



REF : C9112-13633-calcs.xls

STORMWATER DESIGN CALCULATIONS

11 LAUREL CHASE

FORESTVILLE

1.0 Detention System Requirements

Proposed Residence
11 LAUREL CHASE
FORESTVILLE

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1.1 Storage-Area calcs.

DATA:

Site Area Assessed due to easements

Site Area = **0.0561** ha **561** sq.m

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

40% of site area = **224.4** sq.m

Impervious Area Pre Development = **199.8** sqm

Percentage Impervious Pre Development = **36%**

Impervious Area POST Development = **277.9** sqm

Percentage Impervious POST Development = **50%**

OSD Exemption Not Applicable

Catchment directed through OSD = **224** sqm **39.9 %**

OSD Bypass Areas :	Impervious	53.9 sqm	16.0 %
	Pervious	283.1 sqm	84.0 %
	Total	337 sqm	60.1 %

Impervious area bypass **19.4 % OK**

Bypass - discharge - **15.7 L/s**

Detention A

Volume Required **11.22** cu.m **200cum/ha**

Total Area **0.00** sq.m

Orifice Dia. = **58** mm $Q=d^2*\sqrt{h}/0.48$

Invert of pit = **58.87** m $d=\sqrt{((0.48*Q)/\sqrt{h})}$

Max. Water Level achieved = **59.82** m

Storage achieved **144** L

Minimum Storage **11220** L - SSR with no modelling.

Maximum Discharge **6.7** L/s - PSD **400L/s/ha**

Proposed Discharge **6.6** L/s - PSD **OK**

Basix Allowance

Raintank Basix = **5610** L

Raintank Provided = **5610** L

50% of OSD = **5610** L

Basin Type **Inside Raintank**

Net OSD required **5610** L