

**NORTH NOTE**  
BEARINGS SHOWN HAVE BEEN DETERMINED FROM LAND & PROPERTY INFORMATION PLANS AND ARE RELATED TO MAGNETIC NORTH. TRUE NORTH IS APPROXIMATE ONLY AND FURTHER INVESTIGATION WOULD BE REQUIRED TO DETERMINE ACCURATE TRUE NORTH.



**THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT**

**DA2019/1032**

**LOT C**  
CLAD RESIDENCE  
METAL ROOF  
No.8

INTEGRATED DRIVEWAY  
THROW-ON BROOM FINISHED COLOURED CONC. DRIVEWAY BY RAWSON HOMES

CONSUMER POLE  
LOCATION TO BE CONFIRMED ON SITE

**FLOOD AFFECTED**

**NOTES:**

CONTOURS SHOWN HAVE BEEN INTERPOLATED FROM SPOT LEVELS TAKEN ON-SITE AND ARE A REPRESENTATION OF THE TOPOGRAPHY ONLY.  
DIMENSIONS SHOWN (BEARINGS & DISTANCES) HAVE BEEN DETERMINED BY LAND AND PROPERTY INFORMATION PLANS ONLY. BOUNDARIES HAVE NOT BEEN ACCURATELY DETERMINED.  
SERVICES SHOWN HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY. PRIOR TO ANY SITE WORKS, THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO DETERMINE EXACT POSITION OF ANY UNDERGROUND PIPES, CABLES ETC.  
DIMENSIONS OF ANY TREES SHOWN ON THE PLAN ARE APPROX.



**NOTES:**

PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS

- \* ALL DIMENSIONS ARE IN MILLIMETRES
- \* DO NOT SCALE - USE WRITTEN DIMENSIONS
- \* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

**RAWSON HOMES**

1 HOMEBUSH BAY DRIVE  
BUILDING F, LEVEL 2, SUITE 1  
RHODES NSW 2138  
TELEPHONE: 02 8765 5500  
FAX : 02 8765 8099  
BUILDER'S LICENCE No. 33493C



CLIENT:  
**MR M.J. EVANS & MRS J.R. EVANS**

SITE ADDRESS:  
**LOT A, DP 161572  
71 GEORGE STREET  
AVALON BEACH NSW 2107**

HOUSETYPE:  
MODEL: CHIFLEY 32  
FACADE: CLASSIC  
TYPE: DOUBLE GARAGE  
SPECIFICATION: LUX

DRAWING TITLE:  
**SITE PLAN**

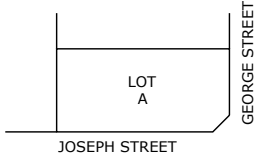
DRAWN BY:	DATE DRAWN:	CHECKED BY:	APPROVED FOR CONSTRUCTION:
DTT	12.08.19	DTT	
COUNCIL AREA:		SCALE:	
NORTHERN BEACHES		1:200	
JOB No:	DRWG No.:	ISSUE:	
A009118	03	C	

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**LOCATION PLAN**

LAT: -33.6241  
LONG: 151.3279



PM 249 RL 3.225

S.C.I.M.S

**SCHEDULE OF TREES**

	DIAMETER	HEIGHT	TYPE
T1	1.00	9m	-
T2	0.60	7m	-
T3	0.50	7m	-

**LEGEND**

	BENCH MARK
	PHOTO POINT
	GULLY PIT
	VEHICULAR CROSSING
	TOP OF BANK
	BOTTOM OF BANK

PP

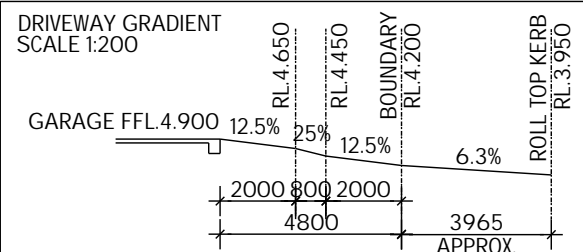
**ABBREVIATIONS**

EB - ELECTRICAL BOX  
EM - ELECTRICAL METER  
GM - GAS METER  
H - HYDRANT  
R - HYDRANT RECYCLED  
KO - KERB OUTLET  
LP - LIGHT POLE  
LH - LAMP HOLE  
MH - MAN HOLE  
MS - MAINTENANCE SHAFT  
PP - POWER POLE  
SH - SHRUB  
SMH - SEWER MAN HOLE  
SIO - SEWER INSPECTION OPENING  
SV - STOP VALVE  
SR - STOP VALVE RECYCLED  
SVP - SEWER VENT PIPE  
SWP - STORM WATER PIT  
T - TREE  
TP - TELECOMMUNICATIONS PIT  
VER - VERANDAH  
WT - WATER TAG  
WM - WATER METER  
WMR - WATER METER RECYCLED  
WC, GC, EC, TC - SERVICE CONDUIT  
W/C - WATER CLOSET

**SITE CALCULATIONS DA**

GROUND FLOOR	116.47 m <sup>2</sup>
FIRST FLOOR	110.03 m <sup>2</sup>
TOTAL LIVING AREA	226.50 m <sup>2</sup>
SITE AREA	690.10 m <sup>2</sup>
BUILDING FOOTPRINT	200.27 m <sup>2</sup>
DRIVEWAY	29.00 m <sup>2</sup>
PATH	10.53 m <sup>2</sup>
CROSSOVER	15.88 m <sup>2</sup>
TOTAL FRONT AREA	180.77 m <sup>2</sup>
FRONT LANDSCAPE AREA (%)	94.17 %
TOTAL LANDSCAPE AREA	450.30 m <sup>2</sup>
LANDSCAPE AREA (%)	65.25 %
FLOOR SPACE RATIO	0.33 :1
SITE COVERAGE	29.02 %

DRIVEWAY GRADIENT  
SCALE 1:200



**N2 WIND CATEGORY**

0.45M FALL ACROSS  
BUILDING ENVELOPE

NOTE:  
DRIVEWAY & FRONT PATH  
TO COMPLY WITH AS2890

NOTE:  
EXISTING LAYBACKS ON GEORGE & JOSEPH  
STREETS TO REMAIN AS PER CLIENT REQUEST

NOTE:  
PROVIDE OVERHEAD ELECTRICAL CONNECTION OF  
SERVICE MAINS FROM SERVICE POLE TO  
CONSUMER POLE WITHIN PROPERTY BOUNDARIES  
THEN UNDERGROUND MAINS TO METERBOX.

NOTE:  
RAWSON HOMES TO  
PROVIDE IMPORT OF FILL





northern  
beaches  
council

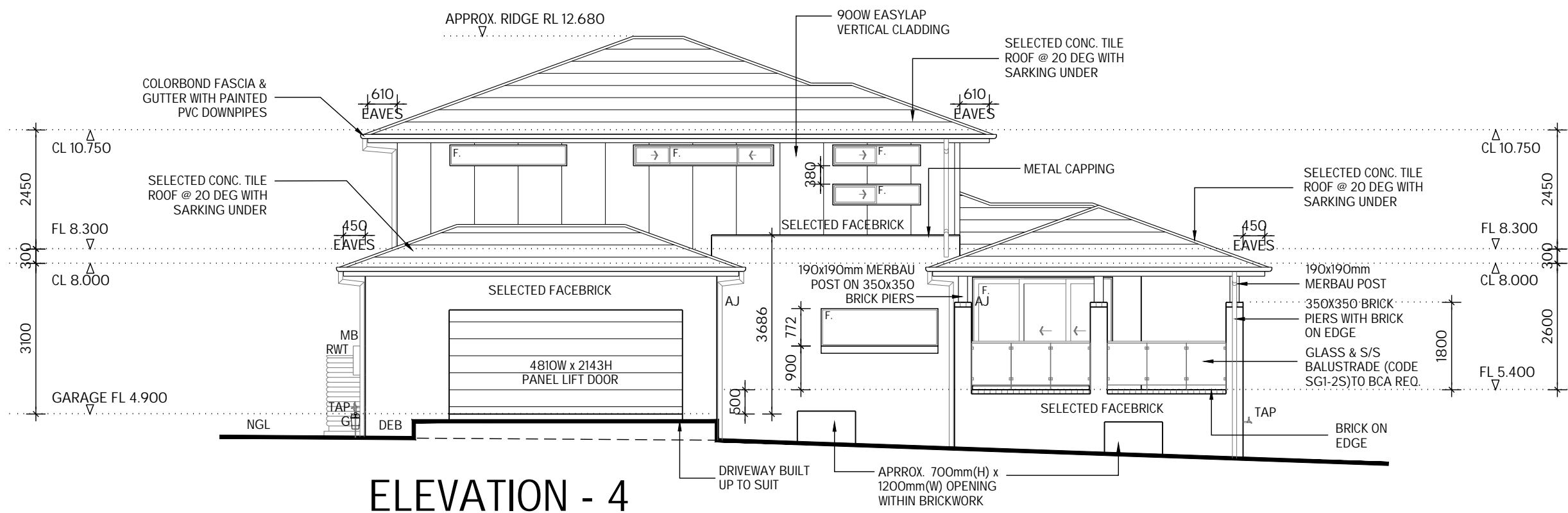
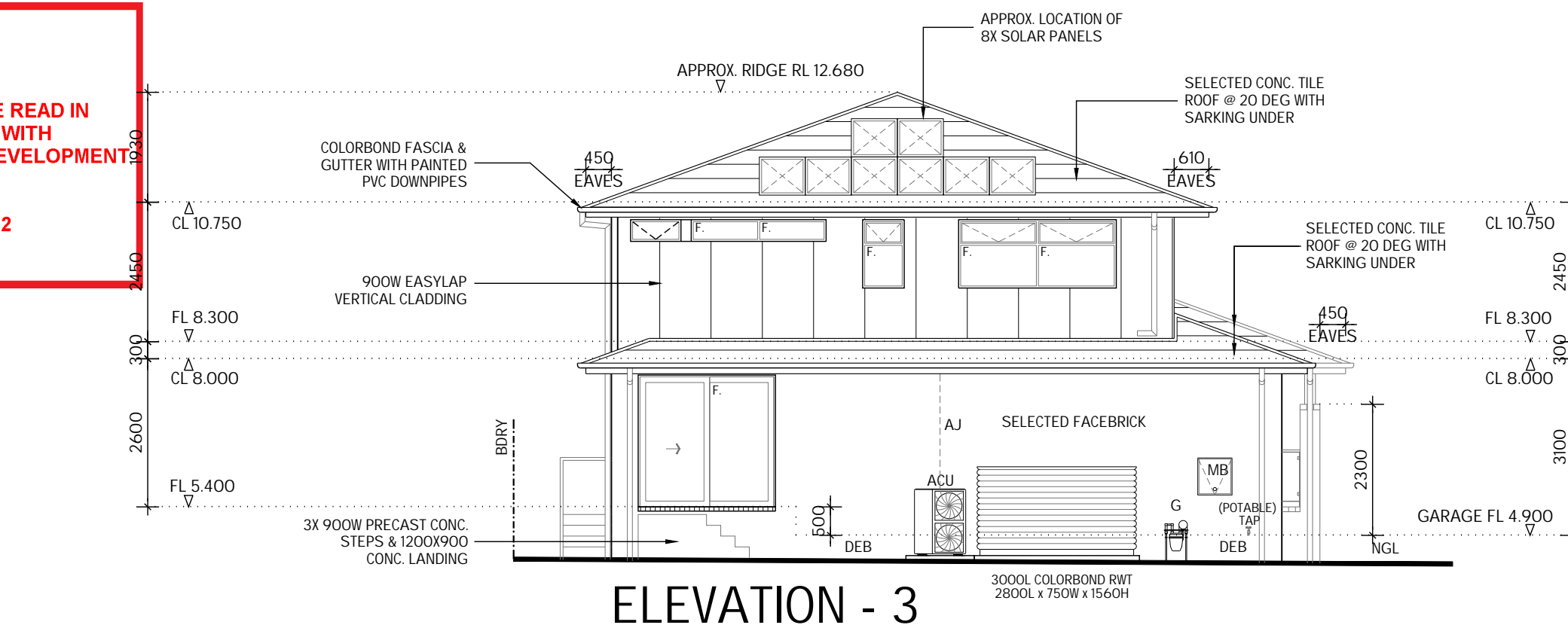
**THIS PLAN IS TO BE READ IN  
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THE CONDITIONS OF DEVELOPMENT  
CONSENT**

**DA2019/1032**

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NOTE:  
NYLON MESH FLYSCREENS TO ALL  
OPENING WINDOWS, SLIDING & STACKER  
DOORS (EXCLUDING HINGED DOORS)



#### NOTES:

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**MR M.J. EVANS & MRS J.R. EVANS**

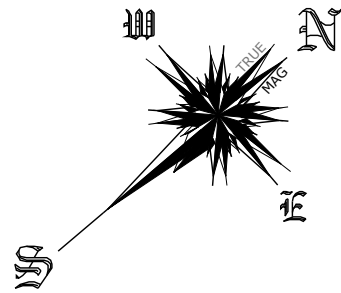
SITE ADDRESS:  
**LOT A, DP 161572  
71 GEORGE STREET  
AVALON BEACH NSW 2107**

HOUSETYPE:  
MODEL: CHIFLEY 32  
FACADE: CLASSIC  
TYPE: DOUBLE GARAGE  
SPECIFICATION: LUX

DRAWING TITLE:  
**ELEVATIONS 3 & 4**

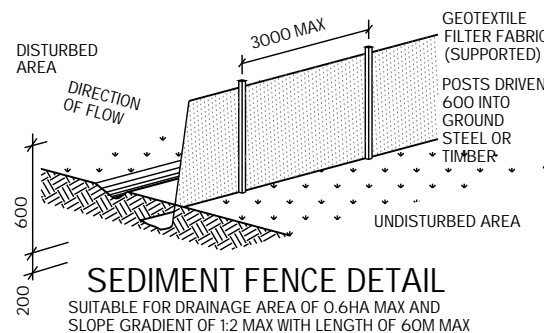
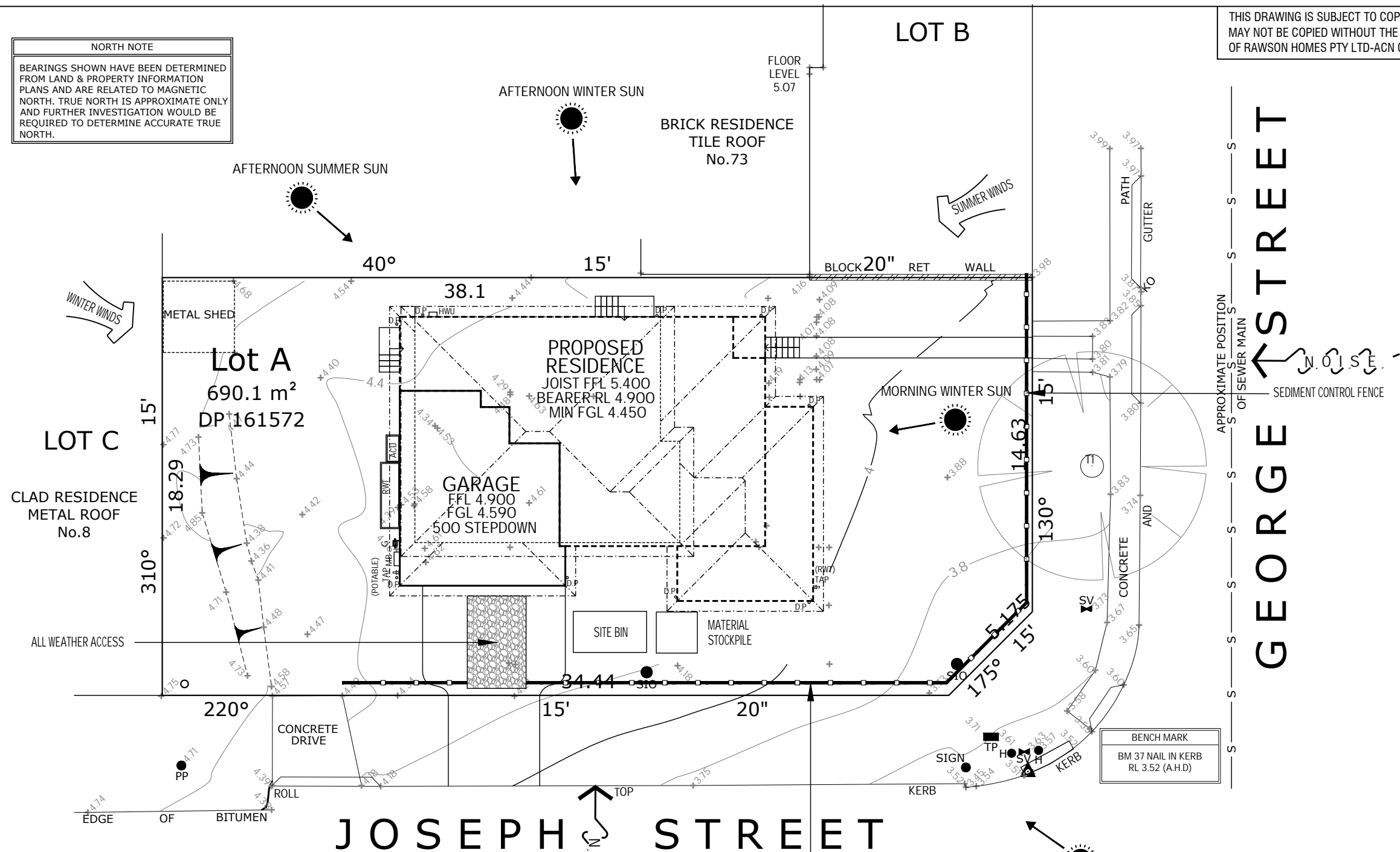
DRAWN BY: DTT	DATE DRAWN: 12.08.19	CHECKED BY: DTT	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: <b>NORTHERN BEACHES</b>		SCALE: 1:100	
JOB No: <b>A009118</b>	DRWG No.: <b>07</b>	ISSUE: <b>C</b>	





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### SEDIMENT CONTROL

INSTALL SEDIMENT CONTROL STRUCTURES IN LOCATIONS INDICATED ON THIS DRAWING AND AS OTHERWISE REQUIRED TO CONTROL SEDIMENT DURING ALL EXCAVATIONS AND WHILST AREAS OF THE SITE ARE EXPOSED TO EROSION. REVIEW CONTROL MEASURES AND MAINTAIN STRUCTURES DURING CONSTRUCTION.

IF ADDITIONAL MEASURES ARE REQUIRED FOR EROSION AND CONTROL OR BY COUNCIL REQUIREMENTS, REFER TO "URBAN EROSION AND SEDIMENT CONTROL" GUIDELINES PREPARED BY THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT.



 **northern beaches council**

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**DA2019/1032**

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AVALON BEACH NSW 2107**

HOUSETYPE:  
MODEL: CHIFLEY 32  
FACADE: CLASSIC  
TYPE: DOUBLE GARAGE  
SPECIFICATION: LUX

DRAWING TITLE:  
**SEDIMENT & ANALYSIS PLAN**

DRAWN BY: DTT	DATE DRAWN: 12.08.19	CHECKED BY: DTT	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1:200	
JOB No: A009118	DRWG No.: 11	ISSUE: C	

GENERAL NOTES:

1. ALL HYDRAULIC WORKS TO BE IN ACCORDANCE WITH THE NORTHERN BEACHES (OLD PITTWATER) COUNCIL'S STANDARD SPECIFICATIONS AND TO THE SUPERVISING ENGINEER'S SATISFACTION.
2. THESE PLANS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLANS FROM RAWSON HOMES JOB No. A009118 ISSUE C DATED 12 AUGUST 2019 (PHONE: (02) 8765 5500).
3. ALL STORMWATER PIPES TO BE 100 DIA. UPVC UNLESS NOTED OTHERWISE. PIPES UNDER DRIVEWAY TO BE SEWER GRADE.
4. DEPTH AND LOCATION OF SEWER & SERVICES TO BE CONFIRMED PRIOR TO COMMENCEMENT OF DRAINAGE WORKS.
5. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION.
6. ENSURE FINISHED GROUND LEVELS ARE SLOPING AWAY FROM THE DEVELOPMENT & INTO PITS OR YARD SUMPS, AS SHOWN ON THE ATTACHED DRAINAGE PLAN.
7. HYDRAULIC PLANS ARE SUBJECT TO COUNCIL APPROVAL.

BASIX REQUIREMENTS (29.08.2019):

3,000 LITRES CAPACITY RAINWATER TANK FOR AT LEAST 231.00 m<sup>2</sup> OF ROOF AREA. PROVIDED 3,030 LITRES RETENTION WITHIN 8,160 LITRES CAPACITY (2x4,080 LITRES) ABOVEGROUND RWT/OSD TANKS FOR TOTAL ROOF AREA.

OSD REQUIRED = 4.500 m<sup>3</sup>

PSD = 2 l/sec

RWT = 3.0 m<sup>3</sup>

PROVIDED 8,160 LITRES (EFFECTIVE 7,580 LITRES) TANKS WITH 3,030 LITRES FOR RETENTION & 4,550 LITRES FOR DETENTION SYSTEM.

CALCULATIONS:

TOTAL SITE AREA = 690.10 m<sup>2</sup>

TOTAL ROOF AREA = 231.00 m<sup>2</sup>

TOTAL EXISTING IMPERVIOUS AREA = 242.00 m<sup>2</sup> APPROX.

TOTAL PROPOSED IMPERVIOUS AREA = 294.50 m<sup>2</sup> APPROX. (42.6%)

INCREASE IN IMPERVIOUS AREA = 52.50 m<sup>2</sup>

(INCLUDING ROOF, GARAGE, DRIVEWAY AND PAVED AREAS)

\* OSD IS REQUIRED.

450 SQUARE  
CONCRETE GRATED PIT  
(MEDIUM DUTY)

100 DIA SEWER  
GRADE CLEAN-OUT PIPE  
(FOR ALL PITS)

②, ③ & ④

450

100 DIA SEWER  
GRADE OUTLET

100 DIA SEWER  
GRADE/UPVC INLET

ENSURE NO WATER  
PONDAGE AT THE  
BASE OF THE PIT

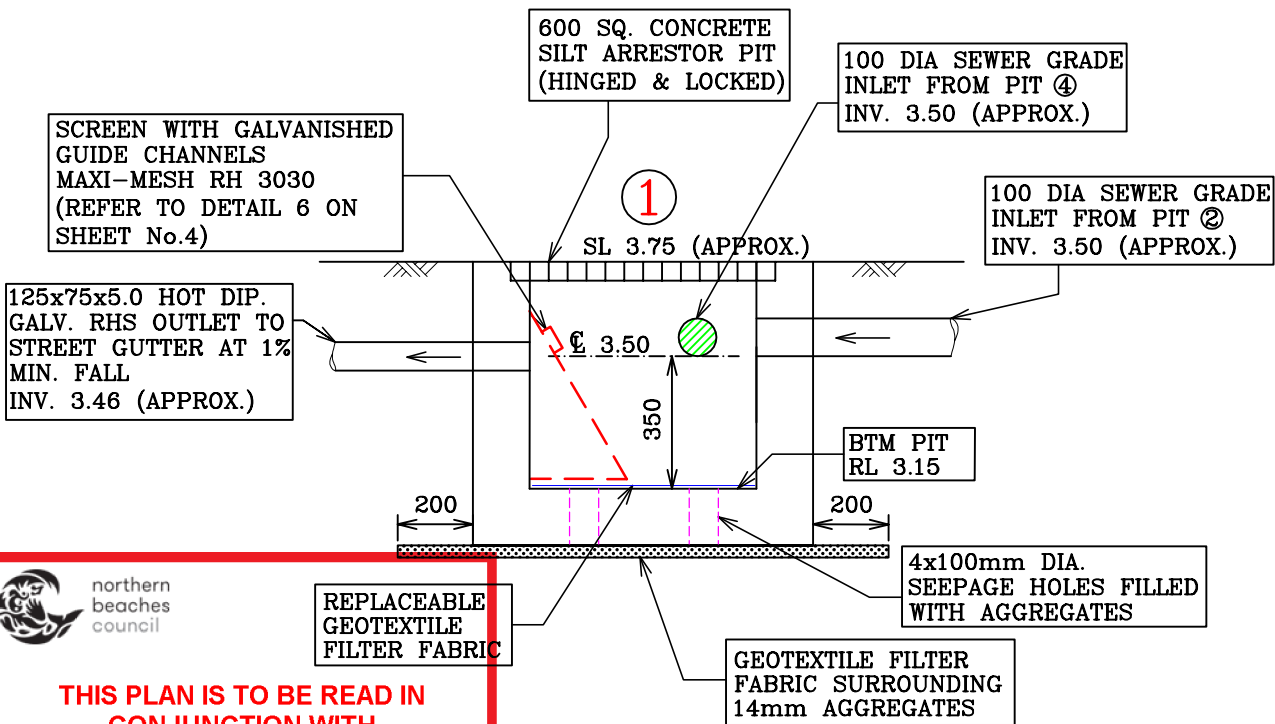
DETAIL 1

GRATED PIT (TYPICAL)

SCALE 1:20

IMPORTANT NOTES:

1. THIS DEVELOPMENT IS TO CONSTRUCT A NEW SINGLE RESIDENTIAL DWELLING ONLY. ACCORDING TO COUNCIL'S DCP 2014, OSD SYSTEM IS REQUIRED FOR THIS DEVELOPMENT.
2. THIS SITE IS FLOOD AFFECTED. THE HABITABLE & NON-HABITABLE FLOOR LEVELS ARE ABOVE THE FLOOD LEVELS (ALSO REFER TO FLOOD IMPACT & RISK MANAGEMENT REPORT FROM NASSERI ASSOCIATES JOB No. D3817 DATED 3 SEPTEMBER 2019).
3. SITE INSPECTION WAS CARRIED OUT ON 16 AUGUST 2019 TO CHECK EXISTING GULLY PIT IN FRONT AND OVERALL DRAINAGE PATTERN OF THE AREA.
4. ALL ROOF WATER IS COLLECTED INTO TWO ABOVEGROUND RAINWATER TANKS WITH TOTAL CAPACITY OF 8,160 LITRES (EFFECTIVE STORAGE CAPACITY 7,580 LITRES) OR 2x4,080 LITRES (EFFECTIVE STORAGE CAPACITY 3,790 LITRES EACH) PLACED ON SOUTHERN SIDE OF THE DWELLING TO ACT AS A COMBINED RETENTION AND DETENTION SYSTEM. THE LOWER PORTION OF THE TANKS WITH TOTAL CAPACITY OF 3,030 LITRES IS USED FOR RAINWATER RETENTION ONLY FOR RE-USE SUCH AS TOILET FLUSHING, LAUNDRY & IRRIGATION SYSTEM. THE UPPER PORTION OF THE TANKS WITH TOTAL CAPACITY OF 4,550 LITRES IS FOR DETENTION. 100 DIA SEWER GRADE OVERFLOW/OUTLET PIPE FROM OSD/RWT1 TO BE CONNECTED SEPARATELY TO PIT ④ AT 1% MIN. FALL (REFER TO DRAINAGE PLAN ON SHEET No.2).
3. SURFACE WATER AROUND THE DWELLING INCLUDING DRIVEWAY AND OVERFLOW/OUTLET FROM OSD/RWT1 TO BE DRAINED TO SILT ARRESTOR PIT ① IN FRONT PRIOR TO BE DISCHARGING TO STREET GUTTER IN JOSEPH STREET VIA 125x75x5.0 HOT DIP. GALV. RHS OUTLET AT 1% MIN. FALL (REFER TO DRAINAGE PLAN ON SHEET No.2).
4. LEVELS ARE CRITICAL. PRIOR TO ANY CHANGES CONTACT ENGINEER.
5. PRIOR TO BACKFILLING STORMWATER PIPES AND CONNECTION TO STREET GUTTER IN FRONT, CONTACT ENGINEER FOR AN INSPECTION.
6. AFTER COMPLETION OF ALL HYDRAULIC WORKS, FINAL WORK-AS-EXECUTED INSPECTION WILL BE CARRIED OUT AND COMPLIANCE CERTIFICATE WILL BE ISSUED IF APPROPRIATE.



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DA2019/1032

SILT ARRESTOR PIT

SCALE 1:20

NASSERI ASSOCIATES

CIVIL, HYDRAULIC & STRUCTURAL ENGINEERING  
SUITE 51, No.14 NARABANG WAY, BELROSE 2085  
PO BOX 714, BALGOWLAH, NSW 2093  
TEL. (02) 9986 3875  
FAX. (02) 9986 3876  
MOB. 0410 308 064  
EMAIL nasseriassociates@bigpond.com

J.NASSERI  
BE, FIEAust.,  
NPER, CPEng.  
DATE: 03/09/2019

SYMBOLS & NOTATIONS

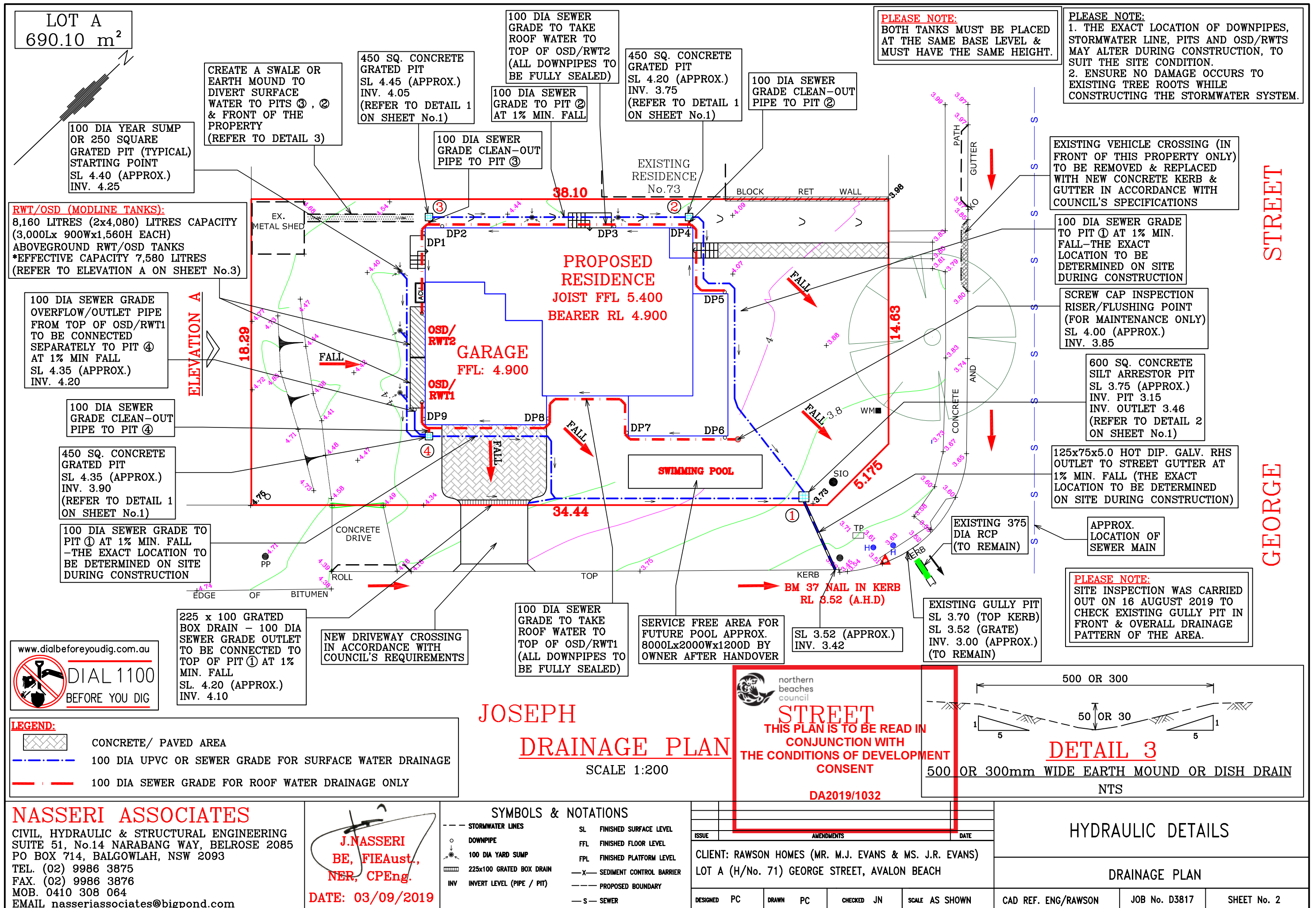
--- STORMWATER LINES	SL FINISHED SURFACE LEVEL
o DOWNPIPE	FFL FINISHED FLOOR LEVEL
● 100 DIA YARD SUMP	FPL FINISHED PLATFORM LEVEL
225x100 GRATED BOX DRAIN	---X--- SEDIMENT CONTROL BARRIER
INV INVERT LEVEL (PIPE / PIT)	--- PROPOSED BOUNDARY
	---S--- SEWER

ISSUE	AMENDMENTS	DATE
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HYDRAULIC DETAILS

NOTES, CALCULATIONS & PITS DETAILS

DESIGNED	PC	DRAWN	PC	CHECKED	JN	SCALE	AS SHOWN	CAD REF. ENG/RAWSON	JOB No. D3817	SHEET No. 1
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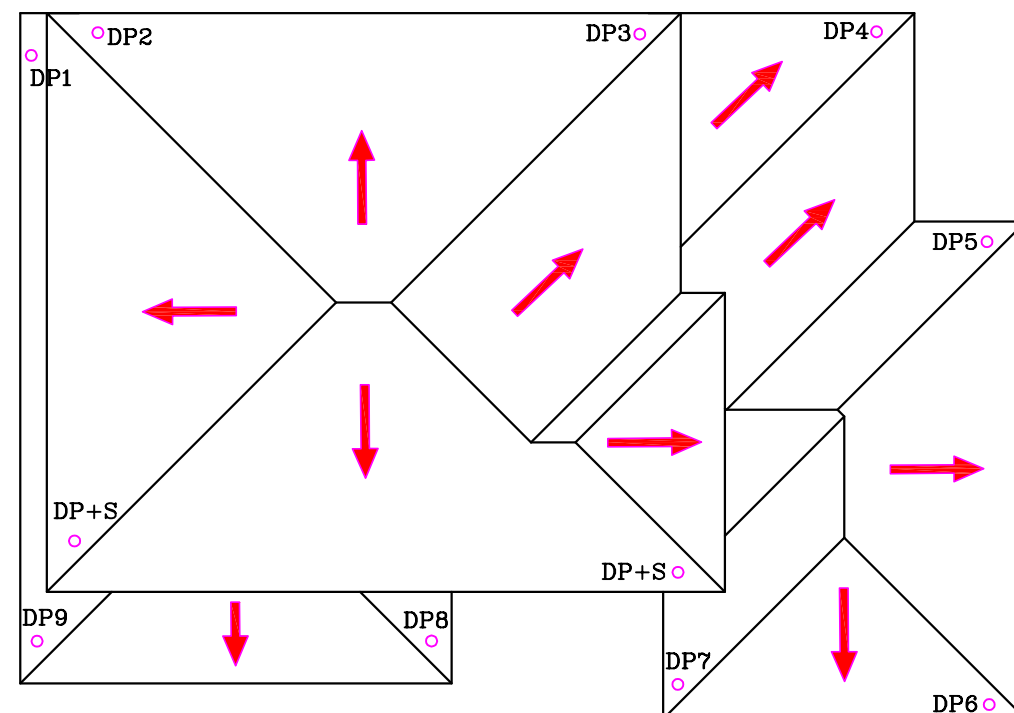
### IMPORTANT NOTES:

1. RAINWATER TANKS ARE FROM KINGSPAN WATER OR SIMILAR. PH: 1300 736 562
2. A FIRST FLUSH DEVICE IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS SHALL BE FITTED TO THE SYSTEM TO DIVERT THE FIRST 0.5mm OF RUN-OFF FROM THE AREA DRAINING AWAY FROM THE STORAGE TANK. (eg.0.5 l/m<sup>2</sup>)
3. BOTH TANKS MUST BE PLACED AT THE SAME BASE LEVEL & MUST HAVE SAME HEIGHT.
4. PLACE 50 DIA INTERCONNECTING PIPES AT THE BASE OF BOTH RWT1 AND RWT2.

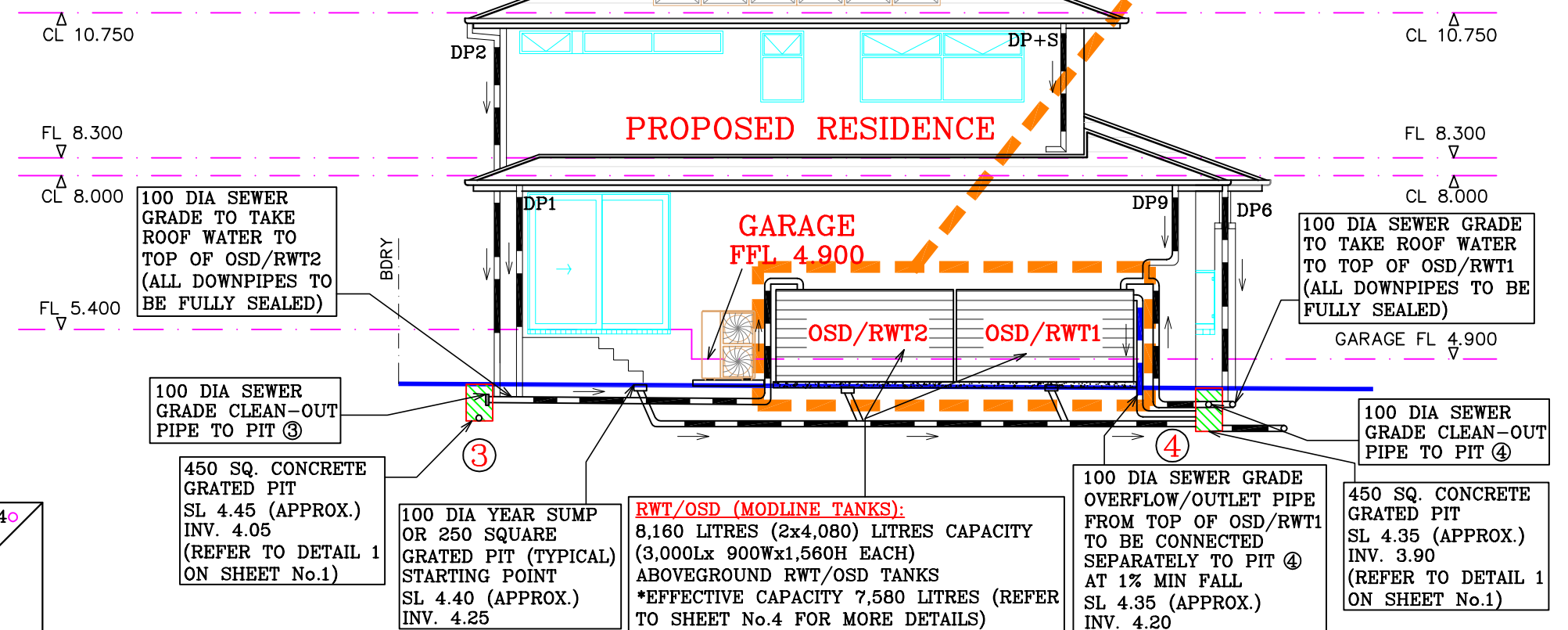
### PLEASE NOTE:

BOTH TANKS MUST BE PLACED AT THE SAME BASE LEVEL & MUST HAVE THE SAME HEIGHT.

REFER TO DETAIL 4 ON SHEET No. 4 FOR MORE DETAILS



**ROOF PLAN**  
NTS

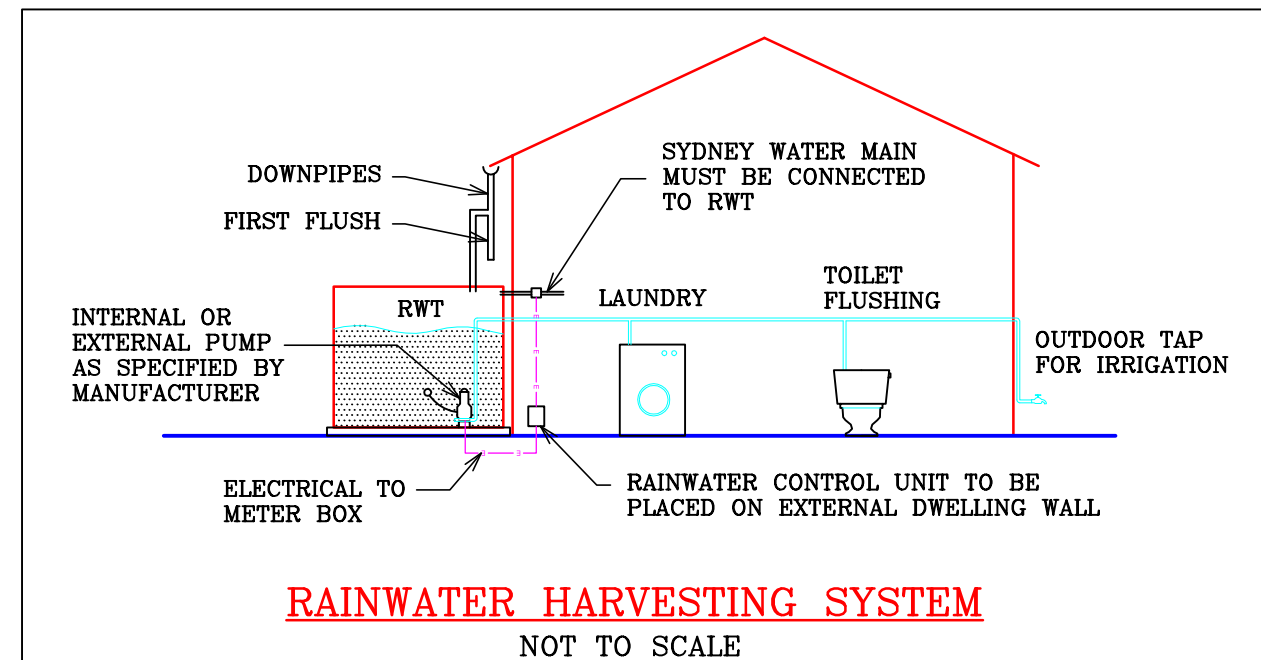


**ELEVATION A**  
SCALE 1:100



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DA2019/1032



## NASSERI ASSOCIATES

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**J. NASSERI**  
BE, FIEAust.,  
NER, CPEng.  
DATE: 03/09/2019

### SYMBOLS & NOTATIONS

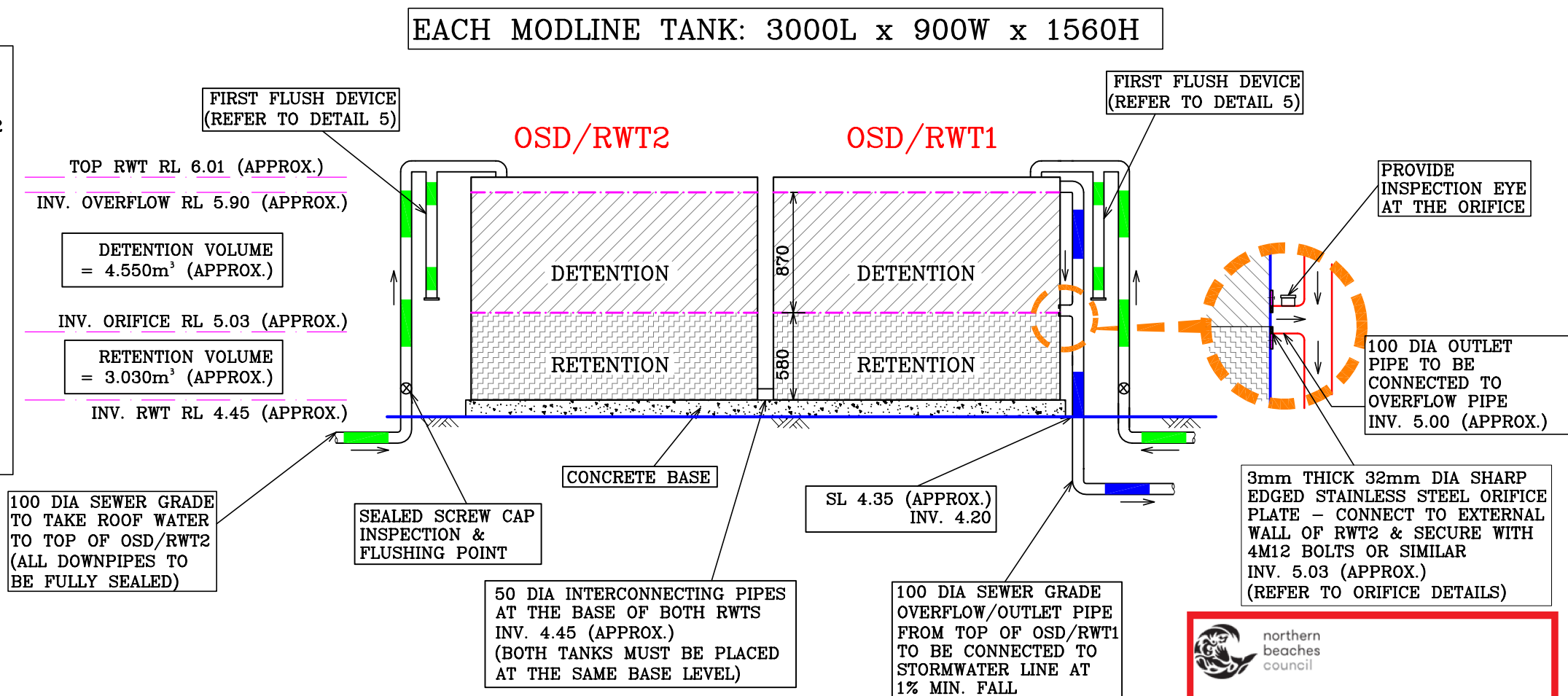
--- STORMWATER LINES	SL FINISHED SURFACE LEVEL
o DOWNPIPE	FFL FINISHED FLOOR LEVEL
100 DIA YARD SUMP	FPL FINISHED PLATFORM LEVEL
225x100 GRATED BOX DRAIN	---X--- SEDIMENT CONTROL BARRIER
INV INVERT LEVEL (PIPE / PIT)	--- PROPOSED BOUNDARY
	---S--- SEWER

ISSUE	AMENDMENTS	DATE
CLIENT: RAWSON HOMES (MR. M.J. EVANS & MS. J.R. EVANS)		
LOT A (H/No. 71) GEORGE STREET, AVALON BEACH		
DESIGNED PC	DRAWN PC	CHECKED JN
SCALE AS SHOWN		

## HYDRAULIC DETAILS

### ELEVATION (A) & ROOF PLAN DETAILS

CAD REF. ENG/RAWSON JOB No. D3817 SHEET No. 3



**IMPORTANT NOTES:**

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3. BOTH TANKS MUST BE PLACED AT THE SAME BASE LEVEL AND MUST HAVE THE SAME HEIGHT.
4. 50-DIA INTERCONNECTING PIPE MUST BE PLACED AT THE BASE OF THE TANKS.



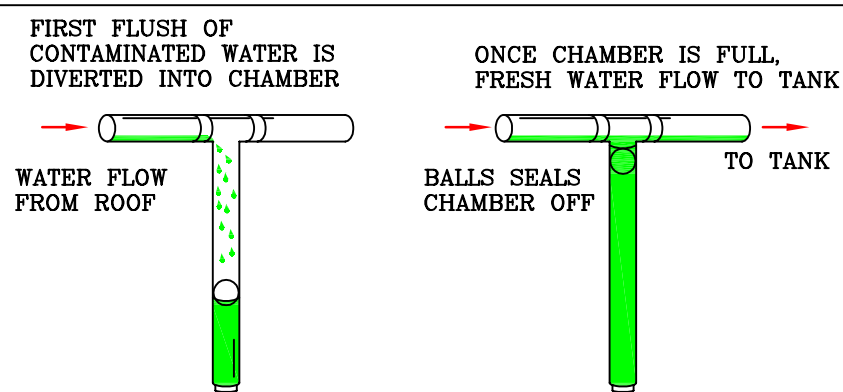
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## DETAIL 4

### OSD/RWT DETAILS

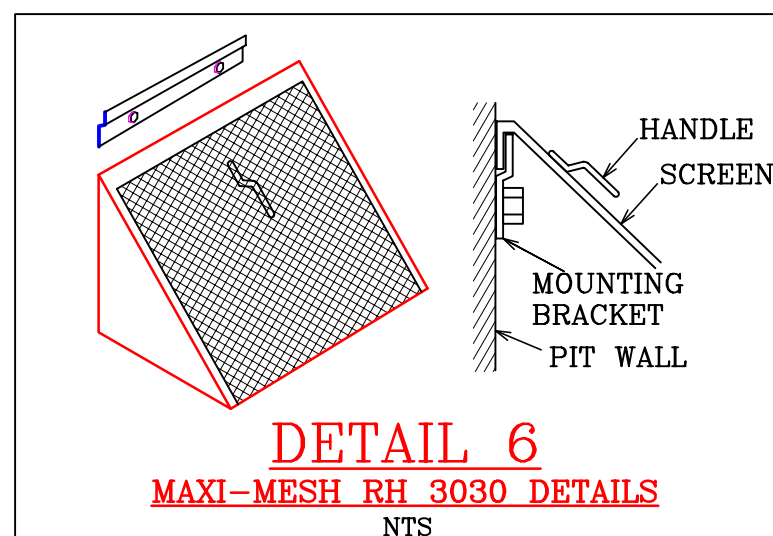
N.T.S.



## DETAIL 5

### FIRST FLUSH DETAILS

NTS



## DETAIL 6

### MAXI-MESH RH 3030 DETAILS

NTS

CALCULATIONS:

RWT VOLUME = 2x4,080 LITRES  
= 8.160 LITRES

EFFECTIVE VOLUME = (1.450/1.560)x8,160  
=7,580 LITRES (APPROX.)

RETENTION VOLUME = (0.58x7,580)/1.45  
=3,030 LITRES (APPROX.)

DETENTION VOLUME = (0.87x7,580)/1.45  
=4,550 LITRES (APPROX.)  
> 4,500 LITRES.....OK

PSD = 2 1/sec

ORIFICE = 32 mm

NASSERI ASSOCIATES

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**BE, FIEAust.**  
**NPER, CPEng.**

DATE: 03/09/2019

## SYMBOLS &amp; NOTATIONS

---	STORMWATER LINES	SL	FINISHED SURFACE LEVEL
o	DOWNPIPE	FFL	FINISHED FLOOR LEVEL
⊗	100 DIA YARD SUMP	FPL	FINISHED PLATFORM LEVEL
	225x100 GRATED BOX DRAIN	—X—	SEDIMENT CONTROL BARRIER
INV	INVERT LEVEL (PIPE / PIT)	---	PROPOSED BOUNDARY
		—S—	SEWER

ISSUE	AMENDMENTS						DATE
CLIENT: RAWSON HOMES (MR. M.J. EVANS & MS. J.R. EVANS) LOT A (H/No. 71) GEORGE STREET, AYALON BEACH							
DESIGNED	PC	DRAWN	PC	CHECKED	JN	SCALE	AS SHOWN

## HYDRAULIC DETAILS

## RWT/OSD TANKS &amp; ORIFICE DETAILS

CAD REF. ENG/RAWSON	JOB No. D3817	SHEET No. 4
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