

Plot Adj to 67B GRAVITS LANE BOUNDAR REGIS

SOAKAWAY DESIGN TO BE DIGEST 365

From MAP, $r = 0.39$. By Percolation test, f determined to be $2.54 \times 10^{-5} \text{ m/sec}$.

$$M5 - 15 = 20 \times 0.63 = 12.6 \text{ mm}$$

$$M5 - 30 = 20 \times 0.8 = 16.0 \text{ mm}$$

$$M10 - 15 = 12.6 \times 1.23 = 15.5 \text{ mm}$$

$$M10 - 30 = 16.0 \times 1.24 = 19.8 \text{ mm}$$

$$I, \text{ INFLOW TO SOAKAWAY} = 19.8 \text{ mm} \times 62 \text{ m}^2 (\text{Area Drained}) \\ = 1.23 \text{ M}^3$$

Assume soakaway 1.00m long and 1.00m deep below pipe invert

$$4.5 \text{ so} = 2 \times (1.00 + W) \times (1.00/5) \\ = 1.00 + W \text{ m}^2$$

$$O, \text{ OUTFLOW} = 1.00 + W \times 2.54 \times 10^{-5} \times (10 \times 60) \text{ m}^3$$

$$S, \text{ EFFECTIVE VOLUME OF SOAKAWAY WITH 30\% FREE VOLUME} = 1.00 \times 0.5 \times W \times 0.3 = 0.45 W \text{ m}^3$$

For satisfactory storage $I - O = S$

$$1.23 - (1.00 + W) \times (2.56 \times 10^{-5}) \times 10 \times 60 = 0.45 W$$

$$1.23 - (1.00 + W \times 0.0154) = 0.45 W$$

$$W = 2.57 \text{ m}$$

SOAKAWAY TO BE 1.00m WIDE $\times$ 2.57m LONG $\times$ 1.00m BELOW PIPE INVERT. (ASSUMING 600mm DEPTH PIPE INVERT, Pit to be dug 1.6m deep.