

JOB No. 102463

Calculated by JB

SHEET No. 1 of 1

Checked by JL

69 Redington Road - Flood Storage

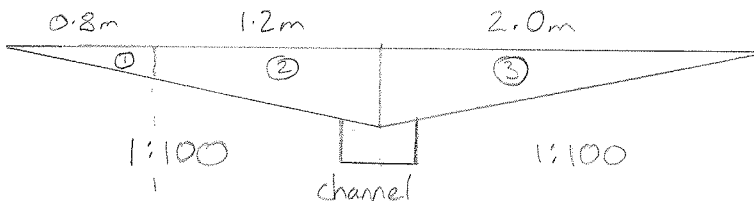
① 1 in 100 year + 30% Climate Change

Maximum Flooded Volume from SWICOL, $V_F = \underline{1.38 m^3}$

From Microdrainage

② Available above ground storage following manhole surcharge = V_s

See 102463-SK02 for flooded volume V_s on plan.



Width of Section (m) 12.61 | 16.34 | 11.10

$$V_{s_{channel}} = 0.953 m^3$$

$$V_{s_1} = \left(\frac{0.8 \times 0.008}{2} \right) \times 12.61 = 0.040 m^3$$

$$V_{s_2} = \left(\frac{0.008 + 0.02}{2} \right) \times 1.2 \times 16.34 = 0.275 m^3$$

$$V_{s_3} = \left(\frac{2.0 \times 0.02}{2} \right) \times 11.1 = 0.222 m^3$$

$$V_s = V_{s_{channel}} + V_{s_1} + V_{s_2} + V_{s_3} = 0.953 + 0.040 + 0.275 + 0.222$$

$$V_s = \underline{1.49 m^3}$$

See 102463-SK02 for channel dimensions.

③

$$V_s > V_F$$

Therefore in the 1 in 100 year + 30% for Climate Change Storm event, the flooded volume from manhole SWICOL will remain on site and be stored above ground.