HYDRAULIC DETAILS FOR CONSTRUCTION OF A NEW DWELLING AT 20 THE ESPLANADE NARRABEEN NSW

DRAWING LIST - CIVIL / HYDRAULICS

BASIX REQUIREMENT
RAINWATER TANK TO BASIX REQUIRMENT

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10.	17.7	240	52.2	810	154	2380
5.	12.5	190	36.9	570	109	1680
4.	11.2	175	33.0	510	97.2	1500
3.	9.7	150	28.6	440	84.2	1300
2.	7.9	120	23.3	360	68.7	1060
1.	5.6	85	16.5	260	48.6	750
FRICTION SLOPE (%)	Q (l/s)	EIA (m2)	Q (l/s)	EIA (m2)	Q (l/s)	EIA (m2)
	Ø100 mm uPVC		Ø150mm uPVC		Ø225 mm uPVC	

EIA = EQUIVALENT IMPERVIOUS AREA

HYDRAULIC NOTES

H.1. ALL SERVICES ARE TO BE LOCATED IN THE FIELD IN CONJUNCTION WITH A RESPONSIBLE OFFICER OF EACH RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

H.2. DRAINAGE PITS ARE TO BE 450 mm SQUARE OR LARGER AND FITTED WITH A GALVANISED GRATE.

H.3. DRAINAGE PIPE SIZES ARE Ø100 mm UNLESS NOTED.

H.4. DRAINAGE PIPES SHALL BE SEWER GRADE PVC UNLESS NOTED.

H.5. ALL BARE SOIL AREAS ARE TO BE PROTECTED FROM EROSION BY TEMPORARY MEASURES RE-VEGETATED AT CESSATION OF CONSTRUCTION.

H.6. A SEDIMENT CATCHMENT POND IS TO BE PROVIDED AT THE RATE OF 120 m3 CAPACITY PER HECTARE DRAINED. THE DETENTION TANKS MAY BE USED FOR THIS PURPOSE, PROVIDED SUFFICIENT WATER IS RETAINED AS A POOL DURING CONSTRUCTION & ADEQUATE SAFETY FENCING IS PROVIDED.

H.7. THE DOWNHILL BOUNDARY OF THE SITE IS TO BE PROTECTED BY HAY BALE OR FILTER FABRIC FENCE DURING CONSTRUCTION AS SHOWN IN ATTACHED DETAIL.

H.8. THE STREET DRAINAGE PIT LOCATED DOWNHILL OF THE SITE SHALL BE PROTECTED FROM SEDIMENT WITH HAY BALES.

H.9. A SINGLE CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED IN THE MANNER SHOWN IN ATTACHED H.9 DETAIL.

H.10. ALL EROSION PROTECTION MEASURES TO MEET THE REQUIREMENTS OF THE DEPT. OF CONSERVATION AND LAND MANAGEMENT AS OUTLINED IN 'URBAN EROSION & SEDIMENT CONTROL', SCS TECH. HANDBOOK No.2 1978 UNLESS SPECIFIED BY COUNCIL.

SPECIAL NOTES

1. ALL PIPES TO BE LAID ON 75 mm SAND BED WITH THE BARRELS FULLY SUPPORTED ("B" CLASS BEDDING)
2. PROVIDE "CLEANING EYES" TO ALL DOWN PIPES NOT DIRECTLY CONNECTED TO PITS.
3. "HEAVY DUTY" GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
4. THE SUMP IN THE DETENTION TANK SHALL BE DELETED.
5. ORIFICE PLATES USED TO RESTRICT THE OUTFLOW MUST BE MACHINED TO THE EXACT DIMENSION AS CALCULATED, FROM MINIMUM 3 mm THICK STAINLESS STEEL OR 3 mm THICK GALVANISED STEEL AFTER MACHINING. THEY MUST BE CAST IN THE PIT WALLS OR PERMANENTLY FIXED IN THE PIT BY SOME APPROVED METHOD SO THEY CANNOT BE EASILY REMOVED.
6. A PLAQUE MEASURING NO LESS THAN 400 mm X 200 mm SHALL BE IN SOME WAY PERMANENTLY ATTACHED AND PROMINENTLY DISPLAYED WITHIN THE IMMEDIATE VICINITY OF THE OSD DEVISE. THIS PLAQUE SHALL ADVISE OCCUPIERS OF THE PROPERTY OF THE EXISTENCE OF THE OSD DEVISE AND ALSO THAT THE DEVISE IS NOT IN ANY WAY TO BE TAMPERED WITH OR CHANGED WITHOUT PRIOR WTITTEN CONSENT OF COUNCIL.
7. THE CONSTRUCTED OSD INSTALLATION MUST BE APPROPRIATELY CERTIFIED BY A SUITABLY QUALIFIED AND EXPERIENCED CONSULTING ENGINEER (GENERALLY CP ENG. QUALIFICATION) WHO MUST STATE THAT IT COMPLIES WITH COUNCIL'S OSD POLICY, ALL RELEVANT CODES AND STANDARDS AND ALSO THAT IT IS GENERALLY IN ACCORDANCE WITH APPROVED PLANS.
8. UPON COMPLETION OF THE OSD WORKS, WORK-AS-EXECUTED (WAE) PLANS SHALL BE SUBMITTED TO THE COUNCIL BY THE CONSULTING ENGINEER/REGISTERED SURVEYOR TO VERIFY THAT THE VOLUME OF STORAGE HAS BEEN ATTAINED AND THAT CRITICAL WATER AND FLOOR LEVELS ARE IN ACCORDANCE WITH DESIGN REQUIREMENTS. ANY CHANGES OR VARIATIONS TO THE APPROVED PLANS SHALL BE HIGHLIGHTED IN RED.
9. CERTIFICATION ON THE STANDARD FORM FOR ON-SITE DETENTION RECORD OF INSTALLATION ISSUED BY COUNCIL AND WAE PLANS SHALL BE SUBMITTED TOGETHER WITH THE COMPLIANCE CERTIFICATE.

CONSTRUCTION NOTES:

1. 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 CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT 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.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. 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.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

Issue	Description	Date	Design	Check
0	For Review	10/07/2022	SD	KZ
A	FOR SUBMISSION	15/07/2022	SD	KZ

ARCHITECT/CLIENT
SHOBHA DESIGNS

PROJECT:
CONSTRUCTION OF A NEW DWELLING AT 20 THE ESPLANADE NARRABEEN NSW

TITLE: TITLE PAGE

CIVIL - HYDRAULICS

Size	Scale U.N.O
A3	1:100
DWG no.	Sheet no.
H-22-261	01

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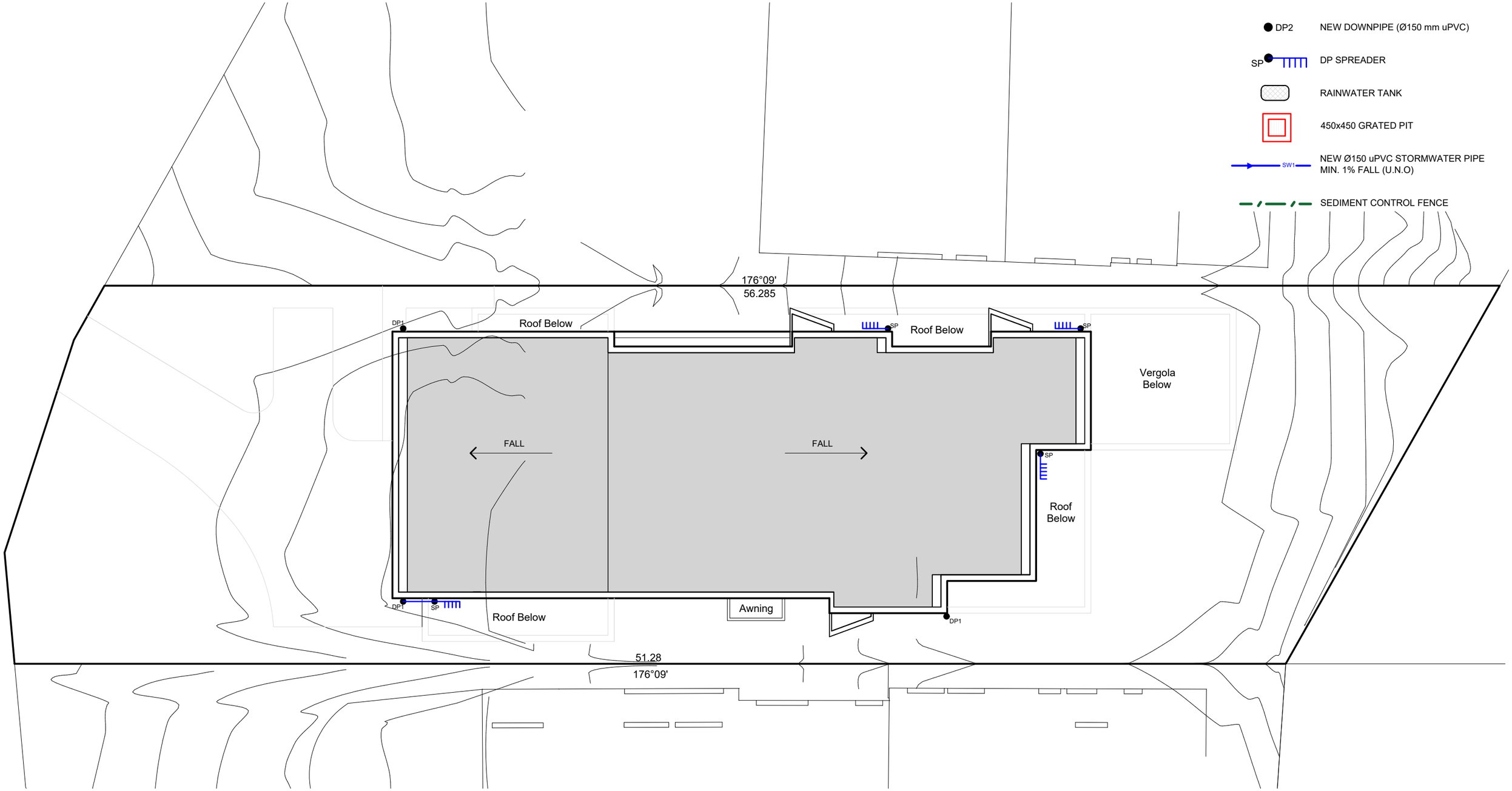
LEGEND:

- DP1 — NEW DOWNPIPE (Ø100 mm uPVC)
- DP2 — NEW DOWNPIPE (Ø150 mm uPVC)
- SP — DP SPREADER
- RAINWATER TANK
- 450x450 GRATED PIT
- SW1 — NEW Ø150 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)
- SEDIMENT CONTROL FENCE



ROOF PLAN
1:100

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H-22-261	02

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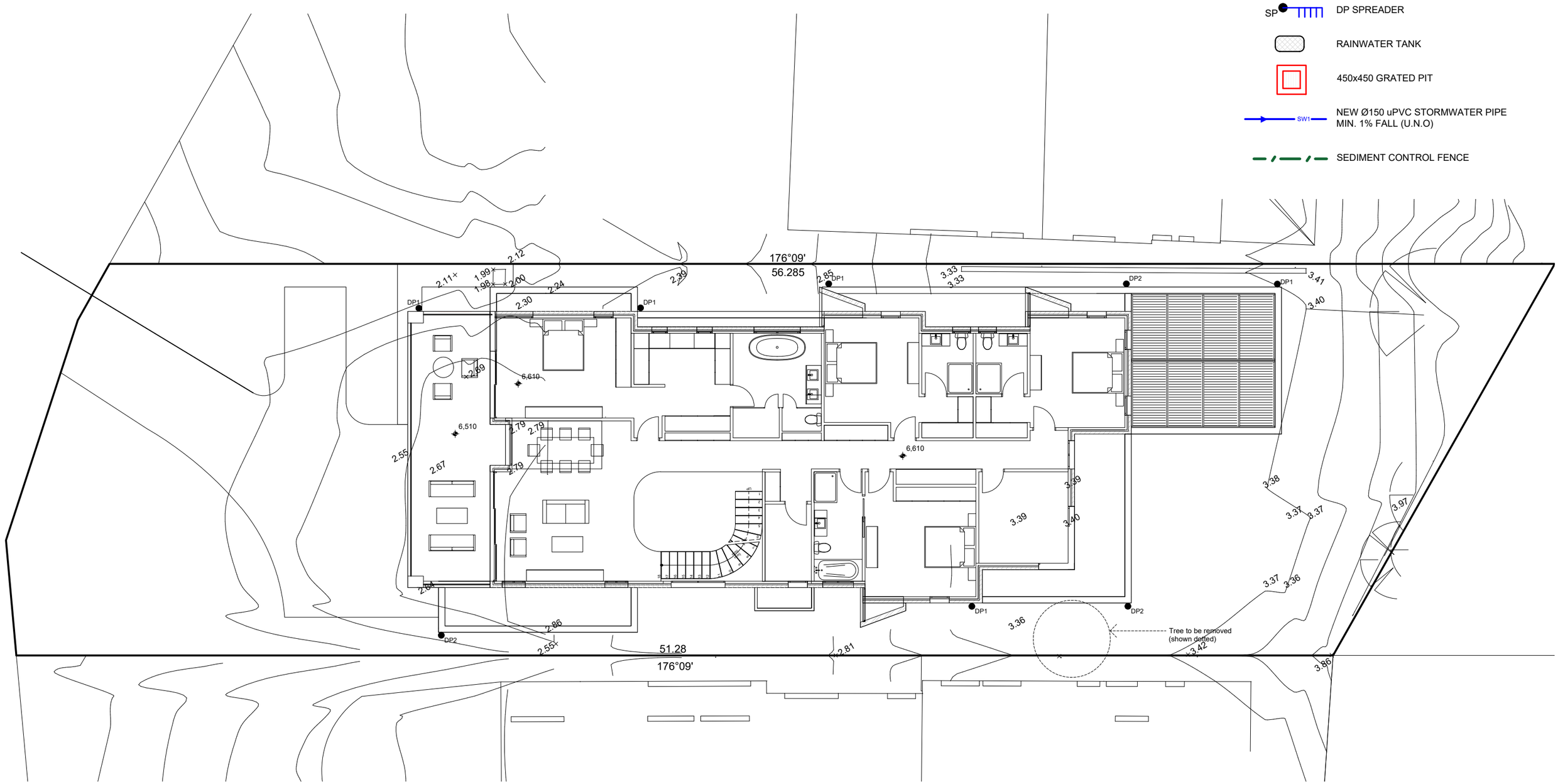

FIRST FLOOR PLAN
1:100

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TITLE: FIRST FLOOR PLAN

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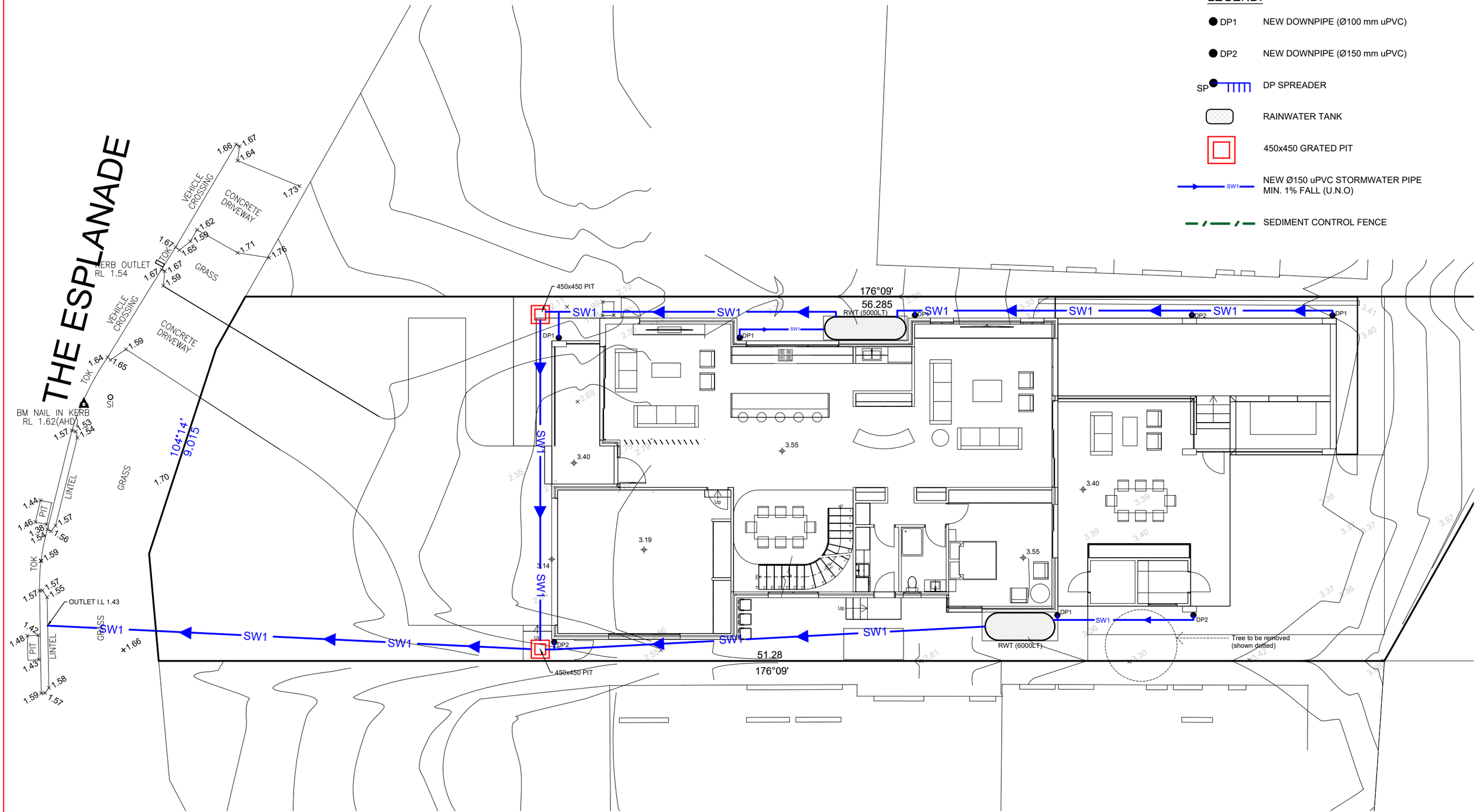

GROUND FLOOR PLAN
1:100

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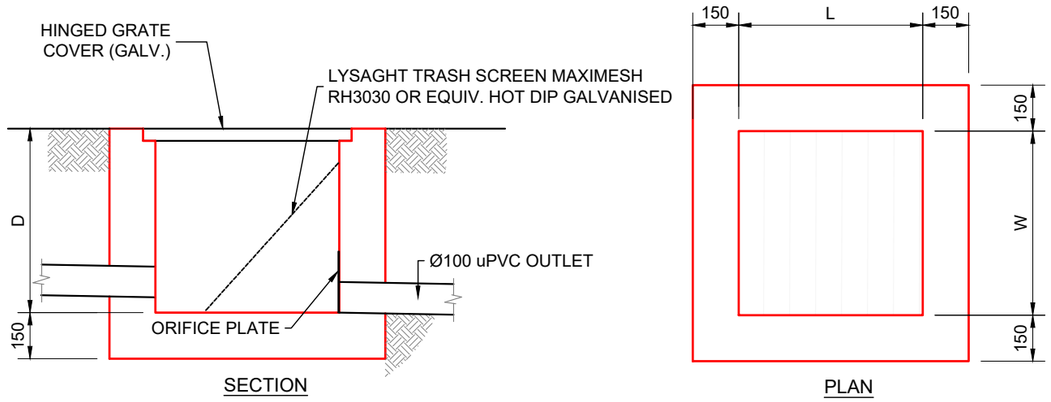
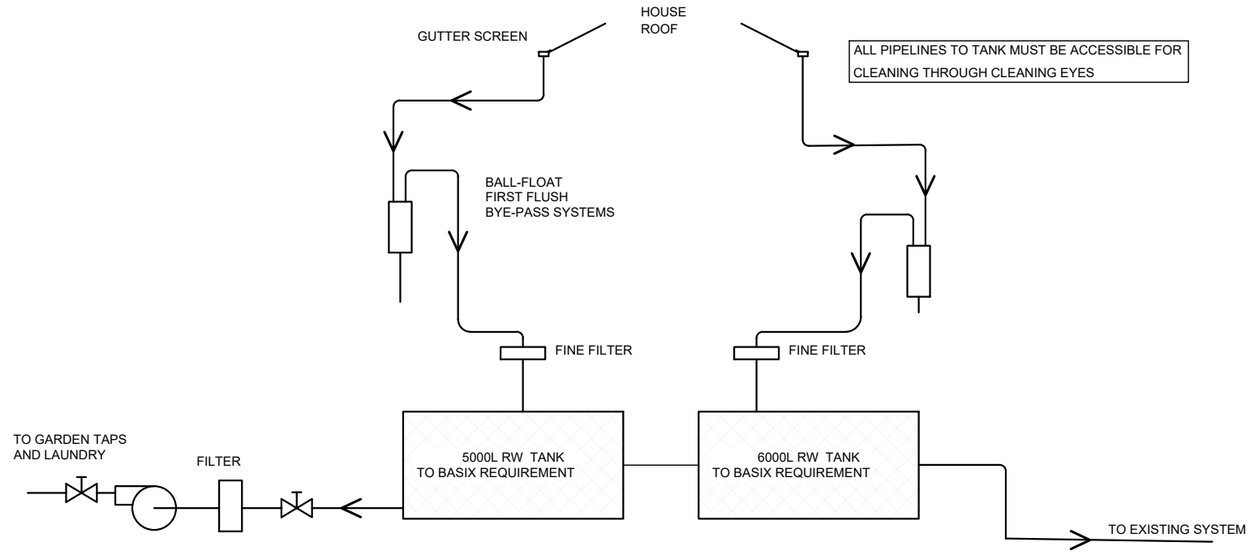


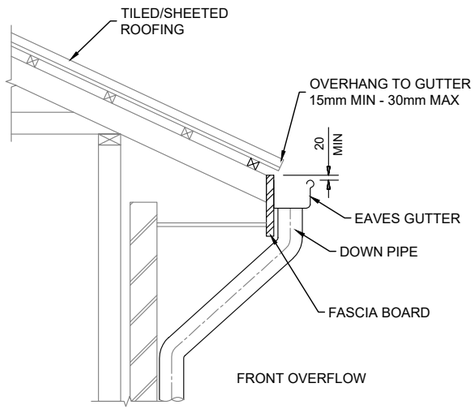
TYPICAL GRATED PIT DETAIL

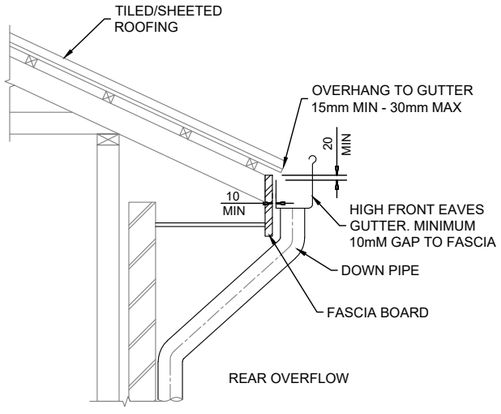
SCALE 1:20



FLOW DIAGRAM

N.T.S





NOTE:

FOR RETENTION WATER TO BE USED IN THE GREY WATER SYSTEM, GUTTERS MUST BE FITTED WITH GUTTER GUARDS AND DOWNPIPES FITTED WITH FIRST FLUSH DIVERTER SYSTEMS.

ALL PIPELINES MUST BE ACCESSIBLE FOR CLEANING THROUGH CLEANING EYES.

CONNECTION INTO THE GREY WATER SYSTEM MUST COMPLY WITH SYDNEY WATER GUIDELINES.

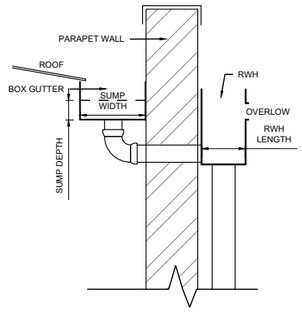
TYPICAL EAVES GUTTER DETAIL

SCALE 1:20

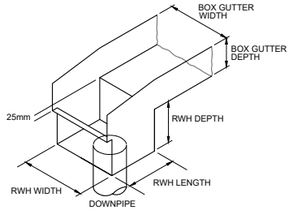
NOTE:

ALL GUTTERS MUST BE FITTED WITH GUTTER GUARDS AND DOWN PIPES FITTED WITH FIRST FLUSH DIVERTER SYSTEMS.

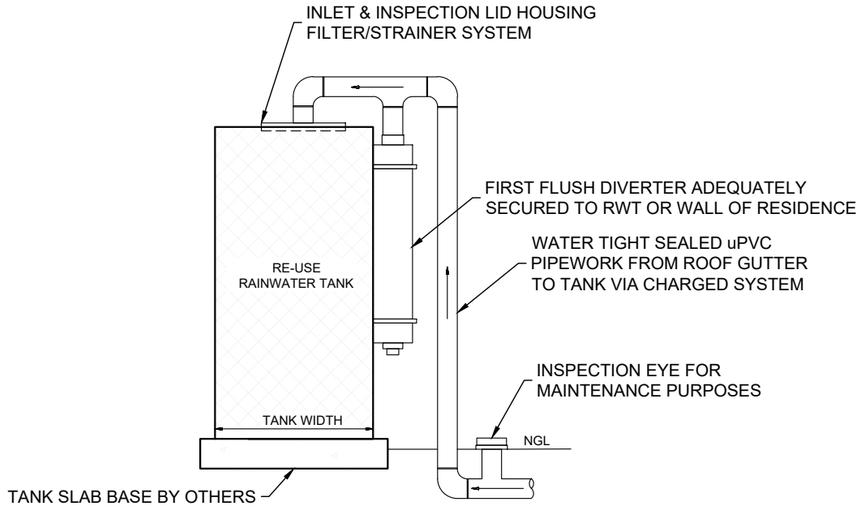
ALL PIPELINES MUST BE ACCESSIBLE FOR CLEANING THROUGH CLEANING EYES.



RAINWATER HEAD &
BOX GUTTER DETAIL (TYP.)
N.T.S



RAINWATER HEAD &
OVERFLOW DETAIL (TYP.)
N.T.S



TYPICAL RAINWATER TANK DETAIL

N.T.S

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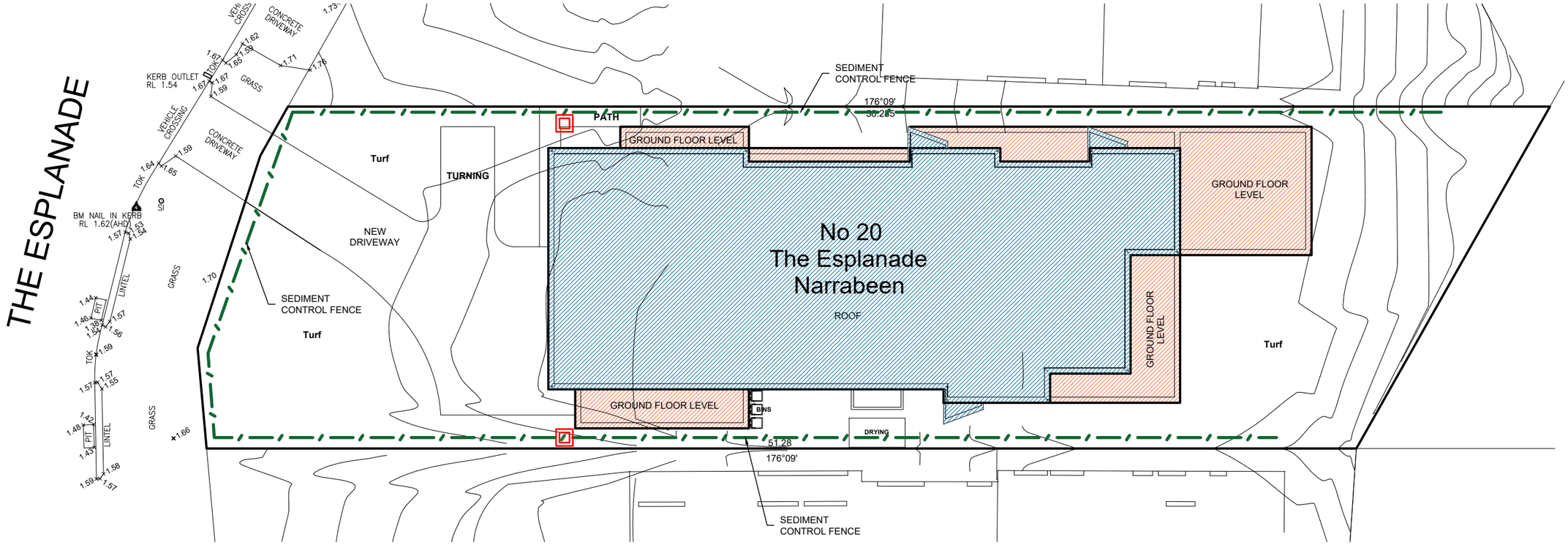
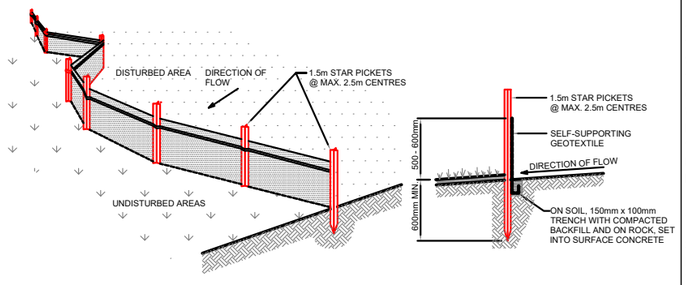
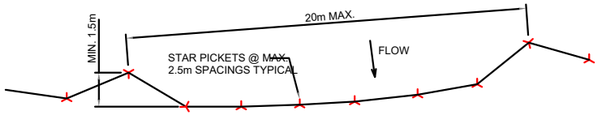


SEDIMENT CONTROL PLAN
1:200



SEDIMENT FENCE
SCALE N.T.S

SECTION DETAIL
SCALE N.T.S



PLAN

SEDIMENT FENCE CONSTRUCTION NOTES:

1. 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 CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT 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

2. TO BE ENTRENCHED.

3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 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

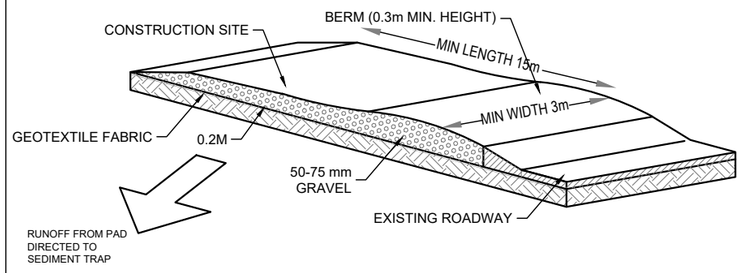
4. BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.

5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP. BACKFILL THE TRENCH

6. OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

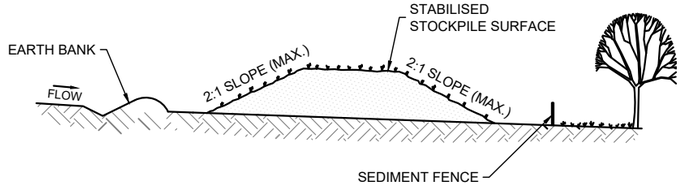
NOTES:

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



NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10. CONSTRUCT EARTH BANKS ON THE UP-SLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.
5. STOCKPILE TO BE COVERED DURING WIND AND RAIN WEATHER CONDITIONS. PROTECTIVE GROUND COVER TO BE PLACED AS FAR AS PRACTICABLE AND MAINTAINED.



TYP. SEDIMENTATION & EROSION CONTROL DETAILS
N.T.S

STABILIZED SITE ACCESS
N.T.S

STOCKPILE
N.T.S

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