CITY OF RYDE

ON-SITE DETENTION CALCULATION SHEET

DEVELOPMENT TYPE: Childcare

ADDRESS: 16 Terry Road, Eastwood

Catchment Zone	(Zone 1) (Zone 2) (Eastwood)			
Site Area	1487	m²		(A)
65% Site Area	966.55	m²		
Total **Proposed** Impervious Area (roofs, driveways, hardstand etc)	841	m²		(B)
% of site impervious	0.62	%		
Impervious area draining to the Storage Facility	841	m²		(C)
Pervious area draining to the Storage Facility	646	m²		(D)
Total area draining to the Storage Facility (impervious and pervious areas)	1487	m²		(E)
Pervious area bypassing the Storage Facility	0	m²		(F)
Impervious area bypassing the Storage Facility	0	m²		(G)
$\frac{(C)+(G)}{(C)} =$	1. 1			(L)

must not be greater than 1.25.

Permitted Site Discharge (PSD) rate per m²

Catchments in Zones 1 & 2

If (G)=0 then PSD = 0.0265 l/sec/m²
If (G)=0 then PSD = $0.0265x(L)^{-1.37}$ l/sec/m²

Eastwood Catchment

If (G)=0 then PSD = 0.0210 l/sec/m²
If (G)=0 then PSD = $0.0210x(L)^{-1.37}$ l/sec/m² 0.0265 (J)

PERMITTED SITE DISCHARGE (E) x (J) 1487 x 0.0265 **39.4055 l/s**

Storage Volume per m²

(K) = 0.0275 m³/m² for zone 1 or
(K) = 0.0255 m³/m² for zone 2 or
(K) = 0.0300 m³/m² for Eastwood Catchment 0.0275 (K)

SITE STORAGE REQUIREMENT ((E) + (G)) x (K)x(1.2)* 1487 + 0 x 0.0275 (x1.2)* 49.071

Allowance for Rainwater Tank offset (5000 litre Max, see clause 3.1.8) -

NOTE * **If OSD is provided in a landscaped surface basin the volume must be increased by 20%**

0 m³

OUTLET CONTROL - using a Sharp Edged Orifice Plate

Height Difference between top water level and Centre of Orifice (m) 1.0 (H)

ORIFICE DIAMETER (mm) $=21.9\sqrt{\frac{PSD}{\sqrt{(H)}}}$

137 mm

Should pipe and pit losses be used to control outflow, the calculations are to be attached.