

-PITS UP TO 450 DEEP TO BE 350SQ U.N.O., PITS UP TO 600 DEEP TO BE 450 SQ U.N.O., PITS UP TO 900 DEEP TO BE 600 SQ 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/BOX GUTTER SUMPS TO HAVE AN OVERFLOW DUCT OR WEIR IN ACCORDANCE WITH AS3500 .  
 -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.

REFER TO SHEET 2 FOR RAINWATER TANK DETAILS.  
LEAF GUTTER GUARDS OR SIMILAR SCREENING  
RECOMMENDED TO ALL GUTTERS.  
BOX GUTTERS AND RWH/S TO BE DETAILED BY  
SUPPLIER/INSTALLER IN ACCORDANCE WITH AS3500 U.N.O.  
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.

(Y) D486913 - SITE OF EASEMENT FOR DRAINAGE 1.83 WIDE  
AS SHOWN SO BURDENED IN VOL. 6338 FOL. 128

- ALL GROUND LEVELS TO REMAIN UNALTERED IN ACCORDANCE WITH COUNCIL FLOOD REPORT.
- ALL MATERIALS TO BE FLOOD COMPATIBLE BELOW RL. **22.00** AHD.
- ALL SERVICES BELOW THE 1% FLOOD LEVEL+FREEBOARD ARE TO BE FLOOD PROOFED.
- ALL STRUCTURES TO BE DESIGNED TO WITHSTAND FLOOD WATERS PER COUNCIL FLOOD REPORT
  - IT IS RECOMMENDED THAT ANY NEW FENCE WITHIN THE FLOOD-AFFECTED AREA BE CONSTRUCTED AS PERMEABLE (OPEN) TYPE TO ALLOW FREE FLOW OF FLOODWATERS
- IT IS ALSO RECOMMENDED TO PROVIDE BARRIER KERB AND / OR GUARD RAIL ALONG THE EDGE OF DRIVEWAY TO PREVENT VEHICLES TO FALL
- COMPLIANCE WITH Chapter 2, Subchapter 2.2, Section 6 – Schedules, Schedule 5 – Catchments Affected by Stormwater Flooding: Notes 1(FFL/FENCING), 2 (BMB REPORT), 6 (LANDSCAPE PLAN FENCING DETAIL) of CBDPC

OWNER RESPONSIBLE FOR ATTAINING COMPLIANCE WITH BCA  
FOR EXTERIOR GROUND LEVELS WHERE LEVELS AND FALLS  
AS SHOWN ARE NOT MAINTAINED. COMPLIANCE WITH OTHER  
AREAS INCLUDING BUT NOT LIMITED TO TERMITE PROTECTION  
MUST NOT BE COMPROMISED IN DOING SO.

REFER TO NOTES FOR PIPE CLASS

<i>TAG</i>	<i>PIPE DIA.</i>	<i>MIN.GRADE</i>
<i>B1</i>	<i>100</i>	<i>CHARGED</i>
<i>B2</i>	<i>100</i>	<i>2%</i>
<i>C1</i>	<i>150</i>	<i>1%</i>
<i>C2</i>	<i>150/SNB</i>	<i>2%</i>

R.L. 0.00	NEW REDUCED LEVEL (NEW FINISHED GROUND 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
2" 90°	90° 2" A.C. LINE

DP	SOUTH. AG. LINE
	DOWNPIPE-SIZE

REFER TO NOTES FOR DP SIZE

GP	GULLY PIT
--	-----------


GP	GARDEN GULLY PIT
--	------------------

<b>= 0/F</b>	<b>OVERFLOW-200x100</b>
<b>= 0/F</b>	<b>OVERFLOW-200x100</b>

<input type="checkbox"/> RWH/S	RAIN WATER HEAD/SUMP
<input checked="" type="checkbox"/> CB	DB UNIT/GRABBER

SP	DP WITH SPREADER
BC	BALCONY GULLY PIT

⊕ BG	BALCONY GULLY FIT
⊙ CE	CLEMMING EYE

 CE	CLEARING EYE
M	GROUND FALL

	GROUND WALL
\\\\\\	100 HIGH EARTH

))))	<b>MOUNDING</b>
------	-----------------

---

PROJECT

**PROPOSED RESIDENCE**

**PROPOSED RESIDENCE  
AT 4 CLIFFORD STREET**

**AT 4 CLIFFORD STREET**

**PANANIA, FOR MR. A.**

**MS. A. P. TRUONG**

---

---

REVISIONS	
D	DWELLING RESITED
C	WP
B	NOTES UPDATED PER COUNCIL REF

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	20-11-23
2	EMAIL	BUILDER/CLIENT	20-12-23
3	EMAIL	BUILDER/CLIENT	17-7-24
4	EMAIL	BUILDER/CLIENT	4-10-24
5	EMAIL	BUILDER/CLIENT	18-11-24

SCALE(A3) 1:200, 100 u.n.o.  
SCALE BAR - 1m INTERVALS  
DATE SEPT. 2023  
DRAWN M.I.  
DESIGNED M.I.  
APPROVED



**IBRAHIM STORMWATER CONSULTANTS**  
**CONSULTING CIVIL ENGINEERS**

P.O. BOX 400 CHERRYBROOK NSW 2126  
TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114  
www.stormwater.net.au email: mail@stormwater.net.au

**PROJECT**  
***PROPOSED RESIDENCE***  
***AT 4 CLIFFORD STREET***  
***PANANIA, FOR MR. A. S. LAM &***  
***MS. A. P. TRUONG***

THIS DRAWING **STORMWATER**  
LAYOUT SH 1

JOB NUMBER **E11492-27123**

& BUILDER  
 EDEN BRAE HOMES

SHEET No.  
**1 of 2**

REVISION  
**D**

Twin 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.22.84

TANK TO BE  
BRACED TO  
TANK PAD

IL.20.50

PAD RL.20.88

3040L Rainwater tank/s, to  
manufacturer's and Water  
Authority'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.

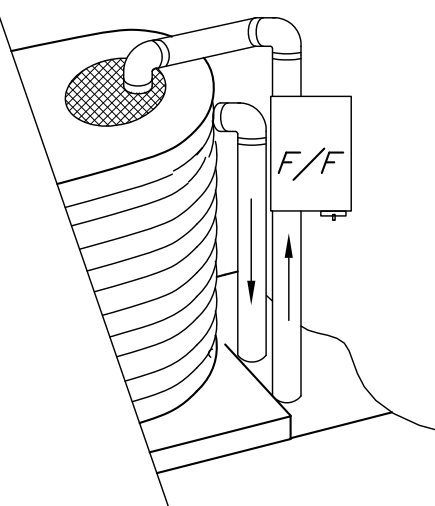
550  
MIN

Charged pipes  
shown

INLET LEVEL  
OF CHARGED  
LINES TO BE  
A MINIMUM AS  
SHOWN  
BELOW ALL  
CONNECTED  
GUTTERS.

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

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



TYPICAL ALTERNATIVE  
INLET SYSTEM SHOWN  
DIAGRAMMATICALLY ONLY

## 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 Water Authority and council DCP's. An approved switch system similar to 'Rainbank' to be used via mains. Pumps to manuf. specs.

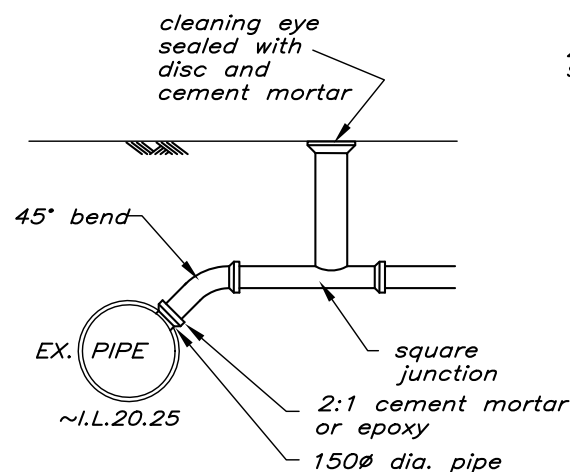
Rain Tank to be installed and maintained to manufacturers specifications and to comply with all Water Authority Guidelines.

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.

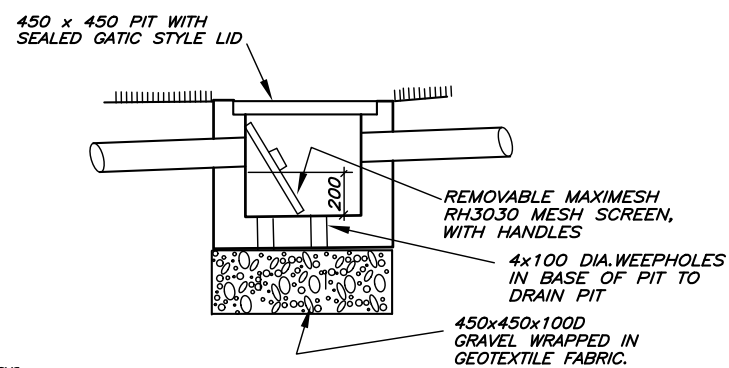
WHSA HAZARD IDENTIFICATION:

INSTALLATION OF RAINWATER TANKS: 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.



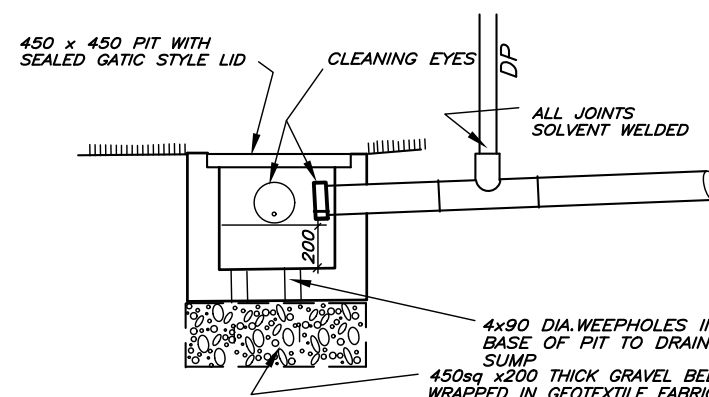
## SLOPE JUNCTION CONNECTION

150Ø dia. pipe using FLOCON CONCONNECT  
DEVICE AT 11-1 O'CLOCK POSITION.  
COUNCIL INSPECTION MUST BE BOOKED  
BEFORE WORKS COMMENCE. INSPECTIONS  
AT EXCAVATION, CORE DRILLING AND  
INSTALLATION MUST BE INSPECTED BY  
COUNCIL



## 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.



## PIT P2–MAINTENANCE PIT

NOTE: CLEANING EYES IN PIT FOR FLUSHING OUT OF CHARGED SYSTEM.  
MAX. 5mm HOLE IN CAPS TO ALLOW SYSTEM TO SELF DRAIN.  
PIT IS NOT BE USED AS SURFACE INLET PIT UNLESS PROVISIONS HAVE  
BEEN FOR ITS OUTLET BY THIS DESIGN OTHERWISE BY OWNER.

LANDSCAPER IS NOT TO  
DIRECT ANY SURFACE  
FLOWS TO THIS PIT AS  
IT IS ONLY FOR THE  
MAINTENANCE OF THE  
CHARGED LINES. OWNER  
MAY CONSTRUCT A  
SEPARATE SYSTEM TO  
UTILIZE AS SUCH OR  
USE A PUMP TO DRAIN  
CHARGED LINES DURING  
MAINTENANCE ONLY.

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.

REVISIONS	
D	DWELLING RESITED
C	WP
B	NOTES UPDATED PER COUNCIL RFI

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	20-11-23
2	EMAIL	BUILDER/CLIENT	20-12-23
3	EMAIL	BUILDER/CLIENT	17-7-24
4	EMAIL	BUILDER/CLIENT	4-10-24

SCALE (A3) 1:200, 100 u.n.o.  
SCALE BAR – 1m INTERVALS  
DATE SEPT. 2023  
DRAWN M.I.  
DESIGNED M.I.  
APPROVED



**IBRAHIM STORMWATER CONSULTANTS**  
**CONSULTING CIVIL ENGINEERS**

P.O. BOX 400 CHERRYBROOK NSW 2126  
TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114  
www.stormwater.net.au email: mail@stormwater.net.au

PROJECT  
**PROPOSED RESIDENCE  
AT 4 CLIFFORD STREET  
PANANIA, FOR MR. A. S. LAM &  
MS. A. P. TRUONG**

THIS DRAWING  
**STORMWATER  
DETAILS SH.1**  
BUILDER  
EDEN BRAE HOMES  
JOB NUMBER  
**E11492-27123**  
SHEET No.  
**2 of 2**  
REVISION  
**D**