



REF : M9341-704352-calcs-a.xls

STORMWATER DESIGN CALCULATIONS

5 BRRINGBAR STREET

NORTH BALGOWLAH

1.0 Detention System Requirements

Proposed Residence
5 BURRENBAR STREET
NORTH BALGOWLAH

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1.1 Storage-Area calcs.

DATA:

Site Area Assessed due to easements

Site Area = **0.0481** ha **481** sq.m

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

40% of site area = 192.4 sq.m

Impervious Area Pre Development = **233.8** sqm

Percentage Impervious Pre Development = 49%

Impervious Area POST Development = **233.3** sqm

Percentage Impervious POST Development = 49%

OSD Exemption Not Applicable

Catchment directed through OSD = **198.5** sqm 41.3 %

OSD Bypass Areas :	Impervious	34.8 sqm	12.3 %
	Pervious	247.7 sqm	87.7 %
	Total	282.5 sqm	58.7 %

Impervious area bypass 14.9 % OK

Bypass - discharge - 13.0 L/s

Detention A

Volume Required 9.62 cu.m 200cum/ha

Total Area 0.00 sq.m

Orifice Dia. = **54** mm $Q=d^2 \cdot \sqrt{h}/0.48$

Invert of pit = **51.04** m $d=\sqrt{((0.48 \cdot Q)/\sqrt{h})}$

Max. Water Level achieved = **52.08** m

Storage achieved 144 L

Minimum Storage **9620** L - SSR with no modelling.

Maximum Discharge **6.3** L/s - PSD 400L/s/ha

Proposed Discharge 6.2 L/s - PSD **OK**

Basix Allowance

Raintank Basix = **4500** L

Raintank Provided = **4500** L

50% of OSD = 4810 L

Basin Type Inside Raintank

Net OSD required **5120** L