

Cae Madog - New Trial Hole

June 2022

Percolation Rate

Trial Pit Dimensions $1.3 \times 1.1 \times (1.4 \text{ m deep})$
Wetted perimeter = $2.6 + 2.2 = 4.8 \text{ m}$
depth 0.3 m .

$$\text{Area percolation} = 4.8 \times 0.3 = 1.4 \text{ m}^2$$

$$\text{Volume} = 1.3 \times 1.1 \times 0.3 = 0.43 \text{ m}^3 = 430 \text{ litres}$$

$$\therefore \text{disposition} = \frac{430}{0.43} = 1000 \text{ litres/m}^2/\text{hr}.$$

$$\begin{aligned} \text{Accepted discharge / person / day (16 hr)} \\ = 150 \text{ litres.} \end{aligned}$$

$$\begin{aligned} \text{Capacity of exist. septic tank: } 1.6 \times 1.0 \times 1.0 \\ = 1.6 \text{ m}^3 = 1600 \text{ litres.} \end{aligned}$$

$$\therefore \text{Max connection} = \frac{1600}{150} \approx 10.$$
