

Spacing of Road Gullies

Private Yard Gully

<u>Longitudinal Gradient</u>	$S_L = 1$ in 100
<u>Crossfall</u>	$S_c = 1$ in 40
<u>Mannings Rounghness Co-eff</u>	$n = 0.017$
<u>Max allowable flow width</u>	$B = 1.0$ m
<u>Effective Catchment width</u>	$W_e = 1.00$ m
<u>Maintenance Factor</u>	$m = 1.0$
<u>Return Period</u>	$N = 5$ year(s)
<u>Time of Concentration</u>	$T = 5$ mins
<u>Rainfall Depth</u>	$2\text{minM5} = 3.5$ mm
<u>Rainfall Intensity</u>	$I = 76.2$ mm/hr
<u>Depth of water against kerb</u>	$H = 0.025$ m
<u>Area of Flow</u>	$A_f = 0.013$ m ²
<u>Hydraulic Radius of channel</u>	$R = 0.012$ m
<u>Flow Rate</u>	$Q = 0.0039$ m ³ /s
<u>Collection efficiency of Grating</u>	$n = 83$ %
<u>Maximum gully spacing</u>	$Sp = 152.5$ m
<u>Velocity in channel</u>	$V = 0.31$ m/s
<u>Time of flow along kerb</u>	$t_g = 8.16$ min
<u>New Time of concentration</u>	$T = 11.16$ mins

Gross area of gully $A_g = 0.07$ m²Waterway area 0.05 m²Waterway area $p = 76$ %Grating bar pattern co-efficient $C_b = 1.75$ Grating parameter $G = 102.0$ s/m²Design Value $G_d = 110$ s/m²Grating Type T