

142 SYDNEY ROAD, FAIRLIGHT

STORMWATER MANAGEMENT PLAN

DRAWING NUMBER	REVISION	DRAWING TITLE
DR-000	0	LEGEND
DR-001	0	PIPE LAYOUT & DETAILS
DR-002	0	ROOF LAYOUT
DR-003	0	SITE AREAS
SD-001	0	SEDIMENT & EROSION CONTROL PLAN

NOTES:

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

2. SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY WATERSHED DESIGN (26/02/2019).

3. LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.

4. 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.

5. ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE LEVELS AND SYSTEM REQUIREMENTS
6. WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.

7. DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.


8. STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.


9. ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.

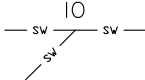
10. ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 – 1995.


11. TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.

LEGEND:

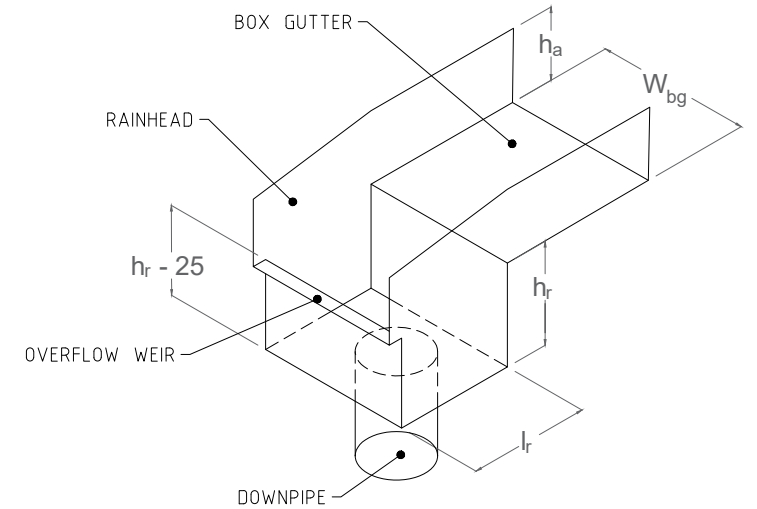
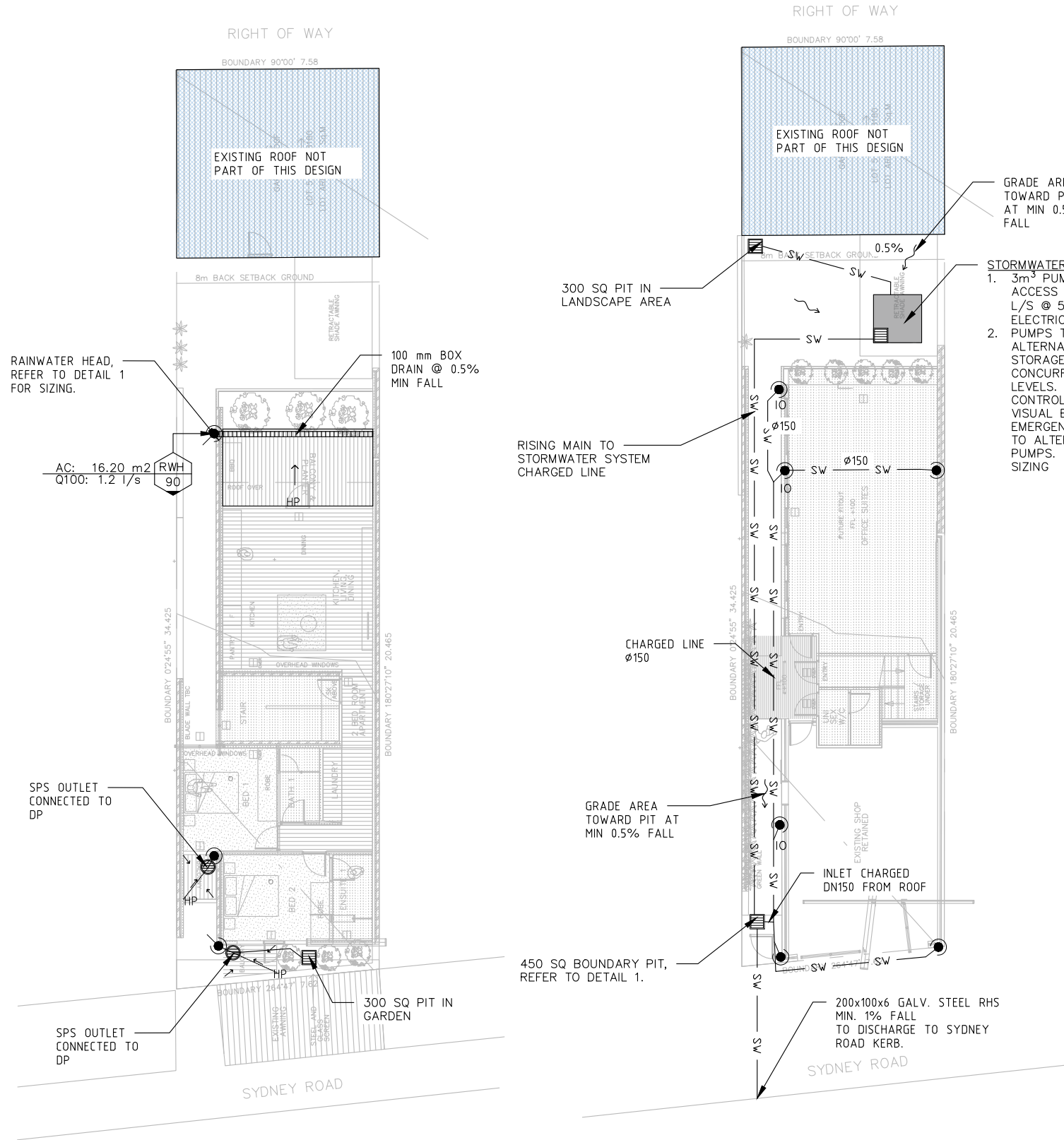
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DOWNPIPE
- 

DRAINAGE PIT
- 

INSPECTION OPENING
- 

SPS DRAINAGE OUTLET



RAINWATER HEAD TYPICAL DETAIL
NOT TO SCALE

TABLE 2 – RAINWATER HEAD DESIGN (100 YEAR ARI, 1:200 FALL)		
ROOF SERVICE AREA	—	16.20m ²
DOWNPIPE DIAMETER	DP	90mm
BOX GUTTER WIDTH (MIN)	W_{bg}	200mm
BOX GUTTER DEPTH (MIN)	h_a	85mm
LENGTH OF RAINWATER HEAD	L_r	110mm
RAINWATER HEAD DEPTH	h_r	113mm
RAINWATER HEAD WIDTH (MIN)	W_{rn}	200mm

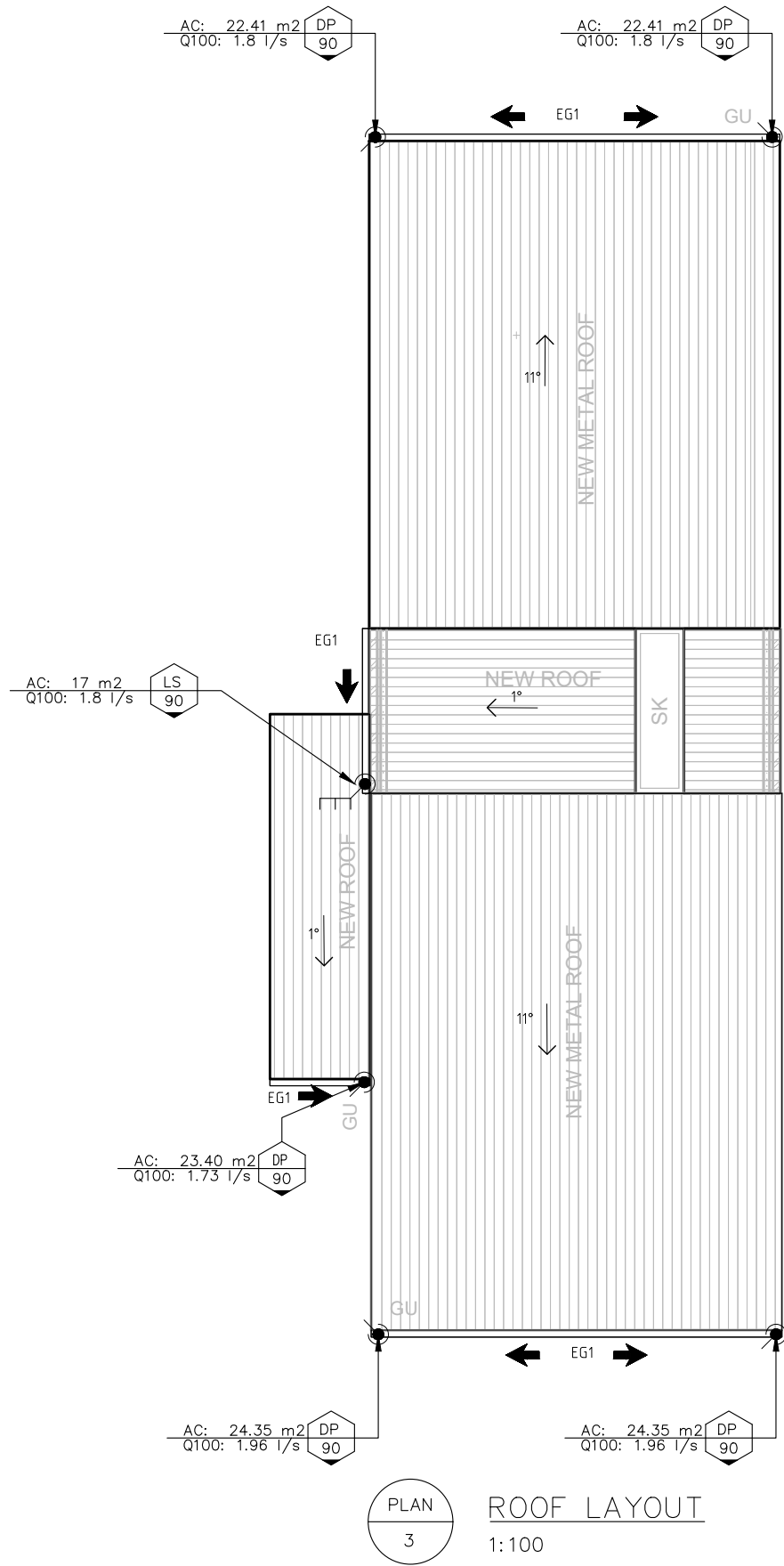
- NOTES:
1. TOP OF RAINWATER HEAD TO BE SET MIN 25mm LOWER THAN INVERT BOX GUTTER.
 2. RAINWATER HEAD OVERFLOW WEIR TO BE SET 25mm BELOW SOLE OF BOX GUTTER.
 3. BOX GUTTER SOLE TO HAVE MINIMUM 1:200 FALL
 4. BOX GUTTER AND RAINHEAD TO BE DESIGNED TO ARCHITECTURAL SPECIFICATION PROVIDED IT COMPLIES WITH THE MINIMUM DIMENSIONS IN TABLE 2.

TABLE 1 – PUMP DESIGN TO AS3500		
AREA TO PUMP	67 m ²	
DESIGN ARI	100 Year	
STORM PERIOD (T)	300 min (5hr)	
RAINFALL INTENSITY (I)	27.7 mm/hr	
RUNOFF COEF. (C)	0.90	
AJUSTED INTENSITY Q = C x I	24.93 mm/hr	
VOLUME V = Q x T x I	8.35 m ³	
PUMP CAPACITY CHECK		
PUMP CAPACITY (l/s)	PUMP VOLUME (m ³)	REQUIRED STORAGE VOLUME (m ³)
2.00	3.60	4.75
2.50	4.50	3.85
3.00	5.40	2.95*

- NOTES:
1. FLOW RATE PER PUMP TO BE MINIMUM 3.0 L/s @ 5m HEAD.
 2. PUMP SIZED TO USING A 100 YR, 5 HR STORM DURATION.
 3. SIZING METHODOLOGY BASED ON AS3500.3 REQUIREMENTS.
 4. PUMP OUT PIT TO BE FITTED WITH HEAVY DUTY GRATE & FRAME (LOAD CLASS "C" MIN).

PIPE LAYOUT—SECOND FLOOR
1:200

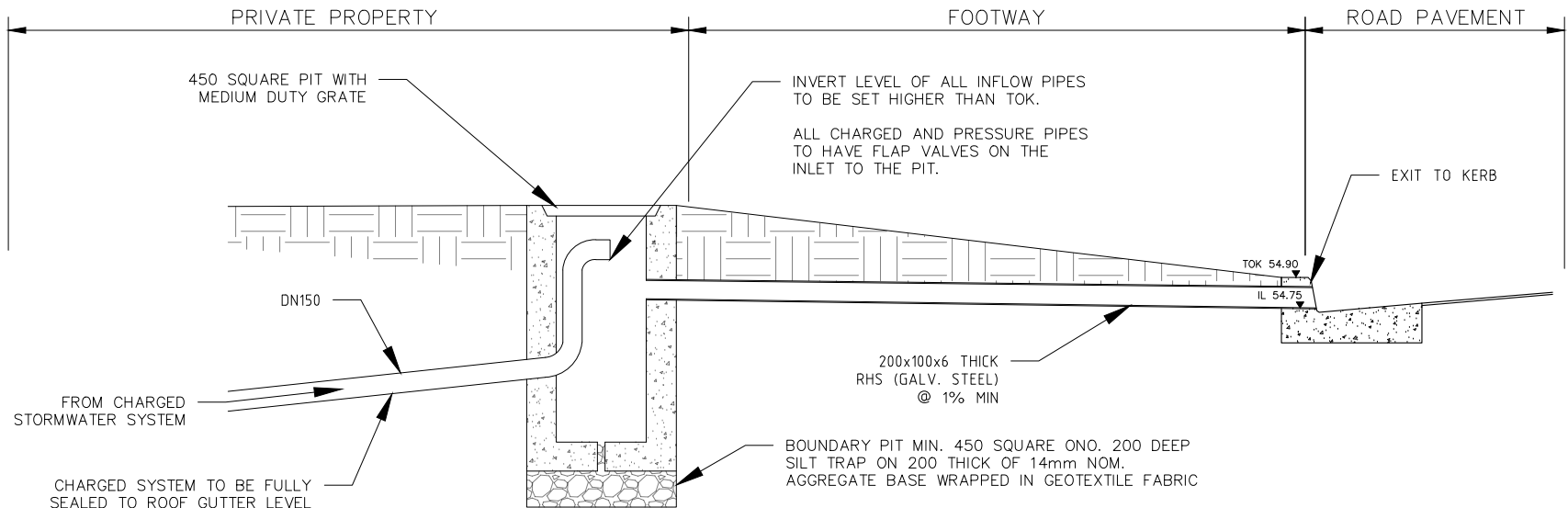
PIPE LAYOUT—FIRST FLOOR
1:200




NOMENCLATURE
 DP - DOWNPIPE
 LS - LEVEL SPREADER
 EG - EAVES GUTTER
 RW - RAINWATER HEAD, REFER TO DETAIL 2 & TABLE 2
 BHP - BALCONY HIGH POINT
 Ac - PLAN CATCHMENT AREA EXCLUDING ROOF PITCH
 Q100 - 100YR 5 MINUTE ARI FLOW RATE

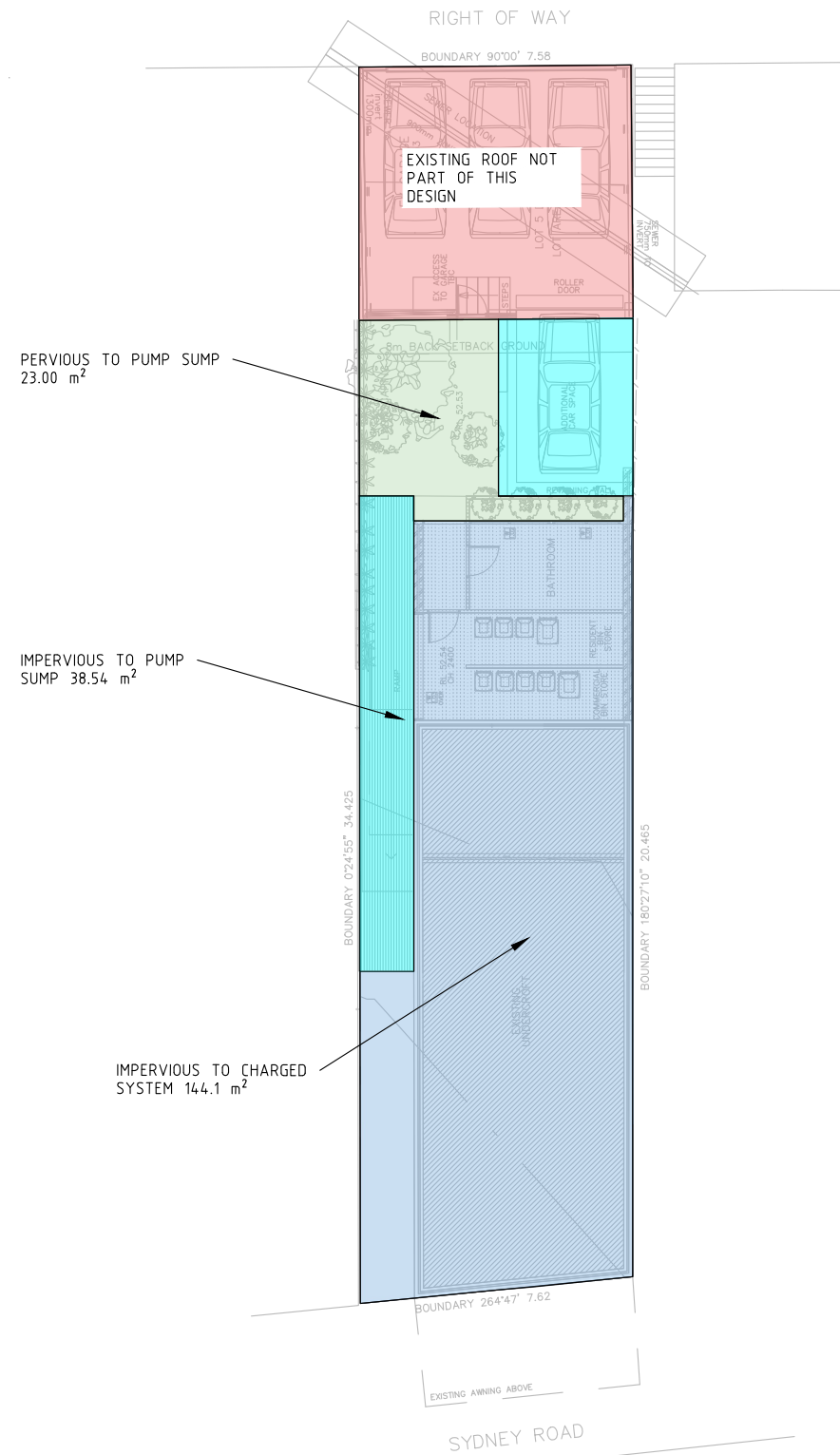
GUTTER SIZING
 EAVES GUTTER DESIGNED TO ARI (100YR:264mm/hr)
 RW DESIGNED TO ARI (100YR:264mm/hr)
 EG1 - MIN CSA 7,000 mm²

LEGEND
 TYPE DIA DOWNPIPE TYPE AND DIAMETER
 → DIRECTION OF FALL
 E LEVEL SPREADER



DETAIL 2
 CHARGED STORMWATER BOUNDARY PIT (TYPICAL)
 NOT TO SCALE

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AS NOTED DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED												ROOF LAYOUT			
REVISIONS										Size A3	Status APPROVED FOR DA SUBMISSION	Drwg No. DR-002	Rev. 0		
	0	YYA	13/03/2019	APPROVED FOR DA SUBMISSION	LES										
	No.	BY	DATE	DESCRIPTION	APPD										



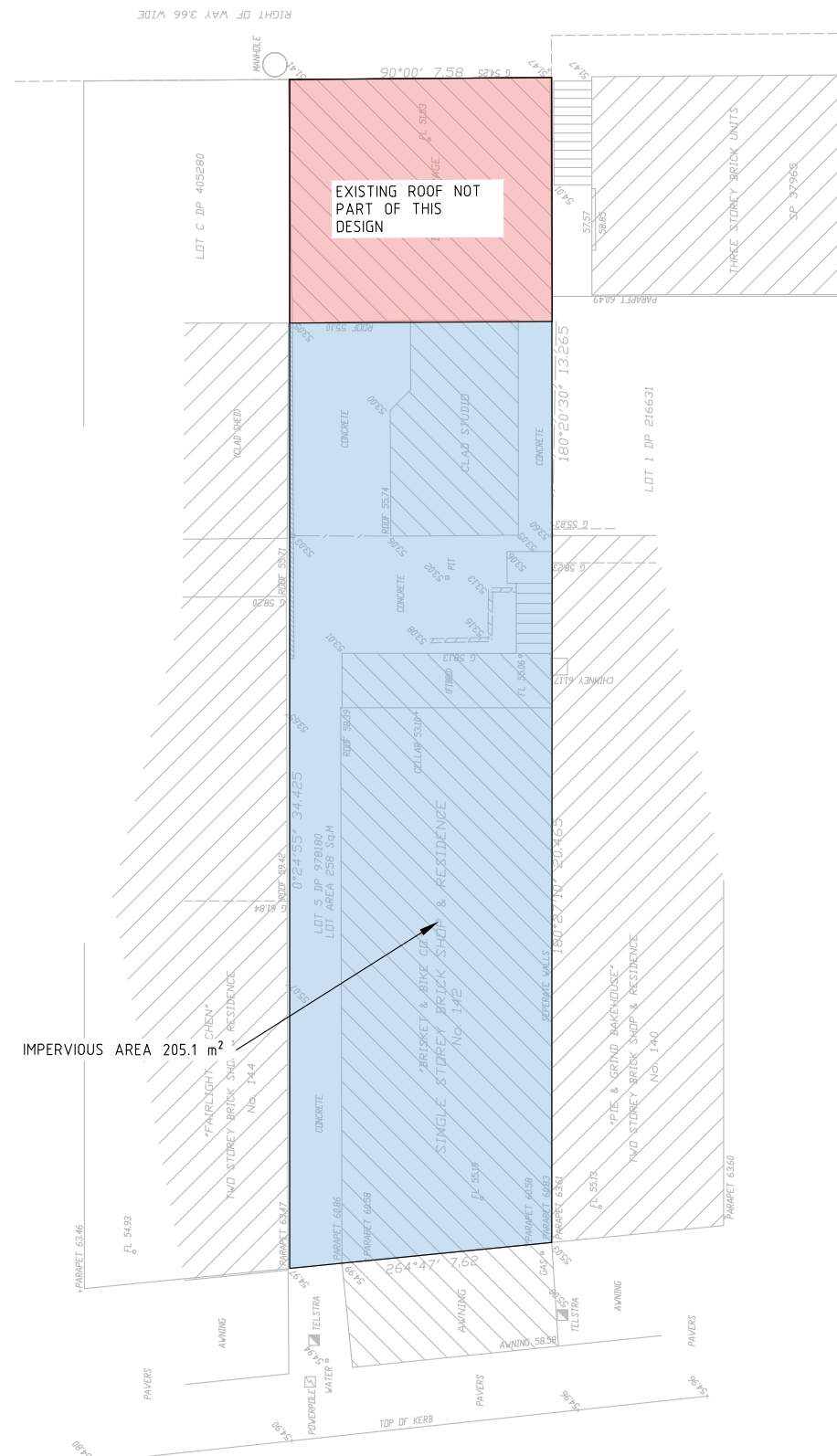
PLAN
4

SITE AREAS – PROPOSED

1:200

PROPOSED

SITE AREA: 258.68m²
PERVIOUS: 23.00m² (9%)
IMPERVIOUS: 235.68m² (91%)



PLAN
5

SITE AREAS – EXISTING

1:200

EXISTING

SITE AREA: 258.68m²
PERVIOUS: 0.00m² (0%)
IMPERVIOUS: 258.68m² (100%)

LEGEND

- PERVIOUS TO PUMP SUMP
- IMPERVIOUS TO PUMP SUMP
- IMPERVIOUS
- EXISTING ROOF

OSD REQUIREMENT:

THE DEVELOPMENT PROPOSES AN INCREASE TO THE PERVIOUS FRACTION FOR THE SITE (0% TO 9%). ON THIS BASIS THE APPLICATION OF OSD IS NOT RECOMMENDED.

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REVISIONS				
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DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED

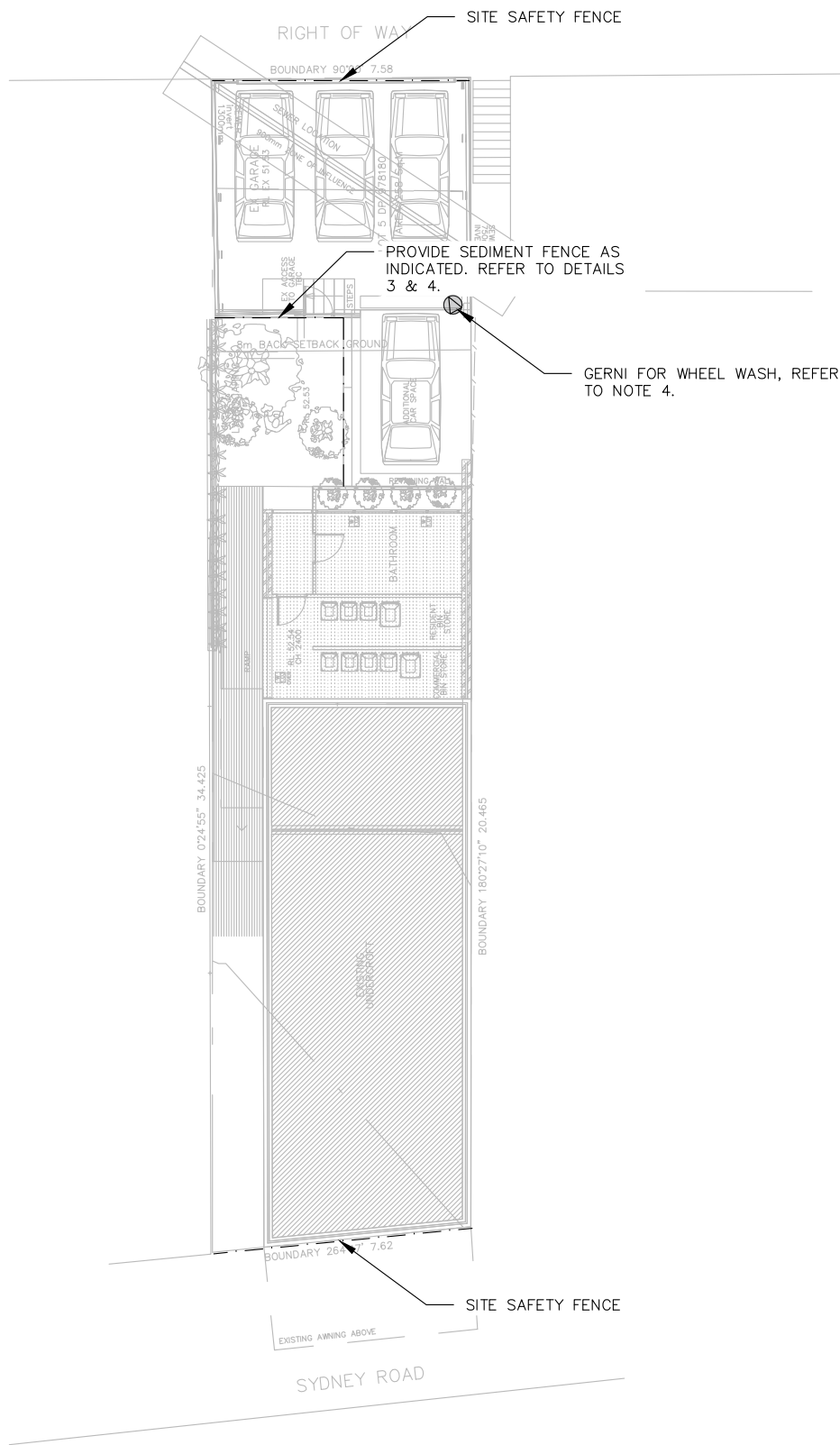
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APPROVED	LES	DATE	13/03/2019

**Stellen**

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AS3500.3:2015

142 SYDNEY ROAD, FAIRLIGHT			
SITE AREAS			
Size	Status	Dwg No.	Rev.
A3	APPROVED FOR DA SUBMISSION	DR-003	0



PLAN 6
SEDIMENT & EROSION CONTROL PLAN
1:200

GENERAL REQUIREMENTS

THE FOLLOWING EROSION AND SEDIMENT CONTROL PLAN (ESCP) HAS BEEN DEVELOPED IN GENERAL ACCORDANCE WITH LANDCOM (2004) – MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION, OTHERWISE KNOWN AS "THE BLUE BOOK". THIS PLAN SHOULD ALSO BE READ IN CONJUNCTION WITH MANAGING URBAN STORMWATER – SOILS AND CONSTRUCTION (VOLUME 2A INSTALLATION OF SERVICES).

SITE ESTABLISHMENT

PRIOR TO THE COMMENCEMENT OF EARTHWORKS ON THE SITE THE FOLLOWING SHALL BE UNDERTAKEN AS A MINIMUM:

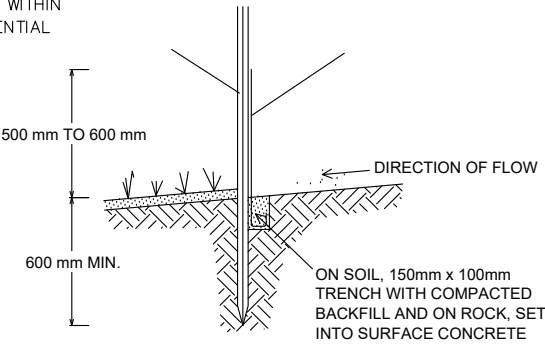
1. ERECT SAFETY FENCING WITH SIGNAGE CLEARLY INDICATING THAT THE SITE IS A CONSTRUCTION ZONE AND ACCESS IS RESTRICTED AS DEEMED NECESSARY.
2. ERECT CLEARLY VISIBLE BARRIER FENCING AT LOCATIONS SHOWN OR IF NOT SHOWN AT THE DISCRETION OF THE SITE SUPERINTENDENT TO ENSURE TRAFFIC IS CONTROLLED AND TO PROHIBIT UNNECESSARY SITE DISTURBANCE.
3. WHERE REQUIRED AT THE DISCRETION OF THE SITE SUPERINTENDENT, INSTALL STABILISED SITE ACCESS AT SITE ACCESS POINT TO PREVENT CONSTRUCTION EQUIPMENT FROM CARRYING SEDIMENT OFF THE SITE ONTO SURROUNDING ROADS.
4. PROVIDE GERNI PRESSURE CLEANER AT SITE EXIT POINT FOR TYRE WASH DOWN AT THE DISCRETION OF THE SITE SUPERINTENDENT.
5. INSTALL SEDIMENT AND EROSION CONTROL DEVICES IN ACCORDANCE WITH THE CONSTRUCTION DETAILS SPECIFIED IN THIS DRAWING SET AND/OR THE REQUIREMENTS OF THE 'BLUE BOOK'.

CONSTRUCTION

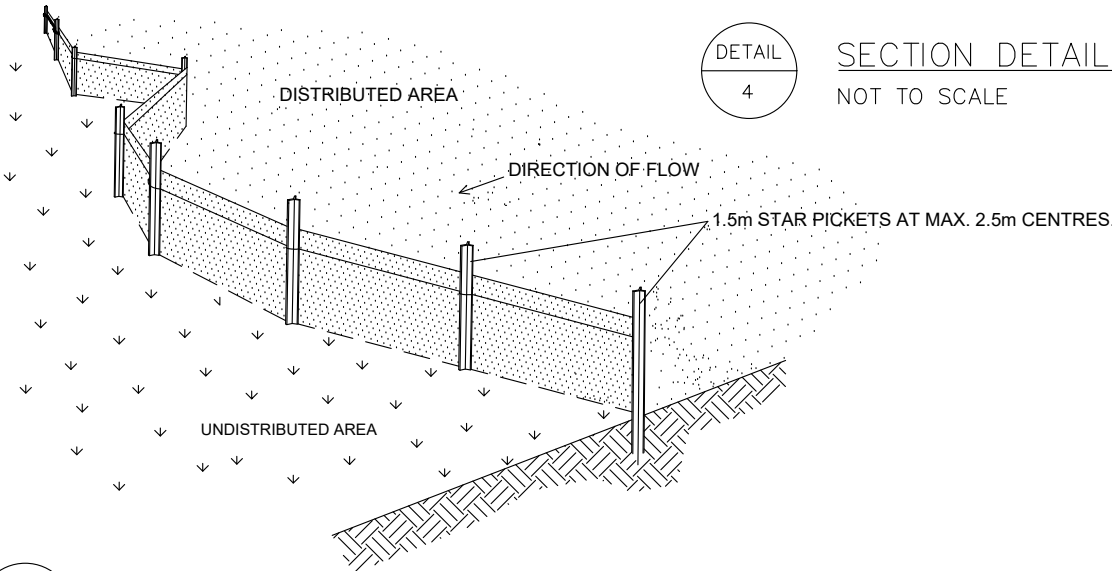
6. USE SANDBAGS, HAY BALES AND/OR GRAVEL FILLED GEOTEXTILE SOCKS TO FILTER AND CONVEY STORMWATER RUNOFF WITHIN THE SITE.
7. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
8. INLET FILTERS SHALL BE INSTALLED WHERE SHOWN TO PREVENT WATER FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE. IF THE LOCATION OF INLET FILTERS ARE NOT SHOWN ON THE PLAN THEIR LOCATION SHALL BE AT THE DISCRETION OF THE SUPERINTENDENT.
9. STAGE WORK AND PROGRAMMING OF CONSTRUCTION ACTIVITIES TO MINIMISE THE EXTENT AND DURATION OF OPEN EXCAVATION. AVOID OPENING TRENCHES WHENEVER THE RISKS OF STORMS ARE HIGH.
10. DIVERT SURFACE WATER AWAY FROM EXCAVATION AREAS WITH SANDBAGS OR EQUIVALENT.
11. FOR DEWATERING OF EXCAVATION AREAS SET UP TEMPORARY DEWATERING PUMP OUT SYSTEM AS REQUIRED AND ENSURE FLOCCULATION IS USED IF WATER IS NOT CLEAR (i.e. SEDIMENT > 50mg/L). FOR RATES AND AGENTS REFER APPENDIX E NSW DEPARTMENT OF HOUSING "MANAGING URBAN STORMWATER SOILS & CONSTRUCTION". DISCHARGE SHALL BE DIRECTLY TO COUNCIL'S PIPED DRAINAGE SYSTEM. DO NOT DISCHARGE TO THE KERB.
12. STOCKPILES SHALL BE LOCATED NO CLOSER THAN 2m (PREFERABLY 5m) FROM CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS. PROTECT STOCKPILES FROM EROSION BY RAIN AND SURFACE FLOWS.
13. ENSURE CHEMICAL AND FUELS ARE STORED WITHIN BUNDED AREAS AND ELEVATED ABOVE POTENTIAL FLOW PATHS.

MAINTENANCE


14. ALL DEDICATED SEDIMENT STORAGE ZONES WITHIN TRAPS SHALL BE CLEANED WHEN A MAXIMUM OF 60% FULL OF SOLID MATERIALS AND DISPOSED OF IN A MANNER THAT PREVENTS FURTHER POLLUTION OF THE SITE.
15. TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES WILL BE RETAINED UNTIL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS STABILISED.
16. THE CONTRACTOR SHALL INSPECT THE SITE AT LEAST WEEKLY AND AFTER ANY STORM EVENT AND WILL:
 - ENSURE THAT DRAINS OPERATE PROPERLY AND TO EFFECT ANY NECESSARY REPAIRS;
 - REMOVE SPILLED SAND OR OTHER MATERIALS FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS (ESPECIALLY DRAINS AND TEMPORARY FLOW PATHS)
 - REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE;
 - CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS REQUIRED;
 - MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS STABILISED; AND
 - REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURES AS THE LAST ACTIVITY IN THE CONSTRUCTION PROGRAM.



DETAIL 4
SECTION DETAIL
NOT TO SCALE



DETAIL 3
TYPICAL SEDIMENT FENCE
NOT TO SCALE

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