



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.mImpervious Area Pre Development = **316.8** sqmPercentage Impervious Pre Development = **49%**Impervious Area POST Development = **360** sqmPercentage 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 **200** cum/haTotal Area **0.00** sq.mOrifice Dia. = **65** mm $Q=d^2\sqrt{h}/0.48$ Invert of pit = **118.60** m $d=\sqrt{((0.48*Q)/\sqrt{h})}$ Max. Water Level achieved = **119.64** mStorage achieved **144** LMinimum Storage **13060** L - SSR with no modelling.Maximum Discharge **8.9** L/s - PSD **400** L/s/haProposed Discharge **8.8** L/s - PSD **OK**

Basix Allowance

Raintank Basix = **6500** LRaintank Provided = **6900** L50% of OSD = **6530** LBasin Type **Inside Raintank**Net OSD required **6560** L