

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

1. Location of proposed development: Cloddiau,
Kerry,
Newtown,
SY16 4DY.
2. Site plan included: Yes.
3. Description of soil: 225mm topsoil over 600mm stony clay subsoil.
4. Percolation test - BSI code of practice BS6297: 1983 Test procedure carried out -
 - a) Excavate a hole 300mm square to a depth 250mm below the proposed invert level of the land drain.
 - b) Fill the 300mm section completely with water and allow to seep away overnight.
 - c) Next day, refill the test section with water to a depth 250mm and observe time in seconds for water to seep away completely.
 - d) 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

$$\text{Test 1 } \frac{10,300 \text{ secs}}{250\text{mm}} = 41.2$$

$$\text{Test 2 } \frac{10,800 \text{ secs}}{250\text{mm}} = 43.2$$

$$\text{Test 3 } \frac{12,200 \text{ secs}}{250\text{mm}} = 48.8$$

$$\text{Average result} = 44.4$$

Hole Two

$$\text{Test 1 } \frac{11,300 \text{ secs}}{250\text{mm}} = 45.2$$

$$\text{Test 2 } \frac{10,800 \text{ secs}}{250\text{mm}} = 43.2$$

$$\text{Test 3 } \frac{12,600 \text{ secs}}{250\text{mm}} = 50.4$$

$$\text{Average result} = 46.3$$

Contd.

Contd.

Hole Three

$$\text{Test 1 } \frac{9,900 \text{ secs}}{250\text{mm}} = 39.6$$

$$\text{Test 2 } \frac{10,700 \text{ secs}}{250\text{mm}} = 42.8$$

$$\text{Test 3 } \frac{10,400 \text{ secs}}{250\text{mm}} = 41.6$$

$$\text{Average result} = 41.4$$

$$\text{Overall average reading} = \frac{44.4 + 46.3 + 41.4}{3} = 44.1$$

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

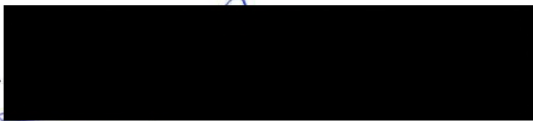
Therefore

$$A_t = 12 \times 44.1 \times 0.25$$

$$A_t = 132.3$$

Therefore a drainage field giving a subsurface area of 135m² is appropriate in this instance (180 metre length by 0.75 metre wide trenches).

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

Signed.  (Ian H. Pryce)

Qualification: Member Chartered Institute of Building (MCIQB)

On behalf of: Messrs. D. and E. Jerman

Date of test: 6th/7th/8th January, 2022