



# Drainage Field Siting and Percolation Test Calculation Form

**NB – Development proposing the use of non-mains drainage schemes will only be considered where connection to the mains sewer is not feasible**

## Guidance Notes:

The following table provides details of siting distances contained in Approved Document H 2010 (Wales), Section H2 of the Building Regulations.

| Siting of septic tanks, treatment plants and soakaways |          |             |               |
|--------------------------------------------------------|----------|-------------|---------------|
| Distance from                                          | Dwelling | Watercourse | Borehole/well |
| Drainage field                                         | 15m      | 10m         | 50m           |
| Septic Tank                                            | 7m       | 10m         | 50m           |
| Treatment plant                                        | 7m       | 10m         | 50m           |

## Conducting the main percolation test

The percolation test should be carried out in accordance with Approved Document H 2010 (Wales), Section H2 of the Building Regulations.

1. These tests should be carried out within and be representative of, the proposed soakaway area.
2. Excavate at least 2 percolation holes 300mm square to a depth of 300mm below the proposed invert level of the effluent distribution pipe. Where deep holes are necessary, the hole should conform to this shape at the bottom but may be enlarged above the 300mm level to enable safe excavation to be carried out.
3. Fill the 300mm square section of the holes to a depth of at least 300mm with water and allow it to seep away overnight.
4. Next day, refill the test sections with water to a depth of at least 300mm and observe the time (T) in seconds, for the water to seep away from 75% to 25% full level. (ie a depth of 150mm)
5. Extreme weather conditions should be avoided when testing.

**# please complete the below diagram and form overleaf and return to appointed planning officer and ensure that the porosity test holes are left open for inspection.**

## Drainage scheme siting diagram

See Block Plan

Percolation tests in accordance with the guidance provided with this form on (date) 23/11/2021 in respect of premises at: **Land at New House, Sarn, Newtown, Powys, SY16 4ER**

Description of ground strata: **Freely draining**

The overall depth of the test holes dug were: (state in metres/millimetres)

| Test Hole 1 | Test Hole 2 |
|-------------|-------------|
| 1m          | 1m          |

I confirm that the water table did not rise to within 1 metre of the invert of the proposed land Irrigation scheme.

The weather conditions on the day were: dry  
 The results of the percolation tests were:

| Test Hole 1                           |                 |      |                | Test Hole 2                           |                 |      |                |
|---------------------------------------|-----------------|------|----------------|---------------------------------------|-----------------|------|----------------|
|                                       | Time in Seconds |      | V <sub>p</sub> |                                       | Time in Seconds |      | V <sub>p</sub> |
| Test 1                                | 6000            | ÷150 | 40             | Test 1                                | 2400            | ÷150 | 32             |
| Test 2                                | 5400            | ÷150 | 36             | Test 2                                | 1800            | ÷150 | 34.6           |
| Test 3                                | 4800            | ÷150 | 32             | Test 3                                | 1200            | ÷150 | 36             |
| Trial Hole 1 – Average V <sub>p</sub> |                 |      | 36             | Trial Hole 1 – Average V <sub>p</sub> |                 |      | 34.2           |

|                                                                                                 |      |  |
|-------------------------------------------------------------------------------------------------|------|--|
| Average V <sub>p</sub> of Test Holes 1 & 2                                                      | 35.1 |  |
| Use this averaged V <sub>p</sub> figure in the following formula $P \times V_p \times 0.25 = A$ |      |  |

| Calculating the drainage field area          |   |                |   |      |   |    | Key            |                                                                                                                                                                                                                    |
|----------------------------------------------|---|----------------|---|------|---|----|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P                                            | X | V <sub>p</sub> | X | 0.25 | = | A  |                | P = no of people served by the tank<br>A = floor area of the drainage field (in square metres)<br>V <sub>p</sub> = Percolation Value<br>TW= Trench width in metres<br>L = length of the drainage field (in metres) |
| 16                                           | X | 14             | X | 0.25 | = | 56 | m <sup>2</sup> |                                                                                                                                                                                                                    |
| Calculating the linear drainage field length |   |                |   |      |   |    |                |                                                                                                                                                                                                                    |
| A                                            | ÷ | TW             | = | L    |   |    |                |                                                                                                                                                                                                                    |
| 56                                           | ÷ | 0.8            | = | 70   | m |    |                |                                                                                                                                                                                                                    |

## Private Treatment Plan Details

### **KLARGESTER BIOTEC 3 - 18 PERSON SEWAGE TREATMENT PLANT, GRAVITY DISCHARGE**



The Klargester BioTec is the economical off-mains solution for single houses and uses the tried and tested aerobic biological process for the treatment of domestic sewage.

Klargester BioTec sewage treatment systems are ideal for single/multiple houses and employ the well proven aerobic biological trickling filter process for the treatment of sewage.

Easy to install, this BioTec 3 system is suitable for a population of 18.