

Brownfield Estimation of Peak Flow Rate of Runoff

BROWNFIELD ESTIMATION OF PEAK FLOW RATE OF RUNOFF

No.	ASV1	Abbreviation	Calculations	Value
1	Hydrological Region	R		6
2	(SOIL) type (1-5)	S		Impermeable
3	Development Size	A		0.0050 ha
4	Method of Greenfield Analysis			If development area is 200+ ha a full FEH analysis is recommended to obtain a more accurate estimate of greenfield runoff characteristics
No.	ASV2	Abbreviation	Calculations	Value
5	Area	A		0.0050 ha
6	Annual Rainfall	SAAR		629 mm
7	Soil runoff coefficient	SPR		1.00
8	Development mean annual peak flow rate	QBAR	1096.30	0.11 l/s
9	Mean annual peak flow per unit area	QBAR/A	21.93	21.93 l/s/ha
10	Minimum limit of discharge	Qthrottle		Minimum sizes of an orifice may limit the minimum hydraulic control flow rate. This allows the derivation of an equivalent value of a l/s QBAR/A
10.1	100 year flow rate per unit area	Qthrottle/A		l/s/ha
10.2	Equivalent mean annual peak flow per unit area	Qthrottle/3.5A		l/s/ha
11	1yr, 30 yr and 100yr peak discharge rate of runoff per unit area			Use the larger of the 2 values of item 9 and 10.2 for calculating 11.1 to 11.3
11.1		Q1yr		18.64 l/s/ha
		Q2yr		19.29 l/s/ha
		Q5yr		28.07 l/s/ha
		Q10yr		35.52 l/s/ha
11.2		Q30yr		47.80 l/s/ha
11.3		Q100yr		69.94 l/s/ha

0.09 l/s
0.10 l/s
0.14 l/s
0.18 l/s
0.24 l/s
0.35 l/s