

GROUND FLOOR LAYOUT

REFER TO SHEET 2 FOR RAINWATER TANK DETAILS.
LEAF GUTTER GUARDS OR SIMILAR SCREENING
RECOMMENDED TO ALL GUTTERS.

WHSA HAZARD IDENTIFICATION:
TRENCHING-ALL PERSONS TO FOLLOW THEIR APPROVED SWMS IN
RELATION TO BARRICADING DEEP TRENCHES AND WEARING
APPROPRIATE CLOTHING. ANY PERSON WORKING INSIDE A TRENCH
MUST BE SUPERVISED BY ANOTHER PERSON.
DIAL BEFORE YOU DIG 1100 MUST BE CHECKED BEFORE ANY
TRENCHING COMMENCES ON SITE. ANY WORKS NEAR IDENTIFIED
SERVICES TO BE CARRIED OUT IN ACCORDANCE WITH THE TRADES
SWMS.
INSTALLATION OF DOWNPIPES AND GUTTERING TO BE CARRIED OUT
IN ACCORDANCE WITH INSTALLERS APPROVED SWMS.

(A) PROPOSED SITE OF DRAINAGE EASEMENT 1.22 WIDE

HALF ROUND FLAT
BACK GUTTER
(7800sqmm)

PIPE SCHEDULE

REFER TO NOTES FOR PIPE CLASS

TAG	PIPE DIA.	MIN.GRADE
B1	100	CHARGED
B2	100	2%
C1	150	1%
C2	150	3%

ALL OTHER SURFACE WATERS
TO BE STRICTLY CONNECTED
TO A SEPARATE SYSTEM BY
OWNER IN ACCORDANCE WITH
AS 3500.3:2003 AND BCA
PART 3.1.2.3.

RAINWATER TANKS WITH PUMPS
TO SUPPLY GARDEN TAPS AND
INTERNAL RE-USE AS PER
BASIX ASSESSMENT

LEGEND

R.L. 0.00	NEW REDUCED LEVEL (NEW FINISHED GROUND LEVEL)
+00.00	EXISTING LEVEL
S.L. 0.00	SURFACE LEVEL
I.L. 0.00	INVERT LEVEL
T.O.W.	TOP OF WALL LEVEL
G.F.L. 0.00	GARAGE FLOOR LEVEL
F.F.L. 0.00	FINISHED FLOOR LEVEL
A,B,C etc.	SEE PIPE SCHEDULE
L1	PIPE LABEL
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
90mm. AG. LINE	90mm. AG. LINE
ODP	DOWNPIPE-SIZE
REFER TO NOTES FOR DP SIZE	
GP	GULLY PIT
GP	GARDEN GULLY PIT
O/F	OVERFLOW-200x100
RWH/S	RAIN WATER HEAD/SUMP
SP	DP WITH SPREADER
BG	BALCONY GULLY PIT
CE	CLEANING EYE
))))	GROUND FALL
))))	100 HIGH EARTH MOUNDING

STORMWATER LAYOUT NOTES

- PITS UP TO 600 DEEP TO BE 450 x 450 U.N.O., PITS UP TO 900 DEEP TO BE 600 x 600 U.N.O., PITS UP TO 1200 DEEP TO BE 900 x 600 U.N.O., PITS EXCEEDING 1200 DEEP TO BE 900 SQ. U.N.O. PITS TO BE PRECAST CONCRETE OR RENDERED BRICK WITH CONCRETE HEAVY DUTY GRATES. U.N.O. LIGHT DUTY PITS AND GRATES MAY BE USED ONLY IN LIGHT/FOOT TRAFFICABLE AREAS. U.N.O. ALL PITS TO BE BENCH TO DISCHARGE PIPES U.N.O. GAL. STEP IRONS TO ALL PITS EXCEEDING 900 DEPTH.
- COVER AND SUMP GRATES SHALL COMPLY WITH AS2733 & AS4198.
- DOWNPIPES TO BE 90 DIA IF CHARGED AND 100 x 50 BOX IF GRAVITY. U.N.O. DP'S SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.3.2:4.11 & AS4198. MAX. ROOF AREA PER DOWNPIPE WITH A NOMINATED GUTTER SIZE TO BE DETERMINED USING MANUFACTURERS SPECIFICATIONS WITH OVERFLOW PROVISIONS BY INSTALLERS.
- PIPES TO HAVE 1% MIN.GRADE U.N.O. BY PIT INVERTS. PIPES TO BE V.C. CLASS 'X' OR U.P.V.C. CLASS STORMWATER PIPE TO AS1254,1260,1273,1477,2179.2 AND WHERE EXPOSED TO DIRECT SUNLIGHT TO HAVE ADEQUATE PROTECTION TO U.V. RADIATION IN ACCORDANCE WITH AS2032. SEWER GRADE/GAL. PIPES AND KERB ADAPTORS TO BE USED WHERE COUNCIL POLICY OR CONSENT REQUIRE SUCH.
- GUTTER OUTLETS SHALL BE FITTED VERTICALLY TO THE SOLE OF THE EAVE GUTTERS. RAINHEADS TO HAVE AN OVERFLOW DUCT OR WEIR 50mm BELOW THEIR CREST.
- PROVIDE OVERFLOW SPITTERS TO ALL COVERED BALCONIES/ TERRACES. NOT TO BE DIRECTED ON TO ROOF SURFACES
- RISING MAINS (PRESSURE PIPE) TO BE IN ACCORDANCE WITH AS3500.1:2.
- SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS2439.1 CLASS 100 TO BE USED ONLY IN SINGLE DWELLINGS.
- ALL PIPE JOINTS, VALVES TO BE IN ACCORDANCE WITH AS3500.3.2:2.7 & AS3500.3.2
- EXPANSION JOINTS SHALL COMPLY WITH AS3500.3.2:TABLE 4.1 PVC JOINTS AND ACCESSORIES TO COMPLY WITH AS2179.2 & AS4198.
- ALL TRENCHES TO BE IN ACCORDANCE WITH AS3500.3.2:7.2.8-14. EMBEDMENT MATERIAL AND TRENCH FILL TO ALL PIPES & SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS3500.3.2:7, ALL WORKS TO BE IN ACCORDANCE WITH AS1254, 1741, 2032, 2733, 2865, 3996, 1260, 1477, 2179.1 & 2,2566, 6367, 8301, ARR97 & BCA.
- IT IS THE BUILDER'S RESPONSIBILITY TO CONFIRM THAT LEVELS AND SURVEYS ARE IN ACCORDANCE WITH LEVELS ON SITE & ARE APPROVED BY COUNCIL & ARCHITECT BEFORE COMMENCING WORK.
- NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS. ALL BASIN WALLS TO BE WATERTIGHT & STRUCTURALLY DESIGNED BY A STRUCTURAL ENGINEER.
- ALL FENCES WHICH MAY DIVERT FLOW FROM PROPOSED DIRECTION TO BE RAISED 100mm.
- BUILDER TO ENSURE ALL DRAINAGE AREAS INCLUDING EXPOSED BALCONIES TO HAVE OVERFLOW MECHANISM IN PLACE IN THE EVENT OF BLOCKAGE WITH ADEQUATE OVERFLOW SECTION THROUGH PLANTERS, PARAPETS ETC.
- ALL EXTERIOR FINISHED GROUND LEVELS TO BE SLOPING AWAY FROM PERIMETER WALLS IN ALL CASES.
- ALL HEADROOM CLEARANCES TO BE COORDINATED BETWEEN BUILDER & ARCHITECT. NOTIFY ENGINEER FOR APPROVAL IF ANY CHANGES OCCUR.
- ALL GULLY POSITIONS ARE DIAGRAMMATIC ONLY- BUILDER SHOULD CONSULT ARCHITECTURALS FOR DIMENSIONS TO LOCATE STORMWATER ELEMENTS U.N.O.
- FIRE RATING TO ARCHITECT'S SPECIFICATION.
- ALL FINISHED FLOOR LEVELS ARE NOMINATED BY ARCHITECT.
- ALL SITE SAFETY MEASURES AND WORK METHOD STATEMENTS PREPARED BY BUILDER/SUB-CONTRACTORS ARE TO BE IMPLEMENTED DURING CONSTRUCTION. NO WORK IS TO COMMENCE UNTIL ALL WORKERS CARRY OUT SITE INDUCTION, PREPARED AND CARRIED OUT BY BUILDER. ANY HAZARD IDENTIFICATION TO BE REPORTED IMMEDIATELY TO SITE SUPERVISOR TO CARRY OUT NECESSARY PROCEDURES TO ELIMINATE HAZARD, PRIOR TO PROCEEDING WITH WORK. STRUCTURAL AND GEOTECHNICAL ADVICE SHOULD BE SOUGHT IN ALL CASES.
- CONFINED SPACES SIGNAGE TO BE INSTALLED IN ACCESSIBLE UNDERGROUND TANKS TO WORK COVER SPECIFICATIONS. ALL PITS EXCEEDING 600mm DEPTH TO HAVE 'J' BOLTS OR SIMILAR INSTALLED TO GRATES.
- MAINTENANCE DEVICES REQ'D BY AUTHORITIES ARE NOT TO BE ASSUMED SHOWN ON DRAWINGS.
- EARTH MOUNDING SHOWN AS TEMPORARY MEASURE UNTIL LANDSCAPING COMPLETED TO DIRECT FLOWS AS SHOWN.

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REVISIONS

NO.	DESCRIPTION

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	14-8-19

SCALE(A3) 1:200, 100 u.n.o.
SCALE BAR - 1m INTERVALS
DATE AUG. 2019
DRAWN M.I.
DESIGNED M.I.
APPROVED



IBRAHIM STORMWATER CONSULTANTS
CONSULTING CIVIL ENGINEERS

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PROJECT
PROPOSED RESIDENCE
AT 600 WARRINGAH ROAD
FORESTVILLE
FOR CALRENDON HOMES

THIS DRAWING
STORMWATER LAYOUT SH.1
BUILDER
CLARENDON HOMES
JOB NUMBER
C9167-00313
SHEET No.
1 of 2
REVISION

QUAD 100Dia. Overflow pipes to Pit P1. Outlet to be mosquito proofed. All exposed pipework to be painted to withstand external elements.(Location shown generic only)

Max. Overflow
RL.119.76m

ORIFICE
IL.118.60

PAD RL.117.51

IL.117.00
2x7110 L SQUARE TANKS
(1800W X 2020H)

6900L for Basix and EFFECTIVE 6530L for OSD
USE 2 x 7110L Dual Rainwater tank/s, to
manufacturer's and Sydney Water's specifications.

Mosquito proof strainer
or cover - regular
cleaning/maintenance
by owner essential

Internal submersible
or external pumps
to supply garden
taps and internal
re-use per Basix
assessment.
Location as per
architecturals.

Leaf Gutter Guard or
Downpipe Guard
recommended.

1000
MIN

INLET LEVEL
OF CHARGED
LINES TO BE
A MINIMUM OF
1400mm
BELOW ALL
CONNECTED
GUTTERS.

First flush water
diverter at tank
as req'd by
L.G.A. F/F

I.O. - Cleaning
eye to all
charged
pipelines for
maintenance of
charged system.

Charged pipes
shown

RAINWATER TANK

TANK DETAILS SHOWN ARE A SUGGESTED CONFIGURATION ONLY. ANY MODIFICATIONS TO TANK VOLUME OR INLET AND OUTLET LEVELS MUST BE APPROVED BY ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION. TANK SHAPE, & DEVICES SHOWN ARE DIAGRAMMATIC ONLY. MINIMUM OF 450 CLEARANCE (UNLESS L.G.A. REQUIRES LARGER SETBACK) TO SIDE BOUNDARIES MUST BE MAINTAINED. CLIENT IS RESPONSIBLE TO ENSURE COMPLIANCE WITH THIS IN THE INSTALLED STATE.

Charged stormwater lines from Roof Areas ONLY to rainwater tank.

All joints to be solvent welded. All exposed pipework to be painted to withstand external elements.

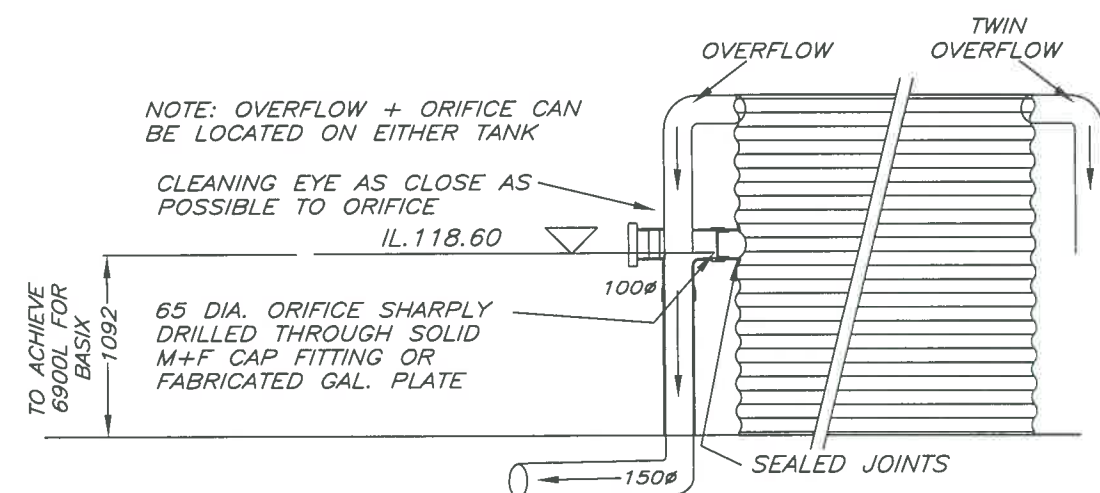
First flush water diverter at tank to comply with Sydney Water and council DCP's. An approved switch system similar to 'Rainbank' to be used via mains. Pumps to manuf. specs.

Rain Tank to be installed and maintained to manufacturers specifications and to comply with all Sydney Water Guidelines.

Client to be responsible for maintenance system of charged pipelines. Debris accumulation significantly affects systems performance. Maintenance program essential. Structural details for tank base by manufacturer or others.

WHSA HAZARD IDENTIFICATION:

INSTALLATION OF RAINTANKS: PLUMBER/SITE SUPERVISOR TO ASSESS ACCESS SUITABILITY PRIOR OR POST SLAB CONSTRUCTION. INSTALLATION OF TANKS TO BE CARRIED OUT FOLLOWING SWMS OF TANK SUPPLIER AND PLUMBER. APPROPRIATE GLOVES TO BE WORN AT ALL TIMES WHILE HANDLING TANKS.



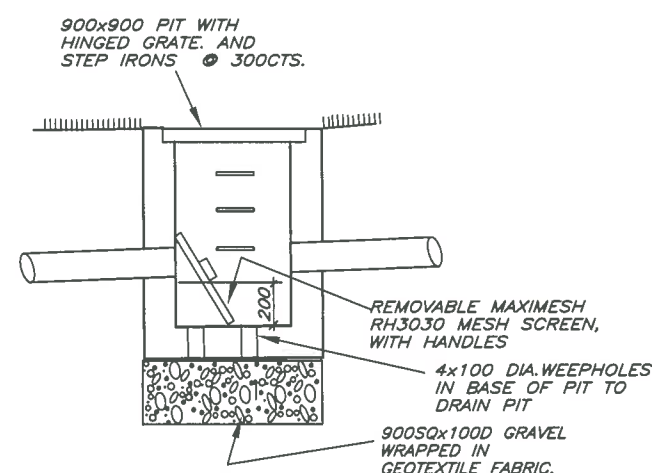
OSD OUTLET DETAIL

THIS IS AN
**ON-SITE STORMWATER
DETENTION SYSTEM**
REQUIRED BY YOUR LOCAL COUNCIL

IT IS AN OFFENSE TO REDUCE THE VOLUME OR TO INTERFERE WITH THE ORIFICE PLATE THAT CONTROLS THE OUTFLOW
THE BASE OF THE OUTLET CONTROL PIT AND DEBRIS SCREEN MUST BE CLEANED OF DEBRIS AND SEDIMENT ON A REGULAR BASIS BY THE OWNER.

THIS PLATE MUST NOT BE REMOVED

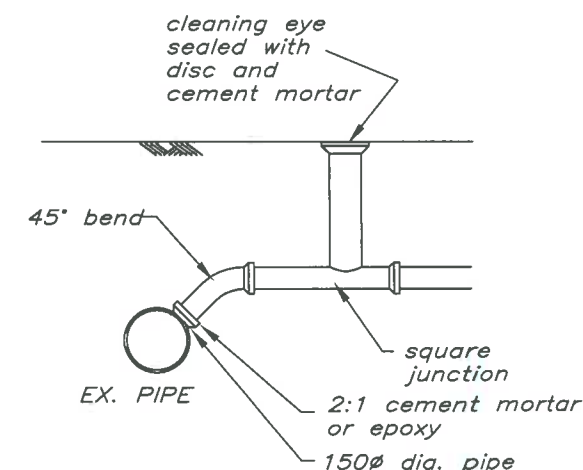
Signage to be provided
adjacent tanks
Size: 110 mm x 80mm



SILT ARRESTOR PIT - P1

WHSA

ALL NEARBY SERVICES TO BE LOCATED PRIOR EXCAVATIONS.
ALL PIPES TO BE CUT FLUSH WITH PIT WALLS AND SPARGED.
PITS EXCEEDING 600mm IN DEPTH TO HAVE LOCK DOWN MECHANISM.
SAFETY GEAR TO BE WORN AT ALL TIMES. INCLUDING FOOTWEAR, CLOTHING AND GLOVES AS PER SWMS.



SLOPE JUNCTION CONNECTION

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BUILDER/CLIENT TO ENSURE THAT ALL SAFETY MEASURES ARE TAKEN DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, SAFETY FENCING, SIGNAGE, OBTAINING STRUCTURAL AND GEOTECHNICAL ADVICE WHERE EXCAVATIONS ARE NEAR STRUCTURES OR SERVICES, SAFETY MEASURES RECOMMENDED BY PRODUCT SUPPLIERS ETC.

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