

REFER TO UPPER FLOOR
DRAINAGE PLAN FOR
CONTINUATION

3m LONG 410 JUMBO ABSORPTION SYSTEM WITH
OVERFLOW INTO 4m LONG LEVEL SPREADER STRIP DRAINS
SOILS HYDRAULIC CONDUCTIVITY VALUE = 1.34×10^{-4}
(REFER TO SOIL PERMEABILITY TEST BY ASCENT
CONSULTING)

LOWER FLOOR DRAINAGE PLAN
SCALE 1:200

2x3460L RAINWATER TANK (2500 LENGTH x
800 WIDTH x 1860 HEIGHT) INTERCONNECTED
FOR OSD & RAINWATER RE-USE REQUIREMENT
BASE RL 48.80
OVERFLOW RL 50.50

UPPER FLOOR DRAINAGE PLAN
SCALE 1:200

- DOWNPIPE TO BE 150x100SQR OR Ø150
- GUTTER SIZE 180 WIDTH x 100 DEPTH MINIMUM

DESIGN SUMMARY

NORTHERN BEACH COUNCIL - MANLY DCP

SITE AREA = 490.50 m²
EXISTING IMPERVIOUS AREA = 405 m² (82.56%)
PROPOSED IMPERVIOUS AREA = 220 m² (45.00%)

THE PROPOSED DEVELOPMENT IS SINGLE DWELLING. DUE TO THE SITE IS SLOPED TOWARD THE REAR AND DOWNSTREAM EASEMENT CANNOT BE ACHIEVED, THEREFORE:

- PROPOSED RWT WITH ORIFICE AS OSD TO CONTROL ROOF RUN-OFF
- PROPOSED ABSORPTION SYSTEM FOR SURFACE RUN-OFF AND REDUCE SITE DISCHARGE RATE.
- OVERFLOW FROM ABSORPTION SYSTEM WILL BE DISCHARGED VIA 4m LENGTH LEVEL STRIP DRAINS.

SITE DISCHARGE ASSESSMENT BY DRAINS ILSAX MODEL

ARI	PRE DEV	POST DEV			OSD VOLUME (m ³)	Ø ORIFICE (m ³)
	Q _{PRE} (l/s)	Q _{OSD} (l/s)	Q _{BYPASS} (l/s)	Q _{POST} (l/s)		
5	12	3	6	9	2.48	40
100	26	4	15	19	5.15	40

OSD VOLUME REQUIRED = 5.15 m³ AT 1% AEP 27 min STORM
OSD VOLUME PROVIDED = 5.42 m³
ORIFICE DIAMETER = 40mm

ISSUE FOR APPROVAL



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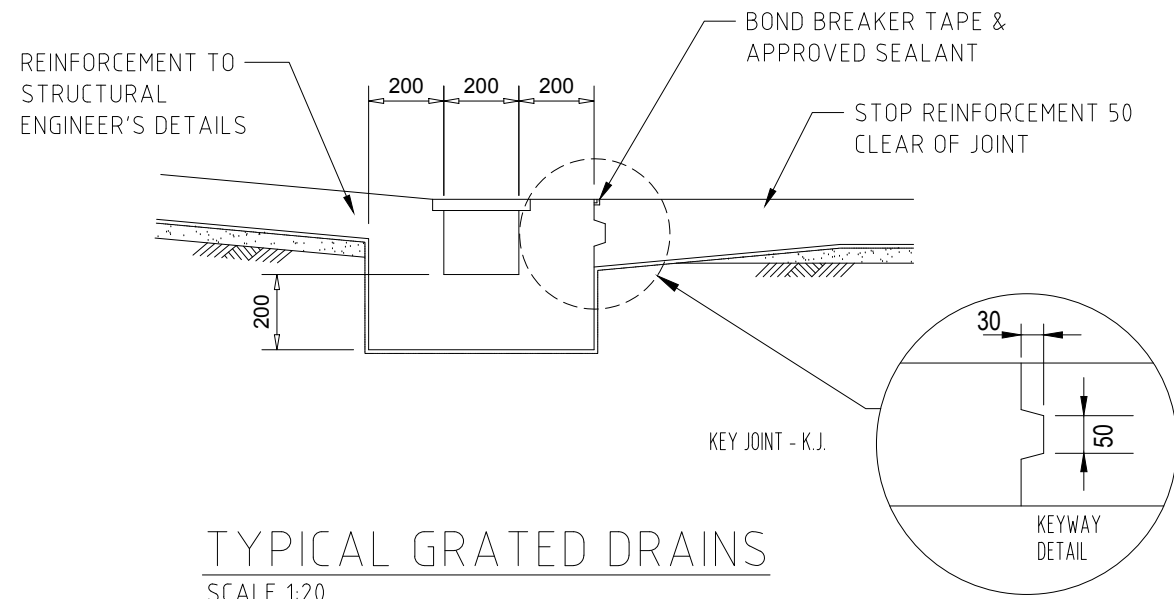
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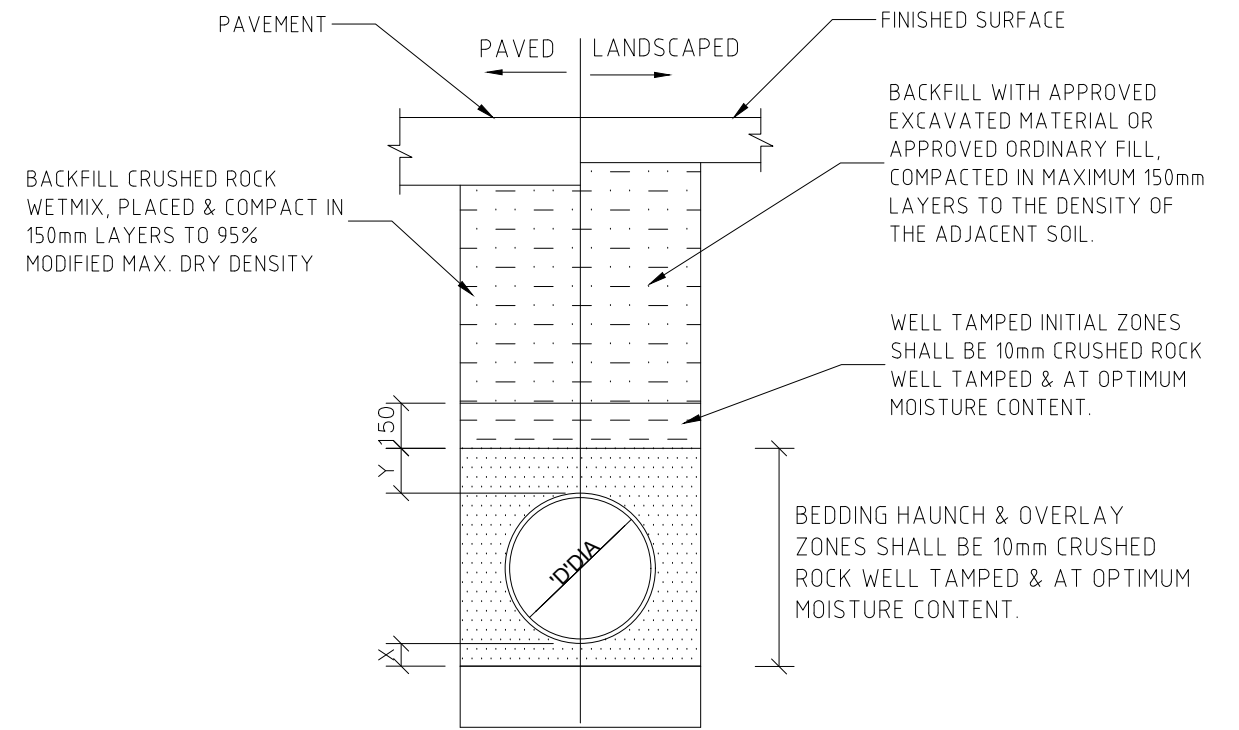
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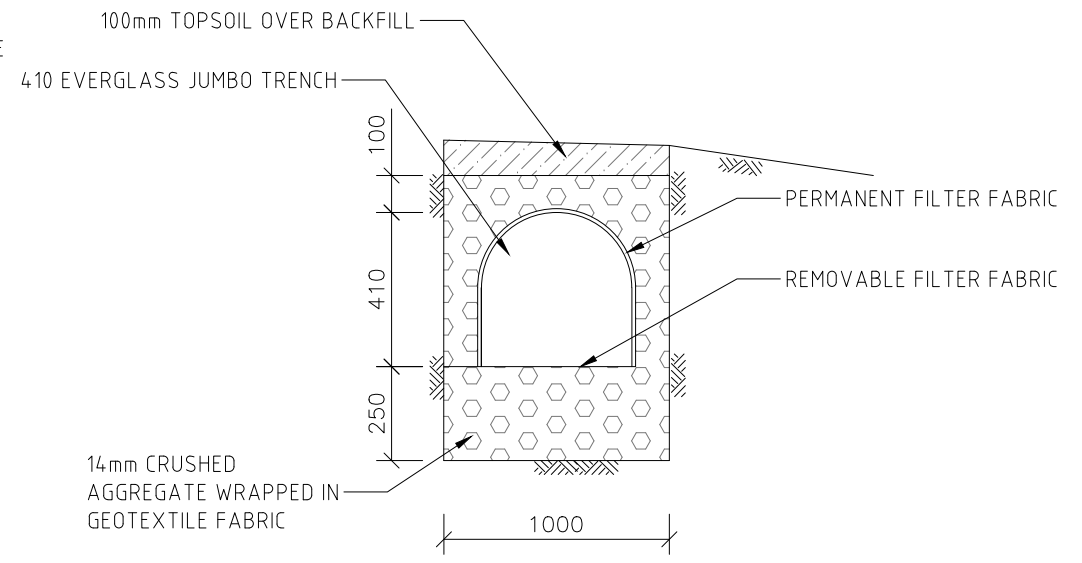
TYPICAL GRATED DRAINS
SCALE 1:20



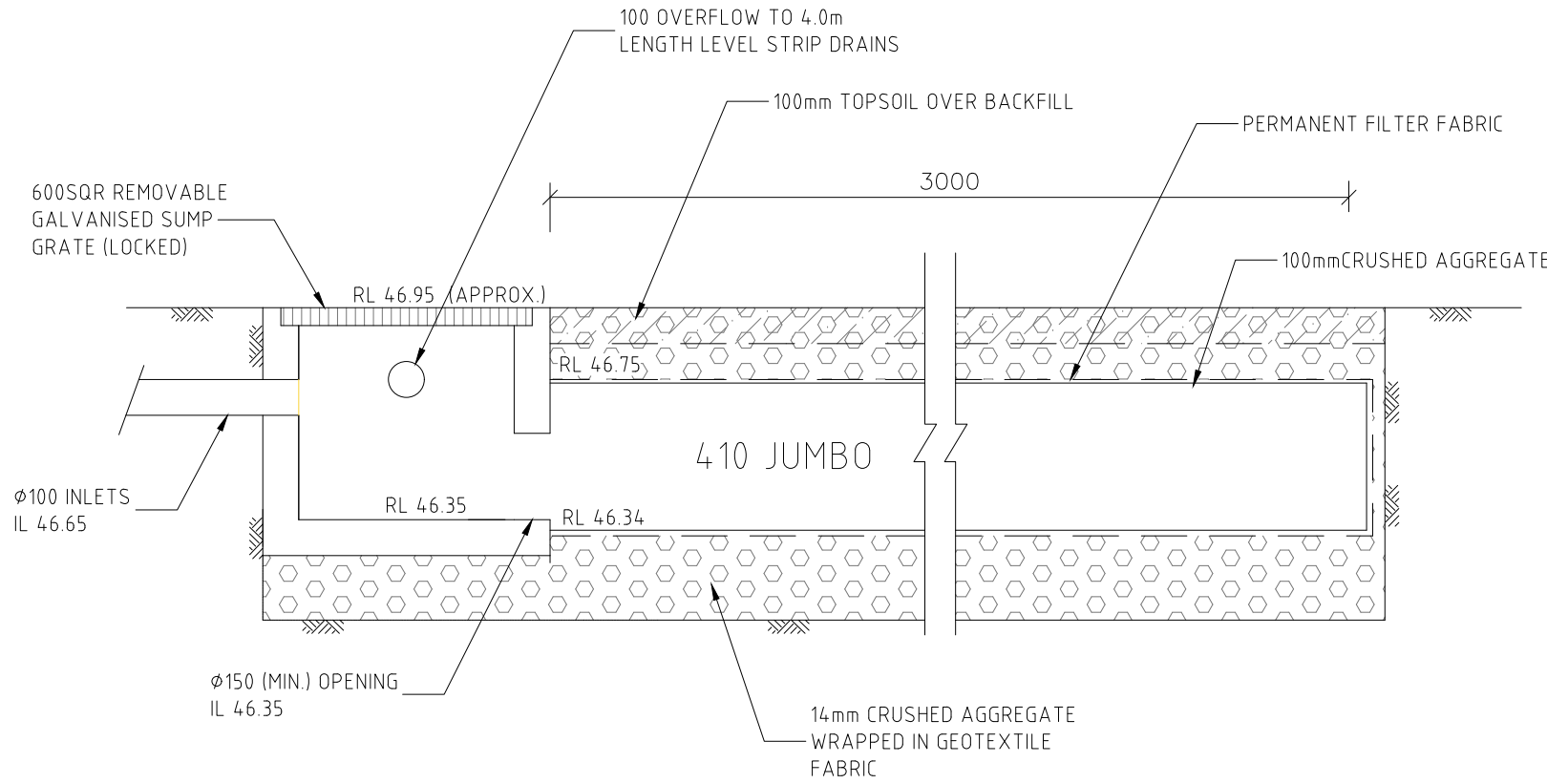
NOTE:
1 REFER TO PIPE LAYING SPECIFICATIONS FOR DETAILS.

PIPE DIA 'D'	W	X MIN	Y
100-150	300	75	75
225-300	600	75	75

UPVC PIPE
TYPICAL PIPE LAYING DETAIL
NTS



ABSORPTION SYSTEM CROSS SECTION
SCALE 1:20



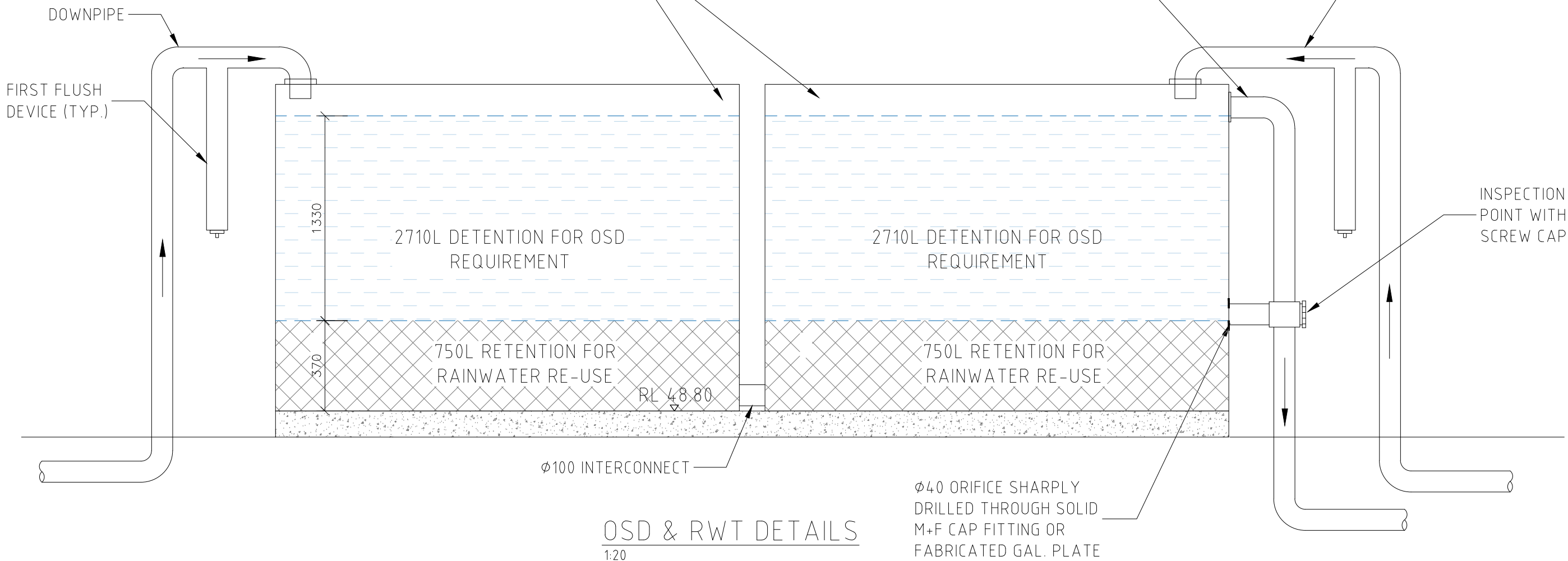
ABSORPTION SYSTEM LONG SECTION
SCALE 1:20

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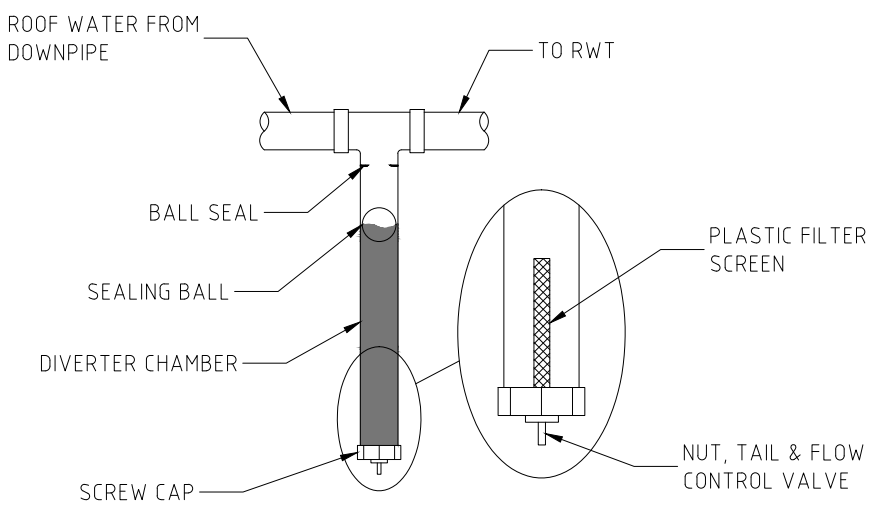
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2x3460L RAINWATER TANK (2500 LENGTH x 800 WIDTH x 1860 HEIGHT) INTERCONNECTED FOR OSD & RAINWATER RE-USE REQUIREMENT
 BASE RL 48.80
 OVERFLOW RL = RL50.50



OSD & RWT DETAILS
 1:20

Ø40 ORIFICE SHARPLY DRILLED THROUGH SOLID M+F CAP FITTING OR FABRICATED GAL. PLATE



FIRST FLUSH DEVICE DETAIL
 1:20

RAINWATER TANK NOTES:

1. RAINWATER TANKS BY KINGSPAN (TEL: 1300 736 562) OR SIMILAR.
2. DIMENSIONS ARE INDICATIVE ONLY. EXACT DETAILS TO MANUFACTURER'S SPECIFICATIONS.
3. A FIRST FLUSH DEVICE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS SHALL BE FITTED TO RAINWATER TANK SYSTEM TO FLUSH OUT THE FIRST 0.5mm OF RUN-OFF FROM THE ROOF AREA THAT DRAINED INTO THE TANK (E.G. 0.5L/m²).
4. PUMP SIZE & SPECIFICATION TO BE NOMINATED BY MANUFACTURER
5. ORIFICE PLATE INSTALLATION TO BE PERFORMED BY QUALIFIED PLUMBER AND TO BE MADE WATERTIGHT BY WASHER OR SUITABLE SEALANT.

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