

PROPOSED NEW DWELLING AND GRANNY FLAT

55 KANGAROO ROAD, COLLAROY PLATEAU

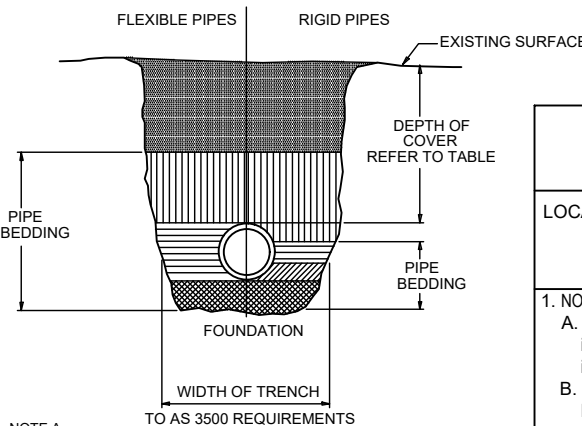
STORMWATER MANAGEMENT DESIGN

GENERAL DRAINAGE NOTES

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LOCAL COUNCIL'S RELEVANT SPECIFICATIONS AND/OR STORMWATER CODE. ANY DISCREPANCY VARIATION OR ADDITIONAL WORK SHALL BE APPROVED BY THE PRINCIPAL CERTIFIER.
2. ALL SERVICES SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. DIAL BEFORE YOU DIG SHALL BE CONTACTED PRIOR TO COMMENCEMENT.
4. ALL DRAINAGE PIPEWORK AND PLUMBING SHALL BE INSTALLED BY A CERTIFIED PLUMBER IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AS3500 AND COUNCIL REQUIREMENTS.
5. ALL DRAINAGE PIPES ARE TO BE SEWER GRADE UNLESS NOTED OTHERWISE.
6. ALL COVERS, GRATES AND FRAMES ARE TO BE CLASS C HEAVY DUTY WHERE SUBJECT TO VEHICULAR TRAFFIC.
7. ALL COVERS, GRATES AND FRAMES ARE TO BE CLASS A MEDIUM DUTY WHERE SUBJECT TO PEDESTRIAN TRAFFIC OR IN LANDSCAPE AREAS.
8. COUNCIL PERMIT/APPROVAL SHALL BE OBTAINED PRIOR TO WORKS ON COUNCIL LAND AND CONNECTION TO COUNCIL SYSTEM.
9. ALL PIPE BENDS TO BE FITTED WITH AN INSPECTION OPENING.

RAINWATER TANK NOTES

1. THE TANK SHALL NOT BE LOCATED OVER A WATER OR SEWER MAIN UNLESS IT IS INSTALLED IN ACCORDANCE WITH THE REGULATORY AUTHORITY REQUIREMENTS
2. ABOVE GROUND TANKS SHALL BE LOCATED AT LEAST 100 MM FROM ANY POTABLE WATER SUPPLY PIPE AND AT LEAST 300 MM FOR BELOW GROUND TANKS.
3. ALL PLUMBING WORK SHALL BE CARRIED OUT BY A LICENSED PLUMBER IN ACCORDANCE WITH SYDNEY WATER REQUIREMENTS AND COUNCIL REGULATIONS.
4. ALL INLETS SHALL BE SCREENED OR FILTERED TO PREVENT THE ENTRY OF FOREIGN MATTER OR CREATURES.
5. REUSE PUMP TO BE INSTALLED BY A LICENSED PLUMBER AND ELECTRICIAN TO SYDNEY WATER REQUIREMENTS
6. A SIGN SHALL BE AFFIXED TO THE RAINWATER TANK AND ALL APERTURES CLEARLY STATING THAT THE WATER IN THE TANK IS RAINWATER
7. NOISE EMISSIONS FROM ANY PUMP SHALL MEET COUNCIL'S REQUIREMENTS.
8. WATER RETAINED FOR INDOOR HOUSEHOLD USE SHALL BE AUGMENTED BY MAINS WATER SUPPLY AND APPROVAL OBTAINED BY SYDNEY WATER.
9. WHERE RETAINED WATER IS AUGMENTED BY MAINS WATER SUPPLY A BACKFLOW PREVENTION DEVICE AND FLOW RESTRICTOR SHALL BE INSTALLED IN ACCORDANCE WITH AS 3500 AND SYDNEY WATER REQUIREMENTS.
10. ALL INLETS SHALL BE FITTED WITH A FIRST FLUSH DEVICE PRIOR TO DISCHARGING TO THE RAINWATER TANK.
11. THE INDIRECT CONNECTION TO MAINS WATER SUPPLY SHALL HAVE A VISIBLE AIR GAP IN ACCORDANCE WITH AS 3500.



NOTE A
STORMWATER DRAINS CONSTRUCTED OF OTHER THAN CAST IRON, DUCTILE IRON OR GALVANISED STEEL HAVING COVER LESS THAN THAT SPECIFIED IN TABLE SHALL BE COVERED WITH AT LEAST 50mm OVERLAY AND SHALL BE PAVED WITH AT LEAST (a) 100mm THICKNESS OF REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICULAR LOADING

LEGEND - TRENCH BACKFILL		
SYMBOL	FLEXIBLE PIPES	RIGID PIPES
	BACKFILL	BACKFILL
	PIPE OVERLAY	PIPE OVERLAY
	PIPE SIDE SUPPORT	SIDE ZONE
	HAUNCH ZONE	HAUNCH ZONE
	PIPE UNDERLAY	BED ZONE

MINIMUM PIPE COVER (FROM FINISHED SURFACE TO TOP OF PIPE)

LOCATION	MINIMUM COVER (mm)	
	CAST / DUCTILE IRON OR GALV STEEL	AUTHORISED PRODUCTS (*)
1. NOT SUBJECT TO VEHICULAR LOADING: A. WITHOUT PAVEMENT: i. FOR SINGLE DWELLINGS - ii. OTHER THAN SINGLE DWELLINGS - B. WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE -	0 0 0 (**)	100 300 50 (**)
2. SUBJECT TO VEHICULAR LOADING: A. OTHER THAN ROADS: i. WITHOUT PAVEMENT - ii. WITH PAVEMENT OF: - REINF. CONC. FOR HEAVY VEHICLES - - BRICK/UNREINF. CONC LIGHT VEHICLES - B. ROADS i. SEALED ii. UNSEALED	300 0 (** #) 0 (** #) 300 300	450 100 (** #) 75 (** #) 500 (#) 500 (#)
3. SUBJECT TO CONSTRUCTION VEHICLES OR IN EMBANKMENT CONDITIONS	300	500 (#)

(*) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK
(**) BELOW THE UNDERSIDE OF THE PAVEMENT
(#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS 4060

NORTHERN BEACHES COUNCIL REQUIREMENTS

THE STORMWATER DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY REGION 2 - CENTRAL CATCHMENT AND AUSTRALIAN STANDARDS AS3500.3

ON-SITE DETENTION

SITE AREA	507.7 m2
POST-DEVELOPMENT IMPERVIOUS AREA	291.2 m2 (>40%)
MINIMUM OSD SITE STORAGE REQUIRED (200m3/ha)	10.2 m3
MAXIMUM PERMISSIBLE SITE DISCHARGE (400l/s/ha)	20.3 l/s
REVISED OSD STORAGE REQUIRED (LESS BASIX)	8.2 m3
ORIFICE PLATE DIAMETER	110 mm

BASIX CERTIFICATE REQUIREMENTS

MINIMUM RAINWATER TANK STORAGE REQUIRED	2.0 m3
MINIMUM ROOF AREA CONNECTED TO TANK	157 m2
NOTE: RAINWATER TANK SHALL BE CONNECTED TO AT LEAST ONE OUTDOOR TAP	

LEGEND

	DENOTES ABOVE GROUND RAINWATER REUSE TANK
	DENOTES ABOVE GROUND ON-SITE DETENTION BASIN
	DENOTES 100mm DIA. STORMWATER PIPE AT 1% MIN. GRADE U.N.O
	DENOTES 100mm DIA. CHARGED STORMWATER PIPE TO ON-SITE DETENTION / RAINWATER TANK
	DENOTES DOWNPIPE
	STORMWATER PIT - SOLID COVER
	STORMWATER PIT - GRATED INLET
	DENOTES GRATED DRAIN

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PROJECT TITLE:
**DWELLING & GRANNY FLAT
55 KANGAROO ROAD
COLLARROY PLATEAU NSW 2097**

DRAWING TITLE:
COVER SHEET AND NOTES

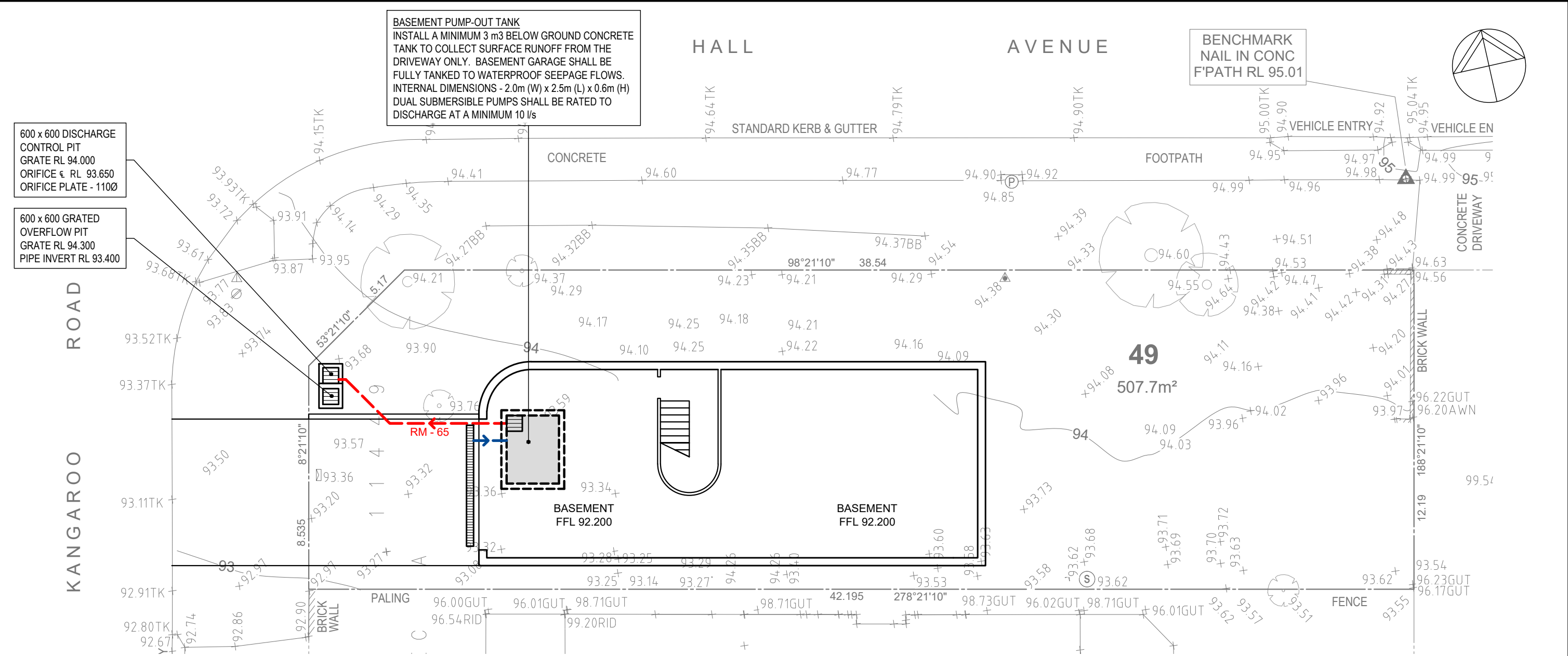
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no. IN SET: 4

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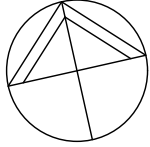
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600 x 600 DISCHARGE
CONTROL PIT
GRATE RL 94.000
ORIFICE ￼ RL 93.650
ORIFICE PLATE - 1100

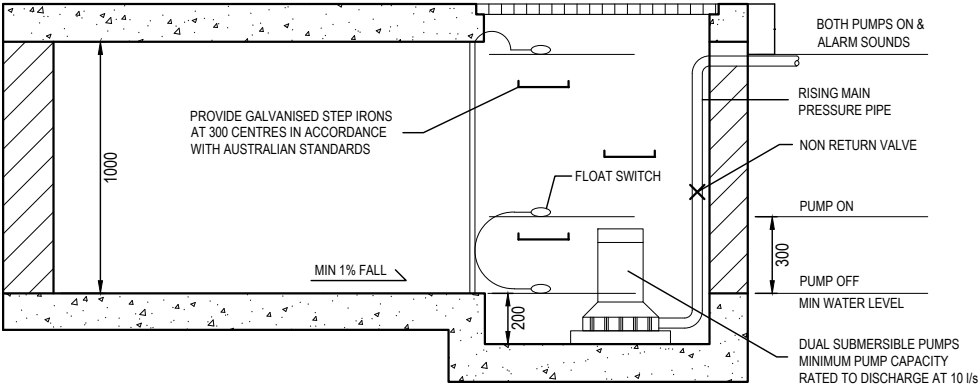
600 x 600 GRATED
OVERFLOW PIT
GRATE RL 94.300
PIPE INVERT RL 93.400

BENCHMARK
NAIL IN CONC
F'PATH RL 95.01



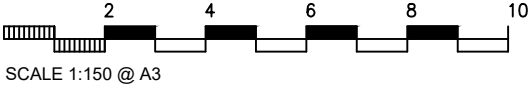
NOTE: FULLY TANKED BASEMENT

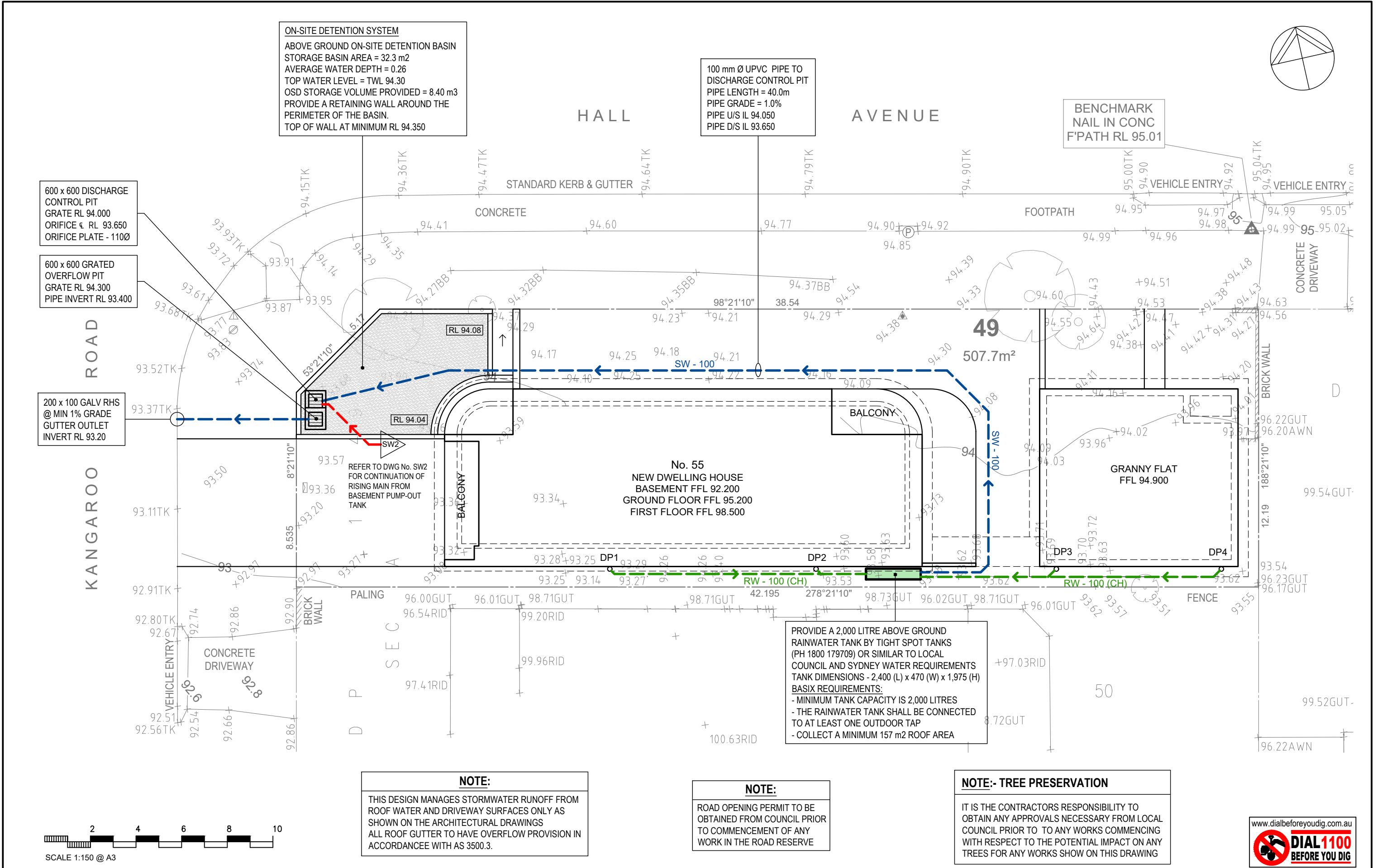
THE BASEMENT SHALL BE FULLY TANKED AND THEREFORE THE BASEMENT PUMP-OUT SHALL DRAIN SURFACE RUNOFF FROM THE DRIVEWAY RAMP ONLY.



BASEMENT PUMP-OUT TANK DETAIL
NOT TO SCALE

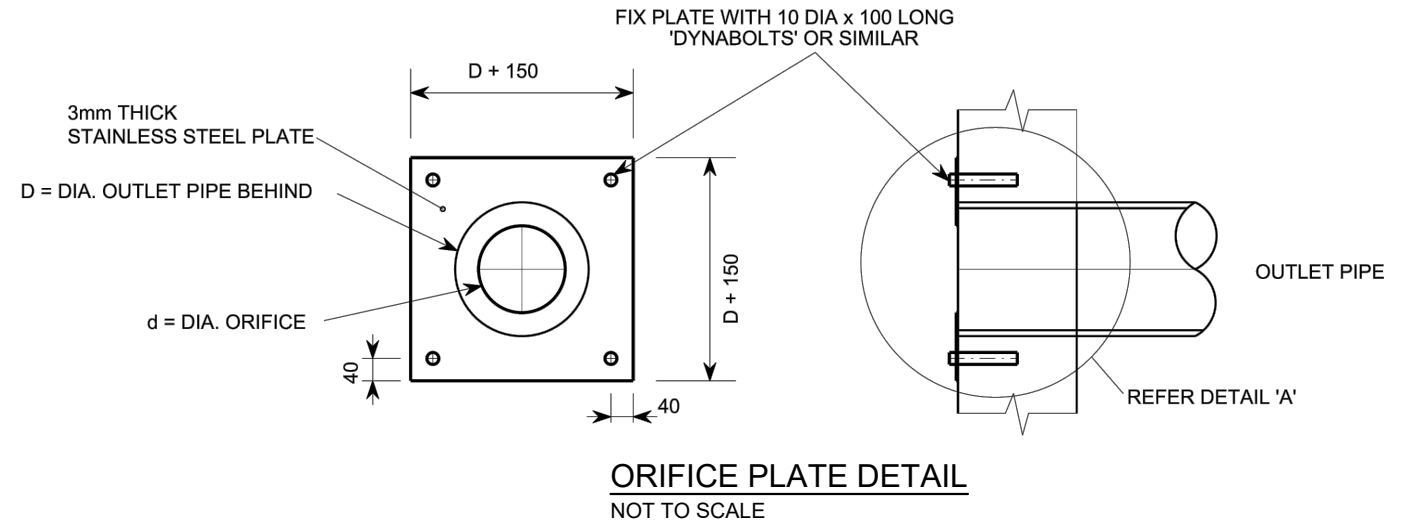
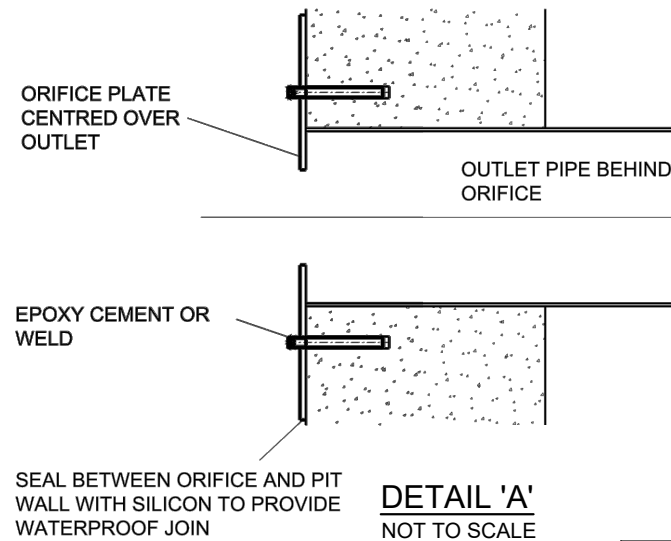
- STANDARD BASEMENT PUMP-OUT DESIGN NOTES**
- THE PUMP SYSTEM SHALL BE OPERATED IN THE FOLLOWING MANNER:
1. THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATIVELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.
 2. A FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL 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 AT THE MINIMUM WATER LEVEL. THE SAME FLOAT SHALL BE SET TO TURN ON OF THE PUMPS ON UPON WATER IN THE TANK RISING TO APPROXIMATELY 300 mm ABOVE THE MINIMUM WATER LEVEL. THE PUMP SHALL OPERATE UNTIL THE TANK IS DRAINED TO THE MINIMUM WATER LEVEL.
 3. A SECOND FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHALL START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.
 4. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE ENTRANCE TO THE BASEMENT GARAGE. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.
 5. A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINTS TO THE PUMP AND STORAGE TANK IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND GUIDELINES.







TYPICAL WARNING SIGN
SCALE N.T.S
* EVERY EXTERNAL SUPPLY OUTLET FROM
RAINWATER RE-USE TANK TO BE LABELED
WITH METALLIC WARNING SIGN



- BASIX CERTIFICATE REQUIREMENTS:**
- PROVIDE A MINIMUM 2,000 LITRE RAINWATER TANK
 - CONFIGURE RAINWATER TANK TO COLLECT A MINIMUM 157 m² ROOF AREA
 - CONNECT TO AT LEAST ONE OUTDOOR TAP

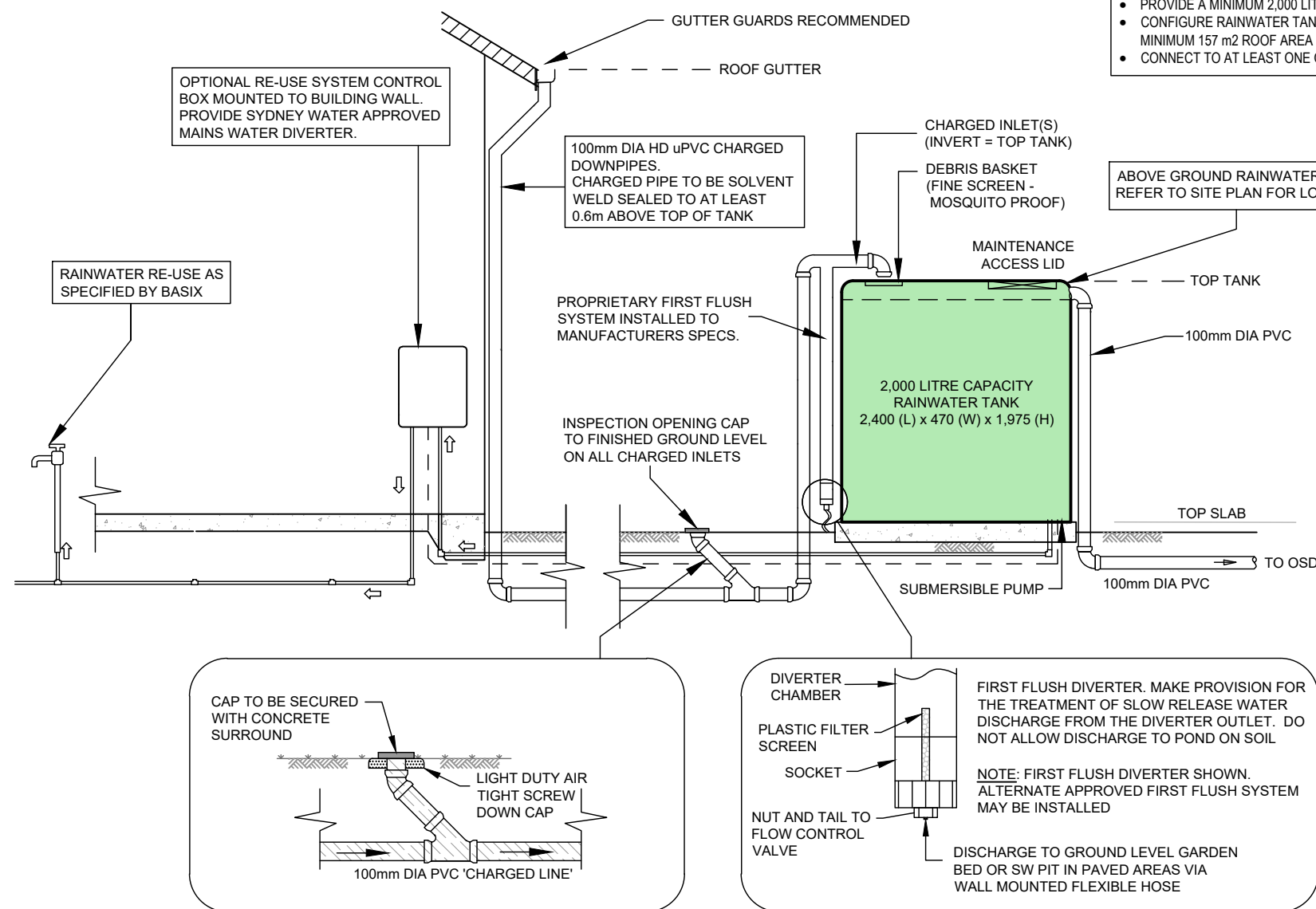
- ORIFICE PLATE NOTES**
1. HOLE IN ORIFICE PLATE TO BE PRECISION CUT WITH SHARP EDGES TO THE SPECIFIED DIAMETER.
 2. ORIFICE PLATE TO BE PLACED CENTRALLY OVER THE OUTLET PIPE.
 3. PLATE TO BE MADE FROM STAINLESS STEEL. HOT DIPPED GALVANISED OR OTHERS NOT ACCEPTABLE.
 4. OUTLET PIPE TO BE CAST INTO THE WALL OF THE PIT.
 5. HOLE IN PLATE TO BE CENTRALLY PLACED.

"WARNING"

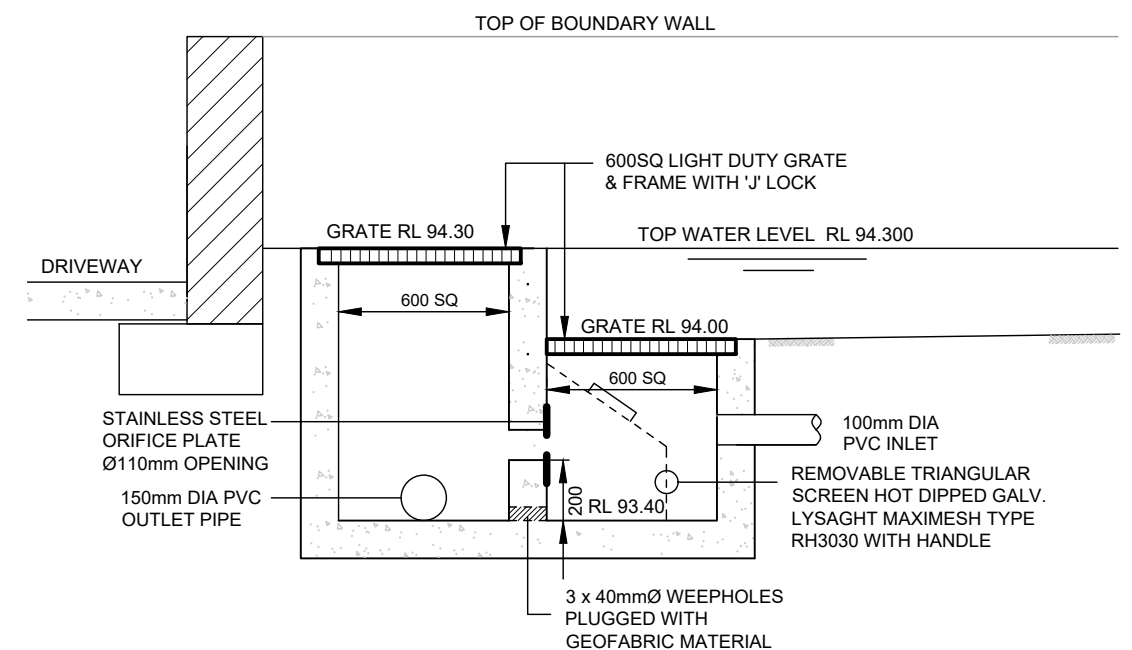
THIS IS AN ON-SITE DETENTION BASIN FOR RAINWATER WHICH IS DESIGNED TO OVERFLOW DURING HEAVY STORMS WITH THE MAXIMUM DEPTH OF WATER BEING 300mm

IT IS AN OFFENCE TO REDUCE THE VOLUME OF THE BASIN OR TO INTERFERE WITH THE ORIFICE PLATE THAT CONTROLS THE OUTFLOW

THIS PLATE MUST NOT BE REMOVED



ABOVE GROUND RAINWATER TANK SCHEMATIC DETAIL
NOT TO SCALE



OSD DISCHARGE CONTROL PIT DETAIL
NOT TO SCALE

**WATERDESIGN
CIVIL ENGINEERS**

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