CITY OF COCKBURN

ON SITE DRAINAGE REQUIREMENTS
(RESIDENTIAL LOTS)

The requirement of the City for stormwater disposal is that all stormwater falling within the lot boundaries is contained within the lot, either through soakwells or other approved methods.

Property owners also have a statutory obligation under common law precedents and section 3.25 (1) of the Local Government Act 1995 to confine stormwater within their boundaries.

The City requires the on-site storage capacity for residential lots be designed to contain the 1 in 20 year storm of 5 minutes duration. This is based on the requirements for gutter & downpipe sizing by Building Codes of Australia. Please note this requirement is based on the assumption that lot levels are higher than surrounding road levels and overland flow path exists in case of a bigger rain event (above 1 in 20 ARI). If not then there would be potential for flooding of the lot and an advice note will be issued on the building license application for the lot.

The resulting formula for calculating the storage volume required is:

$$\mathbf{V = A \div 80}$$

Where A = impervious area of a catchment measured in square metres; m^2
V = required storage volume of the catchment measured in cubic metres; m^3

The required number of soakwells can be calculated as follows:

$$\mathbf{N = V/S}$$

Where N is the number of soakwells and
S is the volume of a single soakwell

Notes:

1. The number of soakwells to be rounded up to the nearest whole number
2. Where N is greater than 1 and the soakwells within the catchment are linked together by the drainage pipes, the diameter of which shall not be less than 100mm.

This information sheet is a guide only. At time of preparation it was deemed to be correct but may be updated without notice.

City has developed Table 1 below to calculate the roof area (m^2) that will be served by different sized soakwells. An example of a simple calculation to obtain number of soakwells is as follows:

The rooftop area is 15.24 × 36.50m = 556m^2
Select 1200mm diameter × 1200mm deep soakwell
Table 1 shows that this soakwell will serve 108.56 m^2 of roof area.
The required number of soakwells is 556/108.56 = 5 soakwells

Table 1: Roof Area (m^2) served for 1 in 20 yr 5 minutes storm

Depth of Soakwell in Millimetres	Diameter of Soakwell in Millimetres								
		300	**600**	**900**	**1200**	**1500**	**1800**	**2100**	**2400**
	300	1.68	6.8	15.3	27.12	42.4	61.04	83.12	108.56
	600	3.36	13.6	30.56	54.32	84.8	122.16	166.24	217.12
	900	5.12	20.32	45.84	81.44	127.2	183.2	249.36	325.76
	1200	6.8	27.12	61.04	108.56	169.68	244.32	332.48	434.32
	1500	8.48	33.92	76.32	135.68	212.08	305.36	415.6	542.88
	1800	10.16	40.72	91.6	162.88	254.48	366.4	498.72	651.44
	2100	11.84	47.52	106.88	190	296.88	427.52	581.92	760
	2400	13.6	54.32	122.16	217.12	339.28	488.56	665.04	868.56

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