

HYDRAULIC DETAILS FOR ALTERATION AND ADDITIONS AT 45 REDMAN ROAD, DEE WHY NSW 2099

DRAWING LIST - CIVIL / HYDRAULICS

S01	DRAWING TITLE, INDEX & NOTES
S02	ROOF DRAINAGE DETAILS
S03	GROUND FLOOR DRAINAGE PLAN
S04	DETAILS
S05	SEDIMENT CONTROL PLAN

BASIX REQUIREMENT
RAINWATER TANK TO BASIX
REQUIREMENT.



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

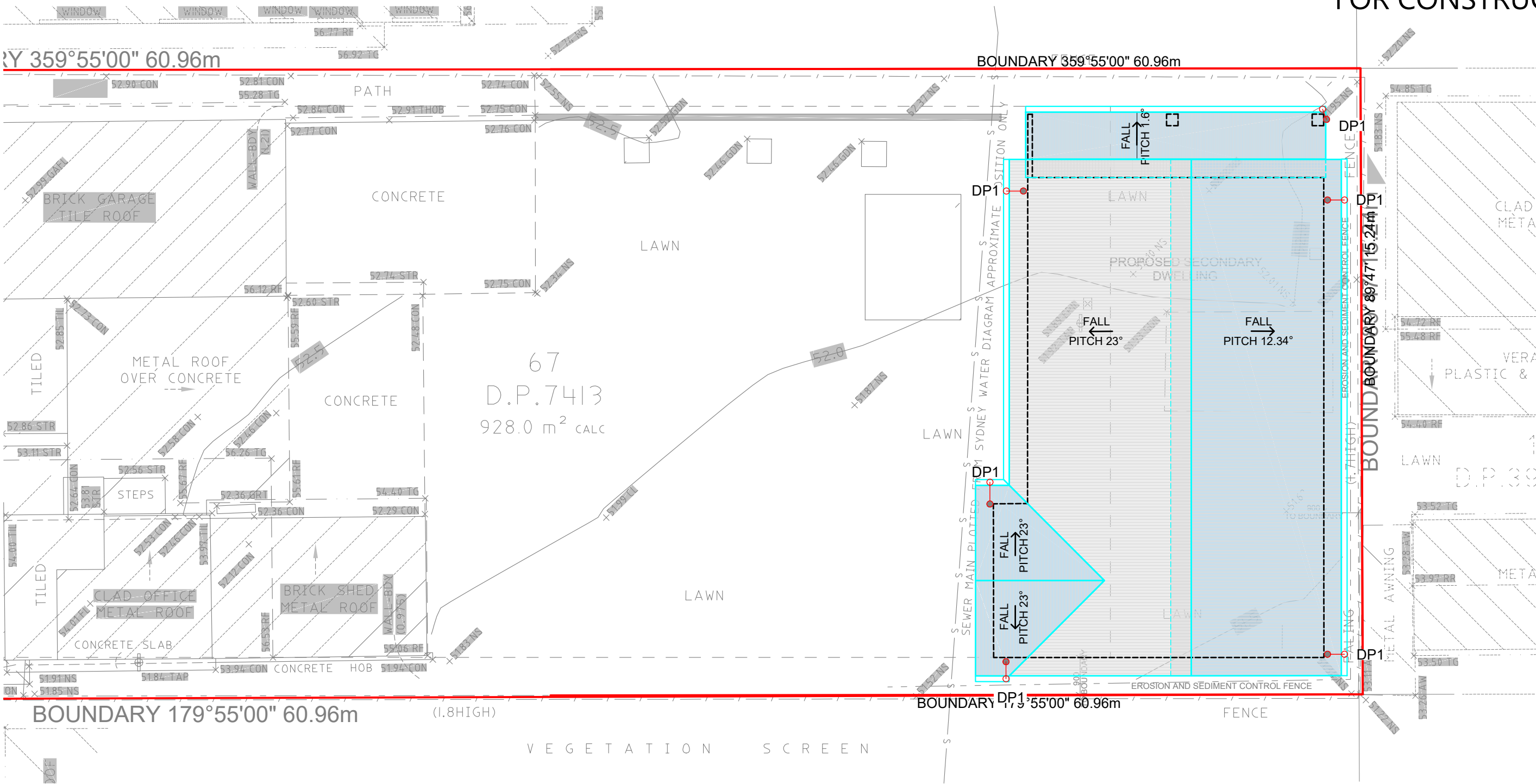
- H.1. ALL SERVICES ARE TO BE LOCATED IN THE FIELD IN CONJUNCTION WITH A RESPONSIBLE OFFICER OF EACH RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- H.2. DRAINAGE PITS ARE TO BE 450 mm SQUARE OR LARGER AND FITTED WITH A GALVANISED GRATE.
- H.3. DRAINAGE PIPE SIZES ARE Ø100 mm UNLESS NOTED.
- 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.



LEGEND:

- DP1 NEW DOWNPIPE (Ø100 mm uPVC)
- NEW 450x450 GRATED PIT
- SW1 NEW Ø100 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)
- SEDIMENT CONTROL FENCE
- ▨ RAINWATER TANK TO BASIX REQ.

ROOF DRAINAGE PLAN
SCALE 1:100

SITE PARAMETERS & TANK DETAILS	
SITE AREA	928.0 m²
EXISTING IMPERVIOUS AREA	512.54 m²
PROPOSED IMPERVIOUS AREA	599.01 m²
PROPOSED LANDSCAPED AREA	328.99 m² (35.45%)

Issue	Description	Date	Design	Check	ARCHITECT/CLIENT
0	For Review	27/06/2023	KK	BG	HERMOSA DESIGN/ MR. & MRS. FALVO
A	For Construction	07/07/2023	KK	BG	
1	For Review	02/09/2023	AK	SD	
B	For Construction	05/09/2023	AK	SD	

PROJECT:
HYDRAULIC DETAILS FOR ALTERATIONS & ADDITIONS AT 45 REDMAN ROAD, DEE WHY 2099

TITLE: ROOF DRAINAGE PLAN

CIVIL - HYDRAULICS	
Size A3	Scale U.N.O 1:100
DWG no. H-23-555	Sheet no. 02

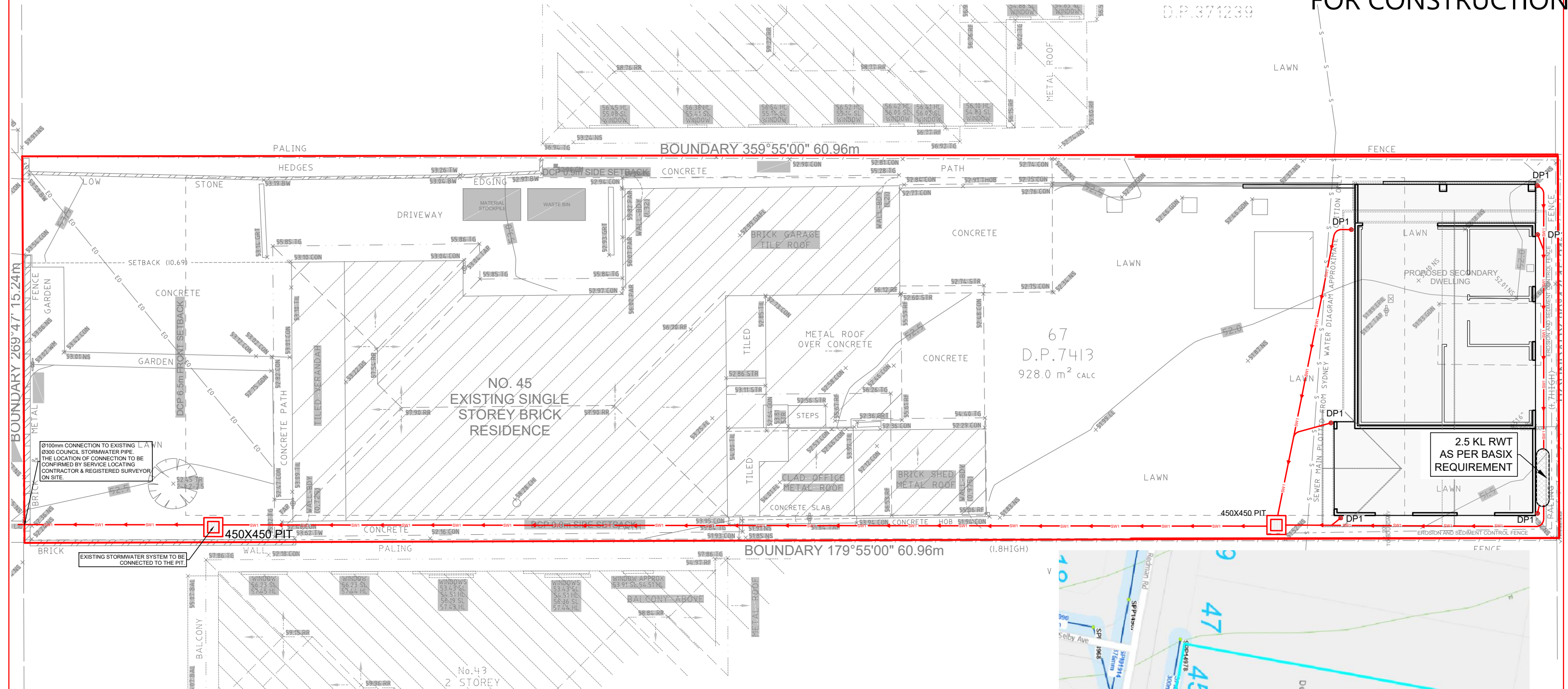


KEVIN ZIA (MIEAust, CPEng, NER)
Prime Consulting Engineers Pty Ltd

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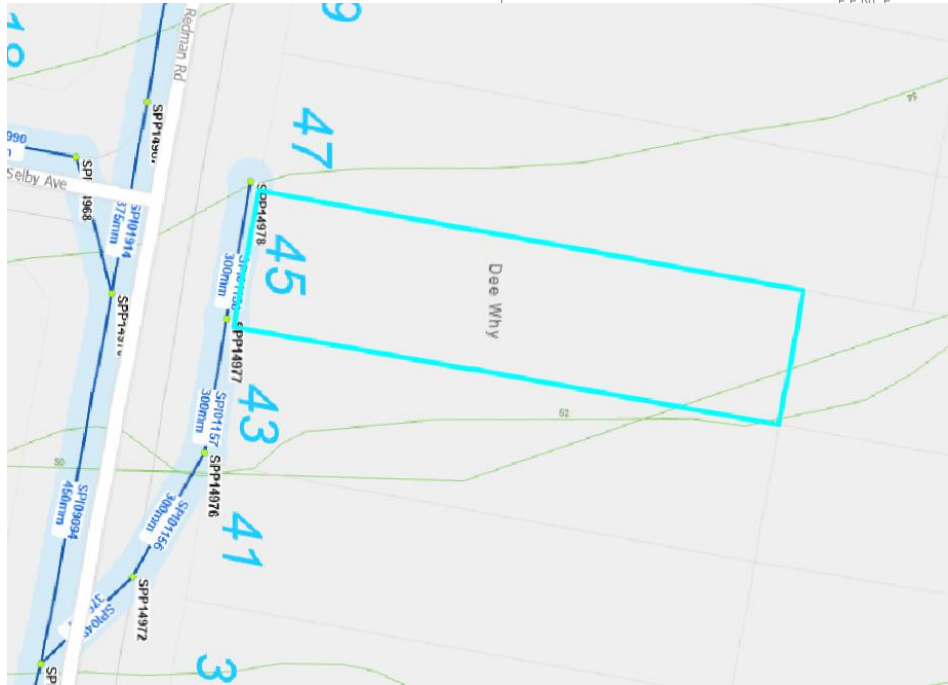
- DP1 NEW DOWNPIPE (Ø100 mm uPVC)
- NEW 450x450 GRATED PIT
- NEW Ø100 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)
- SEDIMENT CONTROL FENCE
- RAINWATER TANK TO BASIX REQ.

GROUND FLOOR DRAINAGE PLAN

SCALE 1:150



SITE PARAMETERS & TANK DETAILS

SITE AREA	928.0 m ²
EXISTING IMPERVIOUS AREA	512.54 m ²
PROPOSED IMPERVIOUS AREA	599.01 m ²
PROPOSED LANDSCAPED AREA	328.99 m ² (35.45%)



NORTHERN BEACHES STORMWATER MAPPING

N.T.S

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0	For Review	27/06/2023	KK	BG	HERMOSA DESIGN/ MR. & MRS. FALVO	HYDRAULIC DETAILS FOR ALTERATIONS & ADDITIONS AT 45 REDMAN ROAD, DEE WHY 2099	Size	Scale <small>U.N.O</small>			
A	For Construction	07/07/2023	KK	BG			A3	1:100			
1	For Review	02/09/2023	AK	SD							
B	For Construction	05/09/2023	AK	SD							
						TITLE: UPPER GROUND FLOOR PLAN	DWG no. H-23-567	Sheet no. 03			

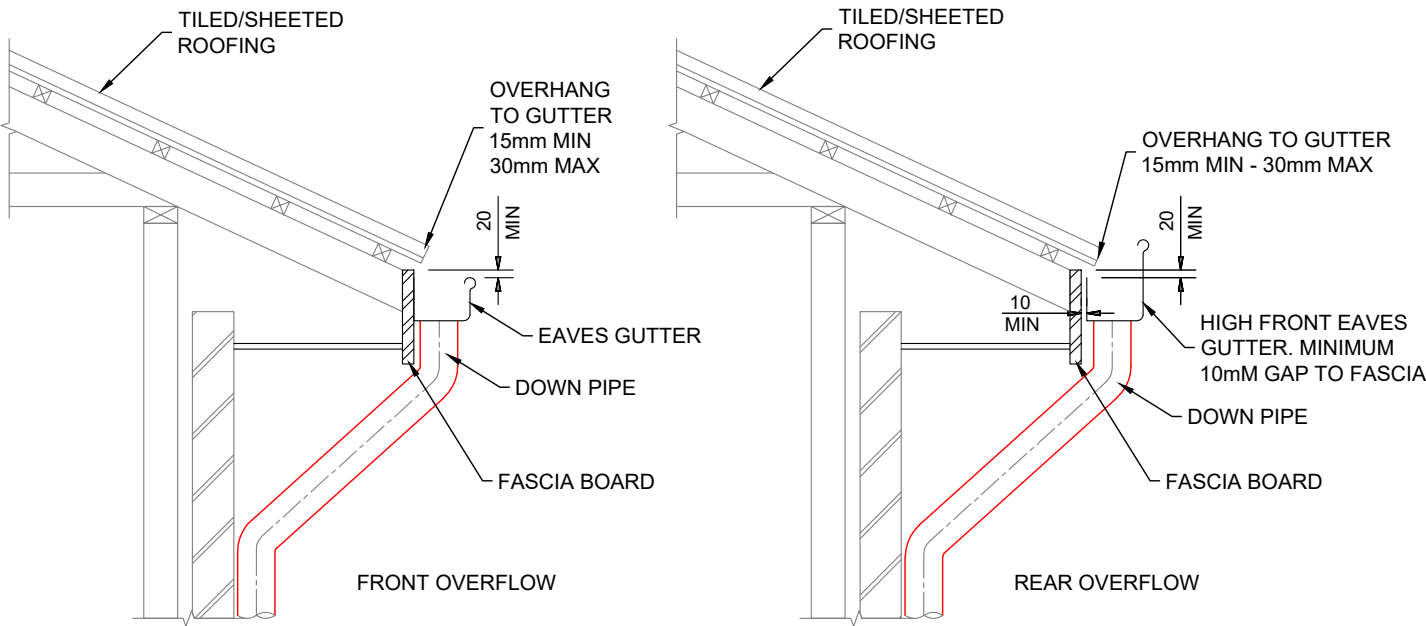
NOTE:
FOR RETENTION WATER TO BE USED IN THE GREY WATER SYSTEM, GUTTERS MUST BE FITTED WITH GUTTER GUARDS AND DOWNPIPES FITTED WITH FIRST FLUSH DIVERTER SYSTEMS.

ALL PIPELINES MUST BE ACCESSIBLE FOR CLEANING THROUGH CLEANING EYES.

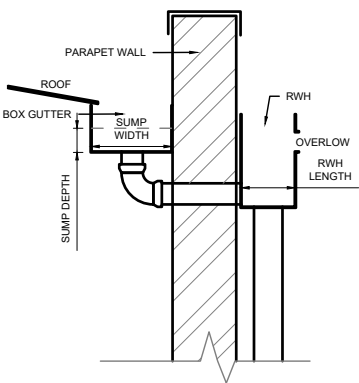
CONNECTION INTO THE GREY WATER SYSTEM MUST COMPLY WITH SYDNEY WATER GUIDELINES.

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

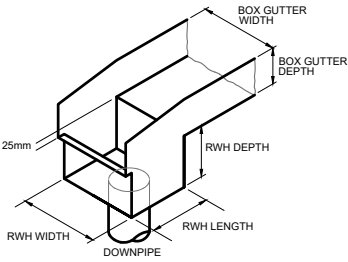
ALL PIPELINES MUST BE ACCESSIBLE FOR CLEANING THROUGH CLEANING EYES.



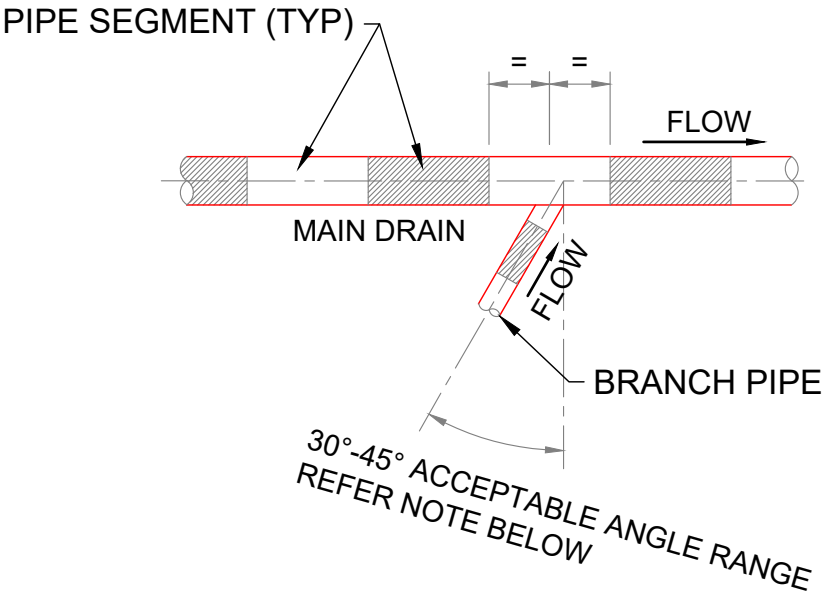
TYPICAL EAVES GUTTER DETAIL
SCALE 1:20



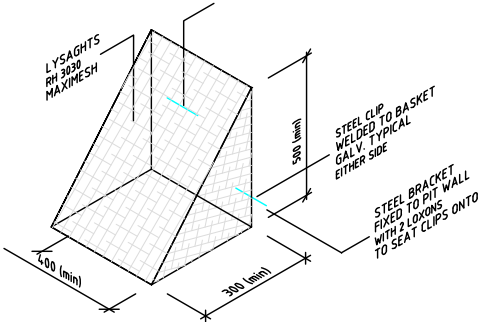
RAINWATER HEAD & BOX GUTTER DETAIL (TYP.)
N.T.S



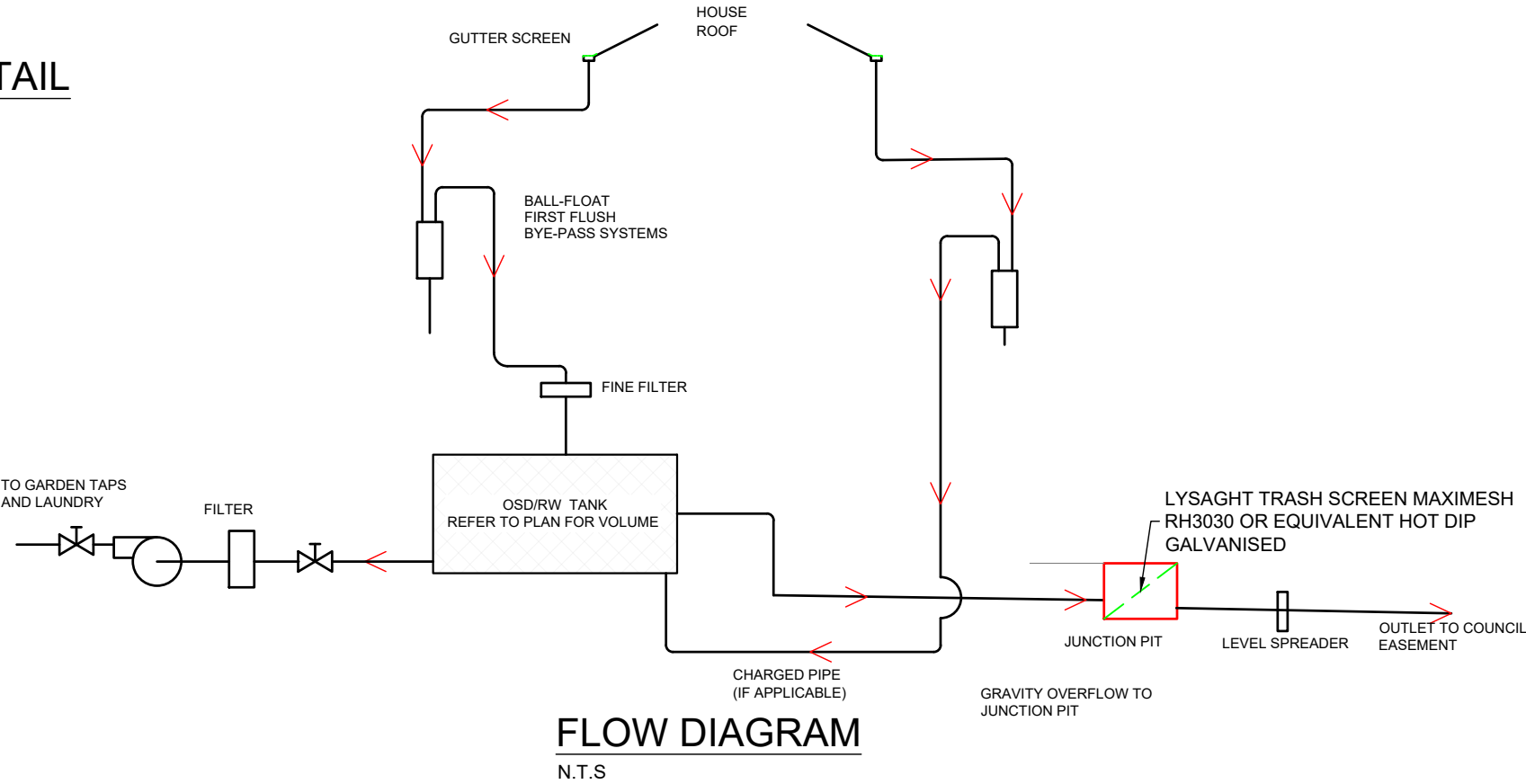
RAINWATER HEAD & OVERFLOW DETAIL (TYP.)
N.T.S






PREFERRED BRANCH LOCATION
ALONG MAIN DRAIN PLAN

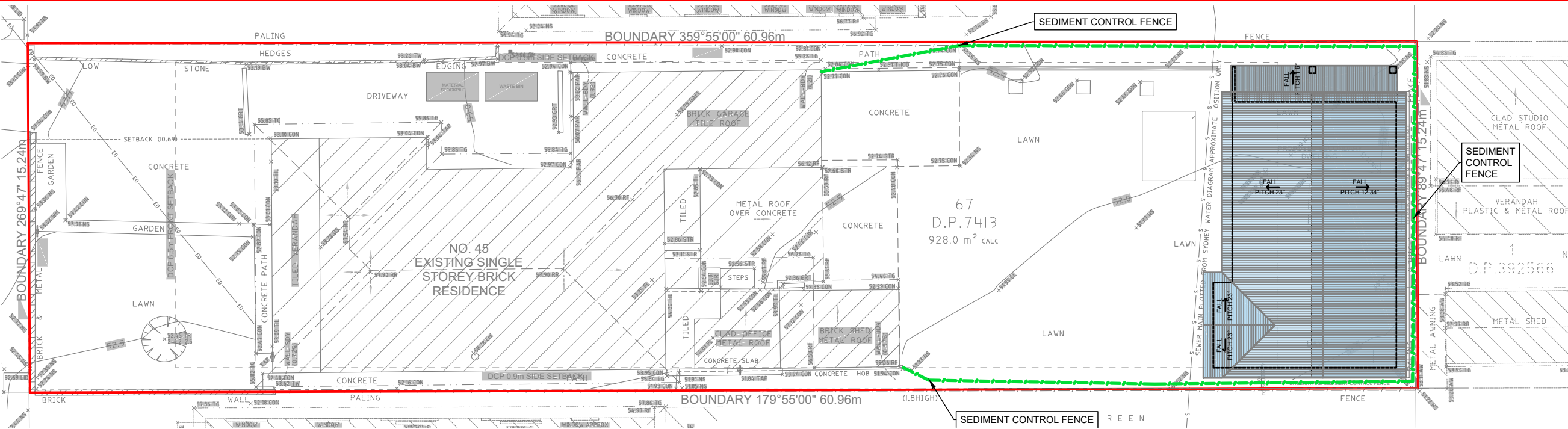


SCREEN DETAIL
N.T.S



FLOW DIAGRAM
N.T.S

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0	For Review	27/06/2023	KK	BG	HERMOSA DESIGN/ MR. & MRS. FALVO	HYDRAULIC DETAILS FOR ALTERATIONS & ADDITIONS AT 45 REDMAN ROAD, DEE WHY 2099	Size A3	Scale <small>U.N.O</small> 1:100		THE COPY RIGHT OF THIS DRAWING REMAINS WITH PRIME CONSULTING ENGINEERS PTY. LTD.
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1	For Review	02/09/2023	AK	SD						
B	For Construction	05/09/2023	AK	SD						
						TITLE: DETAILS	DWG no. H-23-567	Sheet no. 04		



SEDIMENT CONTROL PLAN

SCALE 1:200

LEGEND:

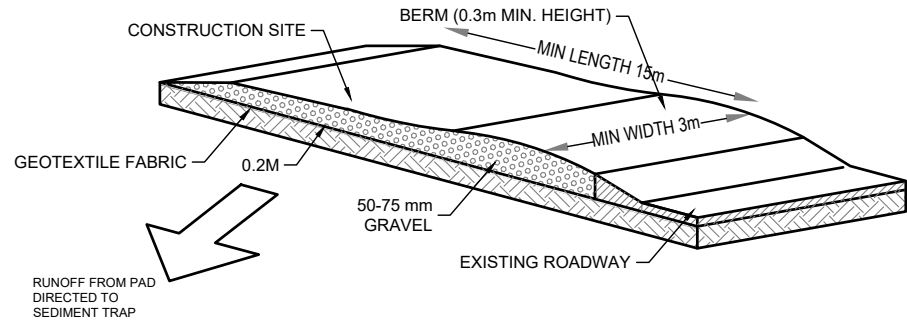
- DP1 NEW DOWNPIPE (Ø100 mm uPVC)
- NEW 450x450 GRATED PIT
- NEW Ø100 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)
- SEDIMENT CONTROL FENCE
- RAINWATER TANK TO BASIX REQ.

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.

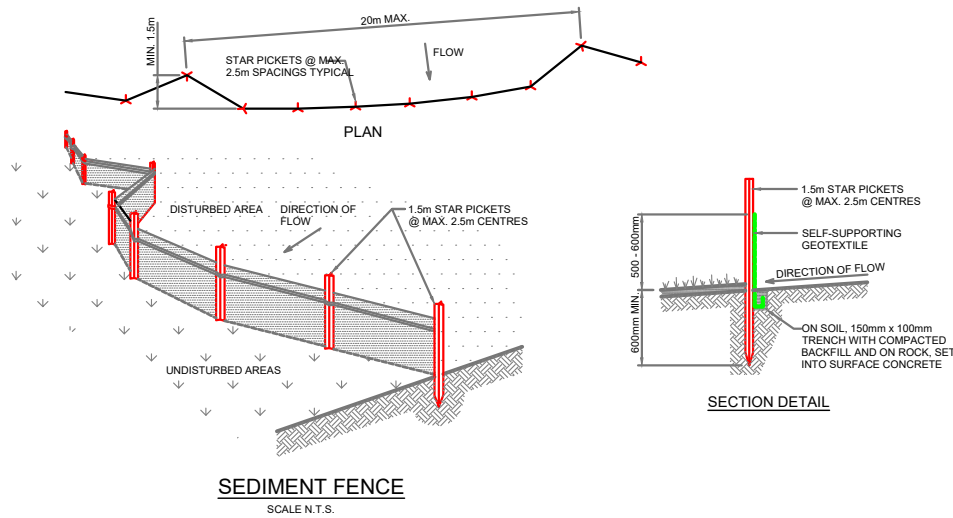
CONSTRUCTION NOTES:

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.



STABILIZED SITE ACCESS

N.T.S

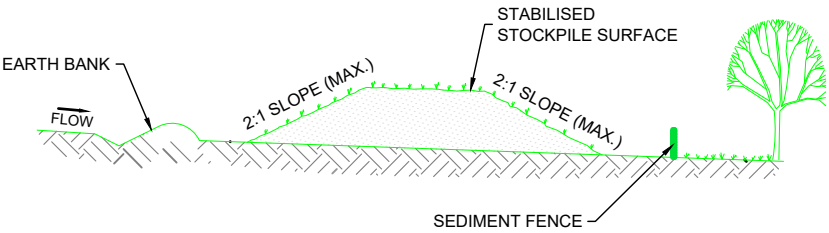


TYP. SEDIMENTATION & EROSION CONTROL DETAILS

N.T.S



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.



STOCKPILE

N.T.S

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						TITLE: SEDIMENT CONTROL PLAN	DWG no. H-23-567	Sheet no. 05	