

## GROUND FLOOR LAYOUT

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

**WHS 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  
(B) SITE OF DRAINAGE EASEMENT 2.44 WIDE (F511027)

### RECOMMENDATIONS BY FLOOD REPORT BY J & F DESIGNS ARE TO BE ADHERED TOO. EXTRACT OF REPORT BELOW.

- The proposed landscaped area in front of the site must slope toward the easement to ensure no water ponds in front of the proposed building.
- The existing boundary levels to remain the same.
- No permanent structures are allowed within the overland flow path over the existing stormwater easement to ensure an unobstructed overland flow path for excess stormwater runoff from upstream catchment areas.
- No brick or other masonry type fence is allowed in front of the site over the existing easement and at the rear boundaries — fences are to be replaced or altered to allow the conveyance of the flow through the site without obstruction.
- Gates and fences within the overland flow paths must be of lightweight materials and permeable to allow for free flow of water.
- The existing ground levels at the rear of the property should remain the same unless noted as part of the overland flow paths.
- All new structures are to have flood compatible building components/ materials (e.g. concrete, timber, steel and brickwork) below 1% AEP flood level plus 300mm freeboard.
- Waterproofing of electrical equipment, wiring and any other services should be undertaken in accordance with the Australian Standard.
- Provide adequate storage areas for hazardous materials and valuable goods above the flood level plus 300mm freeboard.
- All electrical connections, air conditioning units, or external power points are to be set above the minimum habitable floor level.

### PIPE SCHEDULE

REFER TO NOTES FOR PIPE CLASS

TAG	PIPE DIA.	MIN.GRADE
B1	100	CHARGED
B2	100	2%
C1	150	1%
C2	150	4%

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
LT	PIPE LABEL
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
a-a	90mm. AG. LINE
DP	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 WATER TIGHT & 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 ARCHITECTS 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	
A	Arch. and flood report co-ordination

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	14-8-19
2	EMAIL	BUILDER/CLIENT	23-1-20

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



**IBRAHIM STORMWATER CONSULTANTS**  
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PROJECT  
**PROPOSED RESIDENCE**  
**AT 602 WARRINGAH ROAD**  
**FORESTVILLE**  
**FOR CLARENDON HOMES**

THIS DRAWING  
**STORMWATER**  
**LAYOUT SH.1**  
BUILDER  
CLARENDON HOMES  
JOB NUMBER  
**C9075-00312**  
SHEET No.  
**1 of 2**  
REVISION  
**A**

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.119.27m

ORIFICE  
IL.118.12

IL.116.60

3x 3620L SQUARE TANKS  
(1300W X 2250H)

5280L for Basix and EFFECTIVE 4850L for OSD  
USE 3 x 3620L 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.

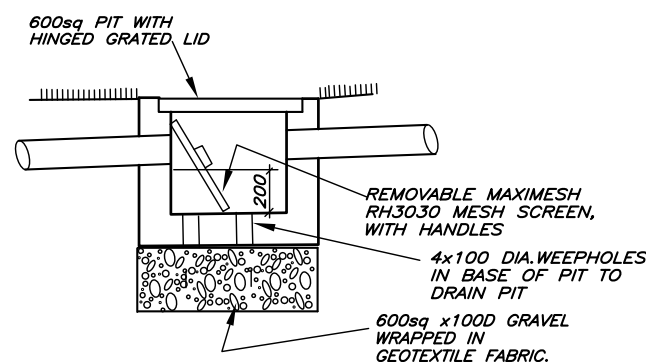
First flush water diverter at tank to comply with Sydney Water and council DCP's. An approved switch system similar to 'Rainbank' to be used via mains. Pumps to manuf. specs.

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.



## 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.

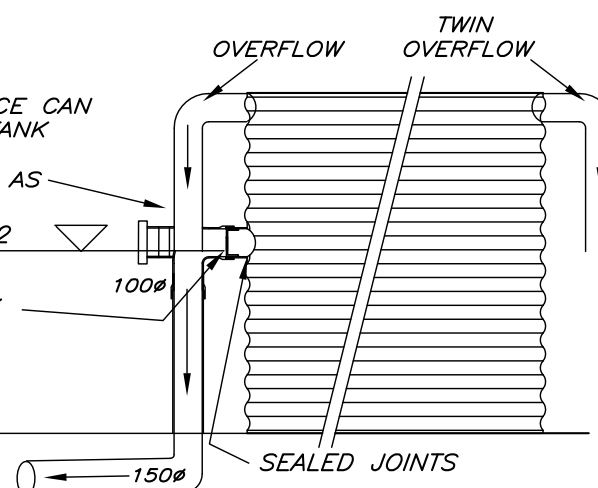
NOTE: OVERFLOW + ORIFICE CAN  
BE LOCATED ON EITHER TANK

CLEANING EYE AS CLOSE AS  
POSSIBLE TO ORIFICE

IL.118.12

TO ACHIEVE  
5280L FOR  
BASIX

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



## 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

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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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SHEET No. **2 of 2**  
REVISION **A**