

NOTES

1.

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ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
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ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
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ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3.2:1998 AND COUNCIL SPECIFICATIONS.
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EXISTING STORMWATER DRAINAGE TO BE UTILISED WHERE CONTRACTOR SEE FIT.



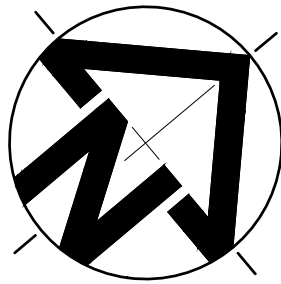
PUMP WELL DETAILS

AREA DRAINING TO SUMP= 50.82m²

SUMP SIZE BASED ON 100 YEAR 2 HR STORM, I=37.9 mm/hr,
Q=CIA/3600= 1 X 37.9 X 50.82 / 3600 = 0.5350 L/sec
VOLUME REQUIRED = 0.5350 X (2X60X60) = 3852 L = 3.852m³
STORAGE PROVIDED 2.0 X 2.0 X 1 = 4.0m³.

PUMP OUT RATE BASED ON 100YR 5MIN STORM, I=204 mm/hr
Q=CIA/3600= 1X 204 X 50.82/3600 = 2.88 L/sec
Q= 5.0 L/sec (AS 3500 MIN.)

DUAL KS-08 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO OPERATE SIMULTANEOUSLY ON HIGH LEVEL ALARMS AT 5.0 l/sec (PER PUMP) AT 2.59m HEAD



LEGEND

- RL

PIT SURFACE LEVEL
- IL

INVERT LEVEL
- TK

TOP OF KERB
- SW

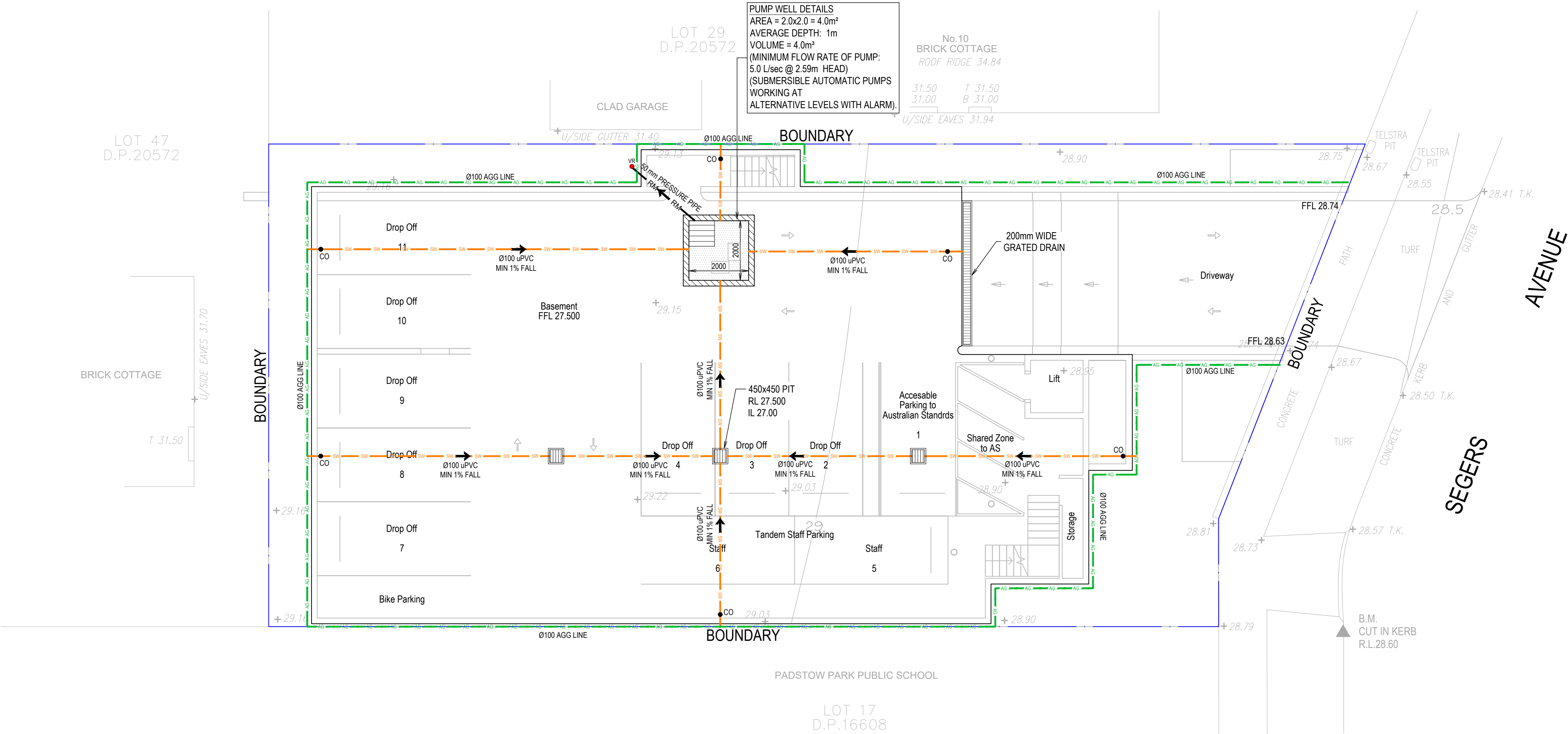
SW
- STORMWATER DRAINAGE PIPE
- DN


DN
- DOWNPIPE TO RAIN WATER TANK
- AG

AG
- Ø100 SUBSOIL PIPE
- OF

OF
- RAIN WATER TANK OVER FLOW PIPE
- RM

RM
- PROPOSED RISING MAIN
-
- EXISTING STORMWATER PIPE
- DP
- PROPOSED Ø100 DOWN PIPE
- EX-DP
- EXISTING DOWN PIPE
- CO
- CLEAN OUT
- DPS
- DOWN PIPE SPREADERS
- VD
- VERTICAL DROP
- VR
- VERTICAL RISER
- FW
- FLOOR WASTE 150Ø
- ▢
- GRATED INLET PIT
- ▤
- 200mm WIDE GRATED DRAIN



								<div><div>ae</div><div>CONSULTING</div><div>ENGINEERS</div></div>	<div><div>P: 9037 0731</div><div>E: info@aeconsulting.com.au</div><div>W: www.aeconsulting.com.au</div></div>	<div>ARCHITECT</div> <div><div>SPACE</div><div></div></div>	<div>CLIENT</div>	<div>SHEET SUBJECT</div> <div>STORMWATER DRAINAGE PLAN</div> <div>BASEMENT FLOOR LEVEL</div>	PROJECT: 12 SEGERS AVENUE, PADSTOW, NSW 2211				<div>ISSUED FOR DA</div> <div>DO NOT SCALE DRAWING, USE FIGURED DIMENSIONS ONLY</div> <div>This drawing remains the property of A.E CONSULTING ENGINEERS and must not be reproduced or used without written consent.</div>							
DATE				DESIGNED										CHECKED										
12.08.2024				A.E.										A.E.										
SCALE @ A1				JOB No																				
1:100				D24156																				
AUTHORISED				DWG No				REV																
A.E.				SW10				B																

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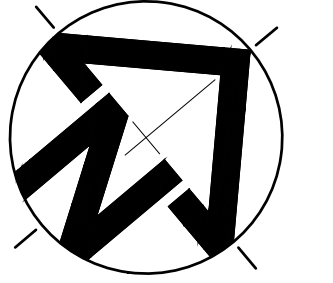
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DESIGN NOTES

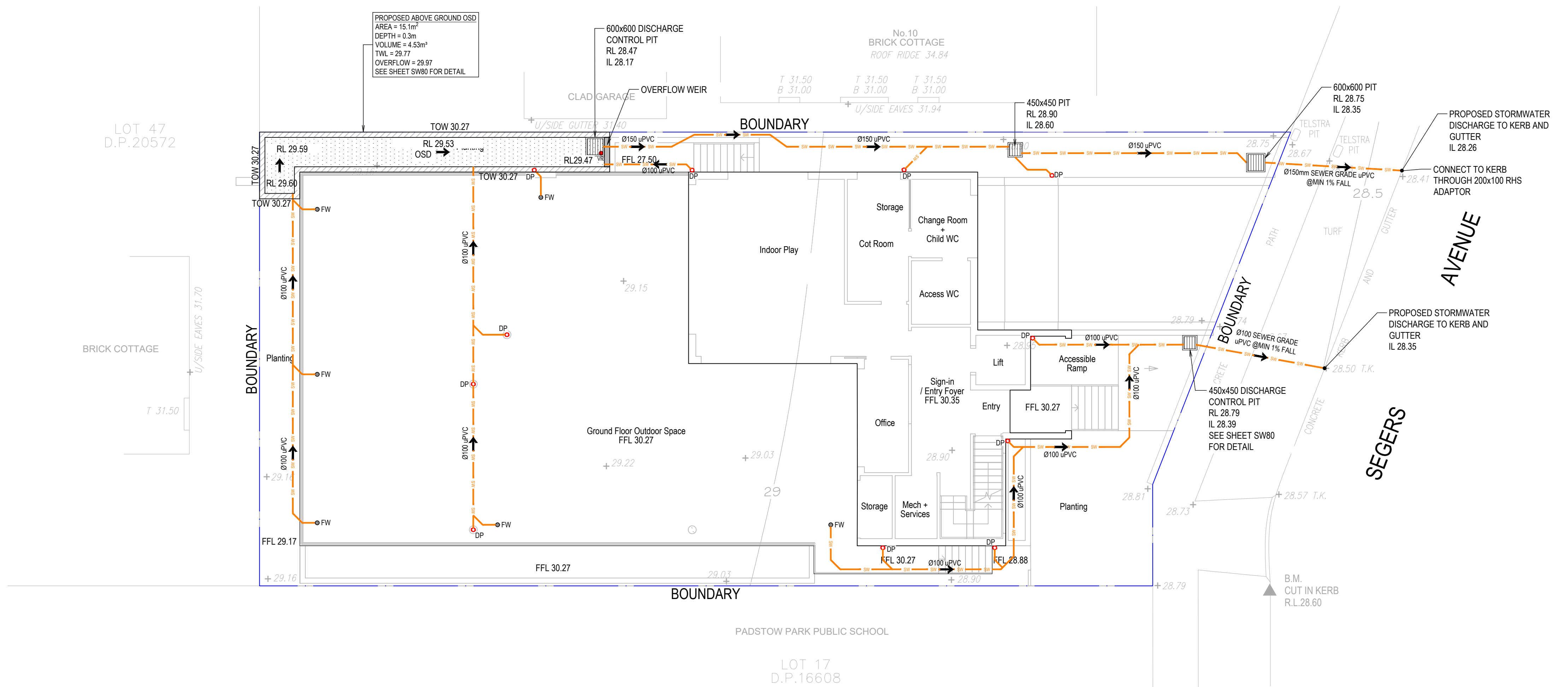
PROPOSED COMMERCIAL DEVELOPMENT

- LGA = CANTERBURY-BANKSTOWN COUNCIL
- LOT SITE AREA = 602.2m²
- IN ACCORDANCE WITH COUNCIL GUIDELINES OSD IS REQUIRED FOR SUBJECT DEVELOPMENT:
SSR FROM DRAINS = 6m²
PSD = 30L/s (DEVELOPMENT ENGINEERING STANDARDS, 2006, SECT. 9.2.2)
- RAINWATER TANK IS NOT REQUIRED.



LEGEND

RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
TK	TOP OF KERB
	STORMWATER DRAINAGE PIPE
	DOWNPIPE TO RAIN WATER TANK
	Ø100 SUBSOIL PIPE
	RAIN WATER TANK OVER FLOW PIPE
	PROPOSED RISING MAIN
	EXISTING STORMWATER PIPE
	PROPOSED Ø100 DOWN PIPE
	EXISTING DOWN PIPE
	CLEAN OUT
	DOWN PIPE SPREADERS
	VERTICAL DROP
	VERTICAL RISER
	FLOOR WASTE 150Ø
	GRATED INLET PIT
	200mm WIDE GRATED DRAIN

[illegible]

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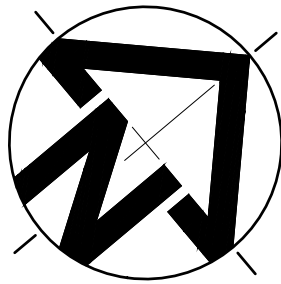
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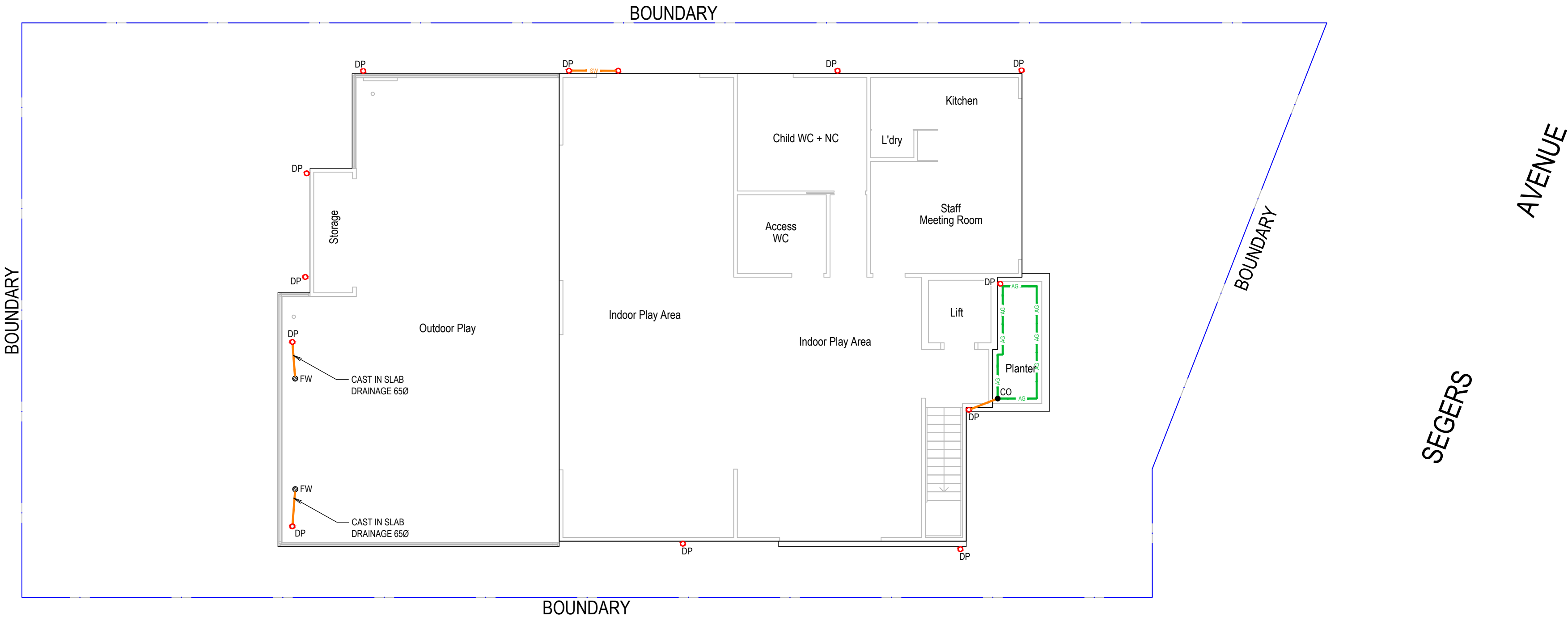
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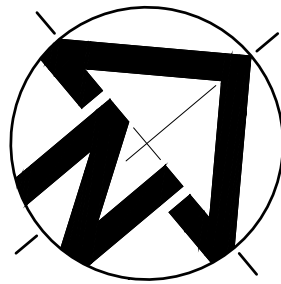
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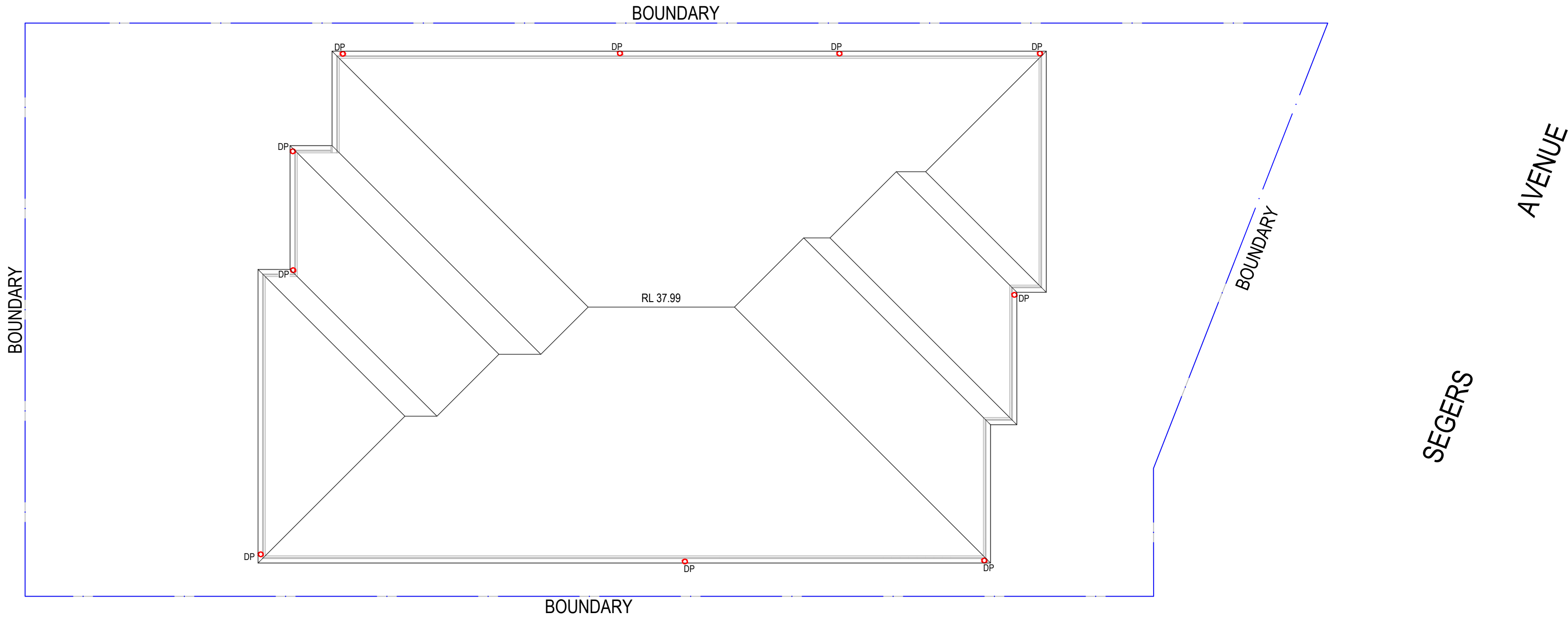
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	DOWN PIPE SPREADERS
	FLOOR WASTE 150Ø



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																								DATE		DRAWN						DESIGNED		CHECKED	
																								12.08.2024		A.E.						A.E.		A.E.	
																								SCALE @ A1								JOB No			
B	ISSUED FOR DA			A.E.		J.S.		14.10.24																											
A	ISSUED FOR DA			A.E.		J.S.		28.08.24														DO NOT SCALE DRAWING, USE FIGURED DIMENSIONS ONLY													
No	AMENDMENT			ENG		DRAFT		DATE										AUTHORISED		DWG No		REV		This drawing remains the property of A.E CONSULTING ENGINEERS and must not be reproduced or used without written consent.											
																		A.E.		SW40		B													

SCALE: 1:100
NOTES:

-
- 1.2m MIN. FENCE POSTS DRIVEN
600mm MIN. INTO GROUND
- 3.0m MAX
CENTRE TO CENTRE
- HEIGHT OF FILTER
600mm MAX
- WOVEN WIRE FENCE (14.5
MINIMUM GAUGE-MAXIMUM
150mm MESH SPACING) AS
SPECIFIED

Diagram illustrating the trench for a woven wire fence with filter cloth:

- 1.2 MIN FENCE POST
- WOVEN WIRE FENCE WITH FILTER CLOTH OVER
- EMBEDDED FILTER CLOTH MINIMUM 200mm INTO GROUND
- 600 MIN (vertical dimension for the upper section)
- 600 MIN (vertical dimension for the lower section)

A cross-sectional diagram of a drop inlet system. The diagram shows a rectangular structure with a sloped side. At the top, there is a horizontal surface labeled "STAKES". Below this, a "DROP INLET WITH GRATE" is shown. The interior of the drop inlet is filled with a material labeled "GEOTEXTILE FILTER FABRIC". The diagram illustrates how the geotextile filter fabric is used to filter debris from the water flow entering the drop inlet.

SILT FENCE

RUN-OFF WATER WITH SEDIMENT

FABRIC BURIED 0.2m

200

FILTERED WATER

CONSTRUCTION SITE

3m MIN WIDTH

15m MINIMUM LENGTH

200

300

GEOTEXTILE FABRIC

Ø100-150 IGNEOUS ROCK

RUN-OFF FROM PAD DIRECTED TO SEDIMENT TRAP

SAND BEDDING

EXISTING ROAD

WOVEN WIRE FENCE (14.5 MINIMUM GAUGE - MAXIMUM 150mm MESH SPACING) AS REQUIRED BY COUNCIL

3.0m MAX. CENTRE TO CENTRE

GEOTEXTILE FILTER FABRIC.

DIRECTION OF FLOW

600mm MAX.

200mm

EMBEDDED FILTER CLOTH MINIMUM 200mm INTO GROUND

UNDISTURBED AREA

1.2m MIN. FENCE POSTS DRIVEN 600mm MIN. INTO GROUND

DETAIL OF OVERLAP

B	ISSUED FOR DA	A.E.	J.S. 14.10.24
A	ISSUED FOR DA	A.E.	J.S. 28.08.24
No	AMENDMENT	ENG	DRAFT DATE



ARCHITECT

SPACE 

CLIENT	
--------	--

PROJECT: 12 SEGERS AVENUE, PADSTOW, NSW 2211			
DATE	DRAWN	DESIGNED	CHECKED
12.08.2024	A.E.	A.E.	A.E.
SCALE @ A1		JOB No	
AS SHOWN		D24156	
AUTHORISED		DWG No	REV
A.E.		SW50	B

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SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION WHERE VEHICLES ENTER THE BASEMENT.

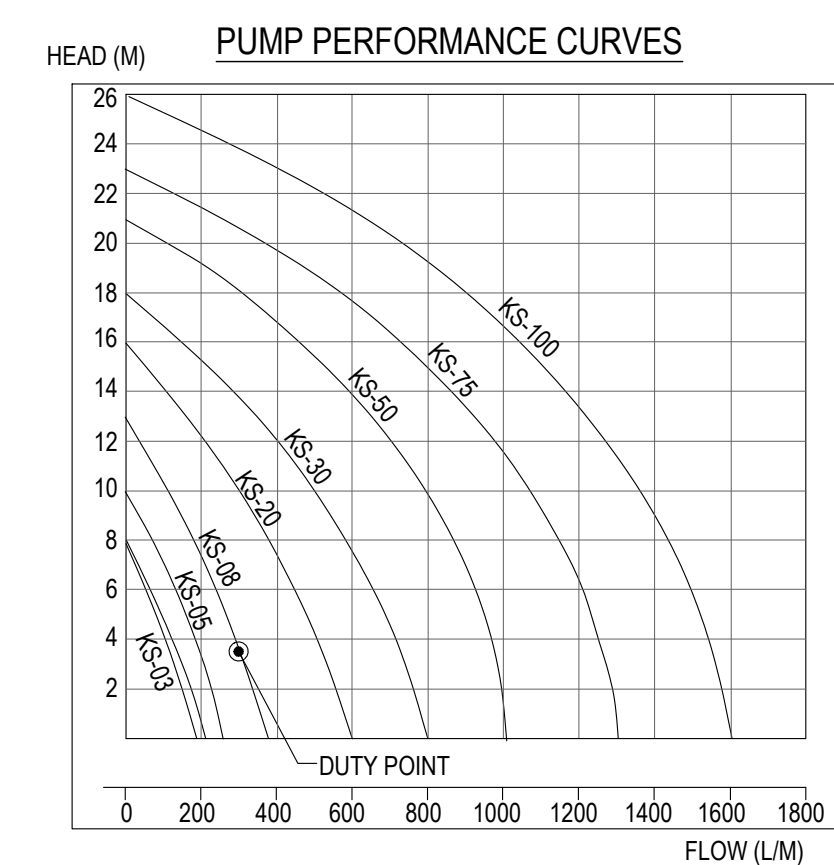
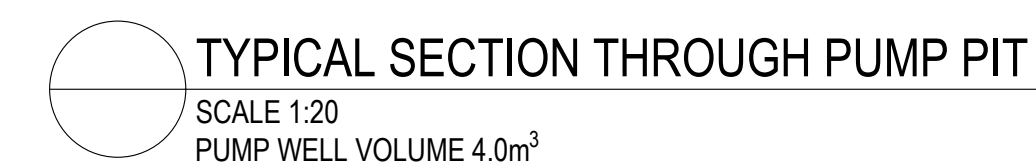
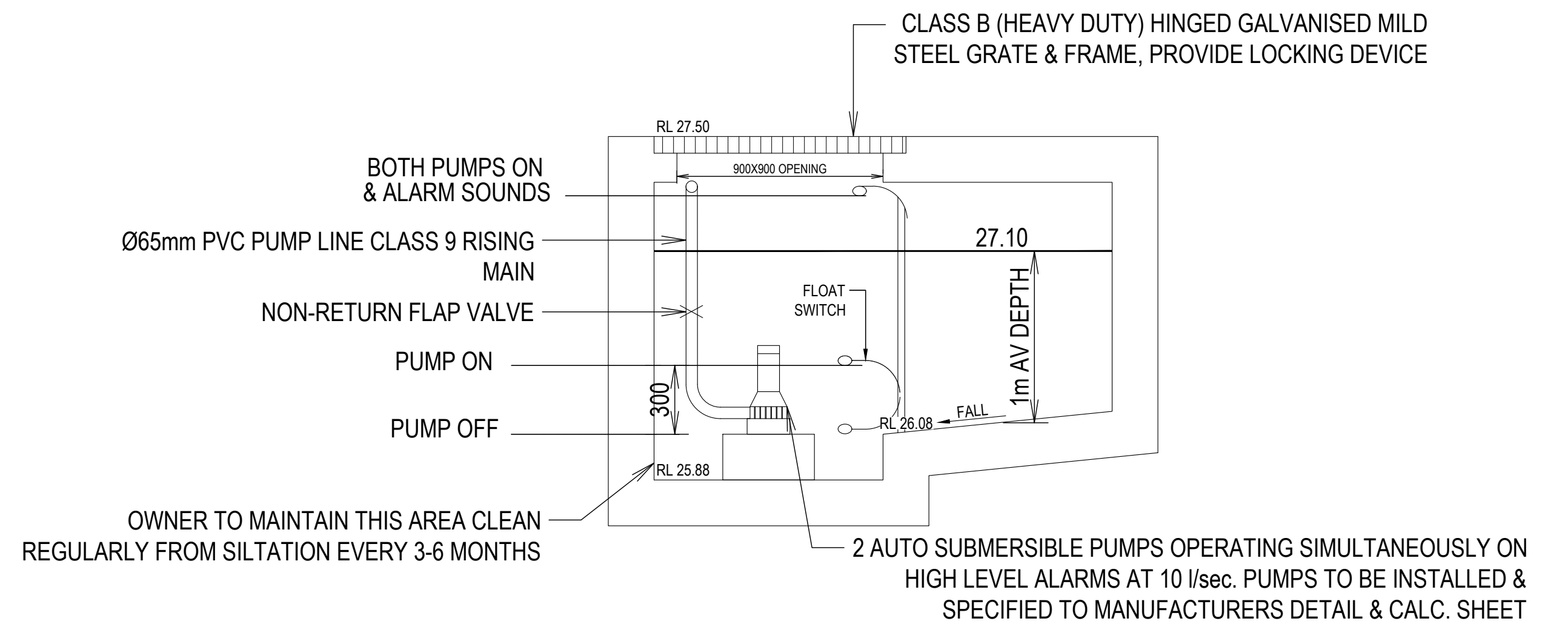
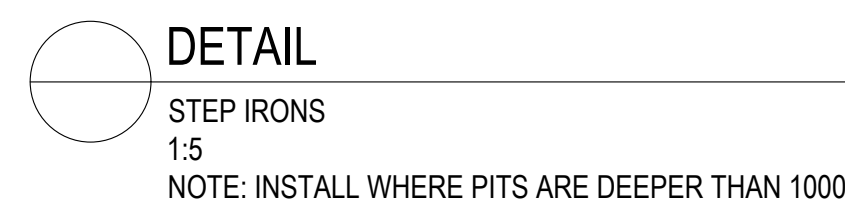
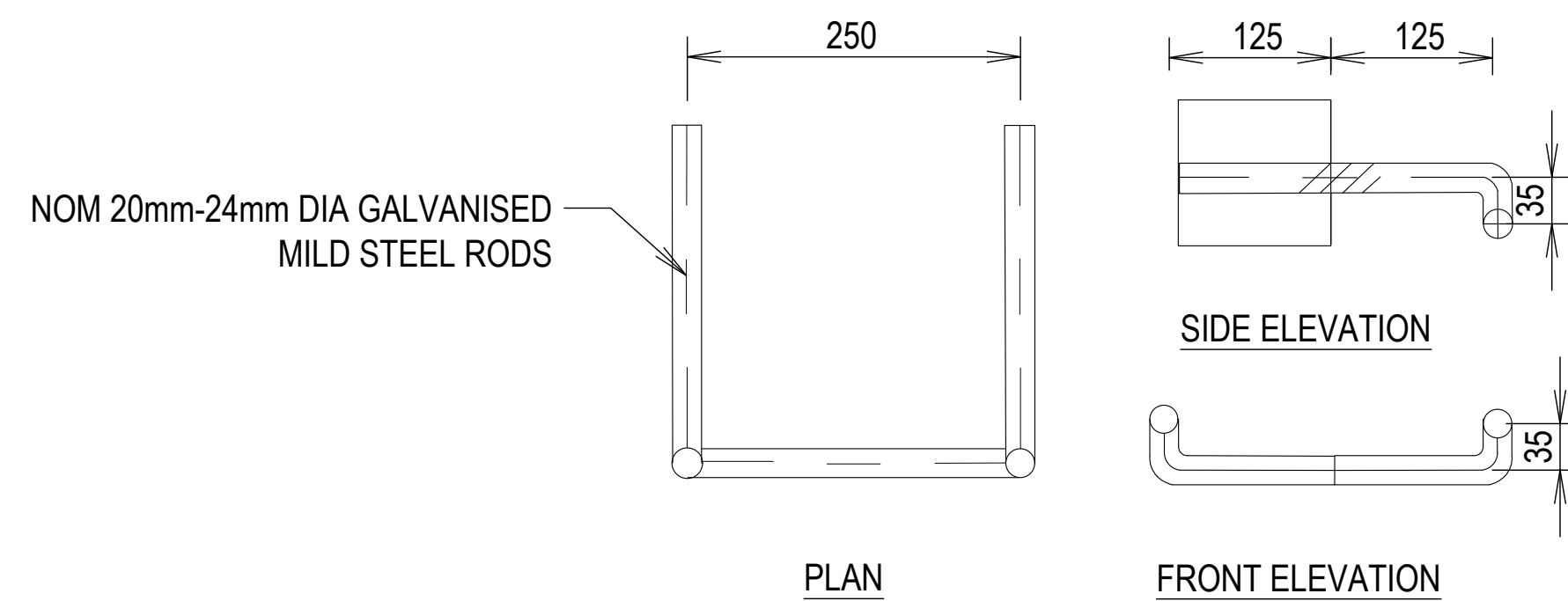
PUMP SPECIFICATIONS: STANDARD PUMP-OUT NOTES

- THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -
1. THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE EQUAL OPERATION LOAD & PUMP LIFE.
 2. A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
 3. A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
 4. A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING & ACTIVATE THE ALARM.
 5. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT & A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.



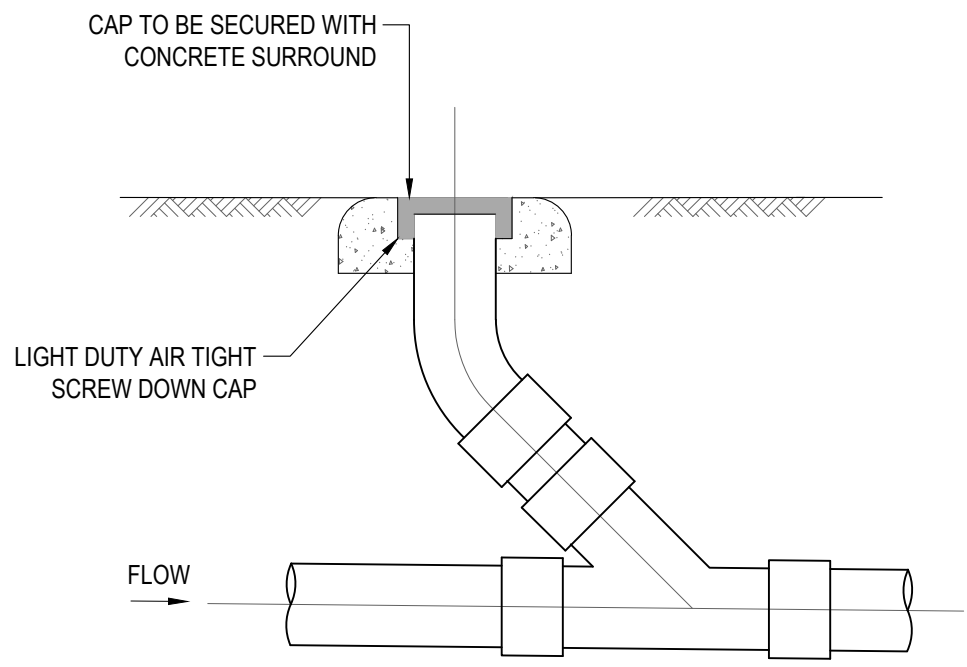
COLOURS:	
"DANGER" AND BACKGROUND	WHITE
ELLIPTICAL AREA	RED
RECTANGLE CONTAINING ELIPSE	BLACK
OTHER LETTERING AND BORDER	BLACK

MATERIALS:
POLYPROPYLENE

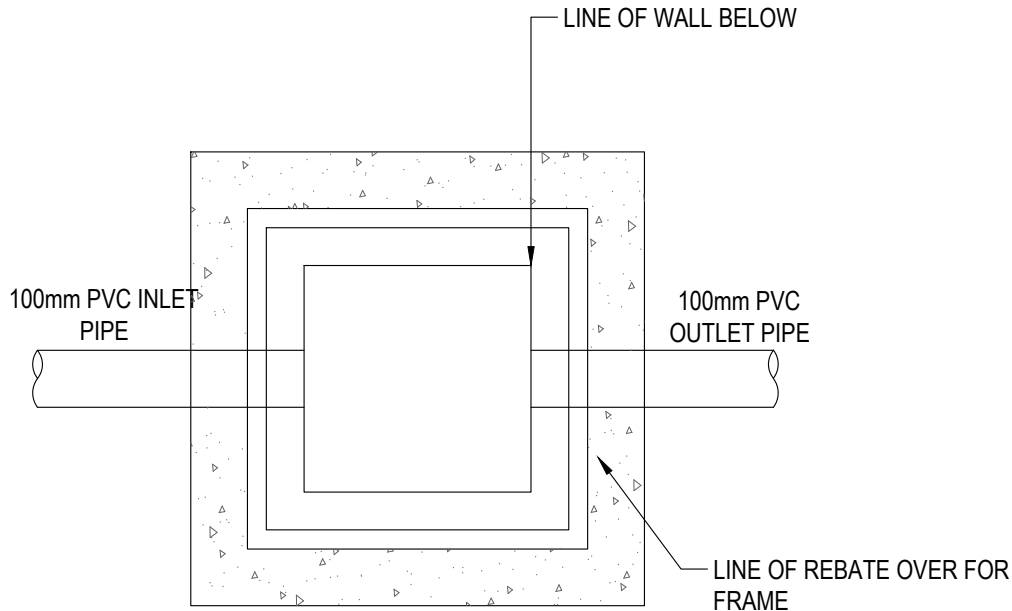


Type	Output		Outlet		Rated		Maximum		Weigh	Dimension		
					Head Capacity		Capacity					
	HP	KW	mm	Inch	M	LPM	M	LPM		Kg	L(mm)	W(mm)
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305
KS-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359
KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	375
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425
KS-20	2	1.5	80	3"	10	300	16	600	31	278	182	475
KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
KS-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610

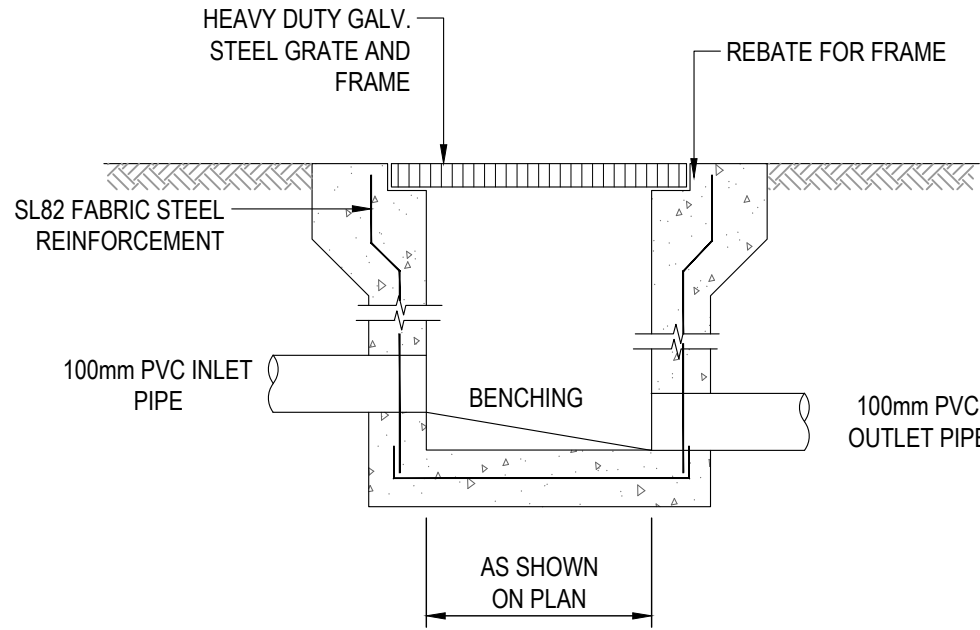
[illegible]



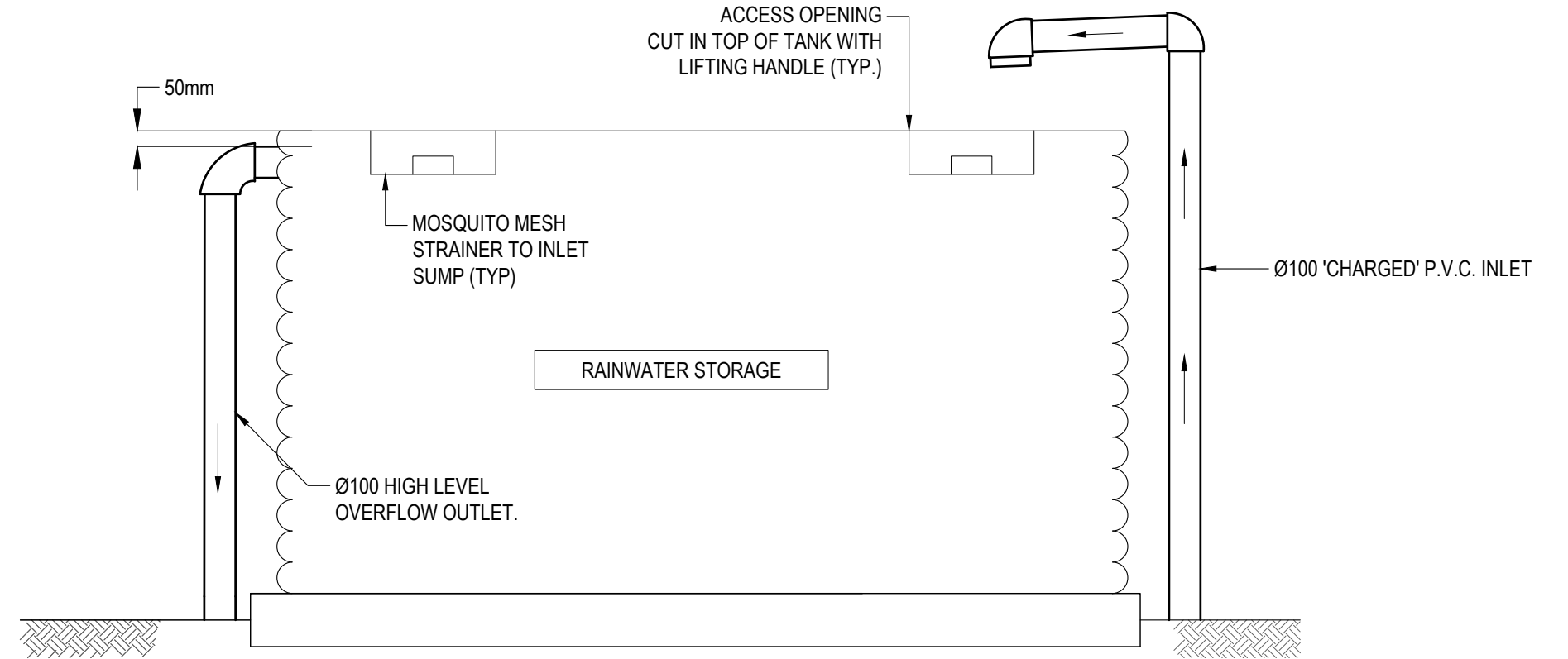
TYPICAL CLEANING EYE DETAIL
NOT TO SCALE



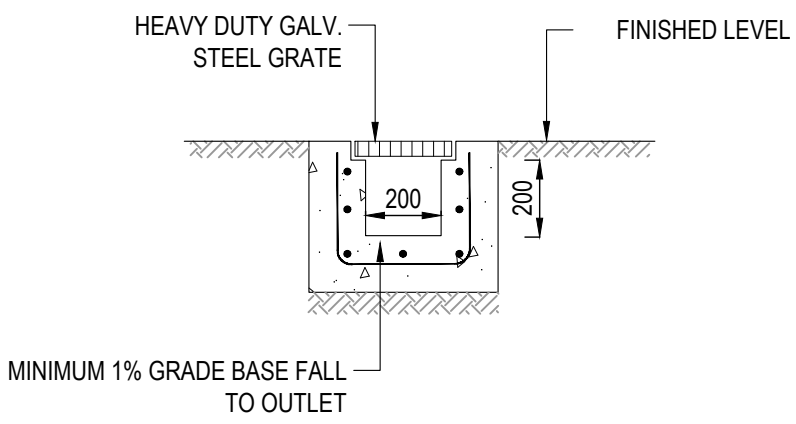
PLAN WITHOUT GRATE



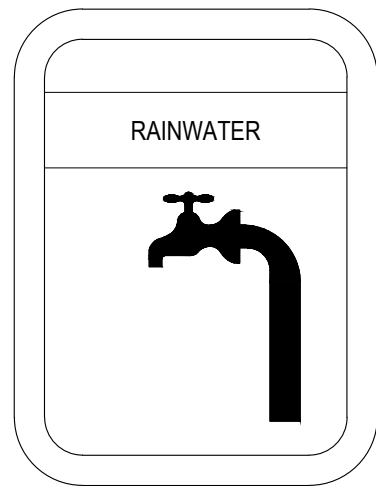
SECTION



TYPICAL RAINWATER TANK DETAIL
NOT TO SCALE

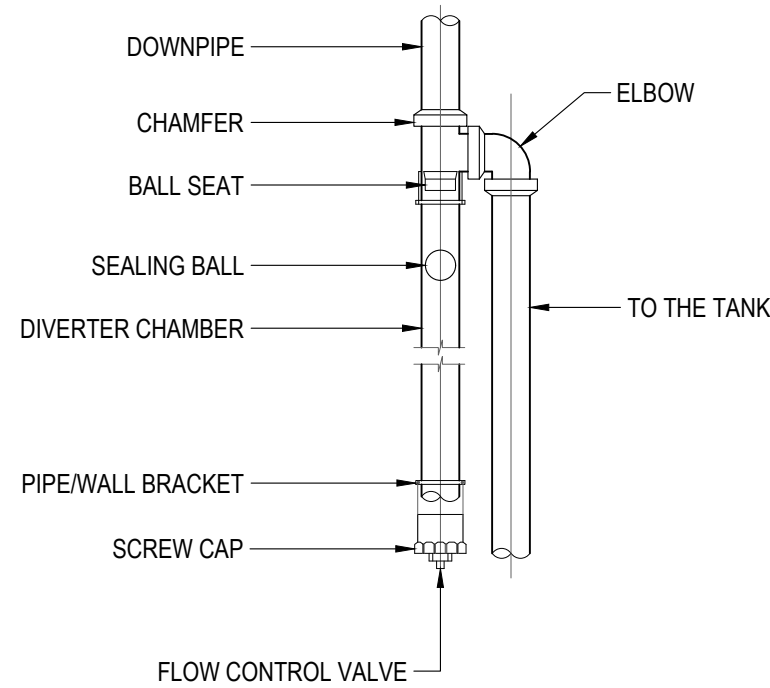


GRADED TRENCH DRAIN DETAIL
NOT TO SCALE

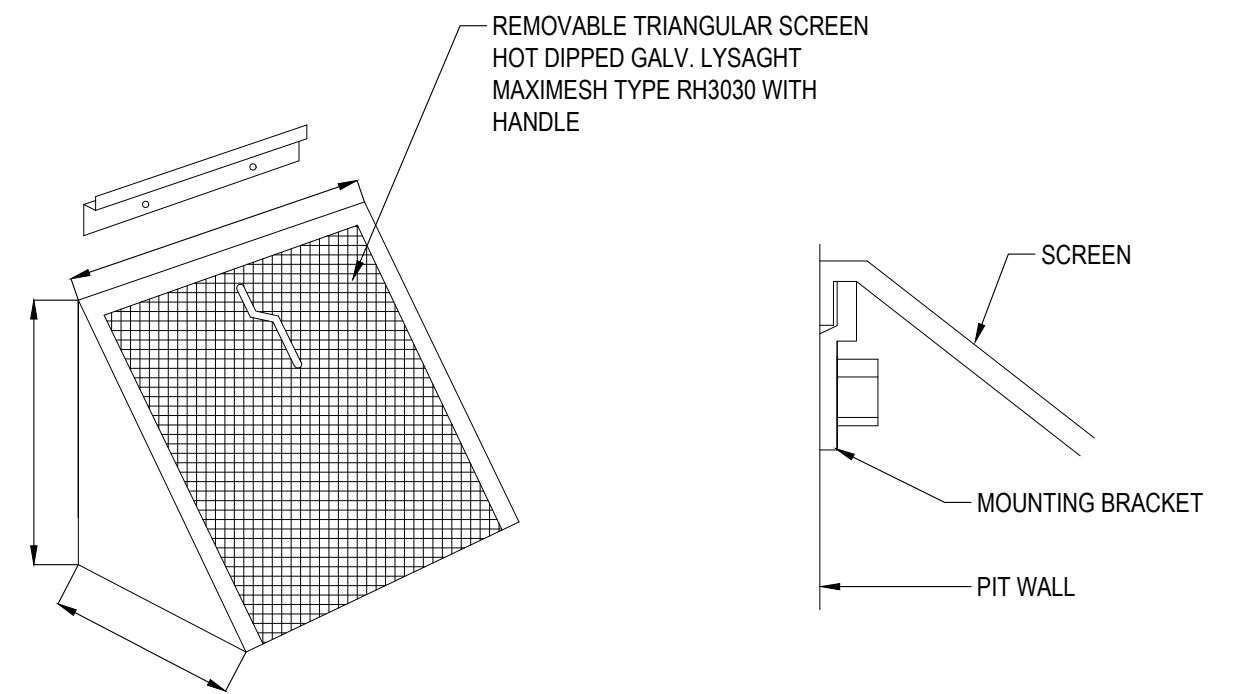


LEGEND:
BACKGROUND IS YELLOW
TEXT IS WHITE ON BLACK
BACKGROUND

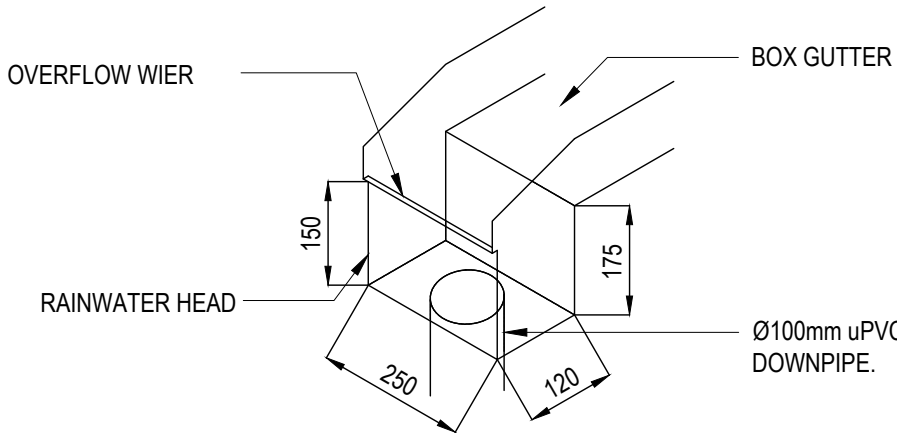
RAINWATER SIGN DETAIL
NOT TO SCALE



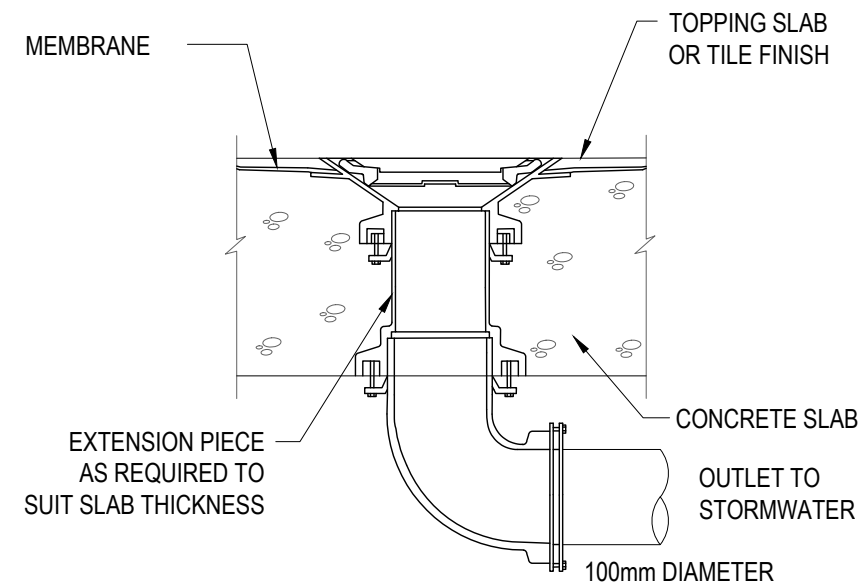
FIRST FLUSH DETAIL
NOT TO SCALE



MULTI PURPOSE FILTER SCREEN DETAIL
NOT TO SCALE

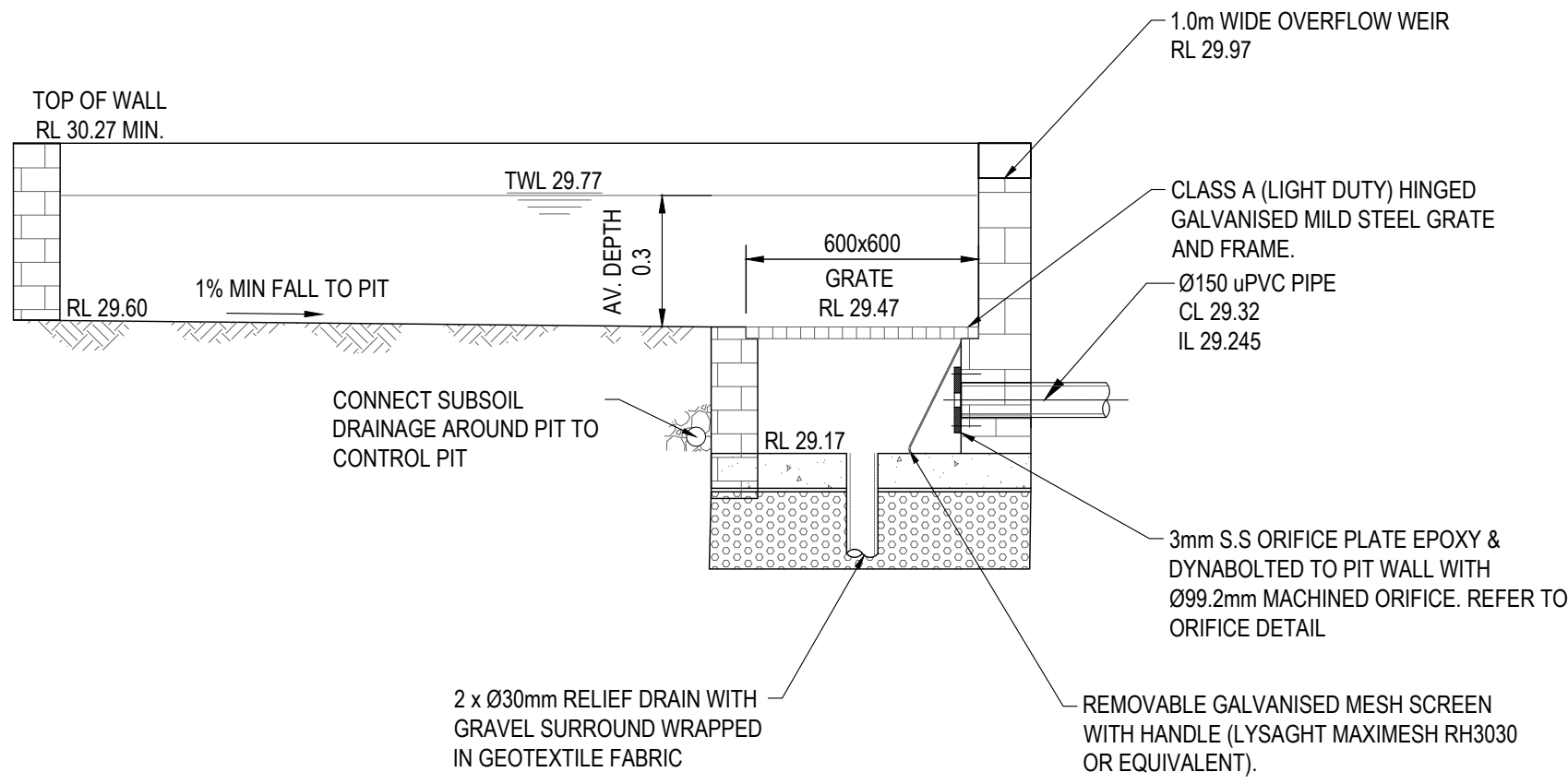


STANDARD RAINWATER HEAD SECTION
NOT TO SCALE



FLOOR WASTE OUTLET
NOT TO SCALE

DRAIN MODEL SUMMARY TABLE - PSD FOR CONNECTION INTO KERB AND GUTTER				
STORM DURATION	PRE-DEVELOPMENT	POST DEVELOPMENT - OSD	POST DEVELOPMENT - BYPASS	POST DEVELOPMENT - TOTAL
20% AEP	15 L/S	11 L/S	6 L/S	17 L/S
10% AEP	19 L/S	11 L/S	7 L/S	18 L/S
5% AEP	22 L/S	12 L/S	8 L/S	20 L/S
1% AEP	28 L/S	13L/S	11 L/S	24 L/S



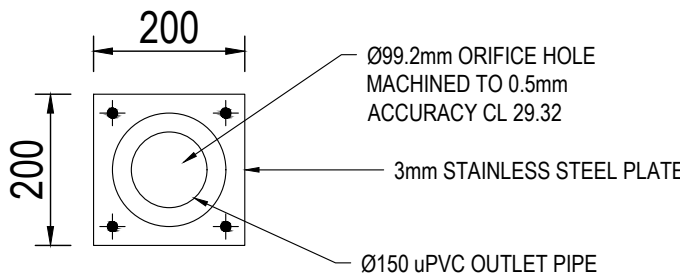
TYPICAL ON-SITE DETENTION DETAIL
NOT TO SCALE

CALCULATING ORIFICE DIAMETER

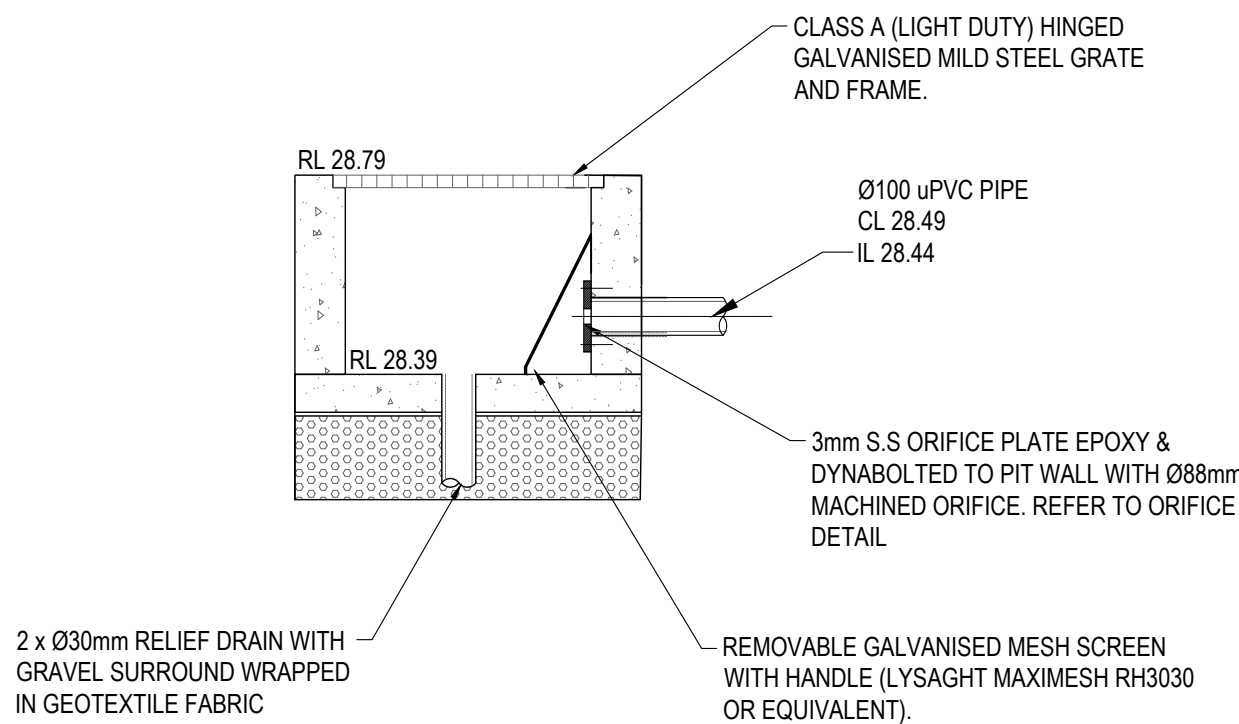
$Q \text{ (l/s)} = 14$
 $Q \text{ (m}^3\text{/s)} = 0.014$
 $C_d = 0.61$
 $g = 9.81$
 $h = 0.45$

$A \text{ (m}^2\text{)} = 0.007724$
 $D \text{ (m)} = 0.099169$

$D \text{ (mm)} = 99.2$



ORIFICE PLATE ELEVATION - OSD
SCALE 1:10



DISCHARGE CONTROL PIT DETAIL @ BOUNDARY
NOT TO SCALE

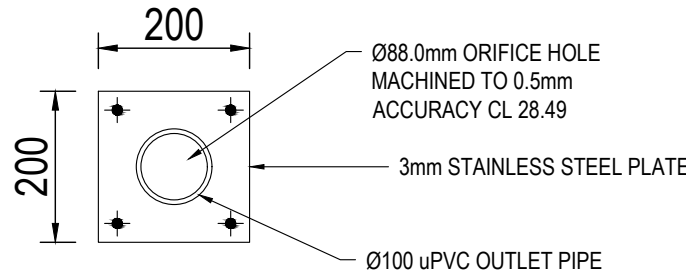
MINIMUM PIT DIMENSIONS		
SITE AREA DRAINING (m²)	WIDTH (W) (mm)	DEPTH (D) (mm)
AREA < 400	450	200
400 < AREA < 800	600	250
800 < AREA < 1200	900	300
1200 < AREA < 1800	1200	350

CALCULATING ORIFICE DIAMETER

$Q \text{ (l/s)} = 9$
 $Q \text{ (m}^3\text{/s)} = 0.009$
 $C_d = 0.61$
 $g = 9.81$
 $h = 0.3$

$A \text{ (m}^2\text{)} = 0.006081$
 $D \text{ (m)} = 0.087995$

$D \text{ (mm)} = 88.0$



ORIFICE PLATE ELEVATION - DCP
SCALE 1:10

B	ISSUED FOR DA	A.E.	J.S.	14.10.24	
A	ISSUED FOR DA	A.E.	J.S.	28.08.24	
No	AMENDMENT	ENG	DRAFT	DATE	



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W: www.aeconsulting.com.au



CLIENT

SHEET SUBJECT
STORMWATER SECTIONS & DETAILS
SHEET 3

PROJECT: 12 SEGERS AVENUE, PADSTOW, NSW 2211			
DATE	DRAWN	DESIGNED	CHECKED
12.08.2024	A.E.	A.E.	A.E.
SCALE @ A1		JOB No	
N.T.S.		D24156	
AUTHORISED		DWG No	REV
A.E.		SW80	B

ISSUED FOR DA
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