

# 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.

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

## **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 Proposed Block Plan REV E

Percolation tests in accordance with the guidance provided with this form in respect of premises at: Land at Ridley Wood Farm, Wrexham, LL13 9US.

Description of ground strata: **moderately draining ground**

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

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

The weather conditions on the day were: **Overcast with showers**

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                                      | <b>9310</b>     | ÷150 | <b>62.0</b>    | Test 1                                      | <b>9140</b>     | ÷150 | <b>60.9</b>    |
| Test 2                                      | <b>9065</b>     | ÷150 | <b>60.4</b>    | Test 2                                      | <b>9015</b>     | ÷150 | <b>60.1</b>    |
| Test 3                                      | <b>9000</b>     | ÷150 | <b>60.0</b>    | Test 3                                      | <b>8870</b>     | ÷150 | <b>59.1</b>    |
| <b>Trial Hole 1 – Average V<sub>p</sub></b> |                 |      | <b>60.8</b>    | <b>Trial Hole 1 – Average V<sub>p</sub></b> |                 |      | <b>60.0</b>    |

|                                                      |             |  |
|------------------------------------------------------|-------------|--|
| <b>Average V<sub>p</sub> of Test Holes 1 &amp; 2</b> | <b>60.4</b> |  |
|                                                      |             |  |

## **Private Package Treatment Plant Details**

### **KLARGESTER BD BIODISC EWAGE TREATMENT PLANT, GRAVITY DISCHARGE**



#### **Product Description**

Klargester BD BioDisc Sewage Treatment Plant – Gravity Discharge to drainage field.

A high-performance package treatment plant suitable for use in commercial/industrial premises.

#### **Drainage Field**

The package treatment plant would discharge wastewater to ground via a new drainage field constructed on-site. Soil percolation tests have been undertaken and the results provided above. These results confirm the ground conditions on-site would support a drainage field in this location.

The drainage field would be constructed and built in accordance with the requirements of BS 6297:2007+A1:2008. The system would also be constructed in-line with Approved Document H 2010 (Wales), Section H2 of the Building Regulations.

The drainage field would be constructed in excess of 15m from the proposed dwelling, 10m from any watercourse and 50m from any well or borehole. The system would also avoid any trees or tree roots.

The drainage field will be very carefully constructed using 110mm downward facing perforated pipes laid in trenches with a uniform gradient not steeper than 1:200. The trenches will be between 300mm and 900mm wide and minimum 1m wide strips of undisturbed ground shall be maintained between parallel trenches. The pipes shall be laid on a 200- 300mm layer of clean gravel granular fill material graded either 16-32mm or 20-50mm. The trenches shall be filled with the same material to a level 50mm above the pipe and covered with geotextile material to prevent the entry of silt. The remainder of the trench can be filled with normal soil. Pipes will be laid at a minimum depth of 200mm below the surface.

The system will be installed by a building contractor with experience of installing package treatment plants and drainage fields.

The area of the drainage field will be appropriately fenced-off to prevent any vehicles from parking or moving above the ground. All users of the site will also be given a detailed map/plan showing the layout of the drainage system, so all are informed of its location.

Only domestic wastewater (wastewater from toilets, handwashing and welfare facilities) on-site will be allowed to discharge to the proposed private package treatment plant – no other connections will be made to the system.