# STORMWATER MANAGEMENT PLAN PROPOSED ALTERATIONS & ADDITIONS No.89 BARRENJOEY ROAD, MONA VALE

### **GENERAL NOTES:**

- THESE PLANS REMAIN THE PROPERTY OF NY CIVIL ENGINEERING PTY LTD AND ARE SUBJECT TO COPYRIGHT
- ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED. ALL REDUCED LEVELS (SURFACE LEVELS, INVERT LEVELS) AND CHAINAGES ARE IN METERS UNLESS OTHERWISE STATED. DO NOT SCALE OFF THE DRAWINGS, SCALES ARE AS SHOWN, USE FIGURED DIMENSIONS
- THIS PLAN IS TO BE READ IN JUNCTION WITH LATEST ARCHITECTURAL STRUCTURAL LITHLITY AND LANDSCAPE PLANS IN ADDITION TO ANY
- ALL WORKS SHALL BE CARRIED OUT TO LOCAL COUNCIL'S DEVELOPMENT CONTROL PLAN AND SPECIFICATIONS, AS/NZS 3500.3 AND B.C.A.
- ALL LEVELS SHALL RELATE TO THE ESTABLISHED BM, PM AND/OR LM. ALL EXISTING SERVICES ARE TO BE VERIFIED FOR LOCATION AND DEPTH PRIOR TO COMMENCEMENT OF ANY WORK, CONTRACTOR TO NOIFY DESIGNER OF ANY DISCREPANCIES OF SERVICE LEVELS QUOTED ON THIS PLAN. ALL SURVEY INFORMATION, BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL MPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF WORKS. NO TREES SHALL BE REMOVED
- THE CONTRACTOR SHALL TAKE ALL DUE CARE TO USE THE ABSOLUTE MINIMUM AREA FOR CONSTRUCTION AND THAT NO UNDUE DAMAGE IS
- THE CONTRACTOR SHALL COMPLY WITH CONDITIONS, AND SPECIFICATION OF COUNCIL AND ALL ACTS OF THE NSW EPA.
- THE CONTRACTOR SHALL TAKE ALL REASONABLE CARE TO PROTECT EXISTING SERVICES. DAMAGED SERVICES SHALL BE REPAIRED AT THE
- SUITABLE WARNING SIGNS AND BARRICADES ARE TO BE PROVIDED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AND AS DIRECTED BY
- SERVICES SHOWN ARE INDICATIVE ONLY FROM AVAILABLE INFORMATION AND THE TIME OF SITE INVESTIGATION (IF ANY). THE BUILDER IS TO
- RESTORE ALL TRAFFIC AREAS TO PRE EXISTING CONDITION. FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED
- RESTORE ALL AUTHORITY OWNED AREAS TO COUNCIL AND/OR AUTHORITY STANDARD AND SPECIFICATION
- THE WORK AS CONSTRUCTED WORKS SHALL BE INSPECTED BY THE ENGINEER, MINIMUM 48 HOURS NOTICE SHALL BE PROVIDED FOR ALL
- THE DESIGN PLANS HEREIN ARE SUBJECT TO COUNCIL APPROVAL PRIOR TO CONSTRUCTION
- WORK AS CONSTRUCTED DRAWINGS TO BE REQUESTED AND RECEIVED IN CAD/.DWG FILE TYPE AND HARD COPY 'RED LINE' MARKUP FROM

# **ROOF STORMWATER DRAINAGE NOTES:**

- ALL DOWNPIPES TO BE FITTED VERTICALLY TO THE SOLE OF EAVES GUTTERS, RAINHEAD AND/OR SUMP
- ALL DOWNPIPES TO DRAIN INTO RAINWATER TANK AND OR PIT PRIOR TO DISCHARGE OFFSITE UNLESS PRIOR APPROVAL IS OBTAINED FROM
- ALL EAVES GUTTERS TO BE SIZED FOR ARI 20 AS PER AS 3500.3 3.5 AND APPENDIX H.
- ROOF DRAINAGE INSTALLATION TO BE IN ACCORDANCE TO AS 3500.3 SECTION 4.

## **STORMWATER DRAINAGE NOTES:**

### PIPE SIZE:

- THE MINIMUM PIPE SIZE SHALL BE:
- DN90 FOR ALL DOWNPIPES:
- DN100 WHERE THE LINE ONLY RECEIVES ROOF STORMWATER RUNOFF, OR
- DN100 WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS

### PIPE GRADE:

- THE MINIMUM PIPE GRADE SHALL BE:
- FOR DN100 DN150 1.00% FOR DN225 - 0.50%
- FOR DN300 0.45%

- MINIMUM PIPE COVER FOR PVC PIPES SHALL BE AS PER AS 3500.3 TABLE 6.2.5:
- NOT SUBJECT TO VEHICULAR LOADING:
- WITHOUT PAVEMENT SINGLE DWELLINGS 100mm
- WITHOUT PAVEMENT OTHER THAN SINGLE DWELLINGS 300mm
- WITH PAVEMENT (BRICK/PAVERS) AND/OR UNREINFORCED CONCRETE 100mm
- SUBJECT TO VEHICULAR LOADING:
- 122 ROADS (UNSEALED) - 750mm
- OTHER THAN ROADS (WITHOUT PAVEMENT) 450mm

- PIPES AND FITTINGS FOR STORMWATER DRAINAGE SHALL BE AS FOLLOWS
- FOR PIPE SIZES GREATER THAN DN225 RCP WITH RUBBER RING JOINTS.
- FOR LARGER PIPE DEPTHS AS SPECIFIED IN AS 3500.3 RCP WITH RUBBER RING JOINTS.
- FOR PIPES AND FITTINGS FOR SUBSOIL DRAINAGE SHALL BE SLOTTED PVS WITH SOLVENT WELDED JOINTS MINIMUM DN150. FOR GRATED DRAINS SHALL BE MINIMUM DN150 IN NON-TRAFFICABLE ZONES AND DN225 IN TRAFFICABLE ZONES.
- LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURING RECOMMENDATIONS AND
- AS 3725-1989 LOADS ON BURIED CONCRETE PIPES
- AS 1597.2 1996 PRECAST REINFORCED CONCRETE BOX CULVERTS
- AS 3500 1990 NATIONAL PLUMBING AND DRAINAGE CODE PART 2 SANITARY PLUMBING AND SANITARY DRAINAGE SYDNEY WATER
- ALLOW TO TEST ALL PIPES AND PITS TO MANUFACTURERS REQUIREMENTS

### CONNECTIONS TO STORMWATER SYSTEMS UNDER BUILDINGS

### CONNECTIONS TO COUNCIL STORMWATER SYSTEMS:

CONNECTION TO COUNCIL STORMWATER SYSTEM TO BE IN ACCORDANCE TO LOCAL COUNCIL DCP AND STANDARDS. NO CONNECTIONS TO BE MADE LINTII PROPER PERMIT/APPROVALS ARE OBTAINED FROM LOCAL COLINCII IN WRITING

EXISTING SERVICES SHOWN ON THESE PLANS ARE NOT GUARANTEED COMPLETE OR CORRECT AND FURTHER INFORMATION IS REQUIRED FROM THE

# **LEGEND**

	RAIN	GRATED TRENCH DRAIN		SURFACE INLET PIT
	ENCH	ABSORPTION TRENCH	<u> </u>	SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)
-	FALL	PROPOSED ROOF GUTTER FALI	00	ACCESS GRATE
⊢ SP	DER	PROPOSED DOWNPIPE SPREADER		(WITH GROSS POLLUTANT TRAP)
	UNO	STORMWATER PIPE 100mm DIA. MIN. UNC	450 X 450	450 SQUARE INTERVAL
a <u> </u>	PIPE	SUBSOIL PIPE	SL 75.50	GRATE LEVEL = 75.50
- sw	PIPE	EXISTING STORMWATER PIPE	IL 75.20	INVERT LEVEL = RL 75.20
O IR		INSPECTION RISEF	DP 90	PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.
■ RWH	HEAD	RAINWATER HEAD	× [10.00]	NATURAL GROUND FINISHED DESIGN LEVEL

# STORMWATER PIT/STRUCTURES NOTES:

1. PIT SIZES WILL BE AS FOLLOWS:

DEPTH (mm)	MIN. PIT SIZE (mm)
UP TO 450	350x350
450 - 600	450x450
600 - 900	600x600
900 - 1200	600x900
1200+	900x900 (WITH STEP IRONS)

- TRENCH DRAINS: CONTINUOUS TRENCH DRAINS ARE TO BE MIN. DN150 AND MIN. 100mm DEPTH. THE BARS OF THE GRATE ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW
- STEP IRONS: PITS RETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS 1657. FOR PITS GREATER THAN 6m OTHER MEANS
- PLASTIC/PVC PITS: PVC PITS WILL ONLY BE PERMITTED IF THEY ARE MAX. 450x450 AND MAX. 450mm DEPTH AS WELL AS BEING HEAVY DUTY.
- IN-SITU PITS: IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS 3500.4. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED
- GRATES: GRATES ARE TO BE GALVANIZED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT

- ALL PIPES INTO PITS TO BE CUT FLUSH WITH PIT WALL
- ALL PITS THAT ARE INSTALLED AT GREATER THAN 600mm DEEP TO BE MIN. 600x600 PIT
- BASE OF PIT TO BE SAME LEVEL OF INVERT OF OUTLET
- OUTLET PIPE FROM ANY PIT TO BE 20mm LOWER THAN INLET PIPE!



ISSUED FOR DA 19.12.2022 NADFR 7AKT MIEAust CPEng NER

**DETAILS, NOTES & LEGEND** 

PROPOSED ALTERATIONS & ADDITIONS No.89 BARRENJOEY ROAD MONA VALE

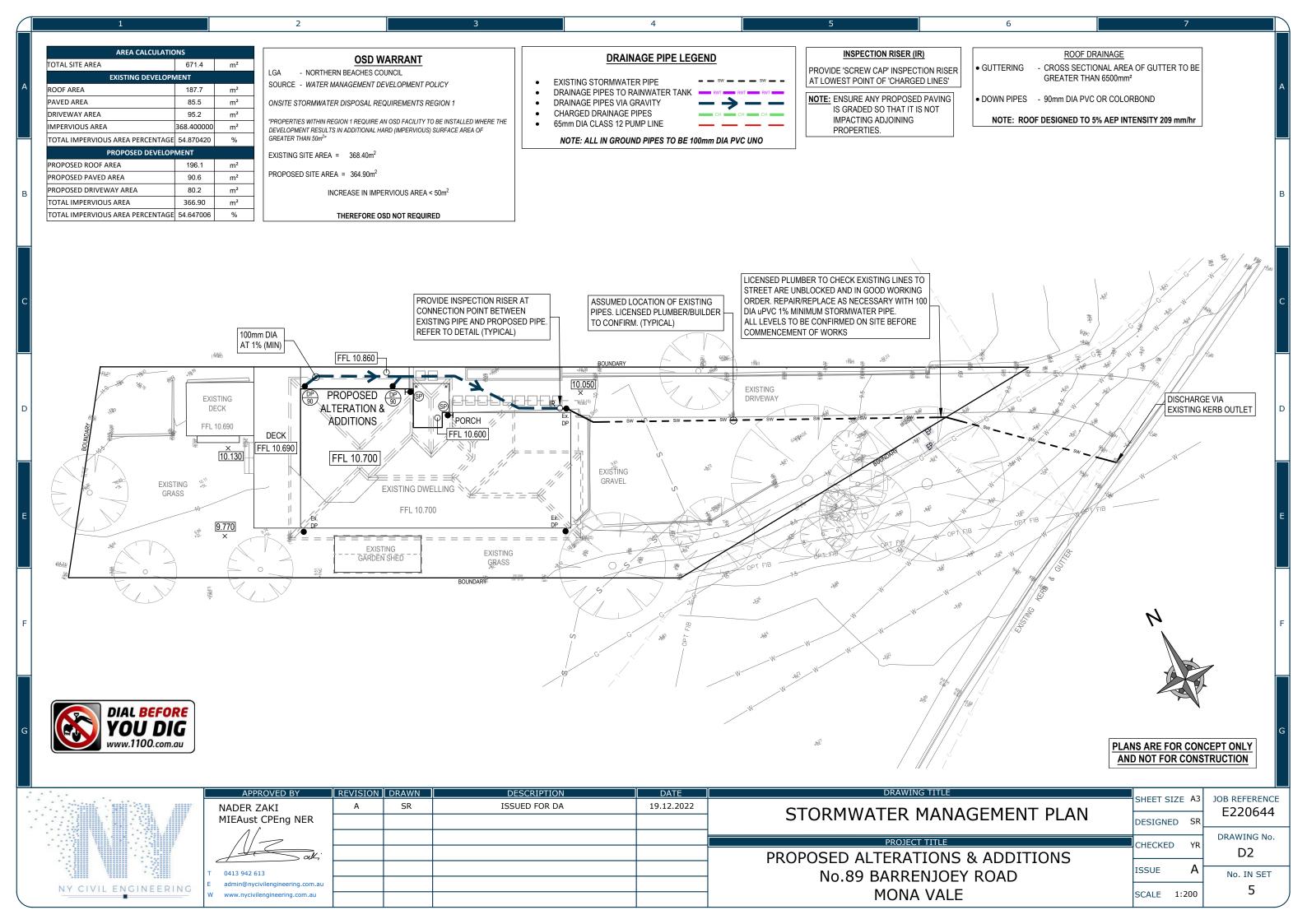
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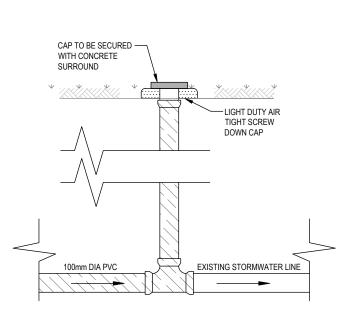
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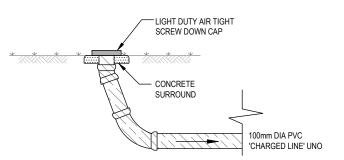
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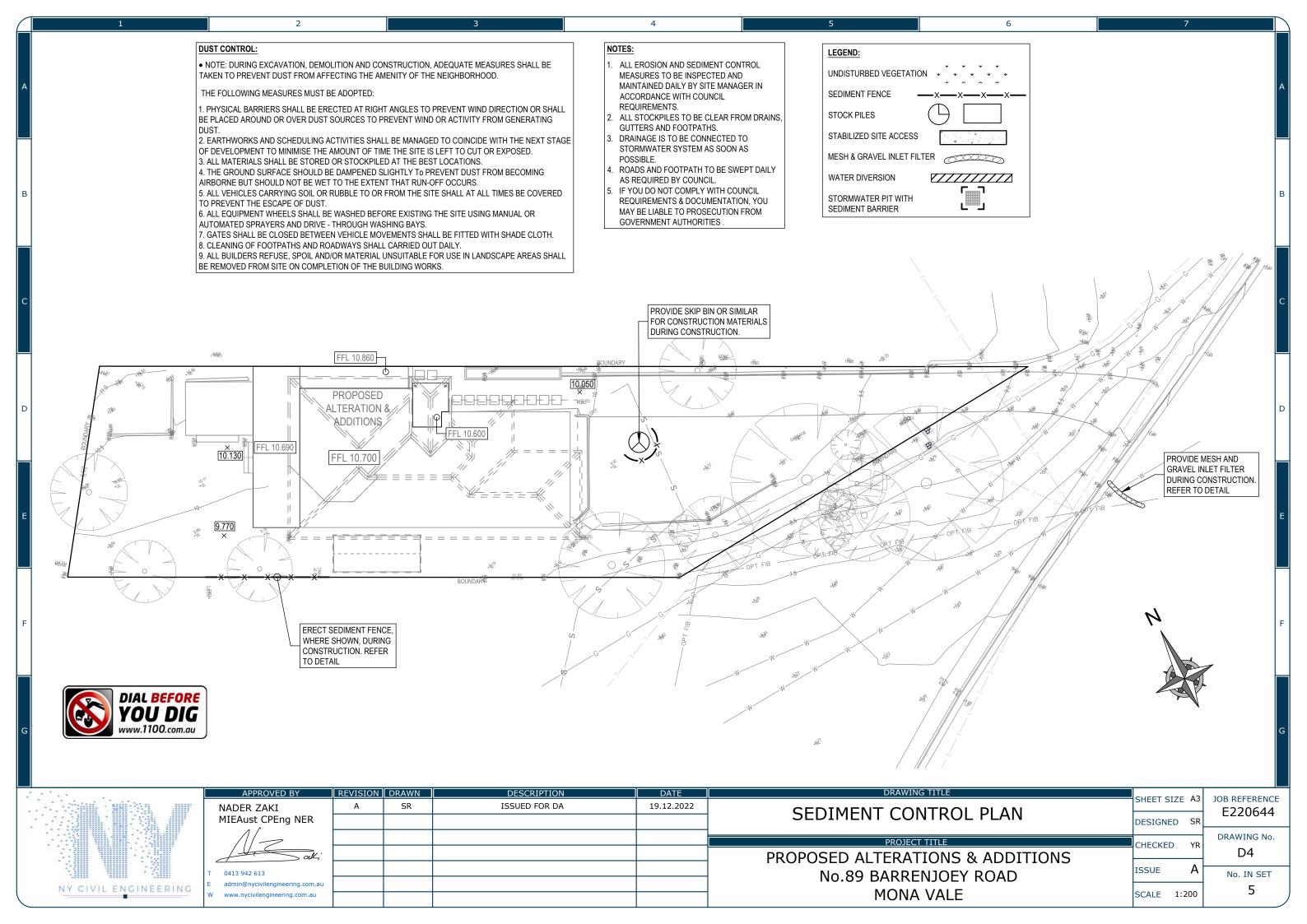
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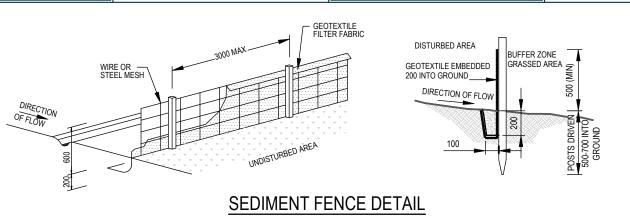
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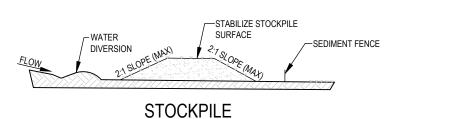
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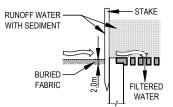


### **CONSTRUCTION NOTES:**

- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENTS AREA OF ANY ONE SECTION. THE CATCHMENTS AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT
- CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
  FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS
- ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH 150mm OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



- PLACE STOCKPILES MORE THAN 2 ( PREFERABLY 5) METERS FROM EXISTING
- VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
- WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT
- WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILIZE FOLLOWING
- THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10. CONSTRUCT EARTH BANKS (LOW FLOW) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METERS ON THE DOWNSLOPE

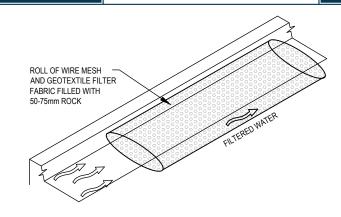


# SEDIMENT BARRIER AROUND PIT

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- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES
- FOLLOW STRAW FILTER AND SEDIMENT FENCE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
- IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING
- DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT

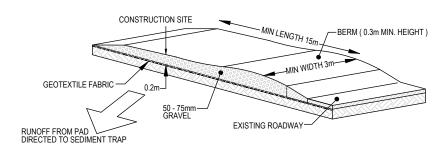
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# MESH AND GRAVEL FILTER

### **CONSTRUCTION NOTES:**

- INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS
- THE LENGTH OF THE INLET PIT AND FILL IT WITH 250 FORWARD THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
- FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm(h) x 400mm(w).
- PLACE THE FILTER AT THE OPENING LEAVING AT LEAST 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
- FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
- SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



# STABILIZED SITE ACCESS

### **CONSTRUCTION NOTES:**

- STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE
- CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD
- BASED OR 30mm AGGREGATE
- ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILD ALIGNMENT AND AT LEAST 3 METERS WIDE
- WHERE A SEDIMENT FENCE JOINS ONTO THE STABILIZED ACCESS, CONSTRUCT A HUMP IN THE STABILIZED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

NY CIVIL ENGINEERING

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SEDIMENT CONTROL DETAILS

PROPOSED ALTERATIONS & ADDITIONS No.89 BARRENJOEY ROAD MONA VALE

SHEET SIZE A3 JOB REFERENCE E220644 DESIGNED SR

DRAWING No. CHECKED YR

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