



4 PARK PLACE
LEEDS
WEST YORKSHIRE
LS1 2RU

George Steet - Goldthorpe

Calculation of surface water flow rate.

Proposed roof area - 2No. semi-detached houses (roof area 4.0m x 10.5m per dwelling)

Total impermeable area = $2 \times 4.0 \times 10.5\text{m} = 84\text{m}^2$ (0.0084 Ha)

Surface water flow rate based on a rainfall intensity of 50mm/hr using the Wallingford Procedure;

$$\begin{aligned}\text{Flow rate (Qp)} &= 2.78 \times 1.3 \text{ Cvi A} \\ &= 2.78 \times 1.3 \times 0.75 \times 50 \times 0.0084 \\ &= \underline{\underline{1.13 \text{ litres/second}}}.\end{aligned}$$

The lowest practical discharge rate based on an orifice of 75mm (in accordance with Building Regulations Part H) is 3.5 litres/second. Given the minimal flow rate no restriction can be applied.