

- (A) - EASEMENT TO DRAIN WATER 1 WIDE (DP 614241 & DP 712744)
(B) - EASEMENT TO DRAIN WATER 1.8 WIDE (DP 614241)
(C) - EASEMENT FOR SEWERAGE PURPOSES OVER EXISTING LINE OF PIPES (DP 712744)
(D) - RIGHT OF WAY AND EASEMENT FOR SERVICES 5 WIDE(DP 873902)

STORMWATER LAYOUT NOTES

- 1) PITS DEEPER THAN 600mm TO BE 600 X 900 W, ELSE 375 SQ U.N.O.
- 2) ALL PIPES TO HAVE 1% MIN. GRADE U.N.O.
- 3) ALL DOWNPIPES TO BE 100 X 50 BOX or 90 Ø.
- 4) PIPES TO BE U.P.V.C. OR STORMWATER PIPE TO A.S.1254.
- 5) PITS TO BE STANDARD PRECAST CONCRETE PITS OR BRICK RENDERED WITH CONCRETE HEAVY DUTY GRATES SIZED AS PITS PER PLAN.
- 6) NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS.
- 7) PERSONS UTILISING THIS PLAN FOR ANY PURPOSES SHALL VERIFY THE DATUM & RESPECTIVE LEVELS PRIOR TO COMMENCING ANY WORKS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 8) DRIVEWAY LEVELS PROVIDED FOR DRAINAGE DESIGN PURPOSES ONLY. LEVELS MAY BE ADJUSTED TO SUIT FINAL HOUSE CUT/FILL CONDITIONS BUT NEED TO MAINTAIN INTENT OF DRAINAGE SYSTEM. ENGINEER TO BE CONSULTED PRIOR TO CONSTRUCTION TO ENSURE INTENT MAINTAINED.
- 9) END OF EXISTING DRAINAGE LINE TO BE EXPOSED & LEVELS CONFIRMED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
- 10) BUILDERS TO ENSURE SERVICES CONNECTIONS TO HOUSE DO NOT CONFLICT WITH DRAINAGE DESIGN REQUIREMENTS.
- 11) ALL WORKS TO BE CONSTRUCTED TO GOOD BUILDING PRACTICE & MATERIALS TO MEET ACCEPTED SPECIFICATIONS.

LEGEND

P1	PIT LABEL	G.F.L.	GARAGE FLOOR LEVEL
	SUMP PIT	• 0.00	EXISTING REDUCED LEVEL
	300x300 FLOOR GULLY	• R.L. 157.00	PROPOSED REDUCED LEVEL
	100/150 Ø GARDEN GULLY	■ DP	DOWNPIPE
	DRAINAGE PIPE	■ SP	SPITTER/SPREADER
	AERIAL PIPE	⊙	CLEANING EYE
S.L.	SURFACE LEVEL	+++++	SEDIMENT FENCE
I.L.	INVERT LEVEL	— — —	AG LINE
F.F.L.	FINISHED FLOOR LEVEL	⇒	OVERLAND FLOW

BELOW GROUND DETENTION TANK

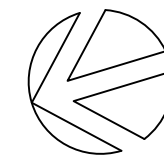
SHOWN HATCHED	
MAX POOL RL	= 85.55
MAX DEPTH	= 1000mm
VOLUME STORED	= 8.00 m3
VOLUME REQUIRED	= 8.00 m3

LENGTH	= 3800mm
WIDTH	= 2200mm
AVERAGE DEPTH	= 955mm
VOLUME STORED	= 8.00 m3

DRAINAGE REQUIREMENT TO WC POLICY

SITE AREA	= 876 m2
EFFECTIVE LOT AREA	= 701 m2
MINIMUM STORAGE	= 200 m3/ha
MAXIMUM DISCHARGE	= 400 l/s/ha
REQUIRED STORAGE	= 14.0 m3
PERMITTED DISCHARGE	= 28.0 l/s

RAINWATER TANK	= 6.14 m3
ON SITE DETENTION STORAGE	= 8.00 m3
PROVIDED STORAGE	= 14.1 m3
UNCONTROLLED DISCHARGE	= 8.00 l/s
CONTROLLED DISCHARGE	= 20.0 l/s



SITE STORMWATER MANAGEMENT LAYOUT

SCALE 1:200/A3

PIPE SCHEDULE

TAG	SIZE	MATERIAL	GRADE	DESCRIPTION
'A'	100 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'B'	150 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'X'	100 Ø	P.V.C	CHARGED	TO FEED RAINWATER TANK
'F'	100 Ø	P.V.C	1% MIN	FLUSHING LINE - CAPPED END

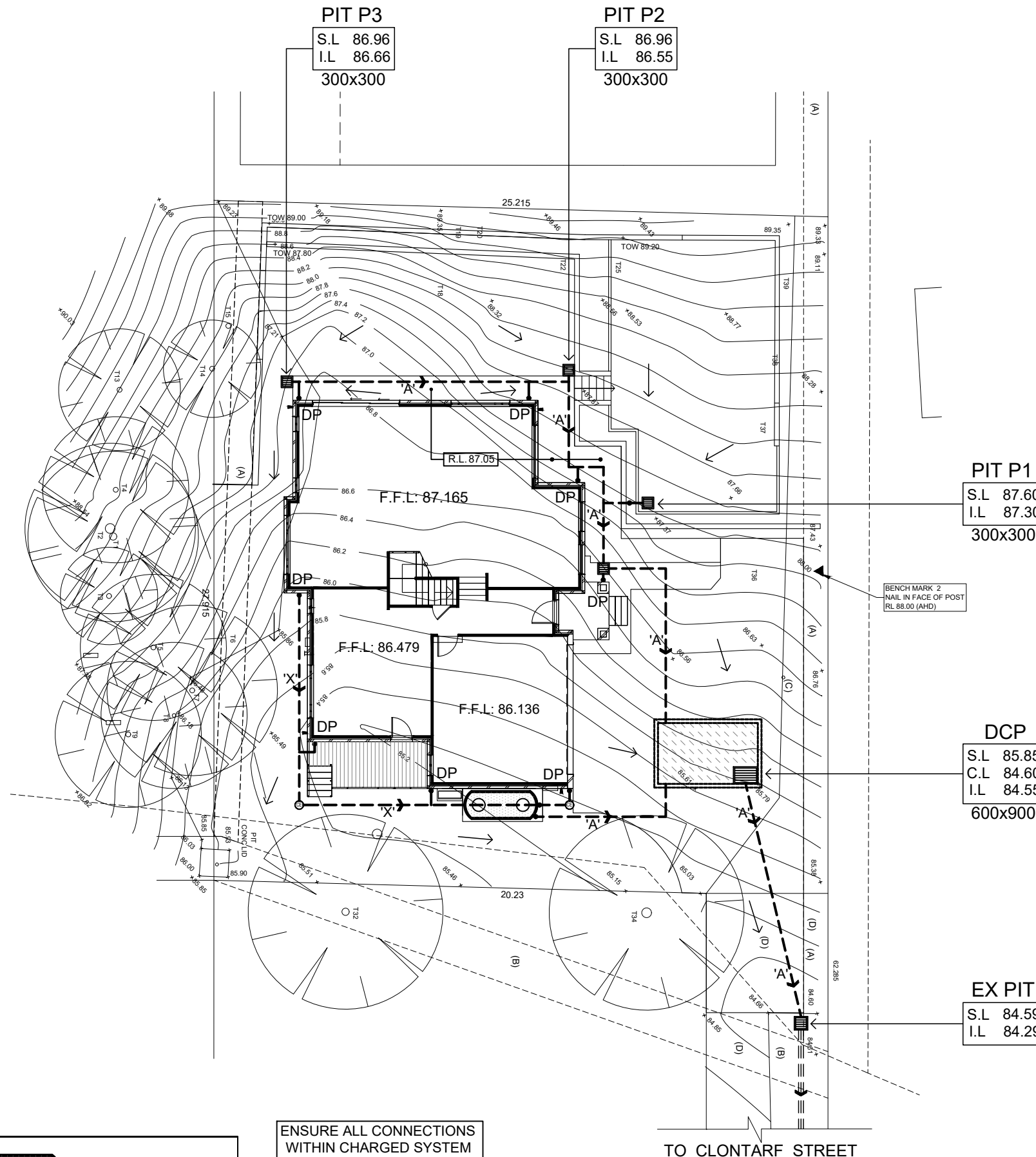
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JOB NUMBER:
SW21210
DRAWING NUMBER:
SW21210 - S1

SW/212/10 - S1

PROJECT:	PROPOSED RESIDENTIAL DWELLING AT LOT 174, # 122 CLONTARF STREET, NORTH BALGOWLAH		
DRAWING:	SITE STORMWATER MANAGEMENT LAYOUT		
DESIGNED	DRAWN	CHECKED:	ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG
A.W	N.W		
A		DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY DESIGNING ENGINEER	
A	ISSUED FOR DEVELOPMENT APPLICATION		17/06/21
ISSUE	REVISION DESCRIPTION		APPR. DATE



RAINWATER TANK
AS SHOWN ON PLAN

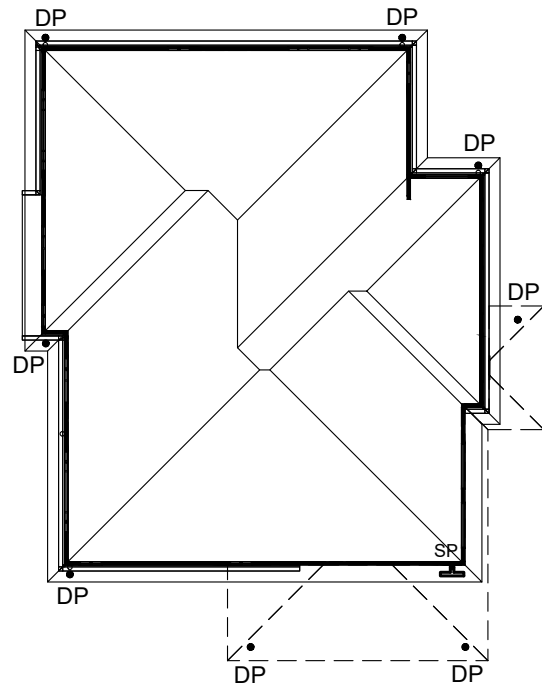
PROVIDE A RAINWATER TANK
6142L IN CAPACITY TO SUIT
ALL BASIX REQUIREMENTS.
TANK TO BE CONNECTED AS
SPECIFIED IN BASIX REPORT.

ENSURE ALL CONNECTIONS
WITHIN CHARGED SYSTEM
ARE SOLVENT WELDED

ALL DOWNPIPES ARE TO BE
ENTIRELY PVC. PIPES ARE TO
BE SEALED UPTO U/S OF
ROOF GUTTERS

ROOF GUTTERS I.L. 89.60
TANK INLET I.L. 87.10
HEAD PRESSURE - 2500mm

TO CLONTARF STREET

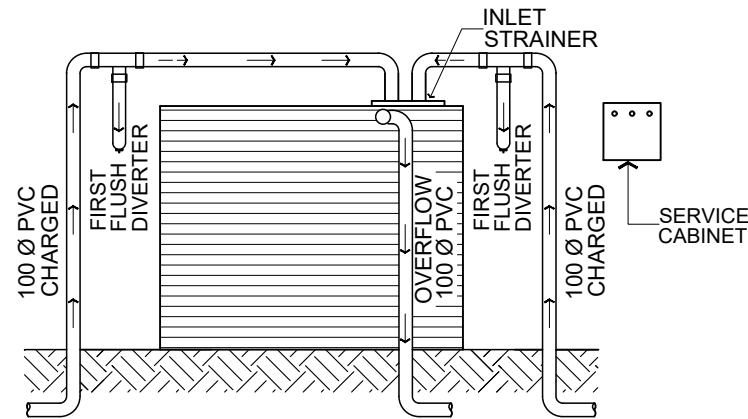


ROOF & FIRST FLOOR LAYOUT
SCALE 1:200/A3

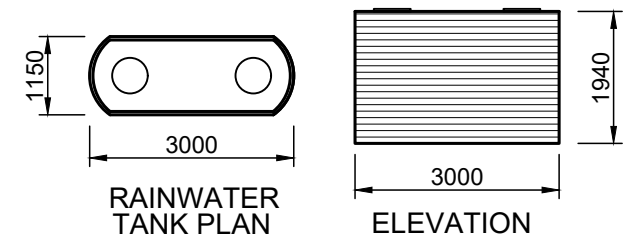
ENSURE ALL CONNECTIONS
WITHIN CHARGED SYSTEM
ARE SOLVENT WELDED

ALL DOWNPIPES ARE TO BE
ENTIRELY PVC. PIPES ARE TO
BE SEALED UP TO U/S OF
ROOF GUTTERS

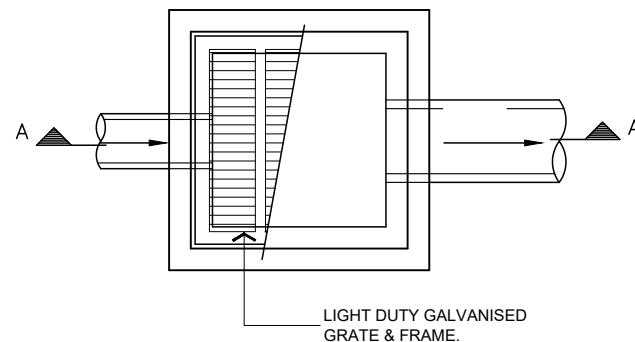
ROOF GUTTERS I.L. 89.60
TANK INLET I.L. 87.10
HEAD PRESSURE - 2500mm



RAINWATER TANK CONFIGURATION



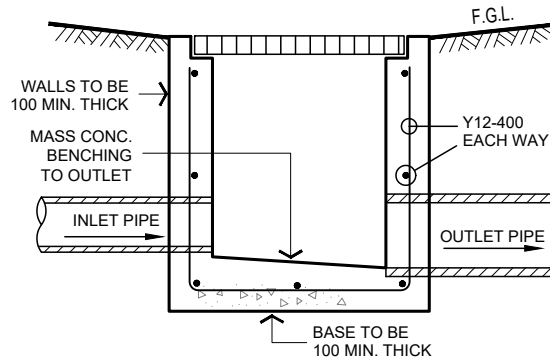
6142L SLIMLINE TANK BY KINGSPAN



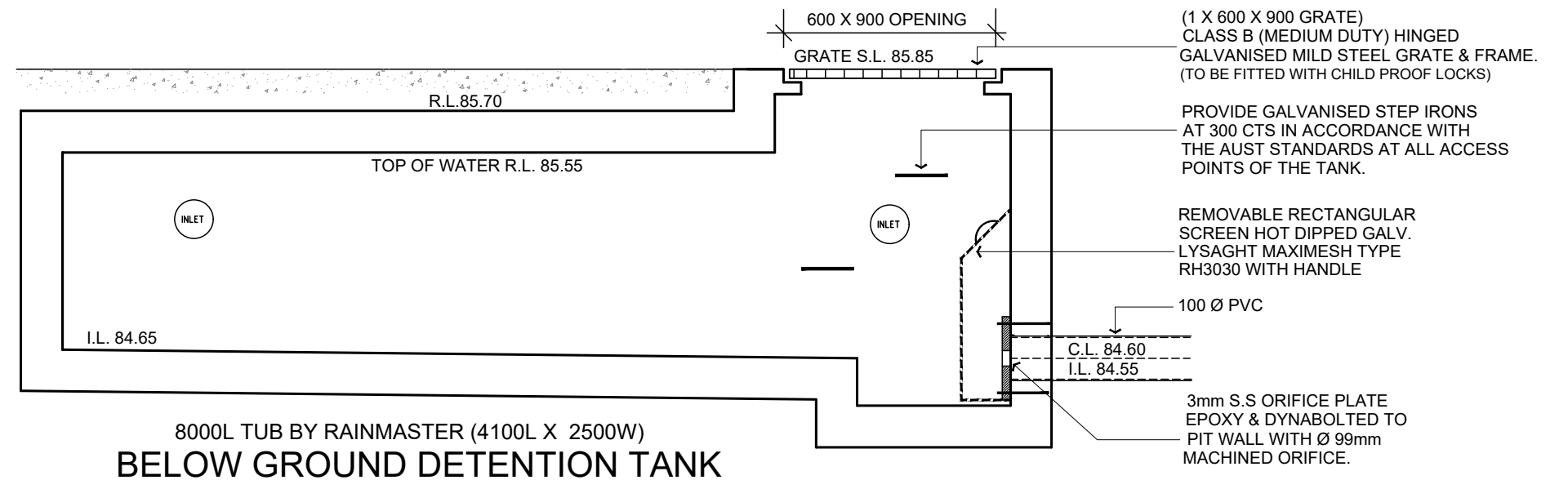
TYPICAL PIT DETAIL

IN TRAFFICABLE AREAS
BRICKWORK/BLOCKWORK WALLS OR
PRECAST CONCRETE PITS MAY BE USED
SUBJECT TO APPROVAL

IN NON-TRAFFICABLE AREAS
FIBRE-GLASS OR
HARD-PLASTIC PITS MAY BE USED
SUBJECT TO APPROVAL

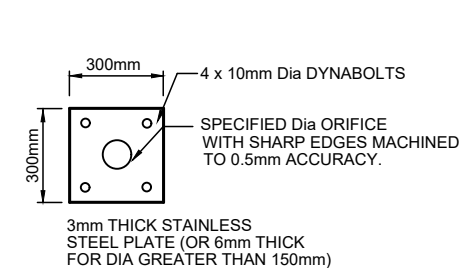


TYPICAL SECTION A

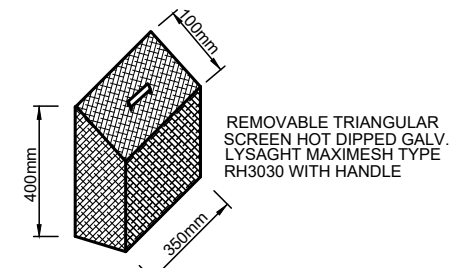


8000L TUB BY RAINMASTER (4100L X 2500W)
BELOW GROUND DETENTION TANK

ORIFICE CALCULATION			
Calculate orifice diameter in 100 year event			
Diameter, $d = (0.48 \times Q / h^{0.5})^{0.5}$	Q = P.S.D. (m3/sec)		
$d = 0.0992 \text{ m}$	Q = 0.02000 m3/sec		
99 mm	h = Maximum height above orifice (m) (not HED)		
	= 0.95 m		
Using orifice equation to check the pipe outflow:			
$Q = CA(2gh)^{0.5}$	A = Area of orifice (mm2)		
Q = 0.02 m3/sec	A = 0.0077 mm2		
20.04 L/sec	h = Maximum height above orifice (m) (not HED)		
	= 0.95 m		



ORIFICE PLATE DETAIL



MAXIMESH SCREEN



TO BE PLACED AT ALL
TANK ACCESS GRATES