



REF : M9365-704303-calcs.XLS

STORMWATER DESIGN CALCULATIONS

AT 3 MILDRED AVENUE

MANLY VALE

1.0 Detention System Requirements

Proposed Residence
 AT 3 MILDRED AVENUE
 MANLY VALE

REF : M9365-704303-calcs.XLS

1.1 Storage-Area calcs.

DATA:

Site Area Assessed due to easements
 Site Area = **0.0715** ha **714.5** sq.m
 OSD exemption if less than 450sqm or less than 40% site coverage
 40% of site area = **285.8** sq.m

Impervious Area Pre Development = **395** sqm
 Percentage Impervious Pre Development = **55%**
 Impervious Area POST Development = **370** sqm
 (Excl. Ex. Pool surface - overflow to sewer)
 Percentage Impervious POST Development = **52%**

OSD Exemption Not Applicable

Catchment directed through OSD = **311.3** sqm **43.6 %**

OSD Bypass Areas :

| | | |
|------------|------------------|----------------|
| Impervious | 58.7 sqm | 14.6 % |
| Pervious | 344.5 sqm | 85.4 % |
| Total | 403.2 sqm | ##### % |

Impervious area bypass **15.9 % OK**
 Bypass - discharge - **18.7** L/s

Detention A

| | | |
|-----------------|-------------------|-----------|
| Volume Required | 14.29 cu.m | 200cum/ha |
| Total Area | 0.00 sq.m | |

Orifice Dia. = **74** mm $Q=d^2\sqrt{h}/0.48$
 Invert of pit = **61.03** m $d=\sqrt{((0.48*Q)/\sqrt{h})}$
 Max. Water Level achieved = **61.77** m
 Storage achieved **144** L

Minimum Storage **14290** L - SSR with no modelling.
 Maximum Discharge **9.9** L/s - PSD **400**L/s/ha
 Proposed Discharge **9.6** L/s - PSD **OK**

Basix Allowance

| | |
|---------------------|--------------------------|
| Raintank Basix = | 6980 L |
| Raintank Provided = | 6980 L |
| 50% of OSD = | 7145 L |
| Basin Type | Below Ground Tank |
| Net OSD required | 7310 L |