



REF : C9075-00312-CALCS.xls
Rev. A

STORMWATER DESIGN CALCULATIONS

At 600 Warringah Road

Forestville

1.0 Detention System Requirements

Proposed Residence

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1.1 Storage-Area calcs. 335

DATA:

Site Area Assessed due to overland flow path/easements

Site Area = **0.0485** ha **485** sq.m

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

40% of site area = 194 sq.m

Impervious Area Pre Development = **316.8** sqm

Percentage Impervious Pre Development = 65%

Impervious Area POST Development = **311.06** sqm

Percentage Impervious POST Development = 64%

OSD Exemption Not Applicable

Catchment directed through OSD = **250.06** sqm 51.6 %OSD Bypass Areas : Impervious **61** sqm 26.0 %Pervious **173.94** sqm 74.0 %Total **234.94** sqm 48.4 %

Impervious area bypass 19.6 % OK

Bypass - discharge - 11.4 L/s

Detention A

Volume Required 9.70 cu.m 200cum/ha

Total Area 0.00 sq.m

Orifice Dia. = **61** mm $Q=d^2 \cdot \sqrt{h}/0.48$ Invert of pit = **118.12** m $d=\sqrt{((0.48 \cdot Q)/\sqrt{h})}$ Max. Water Level achieved = **119.15** m

Storage achieved 144 L

Minimum Storage **9700** L - SSR with no modelling.Maximum Discharge **8.0** L/s - PSD 400L/s/haProposed Discharge 7.9 L/s - PSD **OK**

Basix Allowance

Raintank Basix = **4850** LRaintank Provided = **5280** L

50% of OSD = 4850 L

Basin Type Inside Raintank

Net OSD required **4850** L