

PROPOSED RESIDENTIAL DEVELOPMENT
TYPE: NEW DWELLING

DRAWINGS SERIES TO BE PRINTED IN COLOUR

**DEVELOPMENT APPLICATION ISSUE
NOT FOR CONSTRUCTION**

ADDRESS: No. 327 MCCARRS CREEK ROAD, TERREY HILLS
TITLE: LOT 417/DP 752017
DRAWING SERIES: STORMWATER MANAGEMENT PLAN

GENERAL NOTES

GN1 ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

GN2 THE CONTRACTOR SHALL LOCATE AND DETERMINE LEVELS OF ALL EXISTING SERVICES PRIOR TO COMMENCING EXCAVATION WORK. ALL SERVICES SHOWN ON THIS DRAWING ARE INDICATIVE AND FOR GUIDANCE ONLY.

GN3 THIS DRAWING SERIES IS TO BE READ IN CONCURRENCE WITH RELEVANT DRAWINGS SERIES FROM OTHER CONSULTANTS, COUNCIL OR RELEVANT SPECIFICATIONS. WHERE DISCREPANCIES ARE DETECTED THE DESIGN ENGINEER IS TO BE CONTACTED IMMEDIATELY FOR VALIDATION/ RECTIFICATION.

GN4 BUILDER AND CONTRACTORS IS TO ENSURE THAT ALL COUNCIL DEVELOPMENT CONSENT CONDITIONS, CONSTRUCTION CERTIFICATE AND BASIX REQUIREMENTS ARE MET.

GN5 A STRUCTURAL ENGINEER IS TO DESIGN AND DETAIL SUBSOIL DRAINAGE. UNLESS APPROVED BY OUR OFFICE, SUBSOIL DRAINAGE IS NOT TO CONNECT INTO THE STORMWATER SYSTEM DISPLAYED WITHIN THIS DRAWING SERIES.

GN6 PLANS ISSUED FOR DEVELOPMENT APPLICATION, SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE.

GN7 PLANS ISSUED FOR DEVELOPMENT APPLICATION PURPOSES, SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

RAINWATER RE-USE NOTES

- RN1 THE RAINWATER TANK IS TO BE INSTALLED AND EMPLOYED AS PER BASIX, SYDNEY WATER, COUNCIL AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY.
- RN2 ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
- RN3 BUILDER AND PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK (HB 230- 2008).
- RN4 DO NOT DIRECT CONNECT TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY.
- RN5 THE RAINWATER TANK AND EVERY RAINWATER SUPPLY OUTLET POINT ARE TO BE LABELLED (RAINWATER) ON A METAL SIGN IN ACCORDANCE WITH AS1319.
- RN6 SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
- RN7 ROOF RUN-OFF ONLY IS TO BE DIRECTED TO THE RAINWATER TANK . SURFACE WATER SYSTEMS/INLETS ARE NOT TO BE CONNECTED.
- RN8 ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE DEVICES TO PREVENT MOSQUITO AND VERMIN ENTRY TO THE SATISFACTION OF THE REGULATORY AUTHORITY.
- RN9 PROVIDE APPROPRIATE FLOAT VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL
- RN10 PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN

BEFORE YOU DIG AUSTRALIA



THE MOST UP TO DATE BEFORE YOU DIG AUSTRALIA
(BYDA) PLANS MUST BE KEPT ON-SITE AT ALL TIMES.
ANY PERSON ABOUT TO DIG OR EXCAVATE MUST READ
BYDA PLANS PRIOR TO THE COMMENCEMENT OF WORK.

STORMWATER NOTES

| | |
|------|--|
| SN1 | ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED DEVICES, ARE TO BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS, THE BUILDING CODE OF AUSTRALIA, MANUFACTURER'S RECOMMENDATIONS, SYDNEY CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND LOCAL COUNCIL, AS APPLICABLE. |
| SN2 | ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE AS/NZS3500 AND THE REQUIREMENTS OF THE LOCAL GOVERNMENT AREAS POLICIES, CODES AND SPECIFICATIONS. ENSURE INSPECTION OPENINGS ARE INSTALLED TO DRAINAGE LINES AT REQUIRED LOCATIONS. |
| SN3 | STORMWATER PIPES UP TO DN150 SHALL BE LAID AT A MINIMUM 1% GRADE UNLESS OTHERWISE NOTED. |
| SN4 | WHERE NECESSARY PUBLIC UTILITY SERVICES ARE TO BE ALTERED AND AMENDED AT THE CLIENT'S EXPENSE. |
| SN5 | ALL NEW WORK MAKE SMOOTH TRANSITIONS AND CONNECTIONS WITH EXISTING WORK. |
| SN6 | LOCAL GOVERNMENT AREAS TREE PRESERVATION AND MANAGEMENT ORDERS TO BE ABIDED BY. A PERMIT IS REQUIRED BEFORE TREE/S CAN BE REMOVED . |
| SN7 | ALL PITS TO BE STREAMLINED AND BENCHED IN ACCORDANCE WITH LOCAL GOVERNMENTS AREAS SPECIFICATIONS. |
| SN8 | STEP IRONS ARE TO BE PROVIDED FOR ALL PITS OVER 1.2m DEEP IN ACCORDANCE WITH AS/NZS3500 AND LOCAL GOVERNMENT AREAS CODES AND POLICES. |
| SN9 | DOWNPIPES, RAINWATER LINES AND STORMWATER LINES TO BE FULLY SEALED UNLESS OTHERWISE NOTED. |
| SN10 | ALL GRATE AND INVERT LEVELS PROVIDED ON THIS DRAWING ARE EXTRACTED FROM SURVEY AND REDUCED TO AHD. FOLLOWING EARTHWORKS, PIT INSTALLATION AND BENCHING THE LEVELS ARE TO BE VERIFIED OR ADJUSTED TO MEET THE DESIGN INTENT. IF EVER IN DOUBT CONTACT DESIGN ENGINEER. |
| SN11 | ALL SUSPENDED DRAINAGE PIPES ARE TO STRAPPED IN ACCORDANCE WITH AS/NZ 2032. |
| SN12 | LOW POINTS OF CHARGED DRAINAGE SYSTEMS REQUIRE DEVICES FOR FLUSHING AND MAINTENANCE. |
| SN13 | THE NUMBER AND LOCATION OF DOWNPIPES, ON THIS DRAWING SERIES, ARE SHOWN INDICATIVELY AND ARE TO BE CONFIRMED ON-SITE BY BUILDER PRIOR TO CONSTRUCTION. ROOF DRAINAGE, BY OTHERS, AND TO BE INSTALLED IN ACCORDANCE WITH AS/NZs 3500 SERIES. |
| SN14 | NEW WORKS SHALL NOT CREATE ANY TRAPPED SURFACE AREAS. IN SUCH CASES WHERE TRAPPED AREAS EXIST, A DRAINAGE NETWORK WITH ADEQUATE CAPACITY SHALL BE REQUIRED TO DRAIN STORMWATER TO AN APPROVED DISCHARGE POINT. A PUMP-OUT SYSTEM MAY BE REQUIRED IF THE TRAPPED AREA IS BELOW THE NATURAL SURFACE LEVEL. IN EACH INSTANCE, THE DESIGN ENGINEER MUST BE CONTACTED FOR DESIGN DETAILS (AS REQUIRED) BEFORE CONSTRUCTION. |
| SN15 | WHEN SURFACES FALL TOWARDS A BUILDING, INCLUDING LAND OUTSIDE OF THE SITE, GROUND SURFACE LEVELS ADJACENT TO THE BUILDING ARE TO BE RE-GRADED SUCH THAT THE FIRST METER HAS A MINIMUM 50mm FALL AWAY FROM THE BUILDING AS PER THE NATIONAL CONSTRUCTION CODE. |
| SN16 | BALCONY DRAINAGE AND WATERPROOFING TO BE INSTALLED IN STRICT ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD AND NATIONAL CONSTRUCTION CODE, DESIGN IS TO BE BY OTHERS. |

DRAWING LEGEND

| | |
|--|--|
| | INDICATES ESTIMATED EXTENT OF EXISTING DWELLING |
| | INDICATES ESTIMATED EXTENT OF PROPOSED WORKS |
| | INDICATES ESTIMATED EXTENT OF PROPOSED DRIVEWAY |
| | INDICATES PROPOSED ON-SITE DETENTION TANK/S |
| | INDICATES PROPOSED RAINWATER TANK/S |
| | INDICATES PROPOSED ABSORPTION SYSTEM |
| | INDICATES GRATED BOX DRAIN WITH OUTLET |
| | INDICATES LINEAR GRATE TO ARCHITECTURAL DETAIL |
| | INDICATES TOW/H?? PROPOSED TOP OF WALL/HOB, TO ARCHITECTURAL DETAIL |
| | INDICATES DRAINAGE PIT WITH GRATED OPENING |
| | INDICATES DRAINAGE PIT WITH SEALED COVER |
| | INDICATES STORMWATER PIPE INVERT LEVELS. UNLESS OTHERWISE NOTED PIT BASE IS TO EQUAL PIPE BASE |
| | INDICATES PIPE DIRECTION, DIAMETER, AND MIN FALL |
| | INDICATES EAVES GUTTER ORIFICE |
| | INDICATES PROPOSED DOWNPIPE/RISER |
| | INDICATES EXISTING DOWNPIPE/RISER |
| | INDICATES PROPOSED PIPE DROPPER |
| | INDICATES INSPECTION OPENING WITH A SCREW DOWN LID |
| | INDICATES GUTTER HIGH POINT |
| | INDICATES PROPOSED SCUPPER/SPITTER OVERFLOW/S |
| | INDICATES PROPOSED PLANTER DRAIN OUTLET/S |
| | INDICATES PROPOSED BALCONY DRAIN OUTLET/S |
| | INDICATES PROPOSED ROOF DRAIN OUTLET/S |
| | INDICATES PROPOSED LINEAR DRAIN OUTLET/S |
| | INDICATES PROPOSED BOX GUTTER FLOW DIRECTION |
| | INDICATES PROPOSED EAVE GUTTER FLOW DIRECTION |
| | INDICATES PROPOSED VALLEY GUTTER FLOW DIRECTION |
| | INDICATES BOX GUTTER SUMP/RAINWATER HEAD SUMP |
| | INDICATES PROPOSED DOWNPIPE SPREADER |
| | INDICATES ESTIMATED ROOF PITCH |
| | INDICATES PROPOSED SURFACE FALL DIRECTION |
| | INDICATES PROPOSED REDUCED LEVEL/S OR PIPE INVERT LEVEL/S |
| | PROPOSED STEP HEIGHT |
| | PIPE LINE CONTINUES TO REFERENCED PAGE |
| | PENETRATION/FLOW DIRECTION |
| | SERVICE TYPE: SW (STORMWATER), RW (RAINWATER) |
| | SIZE |
| | PENETRATION/FLOW DIRECTION |
| | INDICATES 100mm DIA. RAINWATER PIPE, U.N.O. |
| | INDICATES 100mm DIA. STORMWATER PIPE, U.N.O |
| | INDICATES EXISTING STORMWATER PIPE |
| | INDICATES EXISTING RAINWATER PIPE |
| | INDICATES 100mm DIA. SEWER GRADE CHARGED STORMWATER PIPE. |
| | INDICATES INDICATIVE LOCATION OF PROPOSED RISING MAIN |
| | ESTIMATED LOCATION OF EXISTING SEWER MAINS |
| | ESTIMATED LOCATION OF EXISTING ELECTRICITY LINE |
| | ESTIMATED LOCATION OF EXISTING TELECOMMUNICATION |
| | ESTIMATED LOCATION OF EXISTING WATER MAINS |
| | ESTIMATED LOCATION OF EXISTING GAS MAINS |
| | INDICATES SITE BOUNDARY |
| | INDICATES EASEMENT WITHIN SITE, REFER TO DETAILED SURVEY |
| | INDICATES INDICATIVE ROOF OUTLINE |
| | INDICATES SIZE & DIRECTION OF RAINWATER PIPE GREATER THAN 100mm DIA. |
| | INDICATES SIZE & DIRECTION OF STORMWATER PIPE GREATER THAN 100mm DIA. |
| | INDICATES SIZE & DIRECTION OF EXISTING STORMWATER PIPE GREATER THAN 100mm DIA. |



SITE SUMMARY OF COUNCIL SPECIFICATION

1. COUNCIL: NORTHERN BEACHES COUNCIL
2. RELEVANT DOCUMENTS:
 - 2.1. NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY (FEB 2021)
 - 2.2. AS/NZS 3500.3
3. ENGINEERING COMMENTS:
 - STORMWATER DISCHARGE
THE DEVELOPMENT PROPOSES A LEVEL SPREADER DISCHARGE WITHIN SITE WHICH IS EXPECTED TO DRAIN OVERLAND TO AN UNFORMED ROAD.
 - ON- SITE DETENTION
THE DEVELOPMENT IS LOCATED IN REGION TWO, PROPOSED DEVELOPMENT IMPERVIOUS AREA IS LESS THAN 40% BUILT UPON AREA AND THE DEVELOPMENT DRAINS TO AN UNFORMED ROAD. CONSEQUENTLY WE ARE OF THE VIEW THAT ON-SITE DETENTION IS NOT REQUIRED. REFER TO COUNCIL CHECKLIST ON PAGE 57 FOR DETAILS.
 - RAINWATER REUSE
RAINWATER REUSE TANK TO BE IN ACCORDANCE WITH BASIX CERTIFICATE (TO BE CONFIRMED UPON RECEIPT). A 5,000 LITRE TANK HAS BEEN SHOWN INDICATIVELY .

THIS DRAWING SERIES HAS BEEN PREPARED IN GENERAL ACCORDANCE WITH THE ABOVE DOCUMENTS.

PAGE DIRECTORY

| | |
|--|----------|
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|  | Revision | Drawn | Date | Description | Checked | Approved | North | Architect | Project | Drawing Title | |
|---|----------|-------|----------|------------------------------------|---------|----------|---|---|--|---|-------------------------------|
| | 3 | SSD | 30.05.25 | ISSUED FOR DEVELOPMENT APPLICATION | RM | SSD |  | PLAYOUST CHURCHER Client: LLOYD | PROPOSED NEW DWELLING No. 327 MCCARRS CREEK ROAD TERREY HILLS | TITLE PAGE & NOTES Project No. ACE24116 | |
| | 2 | SSD | 16.04.25 | ISSUED FOR DEVELOPMENT APPLICATION | RM | SSD | | | | | |
| | 1 | SSD | 28.03.25 | ISSUED FOR CLIENT REVIEW | RM | SSD | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | <small>This drawing is confidential and shall only be used for this project. Copyright of this drawing must not be used, modified or copied without written permission by the owner of Amuna Pty Ltd ABN:31 658 411 299</small> | <small>Scale: A1 AS NOTED</small> | <small>Page No. S1</small> | <small>Revision 3</small> |

ROOF DRAINAGE SYSTEM
THE RAINWATER SYSTEM IS DESIGNED TO GATHER WATER SOLELY FROM THE ROOF AND SHALL BE SEALED ENTIRELY FROM THE EAVE GUTTER'S TO THE RAINWATER TANK INLET/S. ALL UPVC CONNECTIONS MUST ESTABLISH A WATER-TIGHT POSITIVE ADHESION SEAL USING PRIMING FLUID SOLVENT CEMENT WELDS. IT IS CRUCIAL TO KEEP THE STORMWATER SYSTEM, INCLUDING PIPES AND PITS, INDEPENDENT FROM THE RAINWATER SYSTEM.

EAVE LEVEL OF LOWEST ROOF: RL ±210.40 Nom.
TOP OF TANK LEVEL: RL 208.06 Nom.
AVAILABLE HEAD: 2340mm

THEREFORE THERE IS ADEQUATE PRESSURE HEAD TO CONVEY RAINWATER TO TANK

LINE SIGNIFIED AS: — RW — RW —

←
SIGNIFIES EXTENT AND NUMBER OF GRASS SWALES DISCHARGING TO LEVEL SPREADER DISCHARGE. REFER TO PAGE S5 FOR TYPICAL DETAIL

BUILDER & PLUMBER TO CONFIRM NO DISCHARGE SHALL BE WITHIN 10m OF ANY SEPTIC DISPOSAL AREA AND 5m FROM ANY BUILDING OR PROPERTY BOUNDARY

JUNCTION & CLEANOUT PIT - SIP2
SIZE: 600 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 204.30 NOM.
OUTLET IL: 203.45 NOM.

ALL OPEN TRENCHING WITHIN TREE PROTECTION ZONES SHALL BE UNDERTAKEN USING NON-DESTRUCTIVE EXCAVATION METHODS UNDER THE DIRECT SUPERVISION OF THE PROJECT ARBORIST

ESTIMATED LOCATION OF EXISTING STORMWATER SYSTEM. BEFORE PROCEEDING, THE BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY OF THE EXISTING STORMWATER LINE AND PERFORM HYDRAULIC TESTING TO GUARANTEE IT FULFILLS THE DESIGN REQUIREMENTS. IF THE LINE IS INADEQUATE, THE OUTLET MATERIAL MUST BE REPLACED IN COMPLIANCE WITH COUNCIL SPECIFICATIONS.
SIGNIFIED AS: — e.SW —

BUILDER & PLUMBER TO CONFIRM NO DISCHARGE SHALL BE WITHIN 10m OF ANY SEPTIC DISPOSAL AREA AND 5m FROM ANY BUILDING OR PROPERTY BOUNDARY

JUNCTION PIT - SIP1
SIZE: 900 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 197.10NOM.
OUTLET IL: 196.10 NOM.

DISPERSION TRENCH (EXISTING SIZE TO BE VERIFIED ELSE REPLACED)
PROVIDE THE FOLLOWING:
TYPE: EVERHARD 'EVERTRENCH' - JUMBO' OR APPROVED EQUIVALENT
NUMBER OF TRENCHES: ONE
TRENCH DIMENSIONS: LENGTH 15,000 x WIDTH 600 x DEPTH 900mm
THE BASE OF THE TRENCH MUST BE BUILT AT A CONSTANT REDUCED LEVEL AND BE AT LEAST FIVE METERS AWAY FROM ANY BUILDINGS AND FIVE METERS FROM AN PROPERTY BOUNDARIES.

FINAL PLACEMENT OF TRENCH TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION. REFER TO PAGE S5 FOR DETAILS

**MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 1 OF 2**
SCALE - 1:125/A1, 1:250/A3

0 2.5m 5m 7.5m 10m 12.5m

- NOTES:
1. ALL IN GROUND PIPES TO BE DN150 UNLESS OTHERWISE NOTED
 2. THESE PLANS ARE TO BE READ IN CONJUNCTION WITH PROPOSED DRIVEWAY ACCESS PLANS PREPARED BY AMUNA PTY LTD No. ACE24116 SERIES "D"



| Revision | Drawn | Date | Description |
|----------|-------|----------|------------------------------------|
| 3 | SSD | 30.05.25 | ISSUED FOR DEVELOPMENT APPLICATION |
| 2 | SSD | 16.04.25 | ISSUED FOR DEVELOPMENT APPLICATION |
| 1 | SSD | 28.03.25 | ISSUED FOR CLIENT REVIEW |

| Checked | Approved | North | Architect |
|---------|----------|-------|-------------------|
| RM | SSD | → | PLAYOUST CHURCHER |
| RM | SSD | | Client: LLOYD |
| RM | SSD | | |

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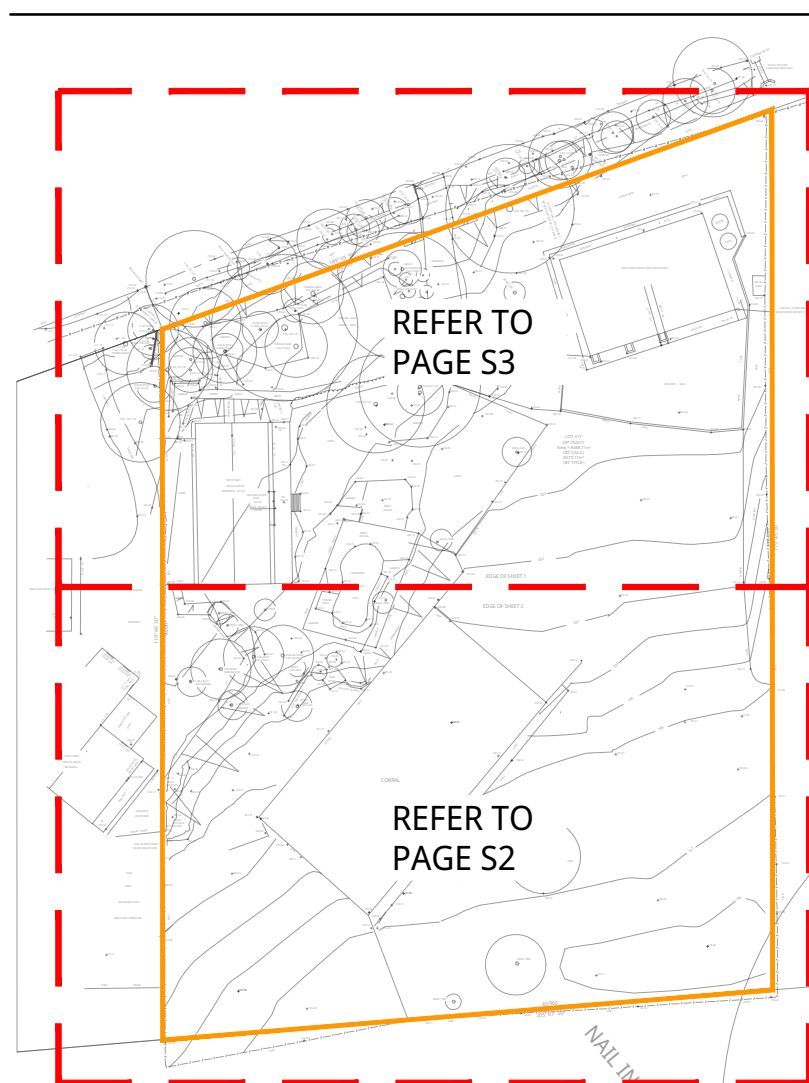
Project
**PROPOSED
NEW DWELLING**
No. 327 MCCARRS CREEK ROAD
TERREY HILLS

Drawing Title
**MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 1 OF 2**
Project No.
ACE24116

Scale: A1
AS NOTED
Page No.
S2
Revision
3

- NOTES:
1. ALL IN GROUND PIPES TO BE DN150 UNLESS OTHERWISE NOTED
 2. THESE PLANS ARE TO BE READ IN CONJUNCTION WITH PROPOSED DRIVEWAY ACCESS PLANS PREPARED BY AMUNA PTY LTD No. ACE24116 SERIES "D"

PAGE DIRECTORY



REFER TO DRIVEWAY DESIGN PLANS
PREPARED BY AMUNA PTY LTD SERIES
"D" REFERENCE ACE24116_D

REFER TO DRIVEWAY DESIGN PLANS
PREPARED BY AMUNA PTY LTD SERIES
"D" REFERENCE ACE24116_D

****DISCLAIMER**
THE DRAINAGE MODIFICATIONS AROUND THE EXISTING SHED AREA ARE BELIEVED TO CONSTITUTE AS REMEDIAL WORKS ONLY. NO OVERLAND FLOW MODELLING OR HYDROLOGICAL STUDIES HAVE BEEN CONDUCTED. ADDITIONALLY, THE PROPOSED DRAINAGE DESIGN HAS NOT BEEN ASSESSED FOR COMPLIANCE WITH RELEVANT STANDARDS OR CODES. WE ARE OF THE VIEW THAT THE PROPOSED RE-GRADING OF CHANNEL WILL IMPROVE DRAINAGE AROUND THE SHED AREA. IF IN DOUBT CONTACT DESIGN ENGINEER FOR FURTHER EXPLANATION AND ASSISTANCE. **

BUILDER TO ENSURE
REMEDIAL WORKS COMPLY
WITH THE NATIONAL
CONSTRUCTION CODE
SURFACE DRAINAGE
REQUIREMENTS.

EXISTING TWO STOREY METAL SHED
EXISTING SHED
(NOT PART OF DESIGN)

ESTIMATED LOCATION OF EXISTING STORMWATER
SYSTEM. BEFORE PROCEEDING, THE
BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY
OF THE EXISTING STORMWATER LINE AND PERFORM
HYDRAULIC TESTING TO GUARANTEE IT FULFILLS THE
DESIGN REQUIREMENTS. IF THE LINE IS INADEQUATE,
THE OUTLET MATERIAL MUST BE REPLACED IN
COMPLIANCE WITH COUNCIL SPECIFICATIONS.
SIGNIFIED AS: **e.SW**

AREA TO BE CUT BACK AND
LOCALLY GRADED TO ACHIEVE
GRAVITY FALL TO LEVEL SPREADER.
STRUCTURAL AND GEO-TECHNICAL
ENGINEERS TO VERIFY EXISTING
STRUCTURES ARE OK, ELSE PROVIDE
SUPPORTING DESIGN.

SIGNIFIES EXTENT OF REINFORCED
CONCRETE TABLE DRAIN DISCHARGE
TO GRASS LINED SWALE.
TABLE DRAIN TO STRUCTURAL
ENGINEERS DETAIL. REFER TO
DRIVEWAY ACCESS PLANS FOR
FUTURE DETAILS

LANDSCAPED AREA TO
DRAIN UNIMPEDED
TOWARD SWALE. ELSE
ADDITIONAL DRAINAGE
MEASURES TO BE
PROVIDED AT CC STAGE.

FOR ALL DOWNPIPES
LOCATED ON
THIS DRAWING
REFER TO NOTE
SN13 ON PAGE
S1.

JUNCTION PIT - SIP5
SIZE: 450 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 204.45NOM.
OUTLET IL: 204.00 NOM.

TURNTABLE
DRAINAGE TO
MANUFACTURES
SPECIFICATION

PROVIDE GRATED BOX DRAIN (GBD):
SIZE: 200mm WIDE x 200mm DEEP GBD.
GRADE: ENSURE A MINIMUM 2% GRADE
FROM GBD INVERT TO OUTLET PIPE IL.
GBD SURFACE LEVEL TO BE 25mm BELOW
GARAGE FINISHED FLOOR LEVEL. ENSURE
UNHINDERED OVERFLOW PATH IN THE
EVENT OF DRAIN OR OUTLET BLOCKAGE

STORMWATER FOR CARPORT AREA
(ABOVE GARAGE) TO BE COMPLETED AT
CC STAGE

PROPOSED RAINWATER TANK
SUPPLY AND INSTALL A SINGLE RAINWATER RE-USE
TANK THAT ADHERES TO THE MANUFACTURER AND
COUNCIL SPECIFICATIONS, BASIX CERTIFICATE, AND
AS/NZS3500.3 STANDARDS. IN ADDITION, FIT LEAF
FILTERS, INSECT/VERMIN CONTROL, AND FIRST FLUSH
DEVICES TO ALL TANK INLETS, AND INCLUDE AN
INSECT/VERMIN CONTROL ON THE TANK OUTLET. THE
RW TANK RE-USE PUMP AND UNIT MUST BE INSTALLED
IN ACCORDANCE WITH THE MANUFACTURER'S
INSTRUCTIONS.

TYPE: ABOVE GROUND SLIM LINE RAINWATER RE-USE
TANK
VOLUME- 1 x 5,652 LITRES (SIZE TBC WITH BASIX CERT)
DIMENSIONS- LENGTH 3000 x WIDTH 1150 x HEIGHT
1760mm

FINAL PLACEMENT OF TANK TO BE CONFIRMED ON SITE
PRIOR TO CONSTRUCTION. REFER PAGE S4 FOR DETAILS.

LANDSCAPE PIT - SIP3
SIZE: 450 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 204.40 NOM.
OUTLET IL: 203.80 NOM.

DRAWING CONTINUES REFER PAGE S2

MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 2 OF 2
SCALE - 1:125/A1, 1:250/A3
0 2.5m 5m 7.5m 10m 12.5m



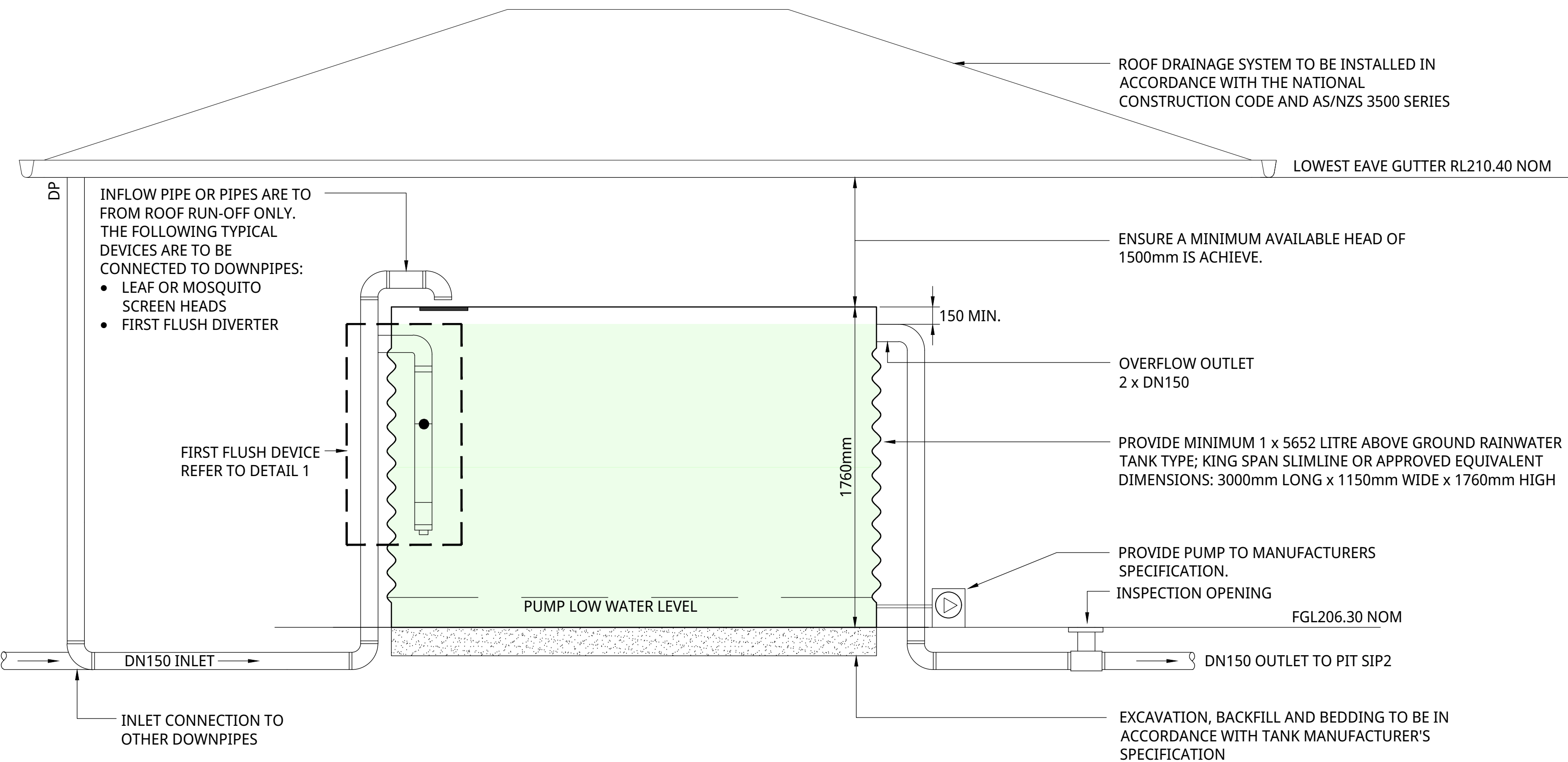
| Revision | Drawn | Date | Description | Checked | Approved | North | Architect |
|----------|-------|----------|------------------------------------|---------|----------|-------|-------------------|
| 3 | SSD | 30.05.25 | ISSUED FOR DEVELOPMENT APPLICATION | RM | SSD | | PLAYOUST CHURCHER |
| 2 | SSD | 16.04.25 | ISSUED FOR DEVELOPMENT APPLICATION | RM | SSD | | Client: LLOYD |
| 1 | SSD | 28.03.25 | ISSUED FOR CLIENT REVIEW | RM | SSD | | |

Client: LLOYD

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Project
PROPOSED
NEW DWELLING
No. 327 MCCARRS CREEK ROAD
TERREY HILLS

Drawing Title
MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 2 OF 2
Project No.
ACE24116
Scale: A1
AS NOTED
Page No.
S3
Revision
3

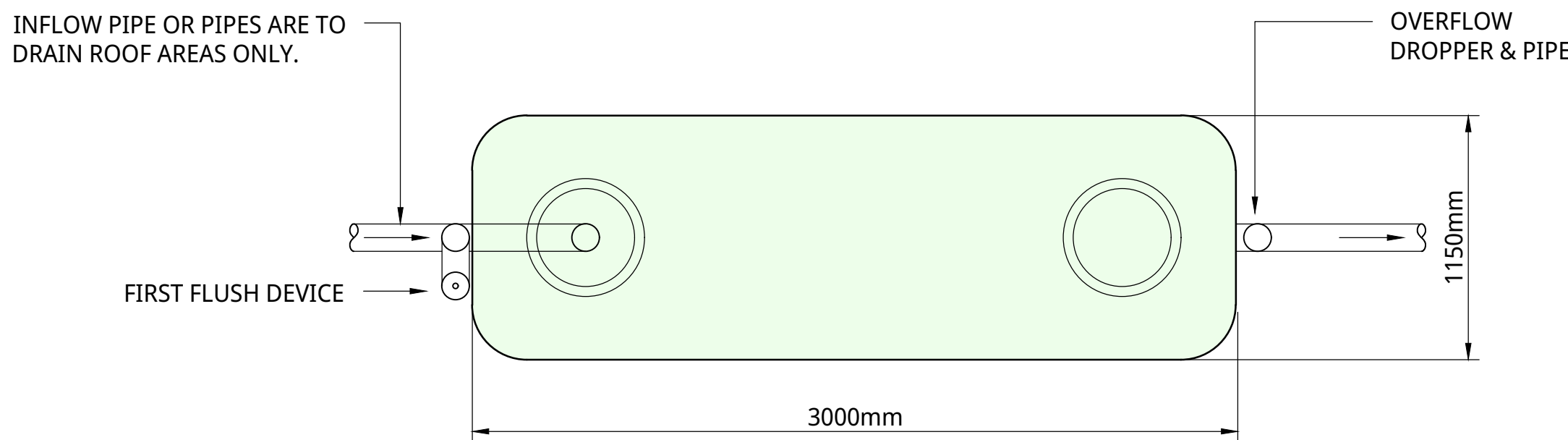


ABOVE GROUND RAINWATER RE-USE TANK
TYPICAL ELEVATION

NTS

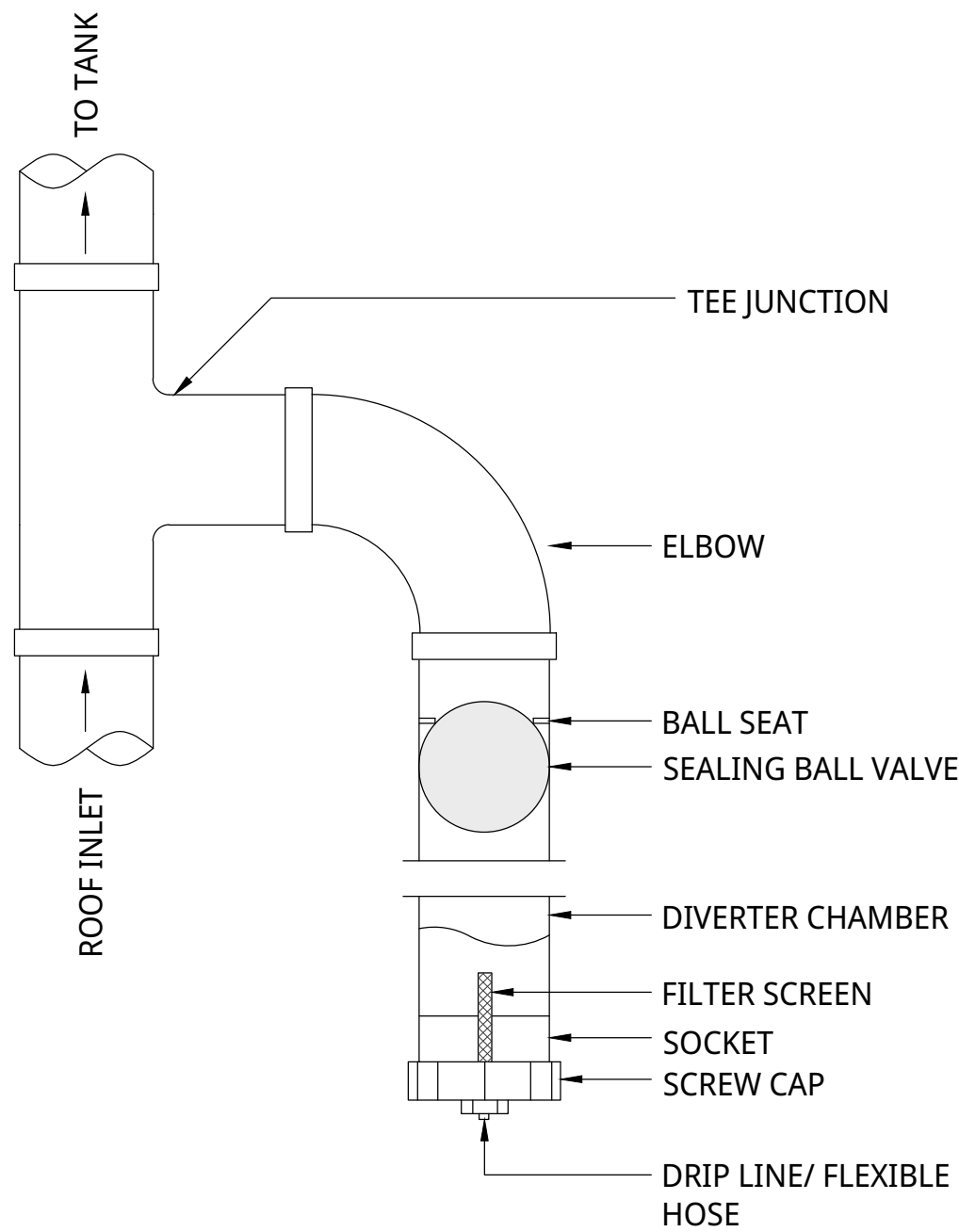
NOTES:

1. RAINWATER TANK TO MEET MINIMUM BASIX REQUIREMENTS.
2. RAINWATER TANK DIMENSIONS TO BE VERIFIED WITH TANK MANUFACTURER, DESIGN ENGINEER TO VALIDATE ANY VARIATIONS PRIOR TO CONSTRUCTION.
3. REFER TO RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK BY MPMSAA (2008) FOR TANK CONNECTION SCHEMATICS.
4. ONLY ONE RAINWATER TANK INLET IS SHOWN FOR INDICATIVE PURPOSES.



ABOVE GROUND RAINWATER RE-USE TANK
TYPICAL PLAN

NTS



DETAIL 1 - TYPICAL FIRST FLUSH DEVICE

NTS

NOTES:

1. APPROVED EQUIVALENT OTHER FIRST FLUSH DEVICE MAY BE INSTALLED.
2. ENSURE FIRST FLUSH DEVICE DOES NOT POND WATER IN ENCLOSED SPACES.
3. FIRST FLUSH VOLUME TO BE A MINIMUM 20L PER 100m² OF ROOF



TYPICAL WARNING SIGN

NTS

NOTES:

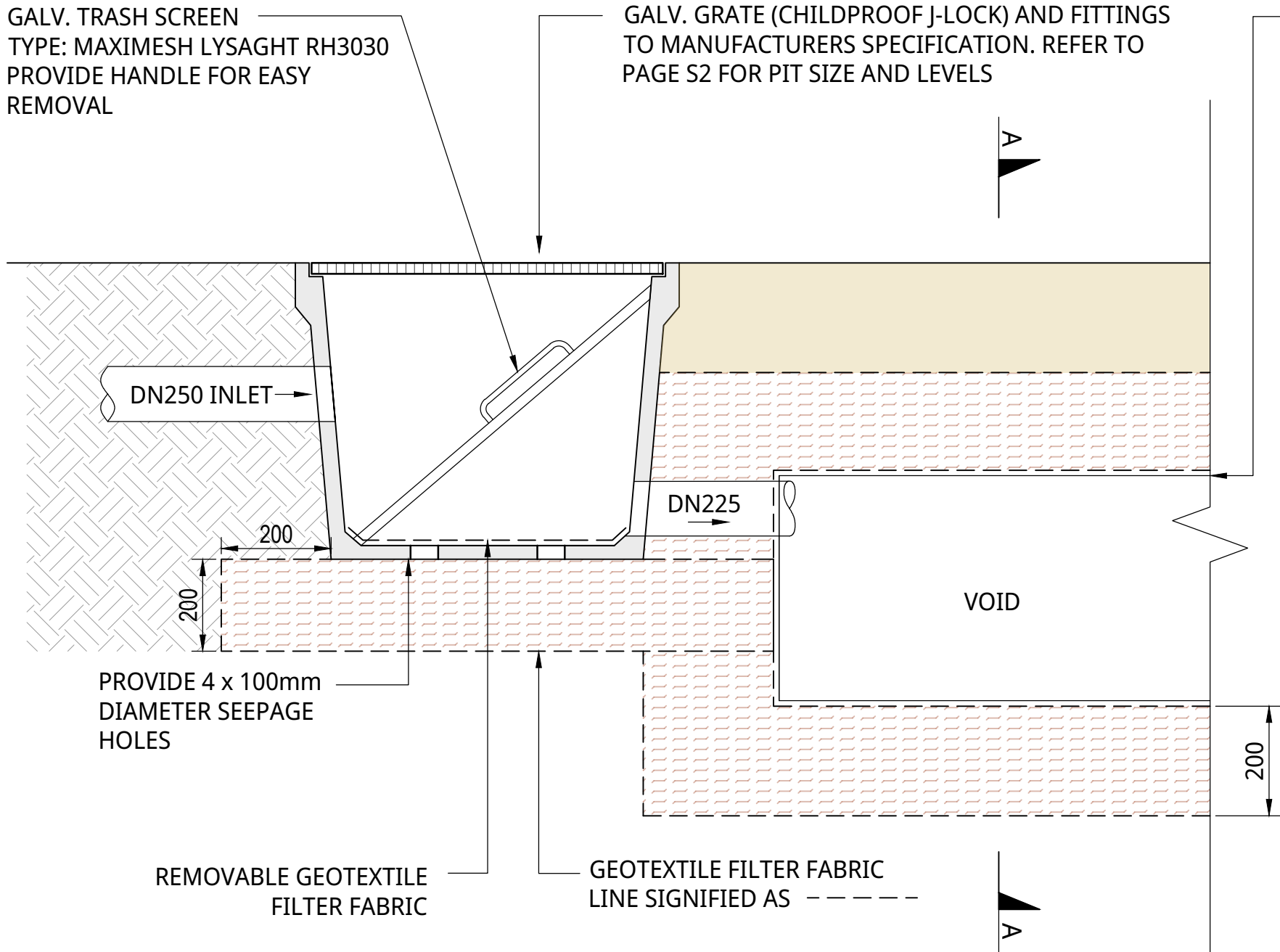
1. REFER TO NOTE RN5 ON PAGE S1

LEGEND:

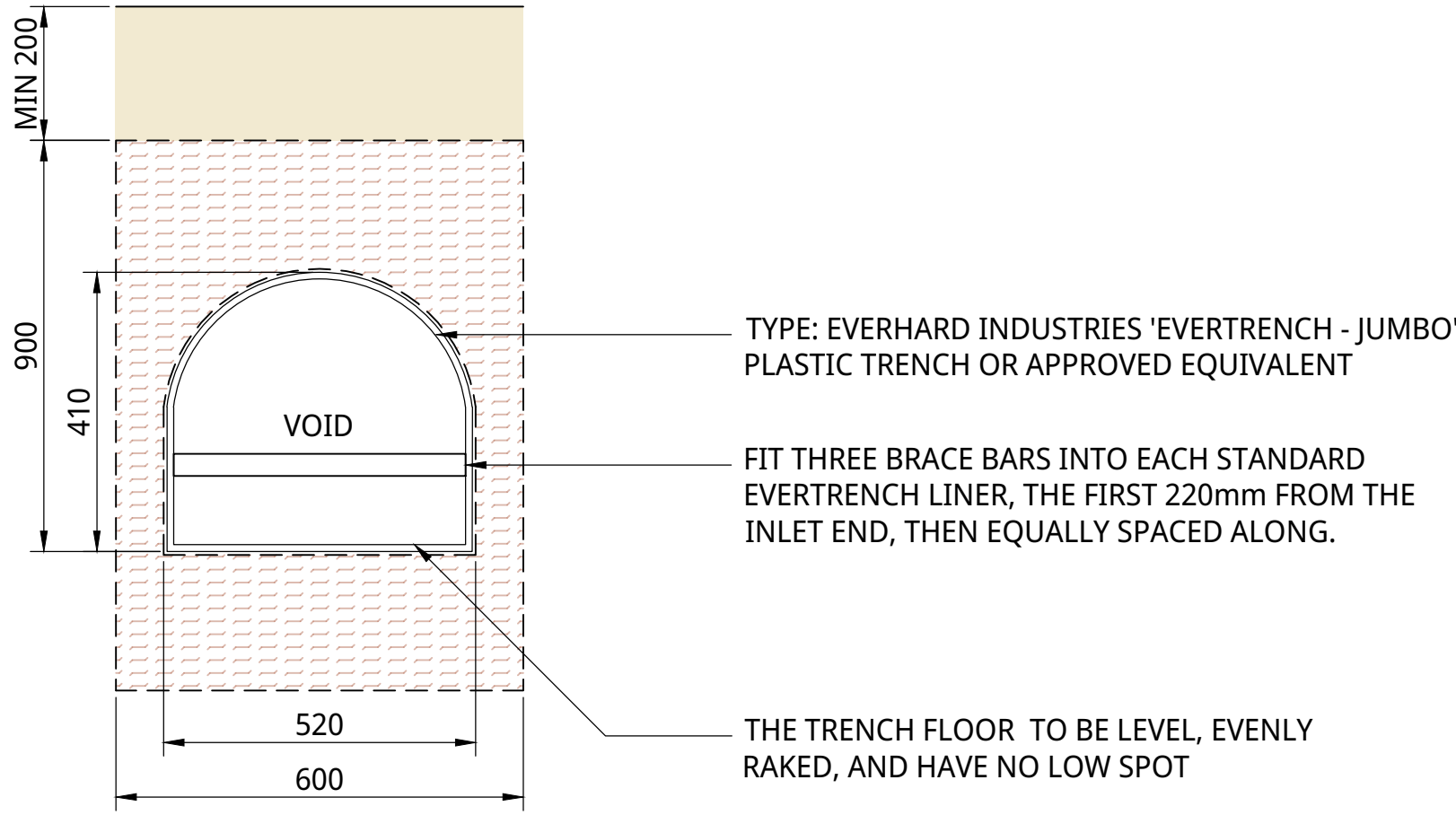
BACKFILL WITH FREE DRAINING MATERIAL

PROVIDED WASHED AGGREGATE AND SURROUND ENTIRELY BY GEOTEXTILE FILTER FABRIC
AGGREGATE SIZE: 20-40mm

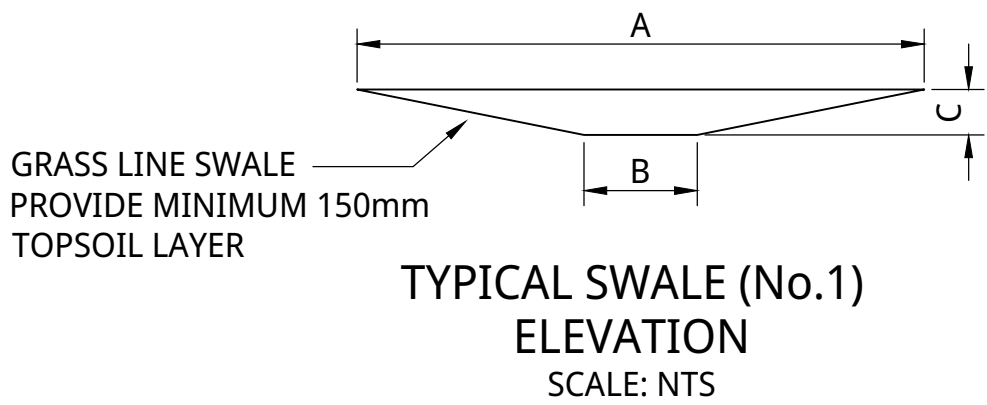
EXISTING EARTH



DETAIL 1 - TYPICAL SECTION OF SEDIMENT CONTROL PIT AND DISPERSION TRENCH
SCALE: NTS

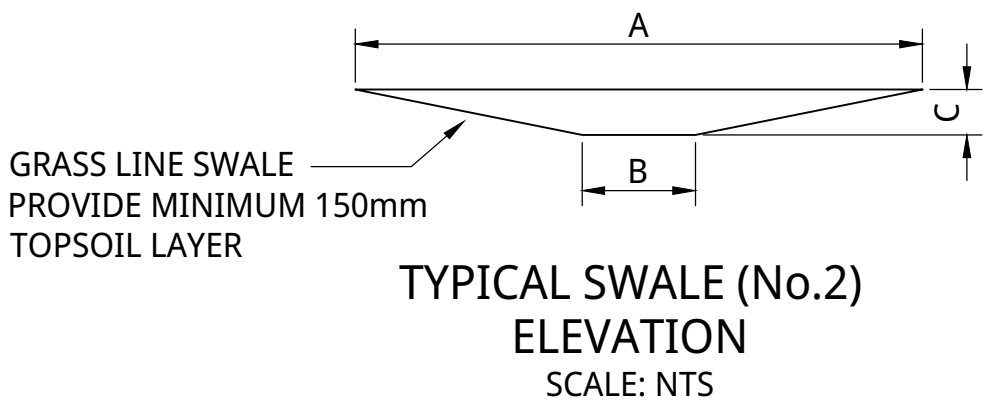


ELEVATION OF DISPERSION TRENCH
SCALE: NTS



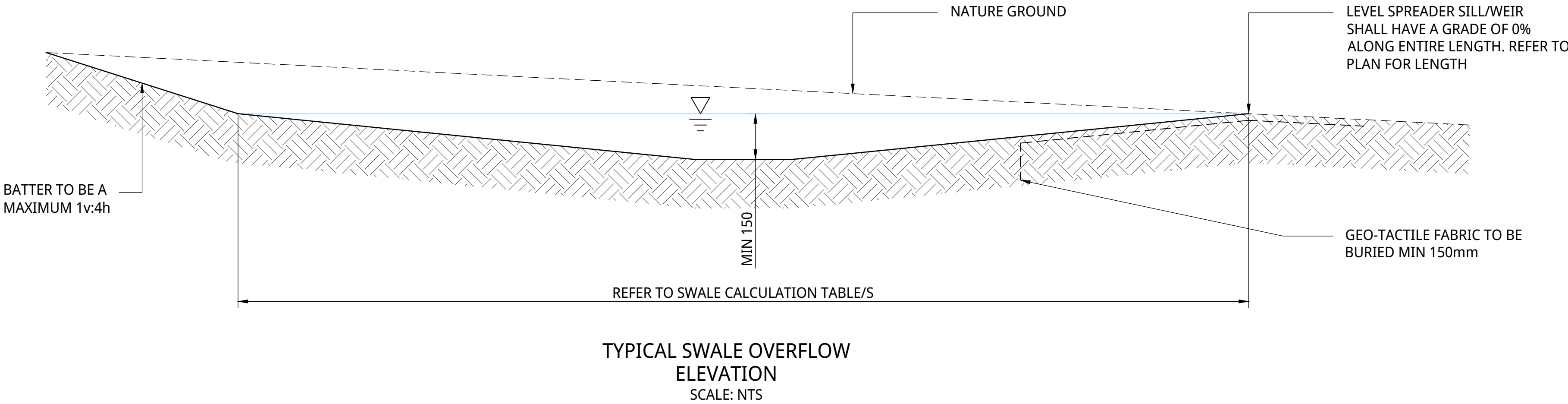
TYPICAL SWALE (No.1)
ELEVATION
SCALE: NTS

| SWALE CALCULATIONS | | | |
|--------------------|--------|----------|-------|
| INPUTS | SYMBOL | RESULTS | UNITS |
| TOP WIDTH | A | 5000 | mm |
| BOTTOM WIDTH | B | 1000 | mm |
| SIDE SLOPE | - | 1 : 12.5 | H/V |
| BED SLOPE | - | 1 | % |
| FLOW DEPTH | C | 160 | mm |
| CAPACITY | - | ≈400 | L/S |

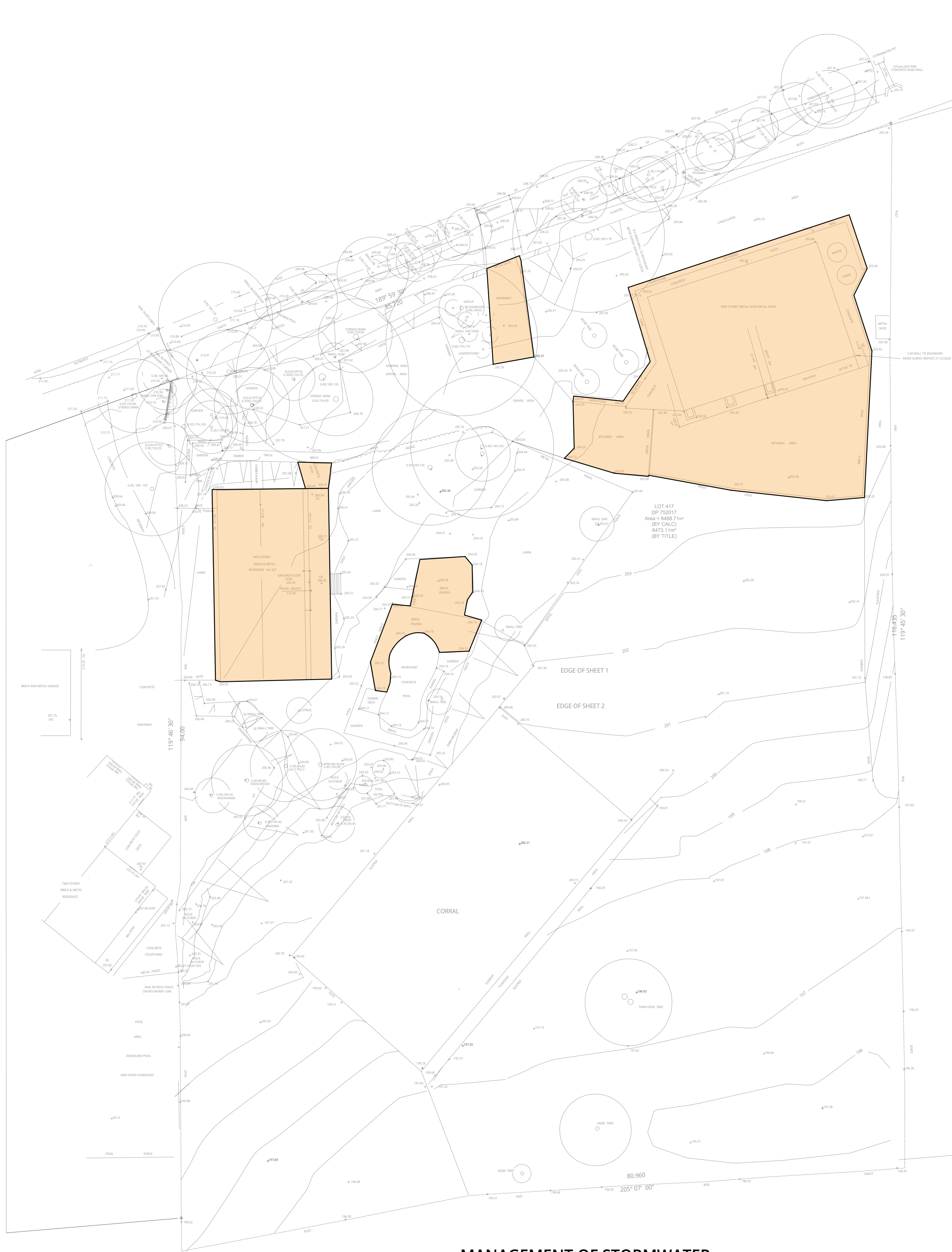


TYPICAL SWALE (No.2)
ELEVATION
SCALE: NTS

| SWALE CALCULATIONS | | | |
|--------------------|--------|---------|-------|
| INPUTS | SYMBOL | RESULTS | UNITS |
| TOP WIDTH | A | 1000 | mm |
| BOTTOM WIDTH | B | 100 | mm |
| SIDE SLOPE | - | 1 : 4 | H/V |
| BED SLOPE | - | 5 | % |
| FLOW DEPTH | C | 117 | mm |
| CAPACITY | - | ≈80 | L/S |



TYPICAL SWALE OVERFLOW
ELEVATION
SCALE: NTS



MANAGEMENT OF STORMWATER
PLAN - PRE DEVELOPMENT
SCALE - 1:300/A1, 1:600/A3



MANAGEMENT OF STORMWATER
PLAN - POST DEVELOPMENT
SCALE - 1:300/A1, 1:600/A3



| IMPERVIOUS AREA CALCULATION | |
|---------------------------------------|----------------------------------|
| DEVELOPMENT | ESTIMATED AREA (m ²) |
| SITE AREA | 8488 |
| PRE-DEVELOPMENT | 1169.0 |
| POST-DEVELOPMENT | 1717.0 |
| ESTIMATED RESULT | 548.0 |
| ESTIMATED ADDITION IN IMPERVIOUS AREA | |



For assistance and support, please contact Council's Development Engineering and Certification team on 1300 434 434.

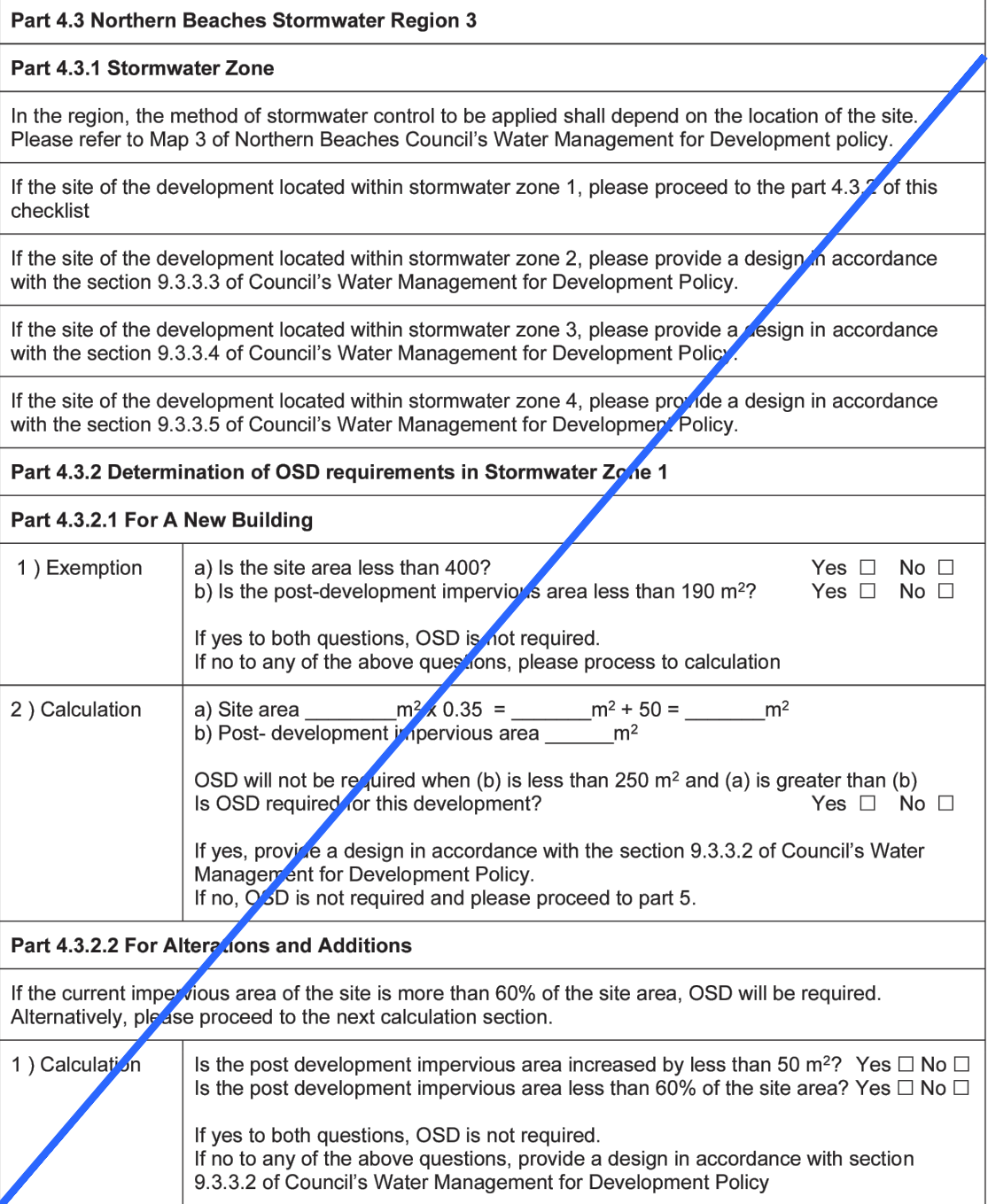
| Part 2 Site Details | | | |
|---|--------------------|-------------------------------------|---|
| Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy) | 2 | Total Site Area | 8488 |
| Pre-Development Impervious Area | 1169m ² | Post-Development Impervious Area | 1717m ² |
| Is the site of the development located within an established Flood Prone Land as referred to Council's Local Environmental Plans? | | | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| If yes, On-site stormwater Detention system (OSD) is not required and please proceed to part 5 of this checklist If no, please proceed to part 3 of this checklist. | | | |

| | | | | |
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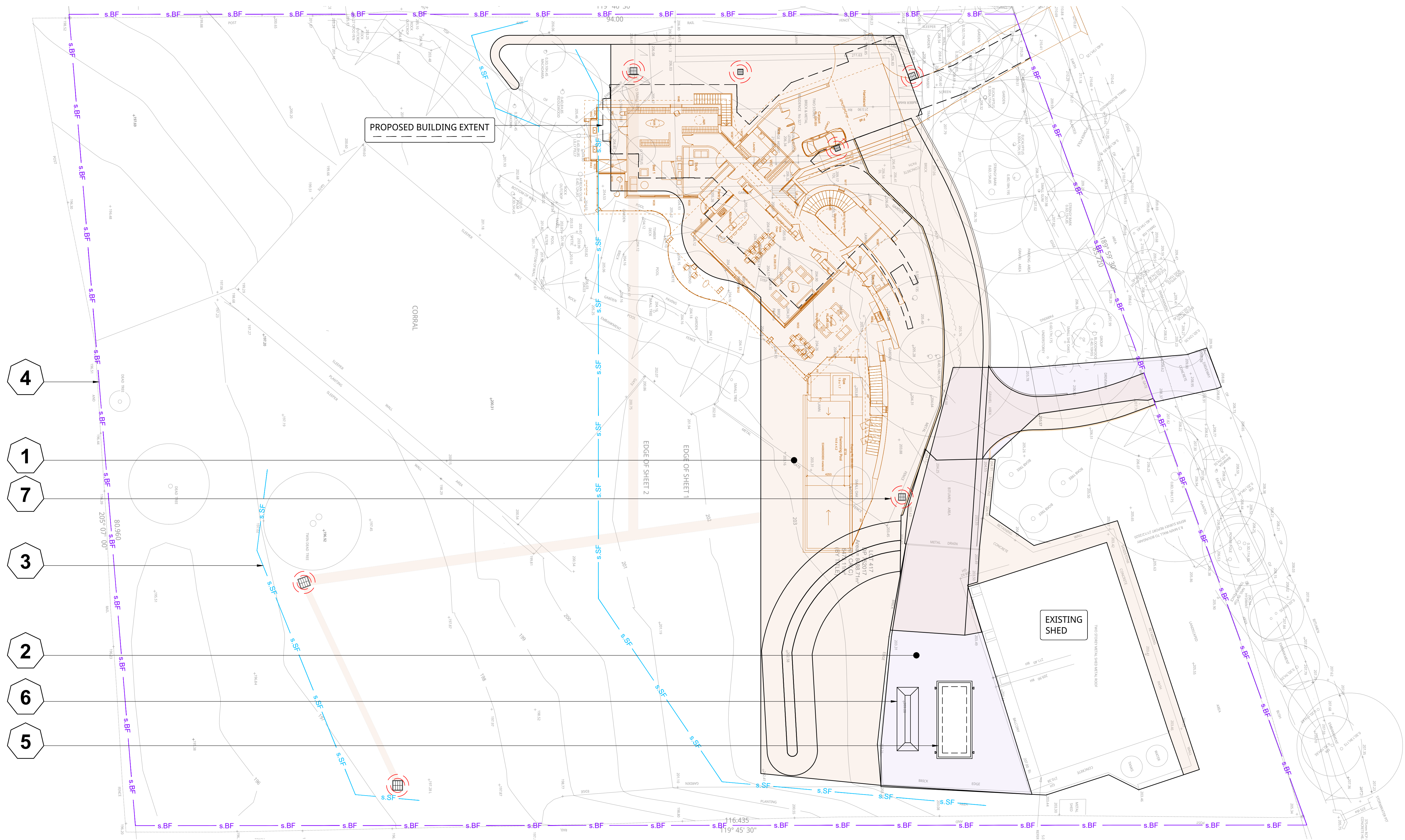
| | | | | | | | |
|--|--|--|------|----------------|--|------|----------------|
| Part 4.2 Northern Beaches Stormwater Region 2 | | | | | | | |
| Part 4.2.1 Description of Work | | | | | | | |
| Residential flat building, commercial, industrial, multiple occupancy development and subdivisions resulting in the creation of three lots or more, will require OSD in all cases. Please provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy. Any single residential development, please proceed to part 4.2.2 of this checklist. | | | | | | | |
| Part 4.2.2 Exemption | | | | | | | |
| Is the site area less than 450m ² ? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | | |
| Does the site of the development drain directly to the ocean without the need to pass through a drainage control structure such as pipe, bridge, culvert, kerb and gutter or natural drainage system? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | | |
| Is it an alternation and addition development to the existing dwellings? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | | |
| If yes to any of the above questions, OSD is not required. If no to all the above questions, proceed to part 4.2.3 | | | | | | | |
| Part 4.2.3 Determination of OSD Requirements | | | | | | | |
| Calculation | <table border="0"> <tr> <td>a) Site area m² x 0.40 (40%) =</td> <td>3395</td> <td>m²</td> </tr> <tr> <td>b) Post- development impervious area =</td> <td>1717</td> <td>m²</td> </tr> </table> | a) Site area m ² x 0.40 (40%) = | 3395 | m ² | b) Post- development impervious area = | 1717 | m ² |
| a) Site area m ² x 0.40 (40%) = | 3395 | m ² | | | | | |
| b) Post- development impervious area = | 1717 | m ² | | | | | |
| OSD will not be required when (a) is greater than (b) OSD is required for this development (tick one only) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | | | |
| If yes, provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy. If no, OSD is not required and please proceed to part 5 of this checklist. | | | | | | | |

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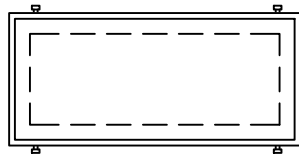



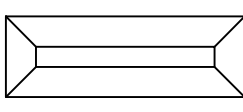


| Definitions | |
|--|---|
| Designed to help you fill out this application | <p>Site area: This refers to the area of the land bounded by its existing or proposed boundaries.</p> <p>Impervious area: This refers to driveways, parking spaces, pathways, paved areas, hardstand areas, roofed areas, garages and outbuildings.</p> <p>Pre Development Impervious area: This refers all impervious areas of the site before the development.</p> <p>Post Development Impervious areas: This refers all the impervious areas within the site after the development is completed.</p> |

| | | | | |
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EROSION & SEDIMENT CONTROL LEGEND

| | | | | | | | |
|----------|--|----------|--|----------|--|----------|--|
| 1 | PROPOSED SOIL DISRUPTED AREA SIGNIFIED AS:  | 3 | SEDIMENT FENCE TO BE IN INSTALLED IN ACCORDANCE WITH PAGE ES2 DETAIL SD 6-8. WHERE TREE ZONES ARE PRESENT SEDIMENT FENCE MEASURES TO ARBORIST RECOMMENDATIONS SIGNIFIED AS:  | 5 | WASTE/SKIP STORAGE AREA, PROVIDE CONTAINER BINS THAT CAN CARRY SOLID AND LIQUID WASTE SIGNIFIED AS:  | 7 | TO PROTECT DRAINAGE PITS, PROVIDE GEO-TEXTILE INLET FILTER IN ACCORDANCE WITH PAGE ES2 DETAIL SD6-12. SIGNIFIED AS:  |
| 2 | UNTIL APPROPRIATE COMPLETION OF CONSTRUCTION WORK,THE EXISTING DRIVEWAY SLAB AND VEHICLE CROSSOVER IS TO BE PRESERVED AND USED AS SITE THE ENTRANCE SIGNIFIED AS:  | 4 | MAKE USE OF EXISTING SITE BOUNDARY FENCE, IF APPROPRIATE, ELSE INSTALL SITE BARRIER MESH FENCING SIGNIFIED AS:  | 6 | STOCKPILE IN ACCORDANCE WITH PAGE ES2 DETAIL SD 4-1, DURING CONSTRUCTION LOCATION OF STOCKPILE MAY BE RELOCATED SIGNIFIED AS:  | | |

EROSION AND SEDIMENT CONTROL NOTES

- GENERAL NOTES
1. THIS EROSION AND SEDIMENT PLAN IS TO BE READ IN CONJUNCTION WITH OTHER RELEVANT ENGINEERING PLANS SPECIFIC TO THIS DEVELOPMENT.
 2. CONTRACTORS WILL ENSURE THAT ALL EROSION AND SEDIMENT WORKS ARE UNDERTAKEN AS INSTRUCTED IN THIS DRAWING SERIES AND CONSTRUCTED AS PER THE GUIDELINES OF LANDCOM'S "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION", DEPT OF HOUSING, 2004 (BLUE BOOK).
 3. TO REDUCE THE LIKELIHOOD FOR SOIL EROSION AND SEDIMENT POLLUTION TO DOWNHILL AREAS, ALL SUBCONTRACTORS WILL BE INFORMED OF THEIR EROSION AND SEDIMENT CONTROL RESPONSIBILITIES.

- EROSION AND SEDIMENT CONTROL INSTRUCTIONS
4. WORKS ARE TO UNDERTAKEN IN THE FOLLOWING ORDER AS PER THE BLUE BOOK SPECIFICATIONS:
 - 4.1. SITE WORKS WILL NOT COMMENCE UNTIL THE EROSION AND SEDIMENT CONTROL WORKS OUTLINED IN CLAUSES 4.2 TO 6, BELOW, ARE INSTALLED AND FUNCTIONAL.
 - 4.2. THE INGRESS TO AND EGRESS FROM THE SITE WILL BE CONFINED TO ONE STABILISED POINT. SEDIMENT OR BARRIER FENCING WILL BE USED TO RESTRICT ALL VEHICULAR MOVEMENTS TO THAT STABILISATION WILL BE ACHIEVED BY EITHER:
 - 4.2.1. CONSTRUCTING A SEALED (E.G. CONCRETE OR ASPHALT) DRIVEWAY TO THE STREET
 - 4.2.2. CONSTRUCTING A STABILISED SITE ACCESS, ACCORDING TO STANDARD DRAWING WITHIN THIS DRAWING SERIES
 - 4.2.3. OR OTHER SUITABLE TECHNIQUE APPROVED BY THE COUNCIL.
 5. SEDIMENT AND BARRIER FENCES WILL BE INSTALLED AS SHOWN WITHIN THIS DRAWING SERIES.
 6. MESH AND GRAVEL "SAUSAGE" PROTECTION WILL BE PROVIDED TO PROTECT GUTTER INLETS NEAR THE ALLOTMENT.
 7. TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR LATER USE IN LANDSCAPING THE SITE.
 8. ALL STOCKPILES WILL BE PLACED IN THE LOCATION SHOWN ON THE ESCP AND AT LEAST 2 METRES CLEAR OF ALL AREAS OF POSSIBLE AREAS OF CONCENTRATED WATER FLOW, INCLUDING DRIVEWAYS.
 9. LANDS TO THE REAR AND SIDES OF THE ALLOTMENT AND ON THE FOOTPATH WILL NOT BE DISTURBED DURING WORKS EXCEPT WHERE ESSENTIAL, E.G. DRAINAGE WORKS ACROSS THE FOOTPATH. WHERE WORKS ARE NECESSARY, THEY WILL BE UNDERTAKEN IN SUCH A WAY TO LEAVE THE LANDS IN A CONDITION OF HIGH EROSION HAZARDS FOR AS SHORT A PERIOD AS PRACTICABLE. THEY WILL BE REHABILITATED AS SOON AS POSSIBLE. STOCKPILES WILL NOT BE PLACED ON THESE LANDS AND THEY WILL NOT BE USED AS VEHICLE PARKING AREAS.
 10. APPROVED BINS FOR BUILDING WASTE, CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS AND LITTER WILL BE PROVIDED AND ARRANGEMENTS MADE FOR REGULAR COLLECTION AND DISPOSAL.
 11. GUTTERING WILL BE CONNECTED TO THE STORMWATER SYSTEM, (OR RAINWATER TANK, IF PRESENT) AS SOON AS PRACTICABLE. IF A RAINWATER TANK IS INSTALLED, THE TANK OVERFLOW SHOULD BE CONNECTED TO THE STORMWATER SYSTEM AS SOON AS PRACTICABLE.
 12. WITHIN THIS DRAWING SERIES ARE STANDARD DRAWINGS OF THE REQUIRED SEDIMENT CONTROL MEASURES.

- SITE MAINTENANCE INSTRUCTIONS
13. THE SITE FOREMEN/SUPERINTENDENT WILL EXAMINE THE SITE, AT A MINIMUM, WEEKLY AND AFTER EVERY STORM EVENT TO:
 - 13.1. EMPTY BINS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER AT LEAST WEEKLY AND OTHERWISE AS NECESSARY. DISPOSE OF ANY WASTE IN AN APPROVED MANNER.
 - 13.2. ENSURE PROPER DRAINAGE OF THE SITE. TO THIS END:

- 13.2.1. CLEAN ANY CATCH DRAINS, DIVERSION BANKS, TABLE DRAINS, BERM DRAINS AND DROP-DOWN STRUCTURES THAT HAVE BECOME BLOCKED THROUGH SEDIMENT POLLUTION.
- 13.3. CHECK THAT DRAINS ARE OPERATING AS INTENDED, ESPECIALLY THAT:
 - 13.3.0.1. NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT
 - 13.3.0.2. AREAS OF EROSION ARE REPAIRED
 - 13.3.0.3. CONSTRUCT SMALL ADDITIONAL EARTH DIVERSIONS AT DISTANCES OF LESS THAN 80 METRES ACROSS THE WORKS TO KEEP SLOPE LENGTHS SHORT AND DISPOSE OF WATER WITHOUT CAUSING CHANNEL EROSION; AND
 - 13.3.0.4. REGULARLY CLEAN OUT SEDIMENT TRAPPED BEHIND SEDIMENT FENCES AND OTHER TRAPS.
- 13.4. ENSURE REMOVAL OF ANY SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 5 METRES FROM HAZARD AREAS, SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS. PROVIDE PROTECTION TO RECEIVING WATERS FROM ANY SUCH MATERIALS PLACED MORE THAN 5 METRES FROM HAZARD AREAS BY IMPLEMENTING THE REQUIRED SOIL AND WATER MANAGEMENT PRACTICES.
- 13.5. CHECK THAT REHABILITATED LANDS HAVE ESTABLISHED SUFFICIENT GROUND COVER TO REDUCE THE EROSION HAZARD EFFECTIVELY AND INITIATE REPAIR AS APPROPRIATE.
- 13.6. CONTROL EXCESSIVE VEGETATIVE GROWTH.
- 13.7. DO NOT DISPOSE OF CLEARED VEGETATION BY OPEN BURNING ON SITE.
- 13.8. CONTROL EMISSION OF DUST FROM UNSEALED ROADS AND OTHER EXPOSED SURFACES, SUCH AS UNPROTECTED EARTH OR SOIL STOCKPILES
- 13.9. KEEP ALL SEDIMENT DETENTION SYSTEMS IN GOOD, WORKING CONDITION. ENSURE:
 - 13.9.1. RECENT WORKS HAVE NOT RESULTED IN THE DIVERSION OF SEDIMENT-LADEN WATER AWAY FROM THEM;
 - 13.9.2. DEGRADABLE PRODUCTS (E.G. STRAW BALES) ARE REPLACED AS REQUIRED;
 - 13.9.3. SEDIMENT IS REMOVED IF THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE;
 - 13.9.4. RETENTION BASINS ON TYPE C SOILS HAVE A MINIMUM SETTLING ZONE DEPTH OF AT LEAST 0.6 METRES OVER TWO-THIRDS OF THE SURFACE AREA WHEN SURCHARGING; WATER IN RETENTION BASINS ON TYPE D SOILS IS TREATED WITH A FLOCCULATING AGENT IF THE SOILS AT THE SEDIMENT SOURCE CONTAIN MORE THAN 10 PERCENT DISPERSIBLE MATERIALS. WHERE BASINS REQUIRE PUMPING OUT, THE NECESSARY DOSING SHOULD OCCUR WITHIN 24 HOURS OF THE CONCLUSION OF EACH STORM EVENT AND THE BASIN SHOULD BE DRAINED ONCE SUSPENDED SOLIDS LEVELS ARE LESS THAN 50 MILLIGRAMS PER LITRE, USUALLY 36 TO 48 HOURS LATER IF GYPSUM IS USED. LONGER OR SHORTER TREATMENT AND DEWATERING PERIODS MAY APPLY IF RAINFALL EVENTS OF DURATION OTHER THAN 5 DAYS HAS BEEN ADOPTED IN THE DESIGN OF THE BASIN; AND
 - 13.9.6. POLLUTANTS, SEDIMENT AND/OR WASTE REMOVED FROM SEDIMENT BASINS, GROSS POLLUTANT TRAPS AND TRASH RACKS ARE DISPOSED IN STABILISED DUMPS WHERE SOIL AND WATER MEASURES HAVE BEEN IMPLEMENTED TO STOP OFFSITE MOVEMENT OF POLLUTANTS.
- 13.10. TO DETERMINE THE EFFECTIVENESS OF ANY SEDIMENT RETENTION BASINS, THE CONSENT AUTHORITY MIGHT REQUIRE THE SITE MANAGER TO UNDERTAKE SAMPLING AND SUBSEQUENT ANALYSIS OF NON FILTERABLE RESIDUE (NFR) CONCENTRATIONS OF WASTE WATER. SUCH SAMPLING AND ANALYSIS IS LIKELY TO BE REQUIRED PERIODICALLY OR FOR A NOMINATED PERIOD, USUALLY THE FIRST THREE MONTHS AFTER COMMISSIONING THE BASINS. DISPOSE ANY POLLUTANTS REMOVED FROM SEDIMENT BASINS IN AREAS WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHOULD NOT OCCUR.
- 13.11. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
- 13.12. MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE REHABILITATED.
- 13.13. TEMPORARY SOIL CONSERVATION MEASURES ARE TO BE REMOVED AND SURFACES RESTORED TO THE FINAL LANDFORM AS THE LAST ACTIVITY IN THE WORKS PROGRAM.

- 13.14. THEN,VEGETATIVE REHABILITATION OF THESE AREAS CAN BEGIN FOLLOWING THE REQUIREMENTS OF THE SITE REHABILITATION/LANDSCAPING PLAN. FIRST LIAISE WITH THE RELEVANT LOCAL GOVERNMENT BODY WHERE WORKS: ARE LIKELY TO CONTINUE IN THE CATCHMENT AND ARE NOT ASSOCIATED DIRECTLY WITH THE DEVELOPMENT, INCLUDE SEDIMENT RETENTION BASINS. THIS IS TO DETERMINE WHETHER THE LOCAL CONSENT AUTHORITY IS PREPARED TO TAKE OVER CONTROL AND RESPONSIBILITY FOR ANY SUCH STRUCTURES. ONGOING MAINTENANCE OF SEDIMENT BASINS CAN BE DESIRABLE WHERE LATER WORKS IN THE CATCHMENT NOT ASSOCIATED WITH THIS DEVELOPMENT ARE LIKELY TO PRODUCE SEDIMENT. IF THE LOCAL CONSENT AUTHORITY DOES AGREE TO TAKE SUCH RESPONSIBILITY, THE DEVELOPER/SITE OPERATOR IS EXPECTED TO ENSURE THAT THEY ARE IN GOOD WORKING ORDER AND DESIGN CAPACITY IS AVAILABLE.
14. THE SITE FOREMEN/SUPERINTENDENT WILL KEEP A LOGBOOK AND CHECK SHEET MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE, AND IMMEDIATELY FOLLOWING RAINFALL EVENTS THAT CAUSE RUNOFF. ENTRIES WILL INCLUDE:
 - 14.1. WALKING AROUND THE SITE SYSTEMATICALLY
 - 14.2. RECORDING THE CONDITION OF EVERY BEST MANAGEMENT PRACTICE (BMP) EMPLOYED, RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH BMP
 - 14.3. RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS, WHERE APPLICABLE
 - 14.4. RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
 - 14.5. FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/ DEVELOPER/ SITE OPERATOR FOR THEIR INFORMATION.
 - 14.6. LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE
 - 14.7. ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES, ENSURING THEY ARE OPERATING CORRECTLY
 - 14.8. AREAS THAT MIGHT SHOW WHETHER SEDIMENT OR OTHER POLLUTANTS ARE LEAVING THE SITE OR HAVE THE POTENTIAL TO DO SO
 - 14.9. ALL DISCHARGE POINTS, TO ASSESS WHETHER THE EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO THE RECEIVING WATERS.

- WASTE CONTROL INSTRUCTIONS
15. ACCEPTABLE BINS WILL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED AT LEAST WEEKLY. DISPOSAL OF WASTE WILL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.
 16. ALL POSSIBLE POLLUTANT MATERIALS ARE TO BE STORED WELL CLEAR OF ANY POORLY DRAINED AREAS, FLOOD PRONE AREAS, STREAMBANKS, CHANNELS AND STORMWATER DRAINAGE AREAS. STORE SUCH MATERIALS IN A DESIGNATED AREA UNDER COVER WHERE POSSIBLE AND WITHIN CONTAINMENT BUNDS.
 17. ALL SITE STAFF AND SUB-CONTACTORS ARE TO BE INFORMED OF THEIR OBLIGATION TO USE WASTE CONTROL FACILITIES PROVIDED.
 18. ANY DE-WATERING ACTIVITIES ARE TO BE CLOSELY MONITORED TO ENSURE THAT WATER IS NOT POLLUTED BY SEDIMENT, TOXIC MATERIALS OR PETROLEUM PRODUCTS.
 19. PROVIDE DESIGNATED VEHICULAR WASHDOWN AND MAINTENANCE AREAS WHICH ARE TO HAVE CONTAINMENT BUNDS.

- SEDIMENT CONTROL INSTRUCTIONS
20. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN ON THE PLAN AND ELSEWHERE AT THE DISCRETION OF THE SITE SUPERINTENDENT TO CONTAIN SOIL AS NEAR AS POSSIBLE TO THEIR SOURCE. SEDIMENT FENCES WILL NOT HAVE CATCHMENT AREAS EXCEEDING 900 SQUARE METRES AND HAVE A STORAGE DEPTH OF AT LEAST 0.6 METRES.
 21. SEDIMENT REMOVED FROM ANY TRAPPING DEVICES WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS CANNOT OCCUR.

22. STOCKPILES ARE NOT TO BE LOCATED WITHIN 5 METRES OF HAZARD AREAS INCLUDING AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS AND DRIVEWAYS.
23. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE. THE ACTUAL LOCATIONS OF THE INLET FILTERS WILL BE CHOSEN BY THE SITE SUPERINTENDENT TO PROTECT THE RECEIVING WATERS BEST
24. TEMPORARY SEDIMENT TRAPS WILL REMAIN IN PLACE UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
25. ACCESS TO SITES SHOULD BE STABILISED TO REDUCE THE LIKELIHOOD OF VEHICLES TRACKING SOIL MATERIALS ONTO PUBLIC ROADS AND ENSURE ALL-WEATHER ENTRY/EXIT.
26. ACCEPTABLE BINS WILL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED WEEKLY.

- SOIL EROSION CONTROL INSTRUCTIONS
27. CLEARLY VISIBLE BARRIER FENCING WILL BE INSTALLED WHERE SHOWN ON THESE DRAWING AND ELSEWHERE AT THE DISCRETION OF THE SITE SUPERINTENDENT TO ENSURE TRAFFIC CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE.
 28. EARTH BATTERS WILL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER, UNLESS OTHERWISE NOTED, THAN:
 29. 2(H):1(V) WHERE SLOPE LENGTH LESS THAN 12 METRES
 30. 2.5(H):1(V) WHERE SLOPE LENGTH BETWEEN 12 AND 16 METRES.
 31. 3(H):1(V) WHERE SLOPE LENGTH BETWEEN 16 AND 20 METRES.
 32. 4(H):1(V) WHERE SLOPE LENGTH GREATER THAN 20 METRES.
 33. ALL WATERWAYS, DRAINS, SPILLWAYS AND THEIR OUTLETS WILL BE CONSTRUCTED TO BE STABLE IN AT LEAST THE 20 YEAR ARI, TIME OF CONCENTRATION STORM EVENT.
 34. WATERWAYS AND OTHER AREAS SUBJECT TO CONCENTRATED FLOWS POST CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND COVER C-FACTOR OF 0.05 (70% GROUND COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION. FLOW VELOCITIES ARE TO BE LIMITED TO THOSE SHOWN IN TABLE 5-1 OF "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION", DEPT OF HOUSING 1998 (BLUE BOOK). FOOT AND VEHICULAR TRAFFIC WILL BE PROHIBITED IN THESE AREAS.
 35. STOCKPILES AND POST CONSTRUCTION AREAS ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.1 (60% GROUND-COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION.
 36. ALL LANDS, INCLUDING WATERWAYS AND STOCKPILES, DURING CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.15 (50% GROUND COVER) WITHIN 20 WORKING DAYS FROM INACTIVITY EVEN THOUGH WORKS MAY CONTINUE LATER.
 37. FOR AREAS OF SHEET FLOW USE THE FOLLOWING GROUND COVER PLANT SPECIES FOR TEMPORARY COVER: JAPANESE MILLET 20 KG/HA AND OATS 20 KG/HA.
 38. PERMANENT REHABILITATION OF LANDS AFTER CONSTRUCTION WILL ACHIEVE A GROUND-COVER C-FACTOR OF LESS THAN 0.1 AND LESS THAN 0.05 WITHIN 60 DAYS. NEWLY PLANTED LANDS WILL BE WATERED REGULARLY UNTIL AN EFFECTIVE COVER IS ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. FOLLOW-UP SEED AND FERTILISER WILL BE APPLIED AS NECESSARY.
 39. REVEGETATION SHOULD BE AIMED AT RE-ESTABLISHING NATURAL SPECIES. NATURAL SURFACE SOILS SHOULD BE REPLACED AND NON-PERSISTANT ANNUAL COVER CROPS SHOULD BE USED.

