



PRIME ENGINEERING CONSULTANTS

PROPOSED DOUBLE STOREY DWELLING 17 PENHURST ROAD, ROSELANDS



PRIME
ENGINEERING
CONSULTANTS

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ARCHITECT:



DRAWN	DATE	DESCRIPTION	ISSUE	CLIENT	DESIGNED BY:	D.S.	ISSUE:	COVER PAGE
D.S.	24.02.2023	ISSUED FOR CDC	A	QIAN	CHECKED BY:	D.S.	A	
				SITE ADDRESS	SCALE:	1:100		
				17 PENHURST ROAD, ROSELANDS	JOB NO:	ARCH DRAWING NO:	SHEET NO:	
					PSW23083	2135	SW01	

LEGEND	
DP ●	DOWNPIPE
	STORMWATER LINE
SSD	SUBSOIL DRAINAGE LINE
OF	OVERFLOW LINE
SWRM	STORMWATER RISING MAIN
e	EXISTING STORMWATER LINE
SW SW	AUTHORITY STORMWATER LINE
HL HL	HIGH LEVEL STORMWATER LINE
S	AUTHORITY SEWER LINE
W	AUTHORITY WATER LINE
G G	AUTHORITY GAS LINE
	AUTHORITY ELECTRICITY LINE
FO FO FO	AUTHORITY FIBRE OPTIC LINE
TEL	AUTHORITY COMMS LINE
	FENCE LINE
	GRATED SURFACE INLET PIT
	GRATED SURFACE INLET PIT WITH ENVIROPOD INSERT
	JUNCTION PIT
	KERB INLET PIT
	EXISTING GRATED SURFACE INLET PIT
	EXISTING GRATED TRENCH DRAIN
	EXISTING JUNCTION PIT
	EXISTING KERB INLET PIT
	EXISTING TELSTRA PIT
	EXISTING HYDRANT
	EXISTING STOP VALVE
	EXISTING GAS VALVE
	EXISTING POWER POLE
	EXISTING BOUNDARY TRAP

LEGEND		
FF ●		FIRST FLUSH
	eSMH	EXISTING SEWER MANHOLE
OFP		OVERLAND FLOW PATH
RWO ●		RAINWATER OUTLET
CO ●		CLEAR OUT POINT
DDO ●		DISH DRAIN OUTLET
PD ●		PLANTER DRAIN
		CAPPING
	(1.01)	PIT TAG/NUMBER
RH		RAINHEAD
		DOWNPIPE DROP
		NON RETURN VALVE
		WALL PENETRATION
DP ●		DOWNPIPE SPREADER
		WARNING LIGHT
0.00 ●		SPOT LEVELS
		BENCHMARK



DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

ABBREVIATIONS:

Ø or DIA	DIAMETER
CBR	CALIFORNIA BEARING RATIO
CH	CHAINAGE
CL	CENTER LINE
CO	CLEAR OUT
DD	DISH DRAIN
DDO	DISH DRAIN OUTLET
DEJ	DOWELLED EXPANSION JOINT
DGB	DENSE GRADED BASECOURSE
DGS	DENSE GRADED SUB-BASE
DP	DOWNPIPE
e	EXISTING
FFL	FINISHED FLOOR LEVEL
GTD	GRATED TRENCH DRAIN
GSIP	GRATED SURFACE INLET PIT
HYD	HYDRANT
IJ	ISOLATING JOINT
IK	INTEGRAL KERB
IL	INVERT LEVEL
IP	INTERSECTION POINT
KIP	KERB INLET PIT
KO	KERB ONLY
K&G	KERB & GUTTER
KR	KERB RETURN
LS	LONGITUDINAL SECTION
NGL	NATURAL GROUND LEVEL
OFP	OVERLAND FLOW PATH
OSD	ON-SITE DETENTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RK	ROLL KERB & GUTTER
RL	REDUCED LEVEL
RW	RETAINING WALL
RWT	RAINWATER TANK
SJ	SAWN CONTROL JOINT
SMH	SEWER MAN HOLE
SW	STORMWATER
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
SWS	STORMWATER SUMP
SV	STOP VALVE
TOK	TOP OF KERB
TOW	TOP OF WALL
TWL	TOP WATER LEVEL
TP	TANGENT POINT
UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UNO	UNLESS NOTED OTHERWISE
WPJ	WEAKENED PLANE JOINT
FF	FIRST FLUSH DEVICE
TYP	TYPICAL
BM	BENCH MARK

DRAINAGE NOTES:

ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED

100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE

MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm

ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS

BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL

ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)

SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS

HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS

PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT

ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP

ALL PITS SHALL BE MAINTAINED REGULARLY

TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER

MAXIMUM FRONT ENTRY PIPE: –
STRAIGHT ENTRY – ø750
SKEW ENTRY 45° – ø525

ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES

COMPRESSIVE STRENGTH f_c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS

ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS

ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm

STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

STORMWATER PIPE BEDDING/PAVING NOTES:

WHERE TRENCH BASE IS ROCK A MINIMUM OF 75mm BEDDING TO BE PROVIDED UNDER PIPE COLLARS.

STORMWATER PIPE BEDDING DETAIL TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS. BEDDING DETAILS TO BE CONFIRMED UPON EXCAVATION & PRIOR TO INSTALLATION OF PIPEWORK.

FOOTPATH REINSTATEMENT NOTES:

REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO THE EXISTING SUBGRADE.

SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION.

REINSTATE FOOTPATH SUBGRADE.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS:

SELECT FILL	95% MODIFIED
SELECT FILL (LESS THAN 300mm BELOW BASE COURSE)	98% MODIFIED
BASE COURSE	100% MODIFIED

EROSION & SEDIMENT CONTROL NOTES:

PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL).

ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

SURVEY

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY COMPLETE PRECISION SURVEYS, BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. PRIME ENGINEERING CONSULTANTS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAW.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT PRIME ENGINEERING CONSULTANTS.

ADOPT DATUM RL 31.41. (A.H.D) AS PER COMPLETE PRECISION SURVEYS.

DRAWING REGISTER		
NUMBER	NAME	REVISION
SW01	COVER SHEET	A
SW02	SPECIFICATIONS SHEET	A
SW03	STORMWATER DRAINAGE PLAN	A
SW04	STORMWATER DRAINAGE DETAILS	A



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DESIGN NOTES:

THE SITE IS LOCATED IN THE CANTERBURY–BANKSTOWN CITY COUNCIL.

SITE AREA = 433.60m²

THE DEVELOPMENT CONSISTS OF THE CONSTRUCTION OF A DOUBLE STOREY DWELLING.

ALL NEW STORMWATER PIPES TO HAVE A MINIMUM OF 100mm CONCRETE OR 300mm TOPSOIL COVER U.N.O.

INSTALL CLEAR OUT FOR INSPECTION AND MAINTENANCE PURPOSES WHERE REQUIRED.

RAINWATER TANK TO BE EQUIPPED WITH FIRST FLUSH AND MOSQUITO PROTECTION DEVICES (REFER DETAIL).

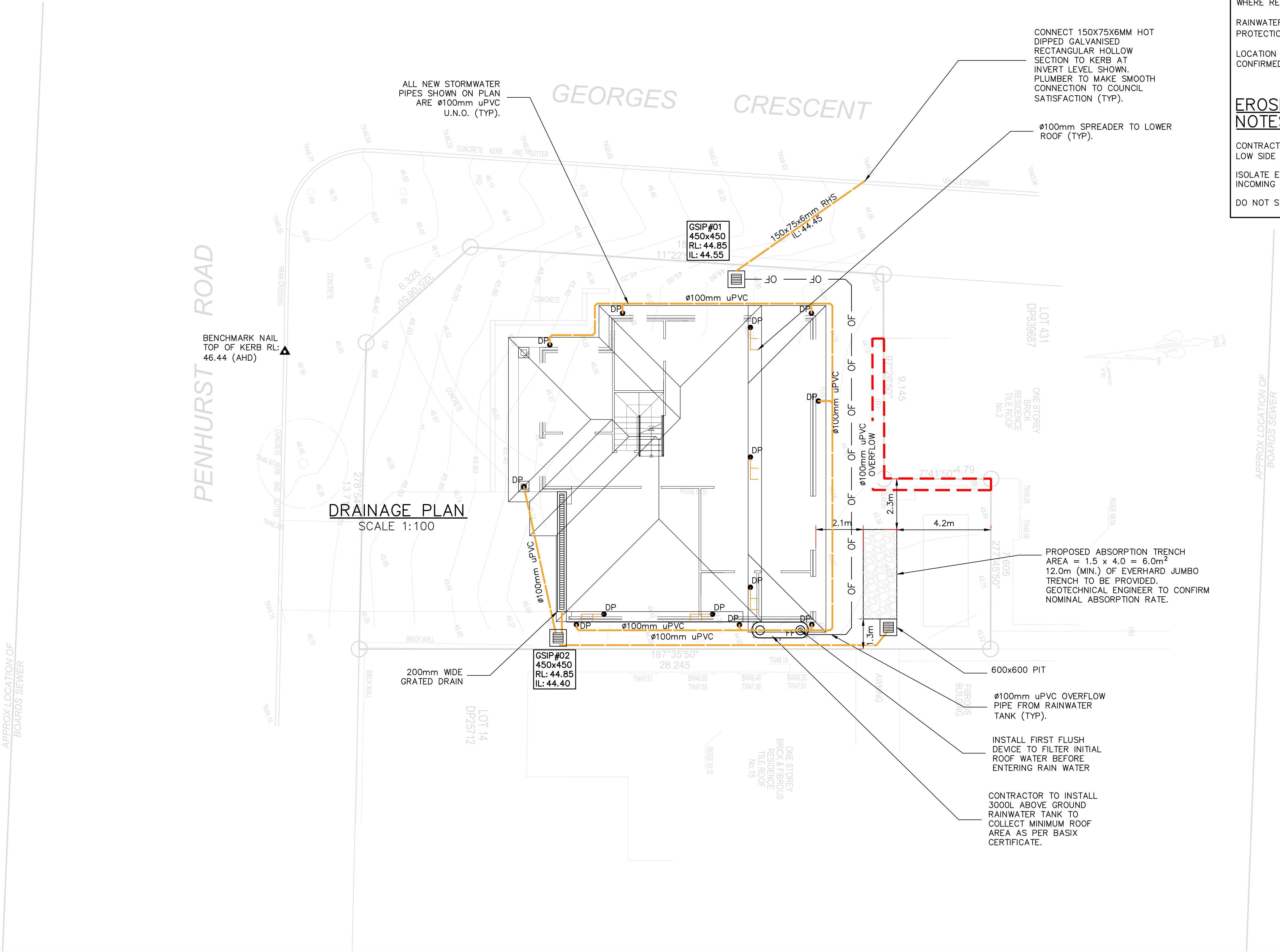
LOCATION RAINWATER TANK SHOWN ON PLAN IS INDICATIVE. TO BE CONFIRMED DURING CONSTRUCTION.

EROSION & SEDIMENT CONTROL NOTES:

CONTRACTOR TO PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYP).

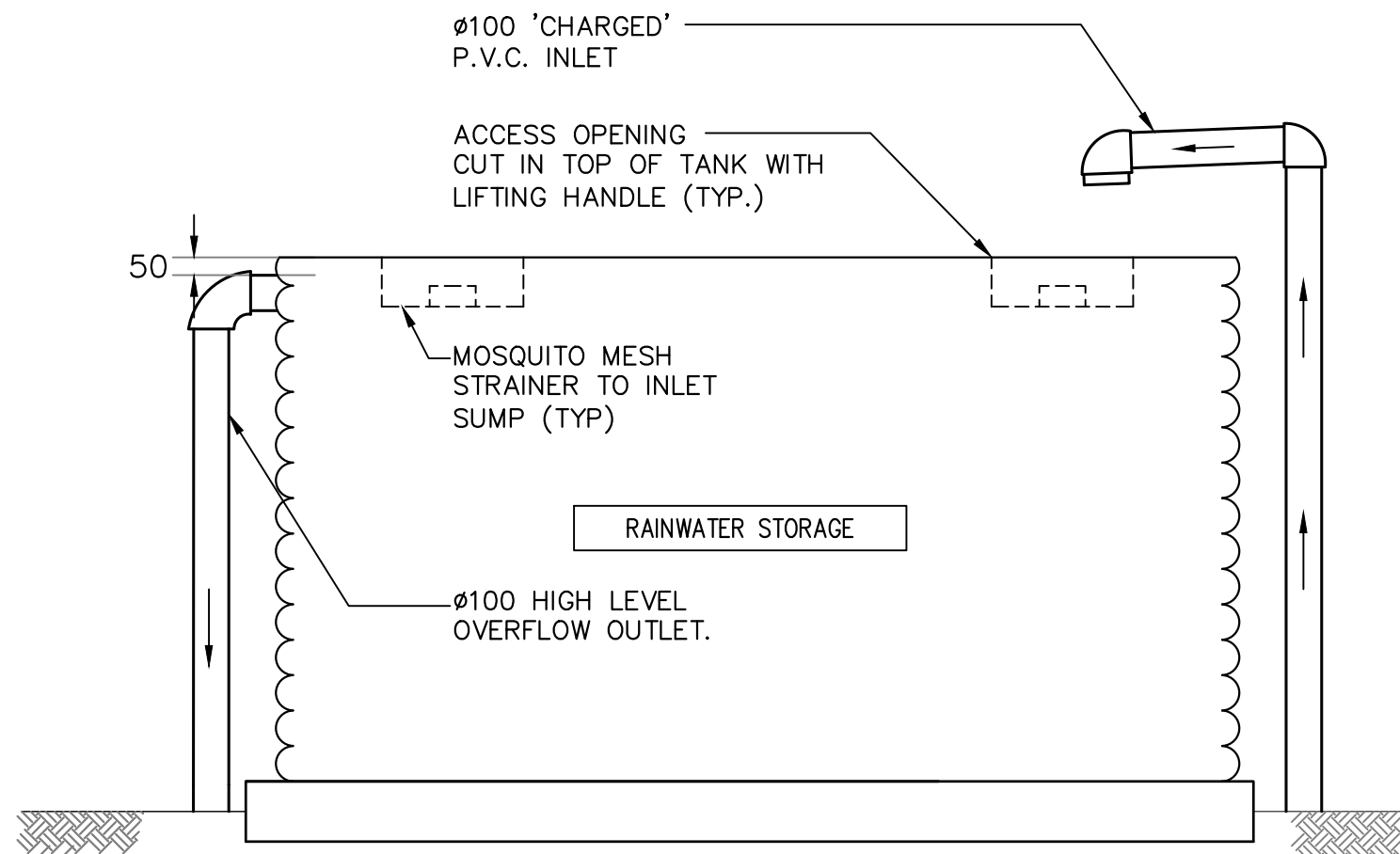
ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

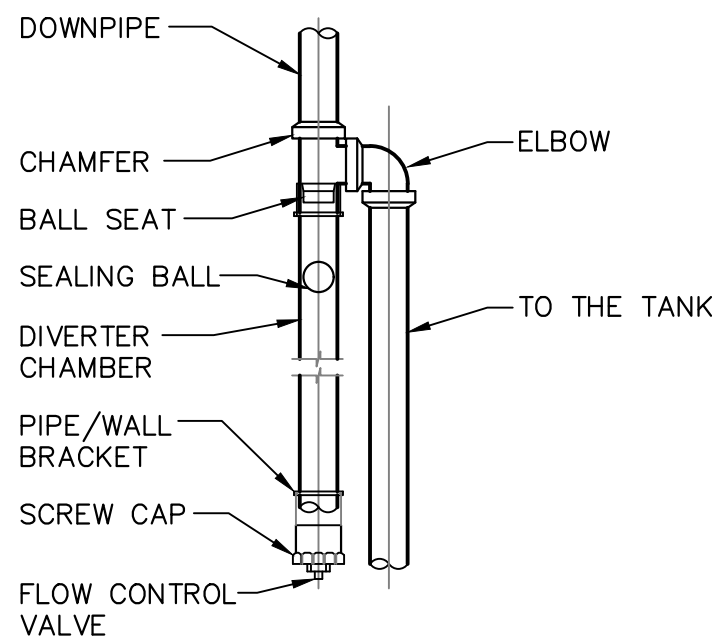




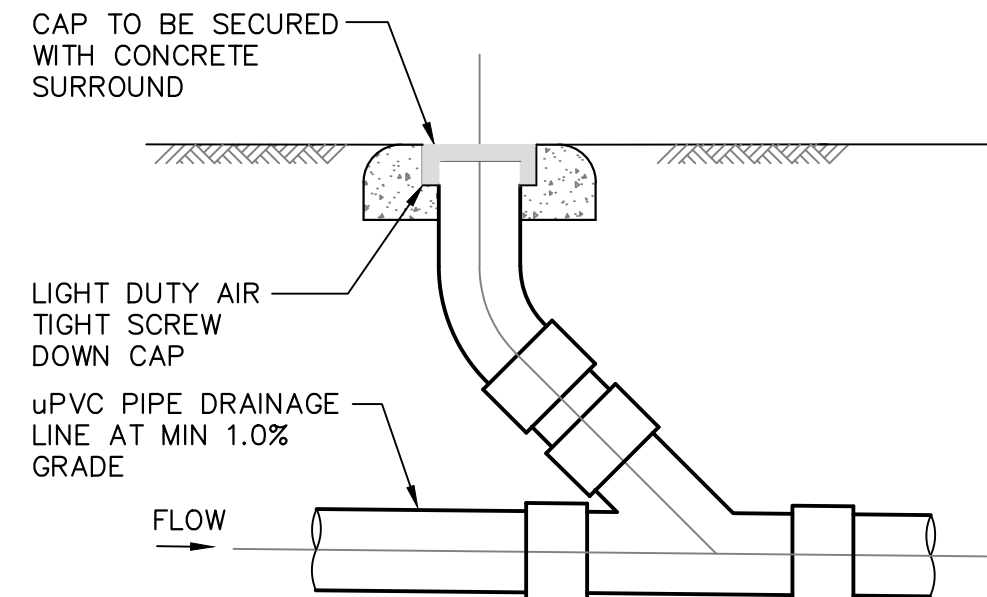
DETAIL 1
RAINWATER SIGN
SCALE 1:10



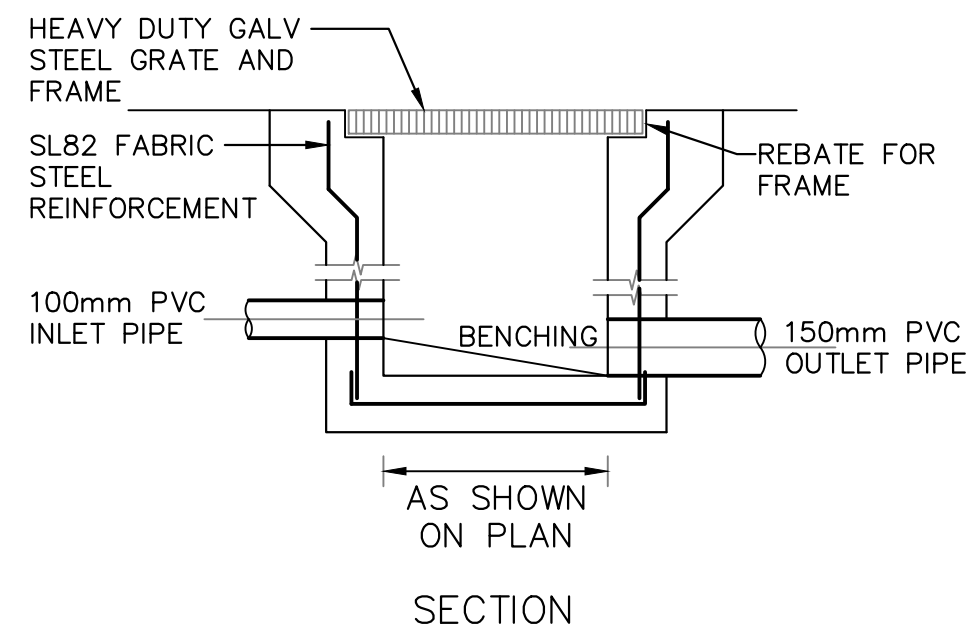
DETAIL 2
TYPICAL ABOVE GROUND
RAINWATER TANK
NOT TO SCALE



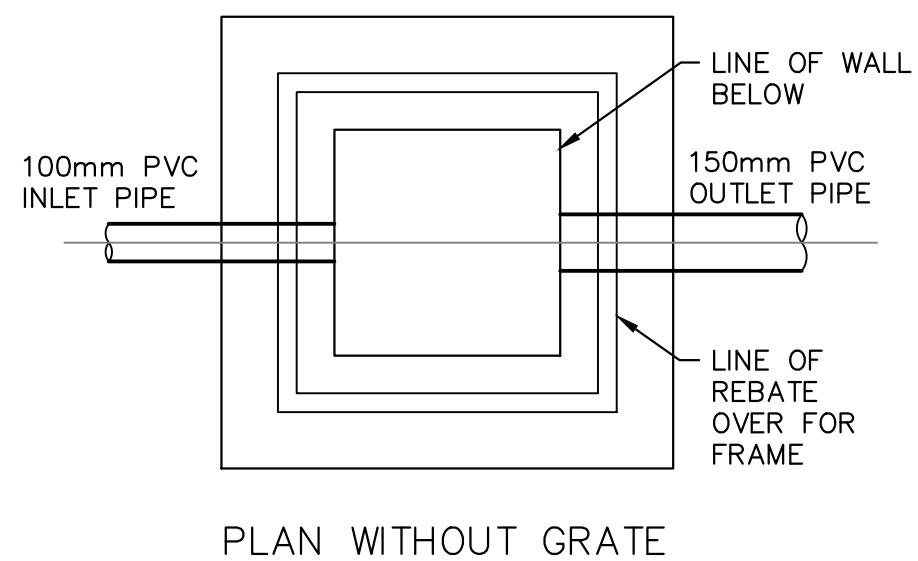
DETAIL 3
FIRST FLUSH DIVERTER
SCALE 1:20



DETAIL 4
CLEANING EYE
SCALE 1:20

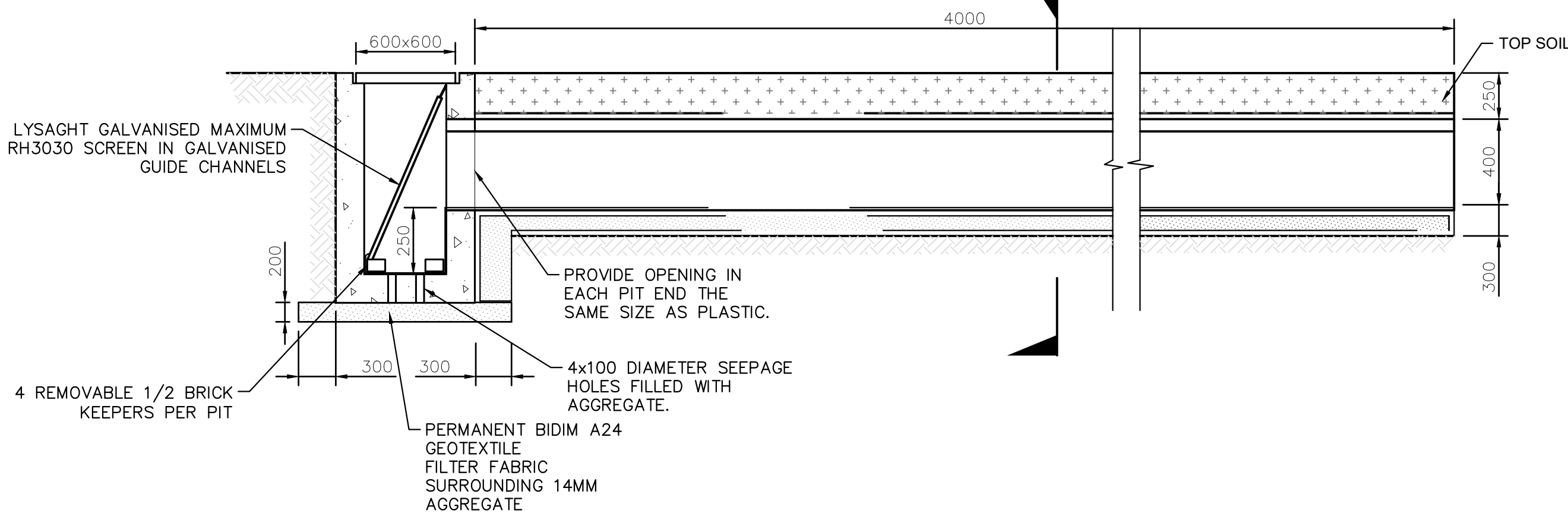


SECTION

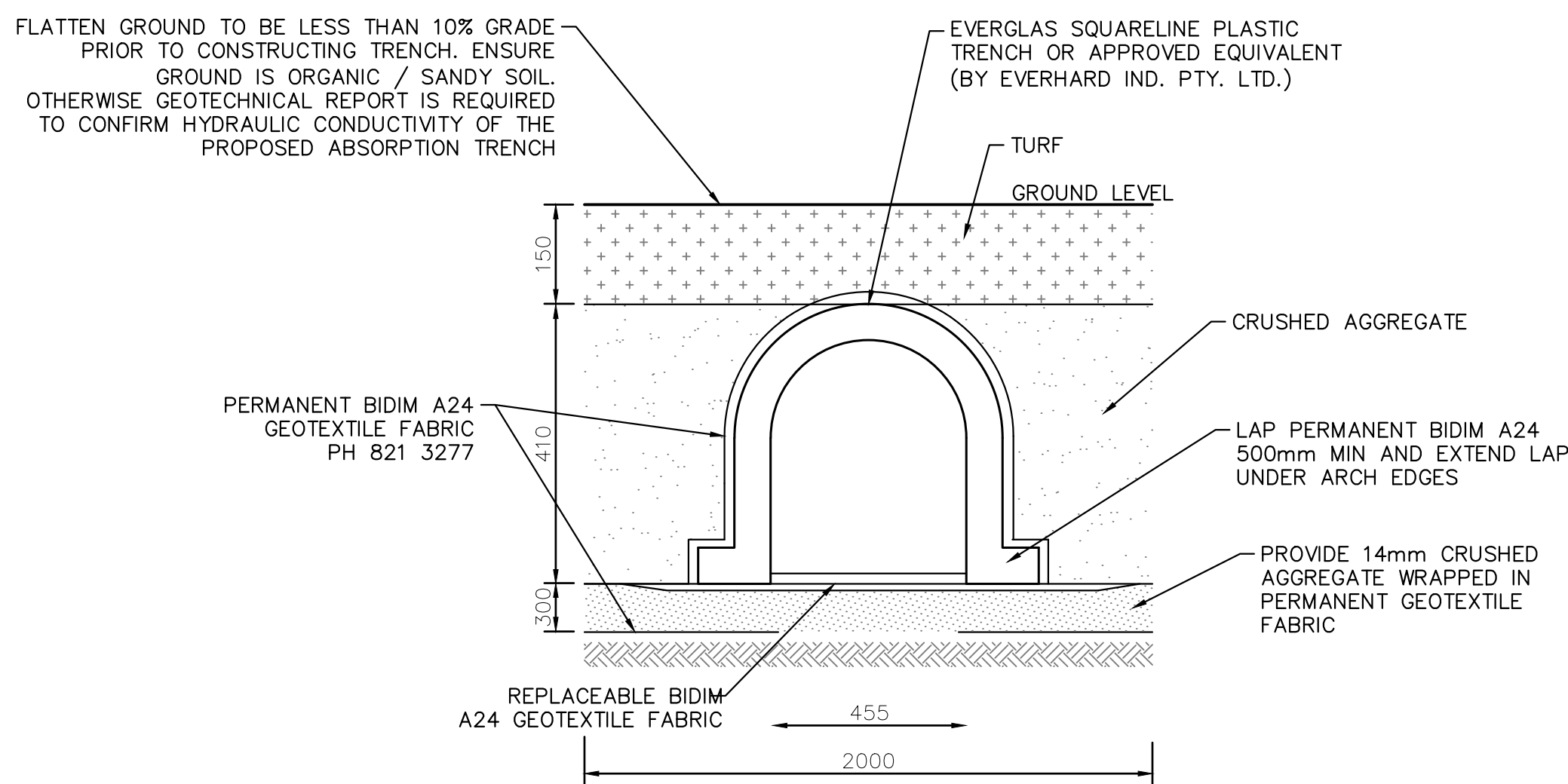


PLAN WITHOUT GRATE

DETAIL 5
STORMWATER PIT
SCALE 1:20



DETAIL 6
TYPICAL SECTION THROUGH ABSORPTION TRENCH
SCALE N.T.S



TYPICAL SECTION B
SCALE N.T.S

ENGINEERING SPECIFICATIONS APPENDIX 1 - ABSORPTION DESIGN CALCULATION						
CANTERBURY-BANKS TOWN CITY COUNCIL						
ADDRESS		17 PENSHURST ROAD, ROSELANDS				
Fill in only those boxes that appear as:						
Gravel Base						
Width (m)	Length (m)	Base Area (m²)		Base Thickness (m)	Storage (m³)	
1.5	4	6		0.3	0.36	
Pits						
Width 1 (m)	Width 2 (m)	Depth (m)	Vol. (m³)	No.	Storage (m³)	
0.6	0.6	0.9		1	0.32	
Pipe						
Pipe Storage(m³/m)=			No.	Storage (m³)		
0.175			3	2.1		
Extra Above Ground Storage=			0	Storage (m³)		
				0		
Available	Storage (m³) =		2.78			
Calculating Inflows, Outflows and Storages						
Contributing Impervious Area (m²)=				63.75		
Nominal Absorption Rate (l/s/m²) =				0.15		
Design Absorption Rate (l/s/m²) =				0.1125	Outflow (l/s) =	0.675
Time (min)	Intensity (mm/hr)	Inflow (l/s)	Inflow Vol (m³)	Outflow Vol (m³)	Required Vol (m³)	Avail-Reqd (m³)
5	233	4.13	1.24	0.20	1.04	1.75
6	219	3.88	1.40	0.24	1.15	1.63
7	208	3.68	1.55	0.28	1.26	1.52
8	198	3.51	1.68	0.32	1.36	1.43
9	190	3.36	1.82	0.36	1.45	1.33
10	183	3.24	1.94	0.41	1.54	1.24
11	175	3.10	2.05	0.45	1.60	1.18
12	170	3.01	2.17	0.49	1.68	1.10
13	165	2.92	2.28	0.53	1.75	1.03
14	160	2.83	2.38	0.57	1.81	0.97
15	155	2.74	2.47	0.61	1.86	0.92
20	137	2.43	2.91	0.81	2.10	0.68
25	123	2.18	3.27	1.01	2.25	0.53
30	113	2.00	3.60	1.22	2.39	0.40
45	92	1.63	4.40	1.82	2.58	0.21
60	80	1.42	5.10	2.43	2.67	0.11
90	62	1.10	5.93	3.65	2.28	0.50
120	51	0.90	6.50	4.86	1.64	1.14
Rainwater Tank						
Vol of Tank (m³)		Offset Applies		Offset Allowance		
0		N		0		
NOTE THAT COLUMN 'Avail-Reqd' MUST BE POSITIVE FOR ALL VALUES.						
THE DESIGN IS: SATISFACTORY						



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SITE STORMWATER
DRAINAGE PLAN