



REF : C11872-17213-calcs.XLS

STORMWATER DESIGN CALCULATIONS

3 CALCA CRESCENT

FORESTVILLE

1.0 Detention System Requirements

Proposed Residence
3 CALCA CRESCENT
FORESTVILLE

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1.1 Storage-Area calcs.

7355

DATA:

Site Area Assessed due to easements

Site Area = 0.0697 ha 697 sq.m

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

40% of site area = 278.8 sq.m

Impervious Area Pre Development = 272.95 sqm

Percentage Impervious Pre Development = 39%

Impervious Area POST Development = 366.6 sqm

Percentage Impervious POST Development = 53%

OSD Exemption Not Applicable

Catchment directed through OSD = 317.2 sqm OK 45.5 %

OSD Bypass Areas : Impervious 49.4 sqm 13.0 %

Pervious 330.4 sqm 87.0 %

Total 379.8 sqm 55 %

Impervious area bypass 13.5 % OK

Bypass - discharge - 17.5 L/s

Detention A

Volume Required 13.94 cu.m 200cum/ha

Total Area 8.46 sq.m

Orifice Dia. = 73 mm $Q=d^2 \cdot \sqrt{h}/0.48$

Invert of pit = 93.07 m $d=\sqrt{((0.48 \cdot Q)/\sqrt{h})}$

Max. Water Level achieved = 93.96 m

Storage achieved 886 L

Minimum Storage 13940 L - SSR with no modelling.

Maximum Discharge 10.4 L/s - PSD 400L/s/ha

Proposed Discharge 10.2 L/s - PSD OK

Basix Allowance

Raintank Basix = 6585 L

Raintank Provided = 6585 L

50% of OSD = 6970 L

Basin Type Inside Raintank

Net OSD required 7355 L