## 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 DETAILS

S06 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	Q (I/s)	EIA (m2)	Q (I/s)	EIA (m2)	Q (I/s)	EIA (m2)
SLOPE (%)	Ø100 mm uPVC		Ø150mi	m uPVC	Ø225 m	m 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.
- 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:

- 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 TO BE ENTRENCHED.
- 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.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

Issue	Description	Date	Design	Check	ARCHITECT/CLIENT	
0	For Review	27/06/2023	KK	BG	HERMOSA DESIGN/	
Α	For Construction	07/07/2023	KK	BG	MR. & MRS. FALVO	
1	For Review	02/09/2023	AK	SD		
В	For Construction	05/09/2023	AK	SD		
D	For CC	19/10/2023	AK	BG		

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

TITLE: DRAWING TITLE, INDEX & NOTES

 CIVIL - HYDRAULICS

 Size
 Scale uno

 A3
 1:100

 DWG no.
 Sheet no.

 H-23-567
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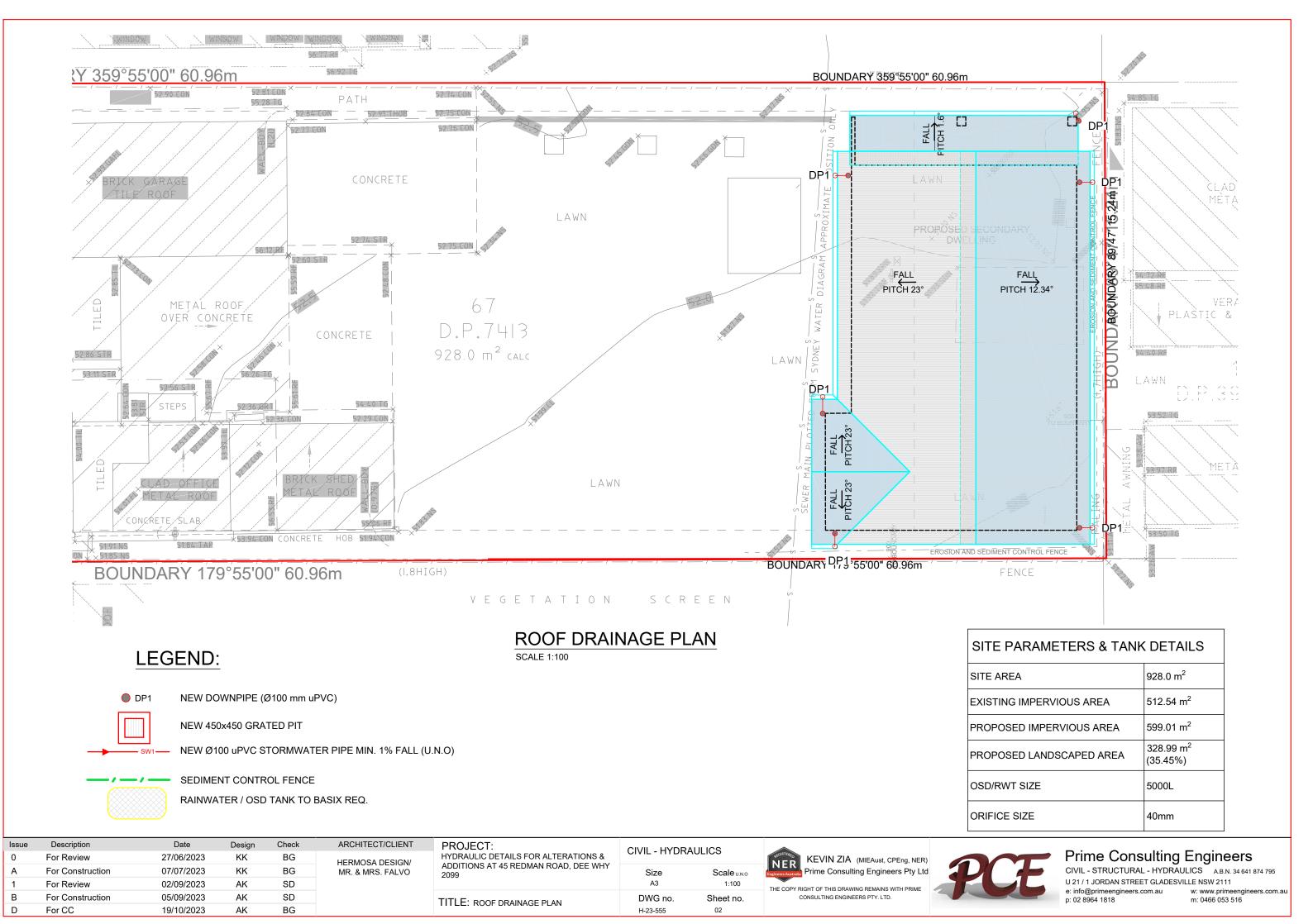


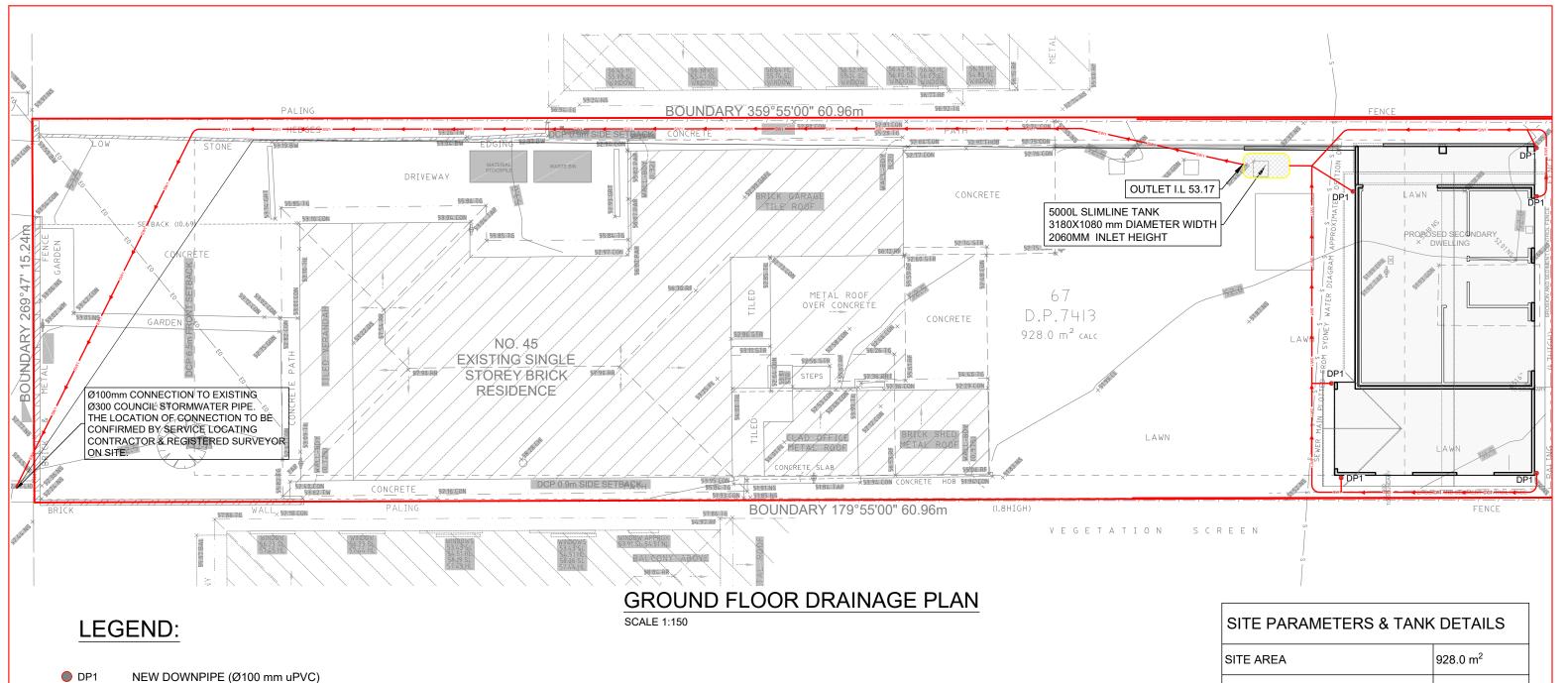


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DP1



NEW 450x450 GRATED PIT



NEW Ø100 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)



SEDIMENT CONTROL FENCE

RAINWATER / OSD TANK TO BASIX REQ.

SITE PARAMETERS & TANK DETAILS				
SITE AREA	928.0 m <sup>2</sup>			
EXISTING IMPERVIOUS AREA	512.54 m <sup>2</sup>			
PROPOSED IMPERVIOUS AREA	599.01 m <sup>2</sup>			
PROPOSED LANDSCAPED AREA	328.99 m <sup>2</sup> (35.45%)			
OSD/RWT SIZE	5000L			
ORIFICE SIZE	40mm			

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D	For CC	19/10/2023	AK	BG	

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

TITLE: UPPER GROUND FLOOR PLAN

CIVIL - HYDRAULICS Size Scale u.n.o A3 1:100 DWG no. Sheet no. H-23-567



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

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p: 02 8964 1818 m: 0466 053 516 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

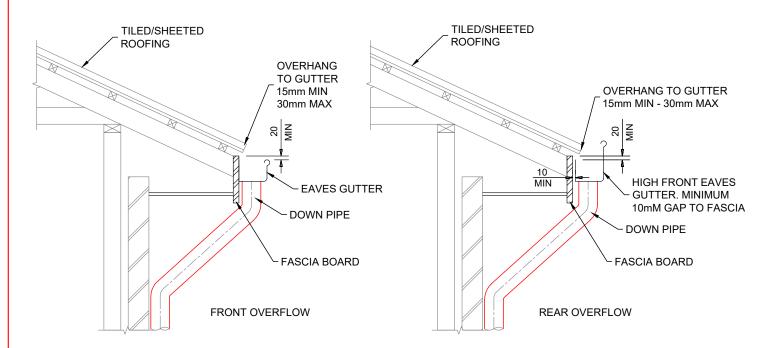
ALL PIPELINES MUST BE ACCESSIBLE FOR CLEANING THROUGH CLEANING EYES.

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

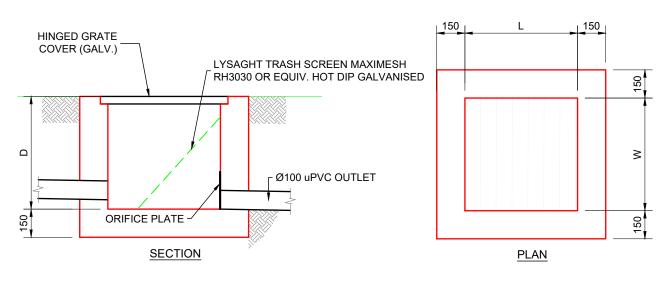
NOTE:

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



## TYPICAL GRATED PIT DETAIL

ARCHITECT/CLIENT

HERMOSA DESIGN/

MR. & MRS. FALVO

SCREEN DETAIL

0	For Review
Α	For Construction
1	For Review
В	For Construction
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Description	Date	Design	Check	
For Review	27/06/2023	KK	BG	
For Construction	07/07/2023	KK	BG	
For Review	02/09/2023	AK	SD	
For Construction	05/09/2023	AK	SD	
For CC	19/10/2023	AK	BG	

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

**CIVIL - HYDRAULICS** Size

Scale U.N.O A3 1:100 DWG no. Sheet no. H-23-567



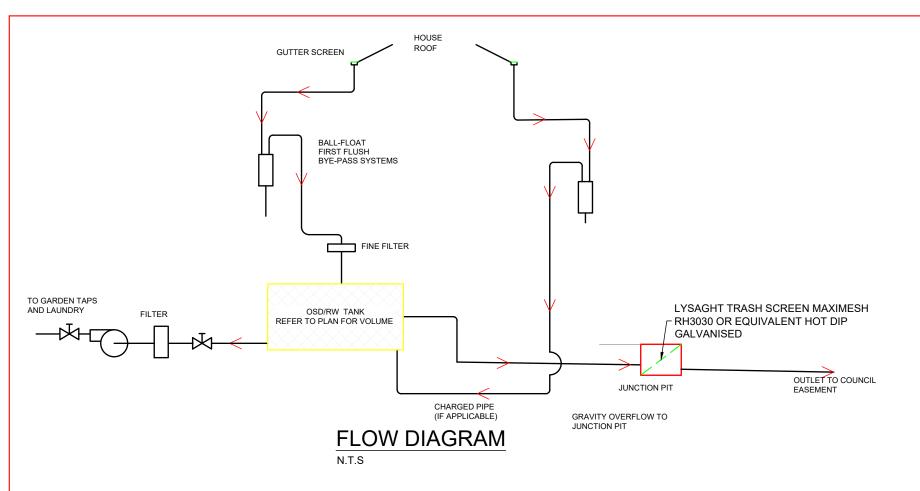


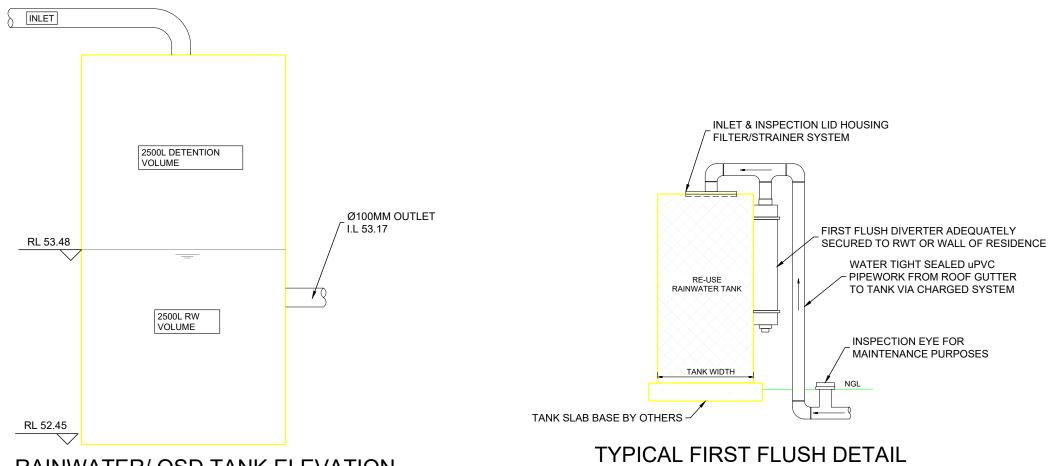


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## RAINWATER/ OSD TANK ELEVATION

N.T.S

Issue	Description	Date	Design	Check	ARCHITECT/CLIENT	PROJECT:	
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1	For Review	02/09/2023	AK	SD		2000	
В	For Construction	05/09/2023	AK	SD		TITLE: DETAILS	
D	For CC	19/10/2023	AK	BG		TITLE. DETAILS	

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

Size A3

**CIVIL - HYDRAULICS** Scale U.N.O 1:100 DWG no. Sheet no. H-23-567



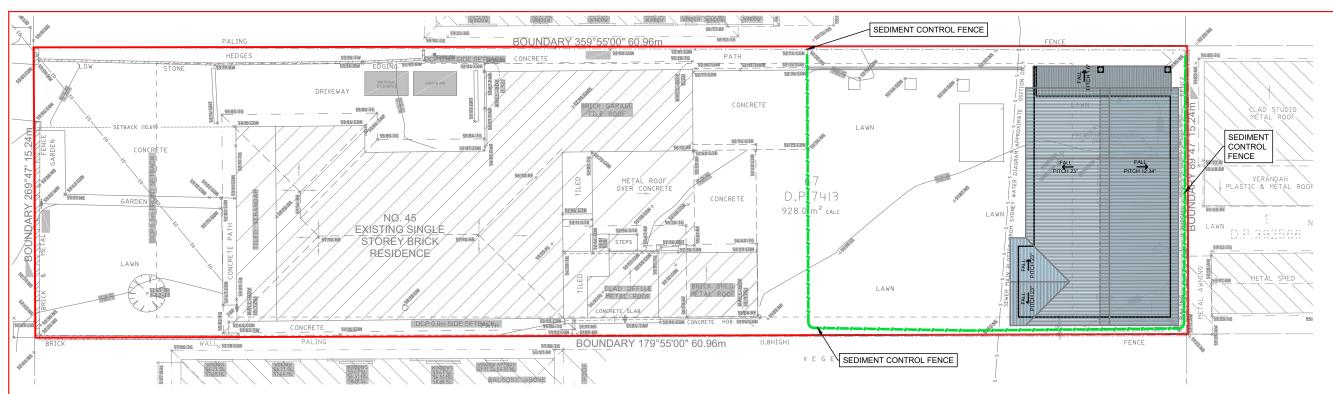
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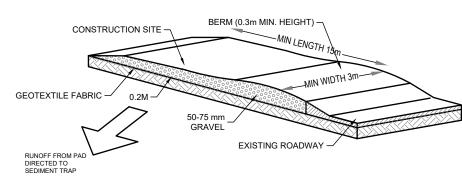
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#### SEDIMENT FENCE CONSTRUCTION NOTES:

- 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.



## STABILIZED SITE ACCESS

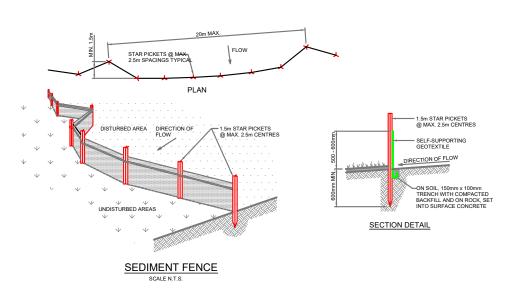
ARCHITECT/CLIENT Date Check Description 27/06/2023 KK BG HERMOSA DESIGN/ BG For Construction 07/07/2023 ΚK MR. & MRS. FALVO 02/09/2023 ΑK SD For Review SD For Construction 05/09/2023 ΑK For CC 19/10/2023 ΑK BG

## SEDIMENT CONTROL PLAN

**SCALE 1:200** 

#### CONSTRUCTION NOTES:

- 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
- ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILD ALIGNMENT AND AT LEAST 3 METRES WIDE.
- WHERE A SEDIMENT FENCE JOINS ONTO THE STABILIZED ACCESS, CONSTRUCT A HUMP IN THE STABILIZED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.



### TYP. SEDIMENTATION & EROSION CONTROL DETAILS

PROJECT:
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2099

Size Scale uno
A3 1:100

TITLE: SEDIMENT CONTROL PLAN

DWG no. Sheet no.
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## LEGEND:

NEW DOWNPIPE (Ø100 mm uPVC)

NEW 450x450 GRATED PIT

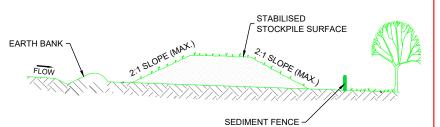
NEW Ø100 uPVC STORMWATER PIPE MIN. 1% FALL (U.N.O)

SEDIMENT CONTROL FENCE

RAINWATER / OSD TANK TO BASIX REQ.

#### NOTES

- PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES 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.
- 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.
- 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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