



REF : C9167-00313-CALCS.xls

STORMWATER DESIGN CALCULATIONS

At 600 Warringah Road

Forestville

1.0 Detention System Requirements

Proposed Residence

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1.1 Storage-Area calcs.

DATA:

Site Area Assessed due to easements

Site Area = 0.0653 ha 653 sq.m

OSD exemption if less than 450sqm or less than 40% site coverage

40% of site area = 261.2 sq.m

Impervious Area Pre Development = 316.8 sqm

Percentage Impervious Pre Development = 49%

Impervious Area POST Development = 360 sqm

Percentage Impervious POST Development = 55%

OSD Exemption Not Applicable

Catchment directed through OSD = 289 sqm 44.3 %

| | | | |
|--------------------|------------|---------|--------|
| OSD Bypass Areas : | Impervious | 71 sqm | 19.5 % |
| | Pervious | 293 sqm | 80.5 % |
| | Total | 364 sqm | 55.7 % |

Impervious area bypass 19.7 % OK

Bypass - discharge - 17.2 L/s

Detention A

Volume Required 13.06 cu.m 200cum/ha

Total Area 0.00 sq.m

Orifice Dia. = 65 mm $Q=d^2 \cdot \sqrt{h}/0.48$ Invert of pit = 118.60 m $d=\sqrt{((0.48 \cdot Q)/\sqrt{h})}$

Max. Water Level achieved = 119.64 m

Storage achieved 144 L

Minimum Storage 13060 L - SSR with no modelling.

Maximum Discharge 8.9 L/s - PSD 400L/s/ha

Proposed Discharge 8.8 L/s - PSD OK

Basix Allowance

Raintank Basix = 6500 L

Raintank Provided = 6900 L

50% of OSD = 6530 L

Basin Type Inside Raintank

Net OSD required 6560 L