGGREGATE (mm)					NOMINAL SIZE OF SINGLE-SIZE AGGREGATE (mm)						
	40	28	20	14	10	40	28	20	14	10	7	5
75.0	-	-	-	-	-	-	-	-	-	-	-	-
53.0	±10	-	-	-	-	±10	-	-	-	-	-	-
37.6	±15	±10	-	-	-	±10	±10	-	-	-	-	-
26.5	±15	±15	±10	-	-	±10	±10	±10	-	-	-	-
19.0	±10	±15	±15	±10	-	±5	±10	±10	±10	-	-	-
13.2	±10	±10	±15	±15	±10	-	±5	±10	±10	±10	-	-
9.50	±5	±10	±10	±15	±15	-	±5	±10	±10	±10	±10	-
6.70	-	±5	±5	±5	±10	-	-	±5	±10	±10	±10	±10
4.75	-	-	-	-	±5	-	-	-	-	-	-	±10
2.36	-	-	-	-	-	-	-	-	-	-	-	±10
0.075	-	-	-	-	-	-	-	-	-	-	-	±10

NOTE: THE QUANTITY OF MATERIAL FINER THAN 0.075mm IN EACH COMPONENT OF A BLEND SHALL NOT EXCEED 2% FOR COARSE AGGREGATE, 5% FOR NATURAL FINE AGGREGATES OR 20% FOR MANUFACTURED FINE AGGREGATE. THE QUANTITY OF MATERIAL FINER THAN 0.002mm SHALL NOT EXCEED 1% FOR EACH OF THE COARSE AGGREGATES AND FOR EACH OF THE NATURAL FINE AGGREGATES.

De	MINIMUM TRENCH DIMENSIONS			
	lb	lc	ld	le
≥75	≤150	75	100	100
>150	≤300	100	150	150
>300	≤450	100	200	150
>450	≤900	150	300	150
>900	≤1500	150	350	200
>1500	≤4000	150	0.25De	300

EMBEDMENT MATERIAL MAXIMUM PARTICLE SIZE	
NOMINAL PIPE SIZE RANGE, DN	MAXIMUM PARTICLE SIZE
<100	10
≥100≤150	14
>150	20

**PUMP CAPACITY CALCULATION:**

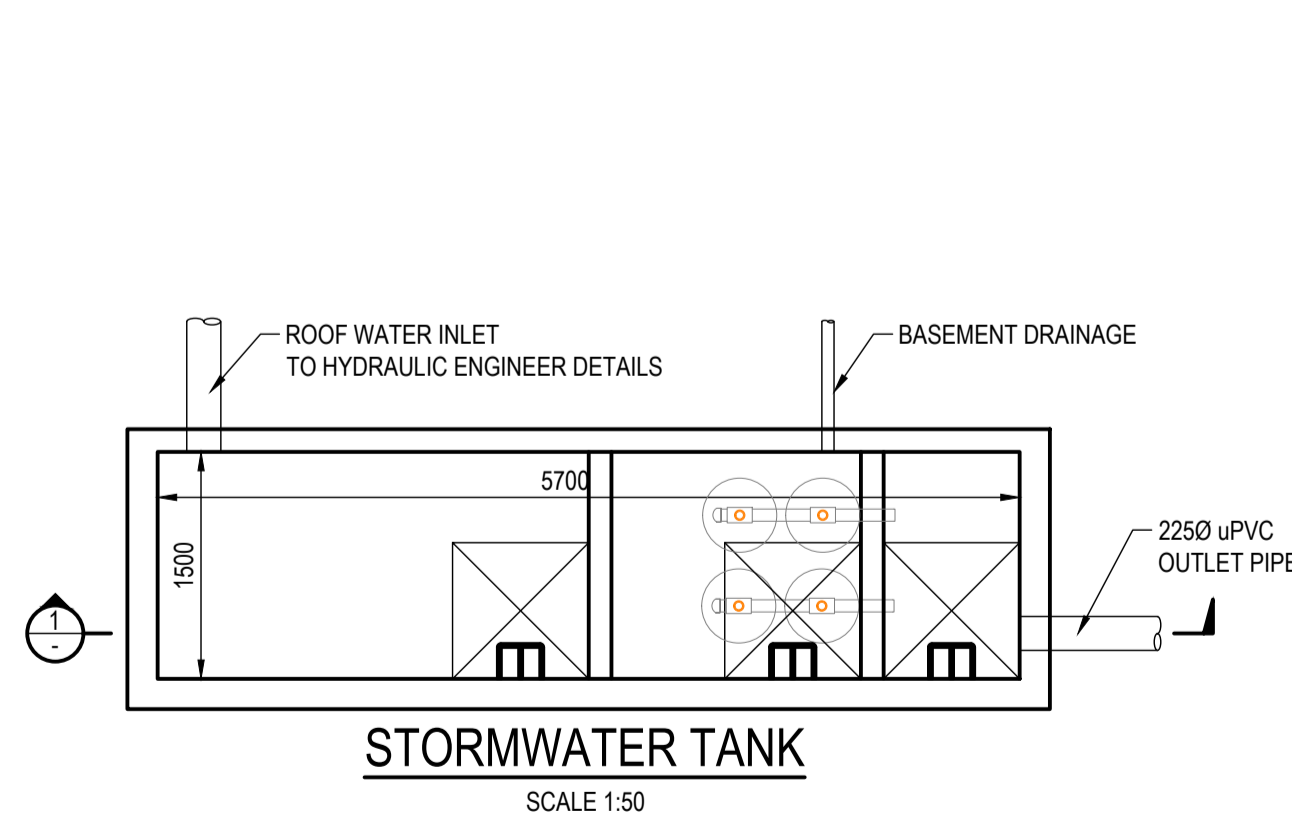
A = CATCHMENT AREA (m<sup>2</sup>)  
T = STORM DURATION (hr)  
I = RAINFALL INTENSITY (mm/hr)  
C<sub>r</sub> = COEFFICIENT OF RUNOFF

Q<sub>10YR/2hr</sub> = INFLOW AT 10YR ARI, 2hr DURATION:

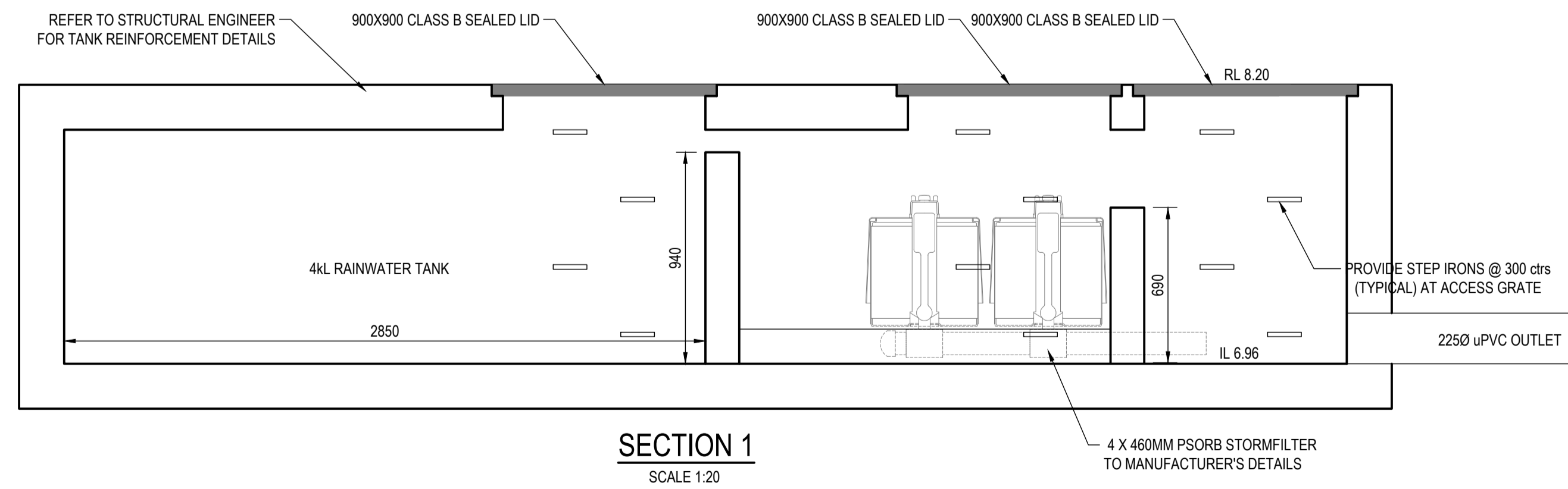
Q<sub>10YR/2hr</sub> = C<sub>r</sub> x I<sub>10YR/2hr</sub>  
= 1 x 34  
= 34mm/hr

V, REQUIRED STORAGE

V = Q/1000 x T x A  
= (34/1000) x 2 x 22  
= 1.50m<sup>3</sup> < 3.0m<sup>3</sup>  
= 3.0m<sup>3</sup> PROVIDED



**STORMWATER TANK**  
SCALE 1:50



**SECTION 1**  
SCALE 1:20

No.	REVISION DESCRIPTION	DRAWN	DATE
B	ISSUED FOR INFORMATION	HB	26.11.21
A	ISSUED FOR S.4.55 APPLICATION	HB	19.04.21

SCALE BAR: 0 1 2 3 4 5 1m 1.5 2m

SCALE 1:20: 0 1 2 3 4 5 1m 1.5 2m

SCALE 1:25: 0 1 2 3 4 5 1m 1.5 2m

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CLIENT: **REFORM PROJECTS**  
15/108 DUNNING AVENUE  
ROSEBERY NSW 2018

ARCHITECT: **ROB MILLS ARCHITECTURE**  
51 QUEEN STREET WOOLLAHRA NSW 2065

PROJECT TITLE: **MIXED-USE DEVELOPMENT**  
1102 BARRENJOEY ROAD  
PALM BEACH, NSW 2108

DRAWING TITLE: **DRAINAGE DETAILS**

DRAWING STATUS: **FOR INFORMATION**  
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER <b>AW</b>	DESIGNER <b>HB</b>	SIGNATURE	
DRAFTSPERSON <b>LO</b>	SCALE <b>AS SHOWN</b>	DATE <b>NOV. 2021</b>	SHEET SIZE <b>A1</b>
JOB No. <b>SY202-105</b>	DRAWING No. <b>C403</b>	REVISION <b>B</b>	