

Structure&Design Service LTD

Site address:

Blaenau Uchaf

Froncyclyte

Nr Llangollen

LL20 7RY

Percolation test carried out: 27 May 2022 & 28 May 2022

Percolation test evidence:

27 May 2022

x2 holes were excavated, hole sizes are 300mm x 300mm x 630mm (invert level 330mm below the surface). The holes were both filled with water and left overnight to seep away.



(Proposed water treatment tank location)



(x2 excavated hole locations)



(300 x 300 x 630mm holes)

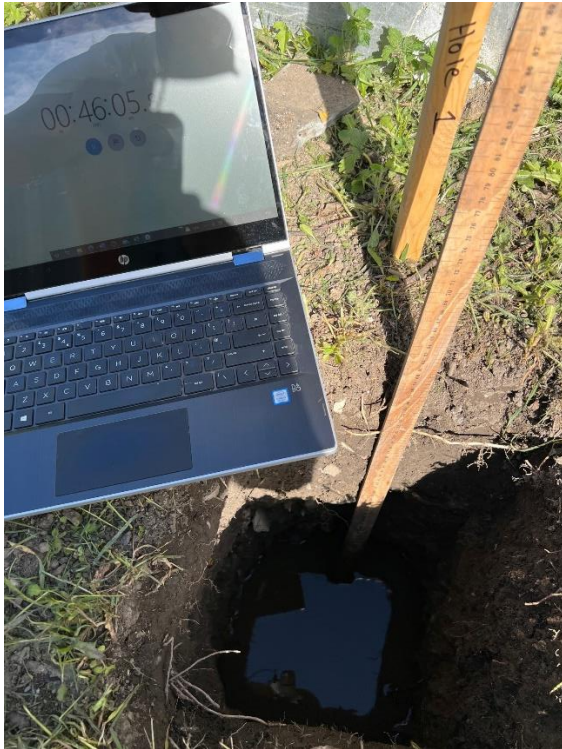


(300 x 300 x 630mm holes)

28 May 2022

Outside temperature 18 degrees, dry with sunny intervals

Both excavated holes were filled to 300mm from the bottom with water, the timer started when the water level reached 225mm and ended when the water had seeped away to 75mm (150mm of fall = 50%).



(evidence of "Hole 1" test)



(evidence of "Hole 2" test)

Both holes were tested 3 times during 28 May 2022, the testing sequence was repeated as described above.

Location	Time taken to seep 150mm
Hole 1	2765
Hole 1	2730
Hole 1	2867
Average: 2787 seconds	

Location	Time taken to seep 150mm
Hole 2	2678
Hole 2	2718
Hole 2	2704
Average: 2700 seconds	

Formula for calculating (Vp) - (average time / 150) = Vp

Hole 1 Vp = 2787 / 150 = 18.58

Hole 2 Vp = 2700 / 150 = 18

Water treatment tank drainage field calculation

Formula $A = p \times Vp \times 0.20$

A = Area required for drainage field (m²)

P = number of people served by the treatment tank (6 person tank as the proposed building is a 4 bedroom house)

Vp = Percolation value (calculated above)

0.20 = water treatment tank calculator

Calculation

$A = (6 \times 18.58 \times 0.20) = 22.30 \text{ m}^2$

$A = (6 \times 18 \times 0.20) = 21.6 \text{ m}^2$

Minimum drainage field for the water treatment plant is: 22.30m²

Proposed area for the package water treatment tank is 10.4m x 9.8m = 101.92 m²

Reference drawing "1067"