

## APPENDIX 1

### Worked example

Lot area = 800m<sup>2</sup>

Total roof and paved area = 500m<sup>2</sup>

Natural surface level = 7.5

Council stormwater system invert level = 6.1

From spreadsheet:

	M	N	O	P	Q	R	S	T
1	<b>MODIFIED COPAS EQUATION FOR STORMWATER RETENTION</b>							
2	Town of Bassendean							
3								
4	Lot Area (ha)		= 0.08					
5	Roof & Paved Area (ha)		= 0.0500					
6	Time of Concentration (mins)		= 5					
7	Predevelopment Flow (l/s)		= 5.04					
8	Orifice diameter (mm)		= 66					
9								
10			1 in 2yr	1 in 5yr	1 in 10yr	1 in 20yr	1 in 50 yr	1 in 100yr
11			cu.m	cu.m	cu.m	cu.m	cu.m	cu.m
12								
13	Maximum Storage Requ		1.24	2.50	3.45	5.03	7.63	9.82
14	<b>T I M E</b>							
15	<i>minutes /hours</i>							
16	5	5	0.94	1.80	2.47	3.44	4.94	6.23
17	6	6	1.07	2.05	2.81	3.88	5.54	6.95
18	10	10	1.24	2.50	3.45	4.81	6.88	8.73
19	20	20	0.52	2.10	3.29	5.03	7.63	9.82
20	30	30	-0.91	0.87	2.20	4.14	7.06	9.55
21	1	60	-6.66	-4.55	-3.00	-0.72	2.74	5.73
22	2	120	-20.37	-18.05	-16.25	-13.57	-9.60	-6.16
23	3	180	-35.26	-32.80	-30.90	-28.00	-23.61	-19.89
24	6	360	-82.43	-79.71	-77.60	-74.40	-69.28	-65.00
25	12	720	-181.09	-178.11	-175.71	-171.80	-165.81	-160.52
26	24	1440	-384.38	-381.09	-378.21	-373.50	-365.90	-359.35
27	48	2880	-799.49	-796.35	-793.09	-787.47	-777.73	-769.19
28	72	4320	-1218.99	-1216.94	-1213.88	-1208.00	-1197.82	-1188.06

Total storage volume = 5.03m<sup>3</sup>

Maximum tank depth = 7.5 – 6.1 = 1.4m

Use 1.2m dia x 1.2m deep tanks each with a volume of 1.36m<sup>3</sup>

Use 4 tanks (total volume) = 5.44m<sup>3</sup>

Outlet orifice diameter = 66mm (max)

**Interactive Stormwater Retention Calculator (Modified COPASEQ5 Rev01.xls) can be found on the Town's website.**

**The Appendix 2 Standard Stormwater Connection Details is currently draft, the updated drawing will be provided shortly.**