

STORMWATER MANAGEMENT PLAN (FOR DA)

PROPOSED RESIDENCE

LOT 12, No.183 BARRENJOEY ROAD, NEWPORT

GENERAL NOTES

1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
6. ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
7. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.
8. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.
9. THIS PLAN IS THE PROPERTY OF DONOVAN ASSOCIATES AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM DONOVAN ASSOCIATES.

PLAN SPECIFIC NOTES

1. **ROOF DRAINAGE NOTE:** AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2003 THEN HAS THE FOLLOWING REQUIREMENTS:
 - i) FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER 30m² ROOF AREA.
 - ii) DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEPPER.
 - iii) OVERFLOW METHOD TO FIGURE G1 OF AS 3500.3:2003 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER
2. **TREE PRESERVATION:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS
3. ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.5.3, 3.7.5 AND APPENDIX G OF AS 3500.3:2003
4. THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES - REFER TO ARCHITECTURAL DRAWINGS
5. LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

LEGEND

| | | | |
|---|-----------|-------------------------------------|--|
| SURFACE INLET PIT | | GRATED TRENCH DRAIN | |
| SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON) | | ABSORPTION TRENCH | |
| ACCESS GRATE (WITH ENVIROPOD 200 MICRON) | | PROPOSED ROOF GUTTER FALL | |
| 450 SQUARE INTERVAL | 450 X 450 | PROPOSED DOWNPIPE SPREADER | |
| GRATE LEVEL = 75.50 | SL 75.50 | STORMWATER PIPE 100mm DIA. MIN. UNO | |
| INVERT LEVEL = RL 75.20 | IL 75.20 | SUBSOIL PIPE | |
| PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN. | | EXISTING STORMWATER PIPE | |
| NATURAL GROUND FINISHED DESIGN LEVEL | x | INSPECTION RISER | |
| | | RAINWATER HEAD | |

DRAINAGE NOTES

PIPE SIZE:
THE MINIMUM PIPE SIZE SHALL BE:

- 90mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

PIPE GRADE:
THE MINIMUM PIPE GRADE SHALL BE:

- 1.0% FOR PIPES LESS THAN 225mm DIA (UNO)
- 0.5% FOR ALL LARGER PIPES (UNO)

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION; AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO *CLAUSE 3.5.3 OF AS3500.3:1990*

DEPTH OF COVER FOR PVC PIPES:
MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

| LOCATION | MINIMUM COVER |
|---|--|
| NOT SUBJECT TO VEHICLE LOADING | 100mm SINGLE RESIDENTIAL 300mm ALL OTHER DEVELOPMENTS |
| SUBJECT TO VEHICLE LOADING UNDER A SEALED ROAD | 450mm WHERE NOT IN A ROAD 600mm |
| UNSEALED ROAD | 750mm |
| PAVED DRIVEWAY | 100mm PLUS DEPTH OF CONCRETE |

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH *AS3725-1989 LOADS ON BURIED CONCRETE PIPES*, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC;
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:
SHALL BE CARRIED OUT IN ACCORDANCE WITH *SECTION 3.10 OF AS3500.3:1990*

CONNECTIONS TO COUNCIL SYSTEM:
IF PROPOSED DRAINAGE SYSTEM IS DESIGNED TO CONNECT TO COUNCIL'S DRAINAGE SYSTEM, IT IS ADVISED THAT A 'WORKS PERMIT' IS OBTAINED FROM THE RESPECTIVE COUNCIL PRIOR TO COMMENCEMENT OF WORKS

ABOVE GROUND PIPEWORK:
SHALL BE CARRIED OUT IN ACCORDANCE WITH *SECTION 6 OF AS3500.3:1990*

PIT SIZES AND DESIGN:

| DEPTH (mm) | MINIMUM PIT SIZE (mm) |
|------------------|-------------------------------|
| UP TO 450mm | 450 x 450 |
| 450mm TO 600mm | 600 x 600 |
| 600mm TO 900mm | 600 x 900 |
| 900mm TO 1500mm | 900 x 900 (WITH STEP IRONS) |
| 1500mm TO 2000mm | 1200 x 1200 (WITH STEP IRONS) |

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm

THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.

THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

- **TRENCH DRAINS:**
CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.
- **STEP IRONS:**
PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.
- **PVC PITS:**
PVC PITS WILL ONLY BE PERMITTED IF THEY ARE NOT A GREATER SIZE THAN 450 x 450mm (MAXIMUM DEPTH 450mm) AND ARE HEAVY DUTY
- **IN-SITU PITS:**
IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS3500.4:1990. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.
- **GRATES:**
GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

DRAWING TITLE:

DETAILS, NOTES &
LEGEND

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| DRAWN | DATE | DESCRIPTION | ISSUE | FOR |
|---------|------------|------------------------------------|-------|--|
| J.N | 21.02.2019 | ISSUED FOR DEVELOPMENT APPLICATION | A | NEWPORT HOMES |
| | | | | SITE ADDRESS: |
| | | | | LOT 12 , No. 183 BARRENJOEY ROAD NEWPORT |
| | | | | |
| PROJECT | | PROPOSED RESIDENCE | | |

APPROVED BY:

SCOTT SHARMA, M.I.E. Aust.

| | | |
|--------------|-------------|-----------|
| DESIGNED BY: | J.N | ISSUE |
| CHECKED BY: | S.S | A |
| SCALE | - | |
| SHEET SIZE | A3 | SHEET No. |
| CLIENT REF. | DRAWING No. | |
| - | E309466 | D1 |

| AREA CALCULATIONS | | |
|----------------------------------|--------|----|
| TOTAL SITE AREA | 474.2 | m² |
| EXISTING DEVELOPMENT | | |
| ROOF AREA | 206.5 | m² |
| PAVED AREA | 87.6 | m² |
| DRIVEWAY AREA | 17.3 | m² |
| IMPERVIOUS AREA | 311.4 | m² |
| TOTAL IMPERVIOUS AREA PERCENTAGE | 65.67% | |
| PROPOSED DEVELOPMENT | | |
| PROPOSED ROOF AREA | 189.8 | m² |
| PROPOSED PAVED AREA | 23.7 | m² |
| PROPOSED DRIVEWAY AREA | 64.1 | m² |
| TOTAL IMPERVIOUS AREA | 277.6 | m² |
| TOTAL IMPERVIOUS AREA PERCENTAGE | 58.54% | |

NOTE:
PRE-DEVELOPMENT AREAS ARE BASED ON THE DWELLING THAT EXISTED PRIOR TO ITS DEMOLITION APPROX. JULY 2018. THE DWELLING WAS DEMOLISHED DUE TO A FIRE. AS IT WAS DEMOLISHED A SURVEY COULD NOT BE TAKEN AND THE AREAS WERE OBTAINED USING NEARMAPS.

NOTE: ENSURE ANY PROPOSED PAVING IS GRADED SO THAT IT IS NOT IMPACTING ADJOINING PROPERTIES.

INSPECTION RISER (IR)
PROVIDE 'SCREW CAP' INSPECTION RISER AT LOWEST POINT OF 'CHARGED LINES'

ABSORPTION TRENCH
SIZE: 3 x 3.4m LONG
(REFER TO DETAIL ON SHEET D5)

- INSTALL PARALLEL TO FINISHED GROUND CONTOURS
- ENSURE TRENCH IS LEVEL TO PERMIT EVEN DISTRIBUTION OF FLOWS
- TOPSOIL OVER TRENCH TO BE STRICTLY SANDY
- TRENCH TO BE 2.0m FROM SIDE BOUNDARY, 2m FROM REAR BOUNDARY AND 2.0m FROM BUILDING STRUCTURE

RAINWATER RE-USE TANK - RWT
(AS PER BASIX REQUIREMENTS)

SIZE: 3,000 LITRES (MIN)
2 x STANDARD UNIT (3,500 LITRES) BY "LANDSCAPE TANKS"
2800L x 1100W x 1055H OR SIMILAR
INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS

- FOR RE-USE AS SPECIFIED BY BASIX CERTIFICATE
- ENSURE TOP OF TANK IS MIN 1.0m BELOW ROOF GUTTERS TO ENSURE SUFFICIENT HEAD FOR THE SYSTEM
- TANK TO BE INSTALLED BY LICENSED PLUMBER IN ACCORDANCE WITH AS/NZS 3500:2003 AND NSW CODE OF PRACTICE PLUMBING AND DRAINAGE 2006

RWT CALCULATIONS

LGA: - PITTWATER COUNCIL

SOURCE - PITTWATER 21 DCP PART: B5.5 STORMWATER MANAGEMENT

"ALL DEVELOPMENT CREATING AN ADDITIONAL HARD (IMPERVIOUS) ROOF AREA OF GREATER THAN 50m2 MUST PROVIDE A RAINWATER TANK FOR NON-POTABLE USE."

- PRE-DEVELOPMENT IMPERV. ROOF AREA = 206.5m²
- PROPOSED POST DEVELOPMENT ROOF IMPERV. AREA = 189.8m²
- PROPOSED INCREASE IN SITE COVERAGE = -16.7m²

INCREASE IN SITE COVERAGE < 50m²

THEREFORE RAINWATER TANK NOT REQUIRED

OSD WARRANT

LGA: - PITTWATER COUNCIL

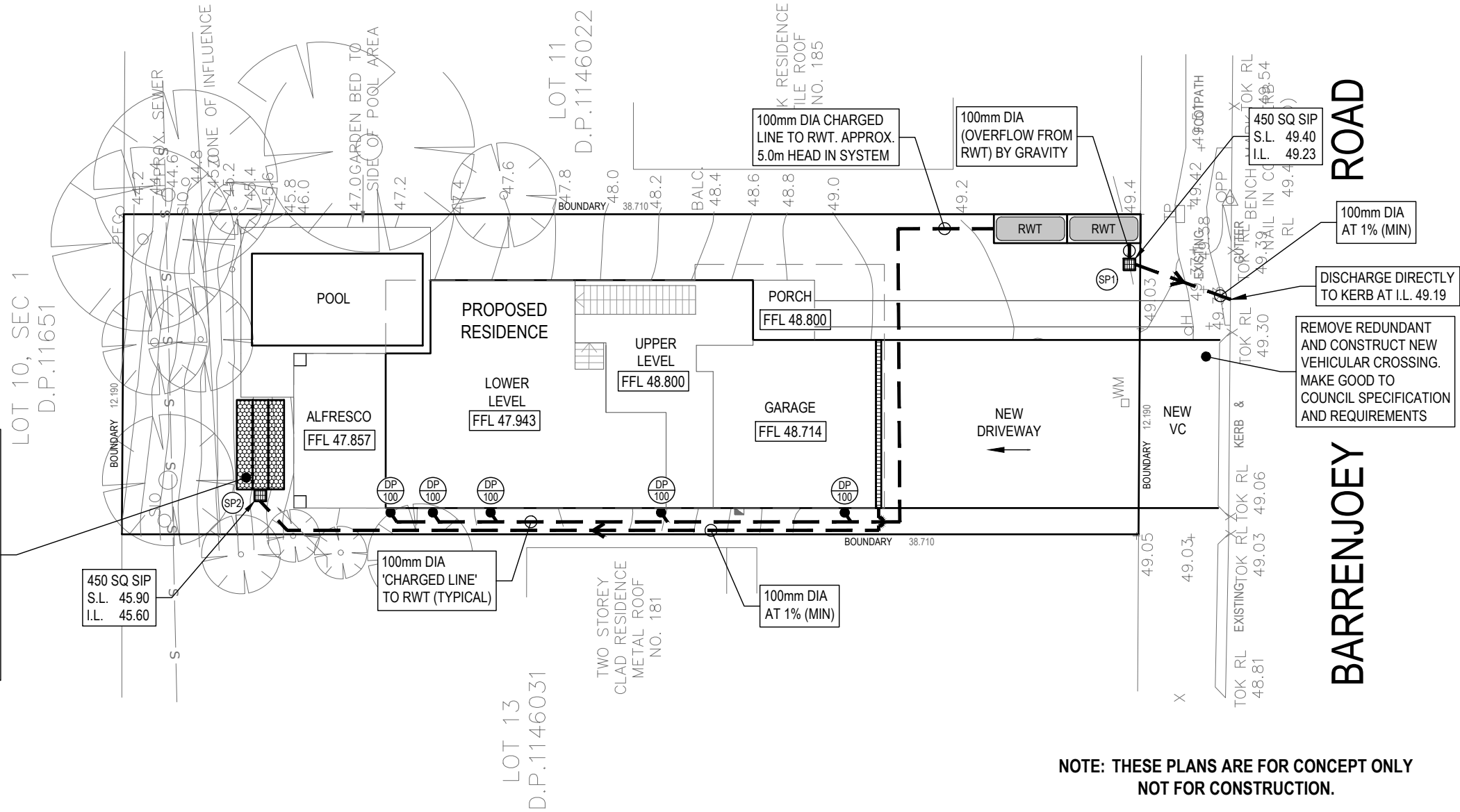
SOURCE - PITTWATER 21 DCP PART: B5.7 STORMWATER MANAGEMENT

"AN ON-SITE DETENTION (OSD) FACILITY IS TO BE INSTALLED WHERE THE DEVELOPMENT RESULTS IN ADDITIONAL HARD (IMPERVIOUS) SURFACE AREA OF GREATER THAN 50m² (ON A CUMULATIVE BASIS SINCE FEBRUARY 1996) AND ON LAND DESIGNATED THROUGH MAPPING AS REQUIRING OSD FACILITY."

- PRE-DEVELOPMENT IMPERV. AREA = 311.4m²
- PROPOSED POST DEVELOPMENT IMPERV. AREA = 277.6m²
- PROPOSED INCREASE IN SITE COVERAGE = -33.8m²

INCREASE IN SITE COVERAGE < 50m²


THEREFORE OSD NOT REQUIRED

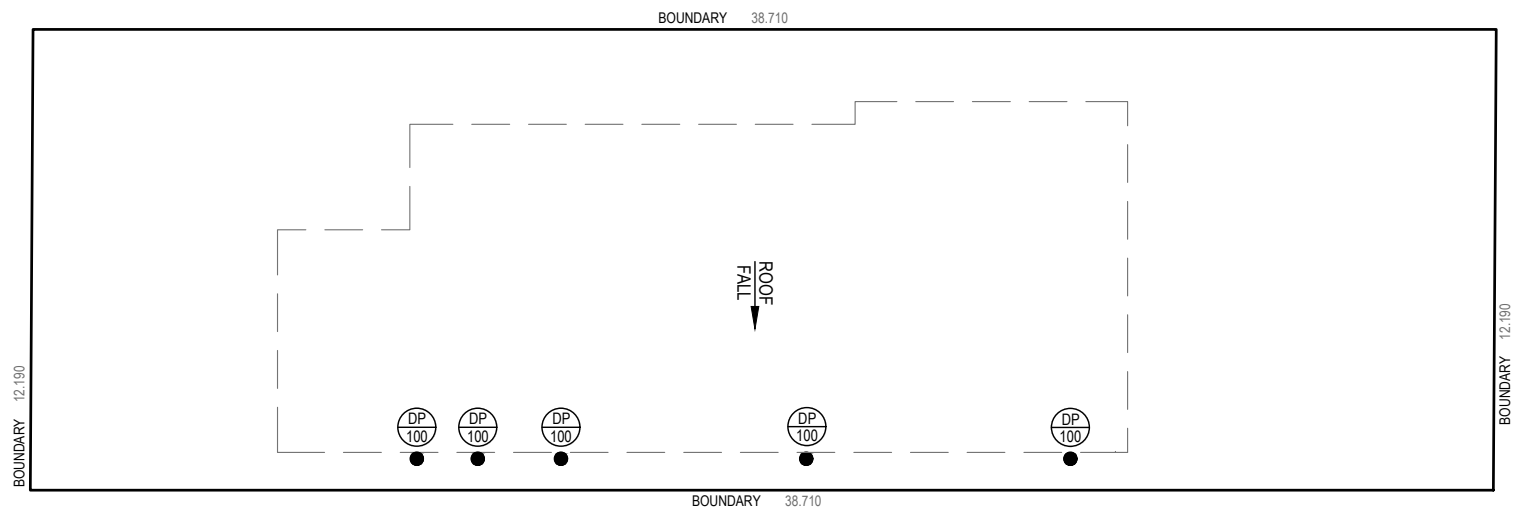


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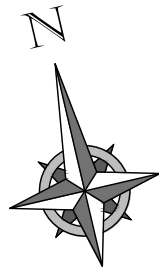
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|---|---------|------------|------------------------------------|-------|--|---|--------------|------------------------|-----------|
| DRAWING TITLE: STORMWATER MANAGEMENT PLAN | DRAWN | DATE | DESCRIPTION | ISSUE | FOR | APPROVED BY:  SCOTT SHARMA, M.I.E. Aust. | DESIGNED BY: | J.N | ISSUE |
| | J.N | 21.02.2019 | ISSUED FOR DEVELOPMENT APPLICATION | A | NEWPORT HOMES | | CHECKED BY: | S.S | A |
| | | | | | SITE ADDRESS: | | SCALE | 1:200 | |
| | | | | | LOT 12 , No. 183 BARRENJOEY ROAD NEWPORT | | SHEET SIZE | A3 | SHEET No. |
| | PROJECT | | PROPOSED RESIDENCE | | | | CLIENT REF. | DRAWING No. E309466 | D2 |



NOTE: THESE PLANS ARE FOR CONCEPT ONLY
NOT FOR CONSTRUCTION.



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15 PARKES STREET PARRAMATTA NSW 2150

DRAWING TITLE:
**STORMWATER
MANAGEMENT PLAN**

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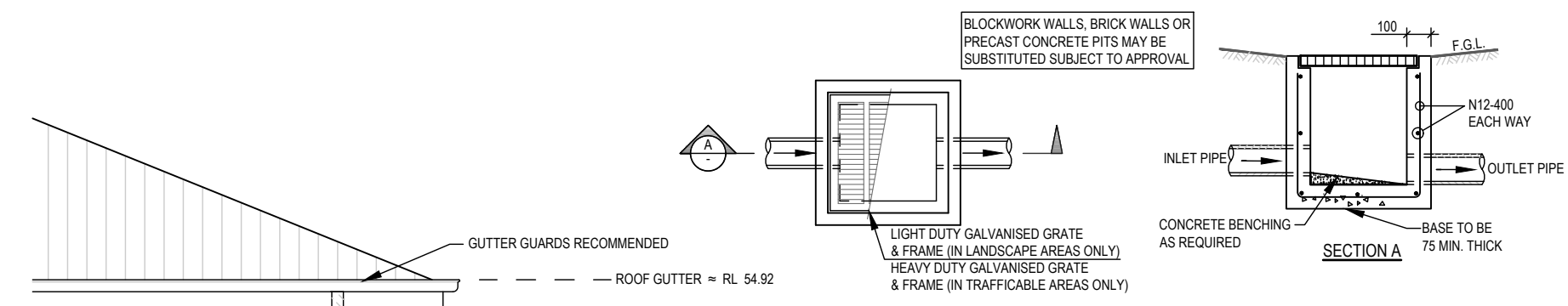
| DRAWN | DATE | DESCRIPTION | ISSUE | FOR |
|---------|------------|------------------------------------|-------|------------------|
| J.N | 21.02.2019 | ISSUED FOR DEVELOPMENT APPLICATION | A | NEWPORT HOMES |
| | | | | SITE ADDRESS: |
| | | | | LOT 12 , No. 183 |
| | | | | BARRENJOEY ROAD |
| | | | | NEWPORT |
| PROJECT | | PROPOSED RESIDENCE | | |

APPROVED BY:



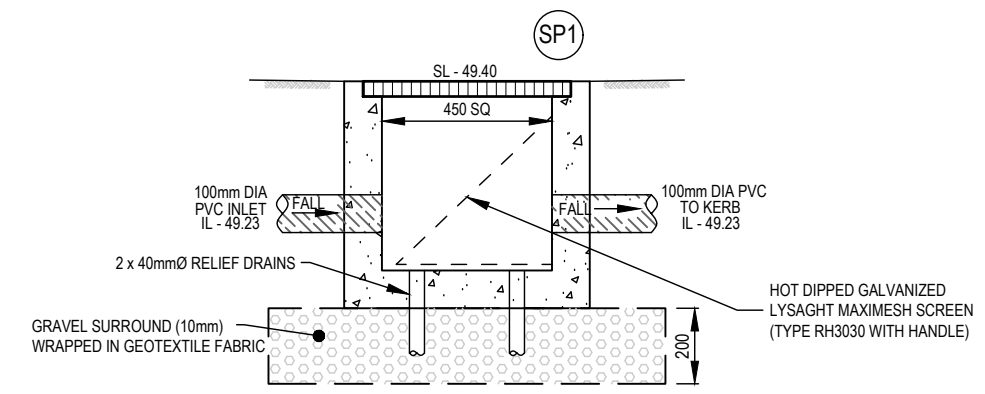
SCOTT SHARMA, M.I.E. Aust.

| | | |
|--------------|-------------|-----------|
| DESIGNED BY: | J.N | A |
| CHECKED BY: | S.S | |
| SCALE | 1:200 | SHEET No. |
| SHEET SIZE | A3 | |
| CLIENT REF. | DRAWING No. | D3 |
| - | E309466 | |

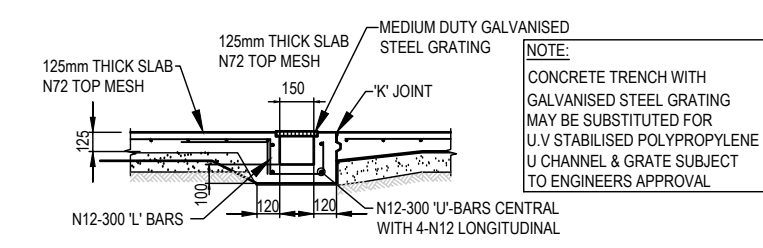


TYPICAL PIT (SIP)
NTS

NOTE:
ALL PROPOSED SITE PITS ARE TO BE CONSTRUCTED IN CONCRETE CAST IN SITU. PLASTIC OR BRICK PITS ARE NOT ACCEPTABLE. HOWEVER, 'COUNCIL MAY CONSIDER PRE-CAST UNITS IF THE UNITS ARE PLACED ON A SOLID BASE OF GRAVEL OR CONCRETE OF 75mm THICK AND BACKFILL UP TO HALF THE DEPTH OF THE PIT SURROUND WITH CONCRETE.



SEDIMENT CONTROL PIT - SP1
1:20

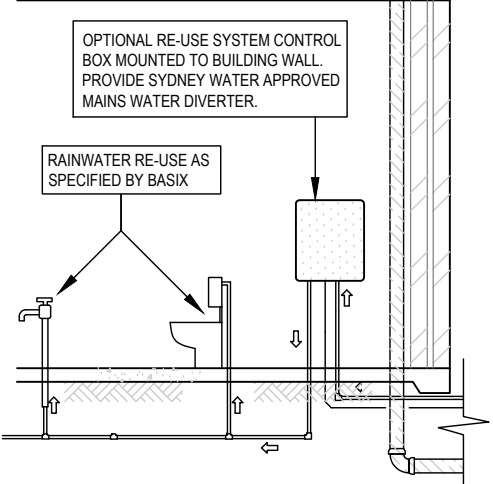


GRADED DRAIN
NTS

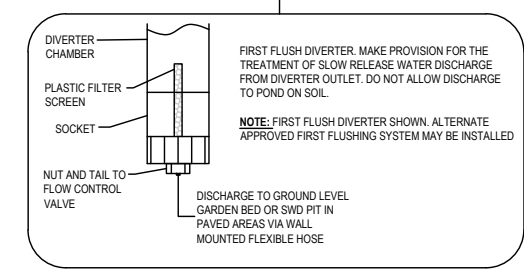


TYPICAL WARNING SIGN
NTS

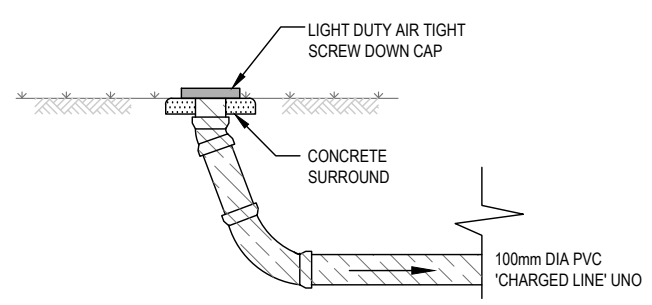
EVERY EXTERNAL SUPPLY OUTLET FROM RAINWATER RE-USE TANK TO BE LABELED WITH METALLIC WARNING SIGN



RAINWATER RE-USE TANK
(AS PER BASIX REQUIREMENTS)
USE 2 x STANDARD UNIT BY "LANDSCAPE TANKS"
(2800L x 1100W x 1055H)
INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS



RAINWATER RE-USE - LANDSCAPE TANKS
NTS
(TYPICAL)



INSPECTION RISER - IR
NTS

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STORMWATER DETAILS
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|---------|------------|------------------------------------|-------|------------------|
| J.N | 21.02.2019 | ISSUED FOR DEVELOPMENT APPLICATION | A | NEWPORT HOMES |
| | | | | SITE ADDRESS: |
| | | | | LOT 12 , No. 183 |
| | | | | BARRENJOEY ROAD |
| | | | | NEWPORT |
| PROJECT | | PROPOSED RESIDENCE | | |

APPROVED BY:

SCOTT SHARMA, M.I.E. Aust.

DESIGNED BY: J.N
CHECKED BY: S.S
SCALE: AS NOTED
SHEET SIZE: A3
CLIENT REF: -
DRAWING No. E309466

| | |
|-----------|----|
| ISSUE | A |
| SHEET No. | D4 |

ABSORPTION SYSTEM CALCULATIONS

Project: Proposed Residence
Job Number: E309466
Location: No.183 Barrenjoey Road, Newport

Site Details

| | |
|--|---------------------------|
| Site Area | 474.2 m ² |
| Impervious Area to Absorption Trench | 64.1 m ² |
| Nominal Absorption Rate (AR _N) | 0.3 l/m ² /sec |
| Reduction Factor (F _R) | 0.75 |

Design Details

| | | |
|---|------------------------------------|--|
| Design Impervious Area (DA) | | 76.92 m ² |
| Design Absorption Rate (AR _d) | = AR _N x F _R | 0.2 l/m ² /sec |
| Base Area of Absorption Pit (BA) | (to be calculated) | 6.1 m ² (3.4m x 0.6m x 3 off) |

Required Absorption System Volume Calculation for 50 year ARI Storm

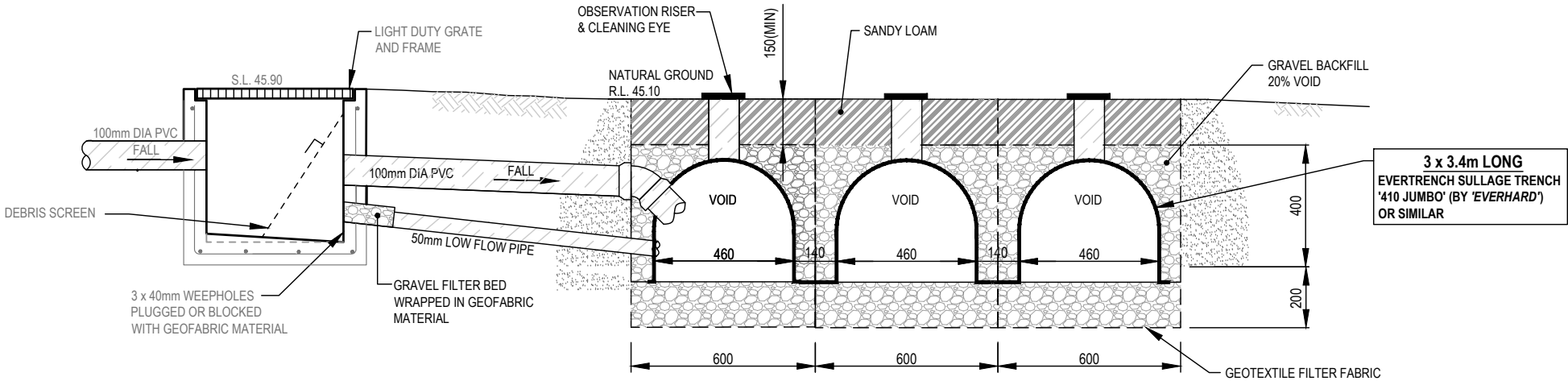
| Time (min) T | Rainfall Intensity (mm/hr) I | Runoff (l/s) R = I x DA/3600 | Runoff Volume (m ³) RV = R x T x 60/1000 | Infiltration Vol (m ³) IV = BA x AR _d x T x 60/1000 | Required Absorption System Volume (m ³) RV - IV |
|-----------------|---------------------------------|---------------------------------|---|---|--|
| 5 | 257.0 | 5.49 | 1.65 | 0.41 | 1.23 |
| 6 | 242.0 | 5.17 | 1.86 | 0.50 | 1.37 |
| 7 | | 0.00 | 0.00 | 0.58 | -0.58 |
| 8 | | 0.00 | 0.00 | 0.66 | -0.66 |
| 9 | | 0.00 | 0.00 | 0.74 | -0.74 |
| 10 | 201.0 | 4.29 | 2.58 | 0.83 | 1.75 |
| 15 | | 0.00 | 0.00 | 1.24 | -1.24 |
| 20 | 152.0 | 3.25 | 3.90 | 1.65 | 2.24 |
| 25 | | 0.00 | 0.00 | 2.07 | -2.07 |
| 30 | 126.0 | 2.69 | 4.85 | 2.48 | 2.37 |
| 40 | | 0.00 | 0.00 | 3.30 | -3.30 |
| 50 | | 0.00 | 0.00 | 4.13 | -4.13 |
| 60 | 87.9 | 1.88 | 6.76 | 4.96 | 1.80 |
| 120 | 58.4 | 1.25 | 8.98 | 9.91 | -0.93 |

Maximum Required Absorption System Volume (MRASV) (m³) 2.37

Proposed Absorption System Volume Calculation Sheet

| | | |
|---|---------------------------|-------|
| Total Volume of pits (above top of base level) (m ³) | (0.6 x 0.6 x 0.6m x 2off) | 0.432 |
| Volume of half round Everglas 410 'Jumbo' (m ³) | (0.175 x 3.5 x 3 off) | 1.79 |
| Gravel void Volume (20% of gravel volume) (m ³) | (0.2 x 0.2 x 6.3) | 0.18 |
| Total Proposed Absorption System Volume (TPASV) (m ³) | | 2.40 |

TPASV must be greater than MRASV Satisfactory



ABSORPTION TRENCH

1:20

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| | | | | | | | | | |
|--|---------|--------------------|------------------------------------|-------|--|---|--------------|-------------|-------|
| DRAWING TITLE: ABSORPTION TRENCH DETAILS AND CALCULATIONS | DRAWN | DATE | DESCRIPTION | ISSUE | FOR | APPROVED BY:  SCOTT SHARMA, M.I.E. Aust. | DESIGNED BY: | J.N | ISSUE |
| | J.N | 21.02.2019 | ISSUED FOR DEVELOPMENT APPLICATION | A | NEWPORT HOMES | | CHECKED BY: | S.S | A |
| | | | | | SITE ADDRESS: | | SCALE | 1:20 | |
| | | | | | LOT 12 , No. 183 BARRENJOEY ROAD NEWPORT | | SHEET SIZE | A3 | |
| | | | | | | | CLIENT REF. | DRAWING No. | D5 |
| | PROJECT | PROPOSED RESIDENCE | | | | | - | E309466 | |