



REF : C11761-16918-calcs.XLS

STORMWATER DESIGN CALCULATIONS

8 JINCHILLA ROAD

TERREY HILLS

1.0 Detention System Requirements

Proposed Residence
8 JINCHILLA ROAD
TERREY HILLS

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1.1 Storage-Area calcs.

7942

DATA:

Site Area Assessed due to easements

Site Area = 0.0701 ha 701.2 sq.m

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

40% of site area = 280.48 sq.m

Impervious Area Pre Development = 386.9 sqm

Percentage Impervious Pre Development = 55%

Impervious Area POST Development = 361.7 sqm

Percentage Impervious POST Development = 52%

OSD Exemption Not Applicable

Catchment directed through OSD = 321.43 sqm OK 45.8 %

OSD Bypass Areas : Impervious 40.27 sqm 10.6 %

Pervious 339.5 sqm 89.4 %

Total 379.77 sqm 54 %

Impervious area bypass 11.1 % OK

Bypass - discharge - 17.3 L/s

Detention A

Volume Required 14.02 cu.m 200cum/ha

Total Area 9.78 sq.m

Orifice Dia. = 75 mm $Q=d^2*\sqrt{h}/0.48$

Invert of pit = 200.84 m $d=\sqrt{((0.48*Q)/\sqrt{h})}$

Max. Water Level achieved = 201.66 m

Storage achieved 818 L

Minimum Storage 14024 L - SSR with no modelling.

Maximum Discharge 10.7 L/s - PSD 400L/s/ha

Proposed Discharge 10.5 L/s - PSD OK

Basix Allowance

Raintank Basix = 6082 L

Raintank Provided = 6082 L

50% of OSD = 7012 L

Basin Type Inside Raintank

Net OSD required 7942 L