



## Simple Roof Catchment & Soak Hole Size Calculation

Exposed roof area	= width x length of roof
a)	= m <sup>2</sup>
Rain fall	= intensity 100mm/hr/ m <sup>2</sup> @ duration of 10 minutes
	= (100 + 60) x 10 = 16.7 litres / m <sup>2</sup>
Catchments volume	= (exposed roof area x rainfall) / 1000
	= (m <sup>2</sup> x 16.7) / 1000
b)	= m <sup>3</sup>
Rock fill allowance	= m <sup>3</sup> x 1.4
c)	= m <sup>3</sup> Total size of soak pit (allow for additional 300mm of top cover)

a	Length	m	X	Width	m	m <sup>2</sup>
b	a)total	m <sup>2</sup>	X	16.7 / 1000		m <sup>3</sup>
c	b)total	m <sup>2</sup>	X	1.4 (Rock fill allowance)		m <sup>3</sup>

### NOTES:

- This will allow the size of hole to be excavated for the volume of rain discharged from the roof.
- Soak pits should be deep enough to reach a suitable drainage layer.
- The storage volume for a rock filled soak pit is approximately .4 of the soak pit's excavated volume. The rate of soakage into the ground has not been considered as the nature of the ground varies throughout the district and in areas of poor soakage an overflow outlet to an approved out fall is allowed.
- This calculation method is for residential size soak pits. Soak pits designed for use of larger commercial type buildings will need specific engineered design.