



REF : C12030-17225-calcs.XLS

STORMWATER DESIGN CALCULATIONS

8 RYRIE AVENUE

FORESTVILLE

1.0 Detention System Requirements

Proposed Residence
8 RYRIE AVENUE
FORESTVILLE

REF : C12030-17225-calcs.XLS

1.1 Storage-Area calcs.

6010

DATA:

Site Area Assessed due to easements

Site Area = **0.0559** ha **559** sq.m

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

40% of site area = 223.6 sq.m

Impervious Area Pre Development = **576.3** sqm

Percentage Impervious Pre Development = 103%

Impervious Area POST Development = **256.7** sqm

Percentage Impervious POST Development = 46%

OSD Exemption Not Applicable With side path 406.43

Catchment directed through OSD = **215.7** sqm OK 38.6 %

OSD Bypass Areas :	Impervious	41 sqm	11.9 %
	Pervious	302.3 sqm	88.1 %
	Total	343.3 sqm	61 %

Impervious area bypass 16.0 % OK

Bypass - discharge - 15.7 L/s

Detention A

Volume Required 11.18 cu.m 200cum/ha

Total Area 5.97 sq.m

Orifice Dia. = **56** mm $Q=d^2 \cdot \sqrt{h}/0.48$

Invert of pit = **87.32** m $d=\sqrt{((0.48 \cdot Q)/\sqrt{h})}$

Max. Water Level achieved = **88.35** m

Storage achieved 1034 L

Minimum Storage **11180** L - SSR with no modelling.

Maximum Discharge **6.6** L/s - PSD 400L/s/ha

Proposed Discharge 6.5 L/s - PSD **OK**

Basix Allowance

Raintank Basix = **5170** L

Raintank Provided = **5170** L

50% of OSD = 5590 L

Basin Type Inside Raintank

Net OSD required **6010** L