

**Effluent Land Drainage System Details to Accompany
Planning Application for Septic Tank Drainage**

1. Location of proposed development: Adj. Lower View,
City Lane,
Sarn,
Newtown,
SY16 4HH.
2. Site plan included: Yes.
3. Description of soil: 200mm topsoil over 800mm stony clay subsoil.
4. Percolation test - BSI code of practice BS6297: 1983 Test procedure carried out -
- Excavate a hole 300mm square to a depth 250mm below the proposed invert level of the land drain.
 - Fill the 300mm section completely with water and allow to seep away overnight.
 - Next day, refill the test section with water to a depth 250mm and observe time in seconds for water to seep away completely.
 - Divide this time by the depth in mm of the water placed in hole. Carry out test three times and take the average figure.

Hole One

$$\text{Test 1 } \frac{7,600 \text{ secs}}{250\text{mm}} = 30.4$$

$$\text{Test 2 } \frac{6,900 \text{ secs}}{250\text{mm}} = 27.6$$

$$\text{Test 3 } \frac{7,200 \text{ secs}}{250\text{mm}} = 28.8$$

$$\text{Average result} = 28.9$$

Hole Two

$$\text{Test 1 } \frac{8,000 \text{ secs}}{250\text{mm}} = 32.0$$

$$\text{Test 2 } \frac{7,200 \text{ secs}}{250\text{mm}} = 28.8$$

$$\text{Test 3 } \frac{7,800 \text{ secs}}{250\text{mm}} = 31.2$$

$$\text{Average result} = 30.7$$

Contd.

Contd.

Hole Three

$$\text{Test 1 } \frac{6,800 \text{ secs}}{250\text{mm}} = 27.2$$

$$\text{Test 2 } \frac{7,400 \text{ secs}}{250\text{mm}} = 29.6$$

$$\text{Test 3 } \frac{7,400 \text{ secs}}{250\text{mm}} = 29.6$$

$$\text{Average result} = 28.8$$

$$\text{Overall average reading} = \frac{28.9 + 30.7 + 28.8}{3} = 29.5$$

From the readings obtained the floor area of subsurface drains required to disperse effluents from a septic tank may be calculated as follows:

$$A_t = P \times VP \times 0.25$$

where

P is the number of persons served by the tank and VP is the average percolation value obtained

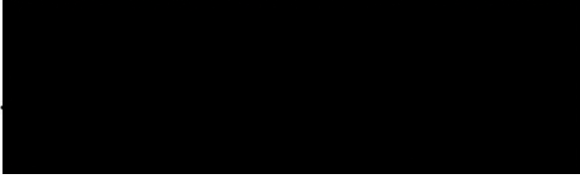
Therefore

$$A_t = 5 \times 29.5 \times 0.25$$

$$A_t = 36.88$$

Therefore a drainage field giving a subsurface area of min. 37m² is appropriate in this instance (0.9m wide trench, 42m length gives 37.8)

I have supervised the above test and certify that the results are correct.

Signed.  (Ian H. Pryce)

Qualification: Member Chartered Institute of Building (MCIQB)

Date of test: 20th/21st/22nd May, 2022