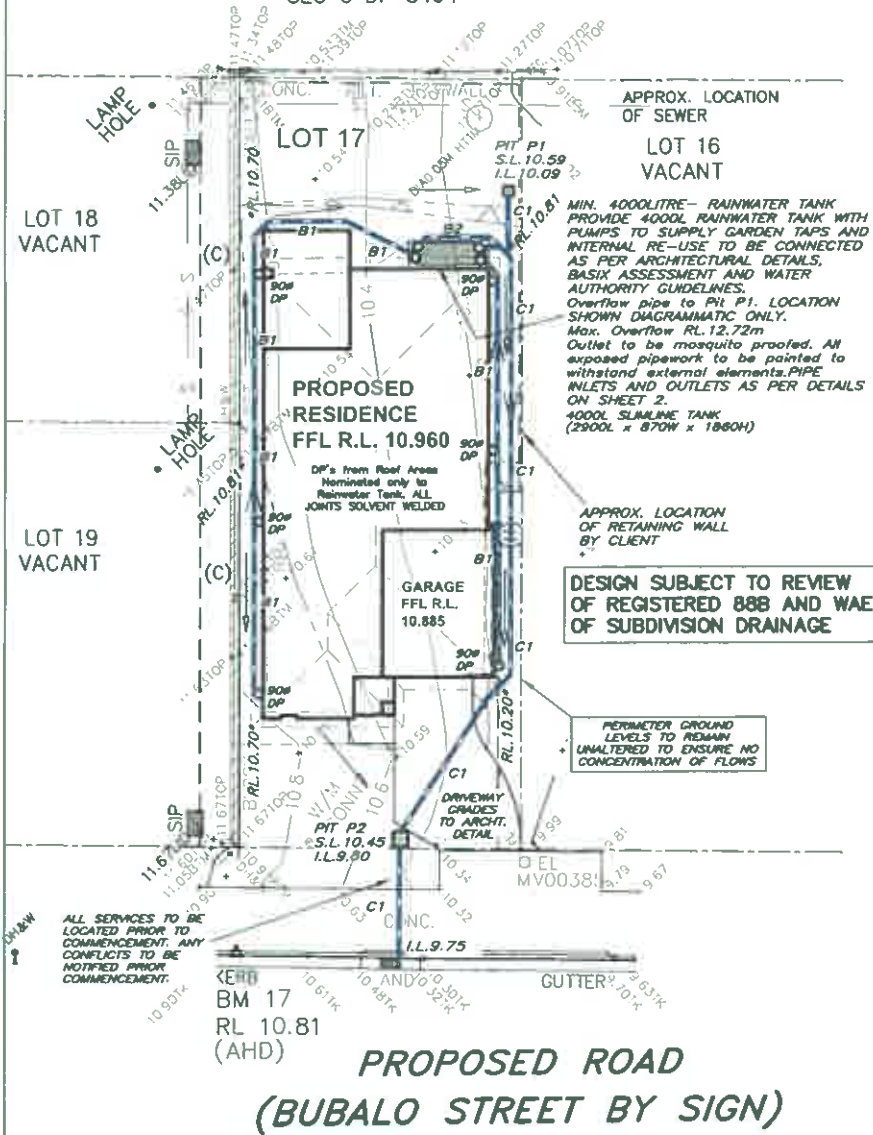


LOT 31  
SEC C DP 5464



**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 x 500 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 BENCHED 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 GRADIES/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 THEM. 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.
- SUBSON 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 & SUBSON DRAINS TO BE IN ACCORDANCE WITH AS3500.3.2.7. ALL WORKS TO BE IN ACCORDANCE WITH AS1254, 1741, 2032, 2733, 2863, 3996, 1280, 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.
- SPACES SIGNAGE TO BE INSTALLED IN ACCESSIBLE UNDERGROUND TANKS TO WORK COVER SPECIFICATIONS. ALL PITS EXCEEDING 600mm DEPTH TO HAVE 'U' BOLTS OR SIMILAR INSTALLED TO GRATES.
- MAINTENANCE DEVICES REQ'D BY AUTHORITIES ARE NOT TO BE ASSUMED SHOWN ON DRAWINGS.
- EARTH BOUNDING SHOWN AS TEMPORARY MEASURE UNTIL LANDSCAPING COMPLETED TO DRECT FLOWS AS SHOWN.

**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.  
(C) PROPOSED EASEMENT TO DRAIN WATER 1.5  
(M) PROPOSED EASEMENT FOR ACCESS AND MAINTENANCE

**PIPE SCHEDULE**  
REFER TO NOTES FOR PIPE CLASS

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

**LEGEND**

R.L. 0.00	(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
LI	PIPE LABEL
PIT P1	SURFACE INLET PIT
PIT OE1	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
OD/F	OVERFLOW-200/100
RWH/S	RAIN WATER HEAD/SUMP
SP	DP WITH SPREADER
BC	BALCONY GULLY PIT
CE	CLEANING EYE
	GROUND FALL
))))	100 HIGH EARTH MOUNDING

**HALF ROUND FLAT BACK GUTTER (200mm)**

ALL OTHER SURFACE SYSTEMS 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

NORTH



REVISIONS

NO.	DESCRIPTION

ISSUE	PRINTS	ISSUED TO	DATE
1	EMBL	BRADY/CLIFF	11-4-18

SCALE(A3) 1:200, 100 u.n.e.  
SCALE BAR - 1m INTERVALS  
DATE MAR - 2019  
DRAWN M.J.  
DESIGNED M.J.  
APPROVED



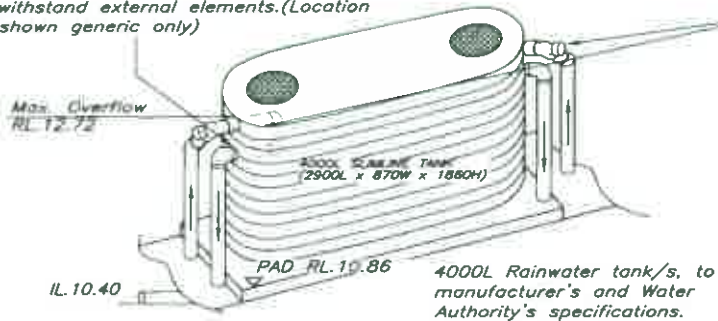
**IBRAHIM STORMWATER CONSULTANTS**  
CONSULTING CIVIL ENGINEERS  
P.O. BOX 400 CHERYBROOK NSW 2128  
TELEPHONE: (02) 9980 5515 FAX: (02) 9980 8114  
www.stormwater.net.au email: mab@stormwater.net.au

PROJECT  
**PROPOSED RESIDENCE AT LOT. 17 PROPOSED ROAD WARRIEWOOD FOR MR & MRS. SOMMER**

THIS DRAWING  
**STORMWATER LAYOUT SH.1**  
BUILDER  
CLARENDON HOMES

JOB NUMBER  
**C8985-13455**  
SHEET No. **1 of 2**  
REVISION

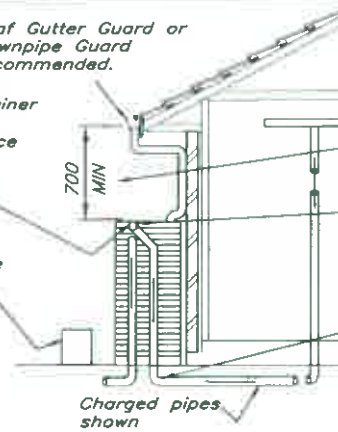
Twin 100Dia. Overflow pipes to Pit P1.  
Outlet to be mosquito proofed. All  
exposed pipework to be painted to  
withstand external elements. (Location  
shown generic only)



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.

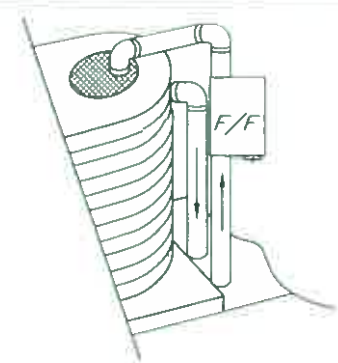
Leaf Gutter Guard or  
Downpipe Guard  
recommended.



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.

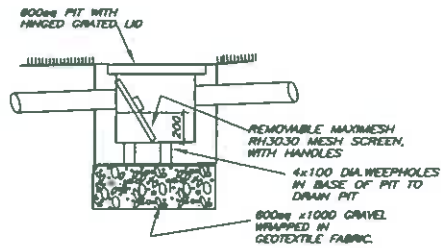
Rain Tank to be installed and maintained to manufacturers specifications and to comply with all Water Authority Guidelines.

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.

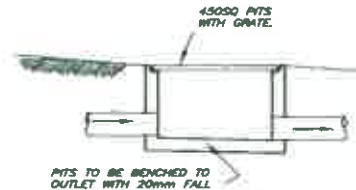
### WHSA HAZARD IDENTIFICATION:

INSTALLATION OF RAIN 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.



## SILT ARRESTOR PIT - P2

WHSA  
ALL NEARBY SERVICES TO BE LOCATED PRIOR EXCAVATIONS.  
ALL PIPES TO BE CUT FLUSH WITH PIT WALLS AND SPARGED.  
PITS EXCEEDING 800mm IN DEPTH TO HAVE LOCK DOWN MECHANISM.  
SAFETY GEAR TO BE WORN AT ALL TIMES, INCLUDING FOOTWEAR, CLOTHING  
AND GLOVES AS PER SWMS.



## TYPICAL PIT DETAIL

NOT TO SCALE

THIS DRAWING IS DIAGRAMMATIC ONLY & NOT TO BE SCALED. IT IS NOT A PART OF ANY CERTAIN REFER TO ARCHITECT'S DRAWINGS FOR DIMENSIONS. THIS DRAWING IS THE PROPERTY OF IBRAHIM STORMWATER CONSULTANTS AND THE DRAWING SHALL NOT BE REPRODUCED OR COPIED, WHOLE OR IN PART, IN ANY FORM WITHOUT THE WRITTEN APPROVAL OF IBRAHIM STORMWATER CONSULTANTS.

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	

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	11-4-18

SCALE(A3) 1:200, 1:100 u.s.a.  
SCALE BAR - 1m INTERVALS  
DATE MAR 2018  
DRAWN M.L.  
DESIGNED M.L.  
APPROVED



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

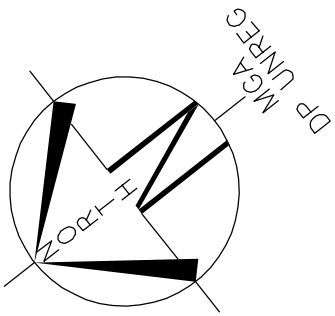
P.O. BOX 400 CHERRYBROOK NSW 2128  
TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114  
www.stormwater.net.au email: mail@stormwater.net.au

PROJECT  
**PROPOSED RESIDENCE  
AT LOT. 17 PROPOSED ROAD  
WARRIEWOOD  
FOR MR & MRS. SOMMER**

THIS DRAWING  
**STORMWATER  
DETAILS SH.1**  
BUILDER  
CLARENDON HOMES

JOB NUMBER  
**C8985-13455**  
SHEET No  
**2 of 2**  
REVISION

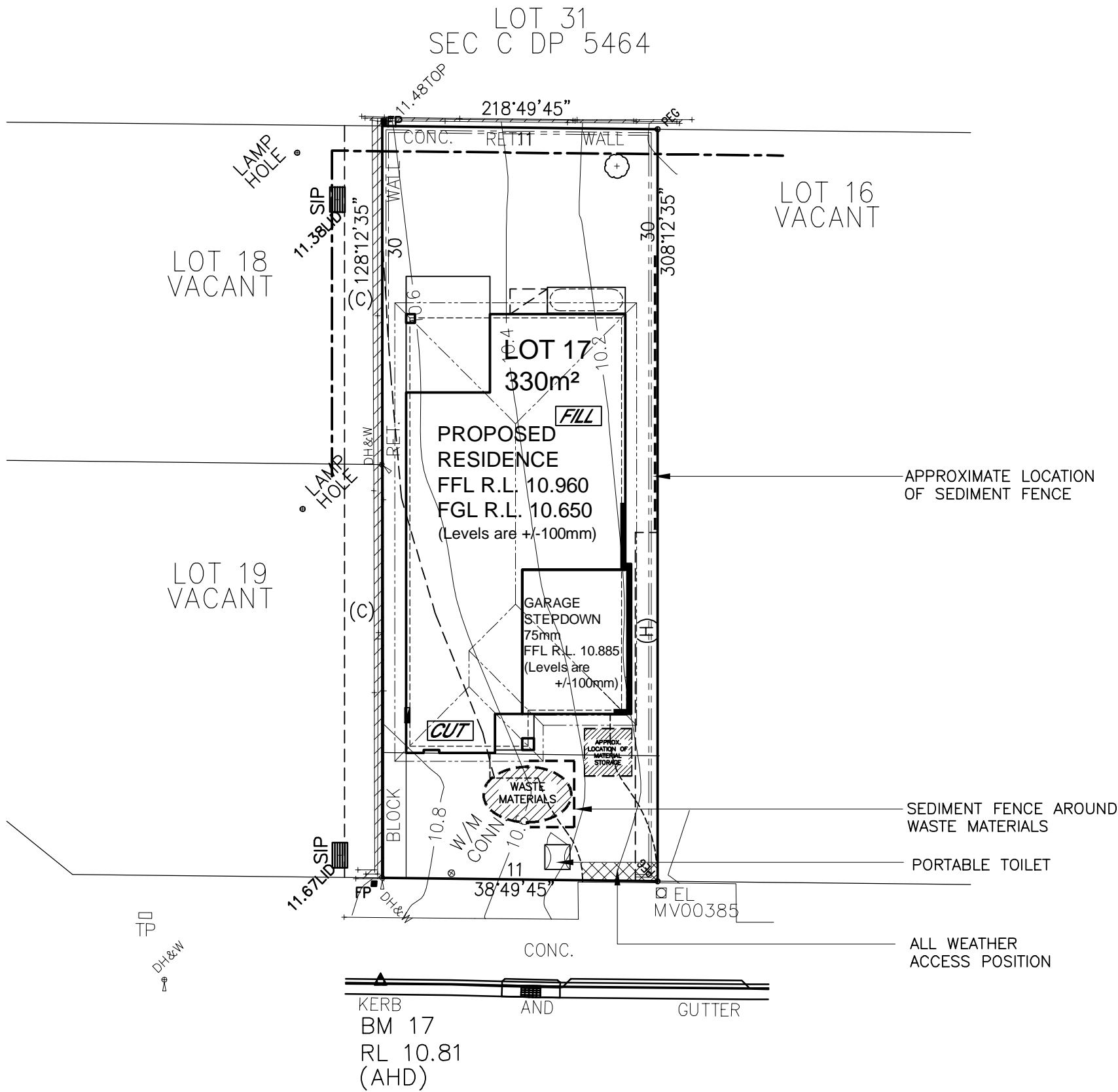
NORTH



(C) PROPOSED EASEMENT TO DRAIN WATER 1.5  
 (H) PROPOSED EASEMENT FOR ACCESS AND MAINTENANCE

**LOT 17**  
 D.P: UNREGISTERED  
 L.G.A: NORTHERN BEACHES

SITING HAS BEEN COMPLETED  
 IN ACCORDANCE WITH  
 PITTWATER DCP 21 - D16



PROPOSED ROAD  
 (BUBALO STREET BY SIGN)

**NOTE:**  
 TEMPORARY SECURITY FENCING TO THE PERIMETER OF THE BOUNDARY WHERE REQUIRED TO PREVENT PUBLIC ACCESS ONTO THE SITE

**NOTE:**  
 GROUND LINES ARE APPROXIMATE. EXTENT OF CUT AND FILL BATTERS WILL BE DETERMINED ON SITE. SEDIMENT BARRIERS ARE CUSTOMISED TO SITE CONDITIONS

**SEDIMENT CONTROL NOTES**

- ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW AND INSPECTED DAILY BY THE SITE MANAGER.
- ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
- SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE x 300mm DEEP TRENCH.
- ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60% FULL OF SOIL MATERIALS, INCLUDING THE MAINTENANCE PERIOD.
- ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
- SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE. ALL ROADS AND FOOTPATHS TO BE SWEEPED DAILY.
- FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3.0m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
- DUST PREVENTION MEASURES TO BE MAINTAINED AT ALL TIMES.

**SEDIMENT FENCE**  
 NOT TO SCALE

**CONSTRUCTION MANAGEMENT PLAN**  
**EROSION AND SEDIMENT CONTROL PLAN**

CLIENT'S SIGNATURE: _____ DATE: _____		PRODUCT: <b>PARKHILL 32</b> Prominent R/H Garage  Evolution Specification		CLIENT: <b>Mr. SOMMER</b> <b>Mrs. SOMMER</b>  SITE ADDRESS: <b>Lot 17</b> <b>Proposed Road</b> <b>WARRIEWOOD 2102</b>		<b>DA DRAWINGS</b>	
<b>ClarendonHomes</b> BL No. 2298C ABN 18 003 892 706 Clarendon Homes (NSW) P/L 21 Solent Circuit, Baulkham Hills NSW 2153 T: (00) 000 0000		© ALL RIGHTS RESERVED This plan is the property of CLARENDON HOMES (NSW) P/L. Any copying or altering of the drawing shall not be undertaken without written permission from CLARENDON HOMES (NSW) P/L. # DIMENSIONS TO BE READ IN				DRAWN: PG. DATE: 28.02.19 Rev: F RATIO @ A3: 1:200 CHECKED: J.S. SHEET: 2 1 JOB No: 29913455 NSW	