

Soil Percolation Testing Results & Drainage Specification

Croxton Farm
Hanmer
Whitchurch
SY13 3BS

Proposed barn conversion scheme to provide two residential dwellings and all associated works including demolition of agricultural buildings, installation of a package treatment plant and upgrading of existing access

Mr Hanmer

November 2025

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Introduction

This Soil Percolation Testing Results document has been prepared and submitted in support of a full planning application made to Wrexham County Borough Council ("The Local Planning Authority") the residential conversion of two redundant agricultural buildings and all associated works including the demolition of agricultural buildings, the installation of a package treatment plant and the upgrading of an existing field access at Croxton Farm, Hamner, Whitchurch, SY13 3BS ("the Application Site").

As part of the proposed development, a new package treatment plant and sub-surface drainage field will be installed to serve the proposed barn conversions.

Package Treatment Plant & Drainage Field

The proposed package treatment plant will discharge wastewater to ground via a new drainage field constructed on-site. Soil percolation tests have been undertaken and the results are provided below for the review of the Local Planning Authority and any relevant consultees. 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 any habitable accommodation on-site, 10m from any watercourse and 50m from any well or borehole. The system would also avoid any trees or tree roots. The submitted Proposed Block Plan drawing shows the proposed location of the proposed drainage field.

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.

Percolation Test Results

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 soak-away 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 neces-sary, 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. (i.e. a depth of 150mm)
5. Extreme weather conditions should be avoided when testing.

Results:

Percolation tests in accordance with the guidance provided with this form on 30/09/2025 in respect of premises at: Croxton Farm, Hanmer, Whitchurch, SY13 3BS.

Description of ground strata: **freely draining soil.**

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 and overcast**

The results of the percolation tests were:

Test Hole 1				Test Hole 2			
	Time in Seconds		V_p		Time in Seconds		V_p
Test 1	**5740**	÷150	**38**	Test 1	**5560**	÷150	**37**
Test 2	**5680**	÷150	**38**	Test 2	**5430**	÷150	**36**
Test 3	**5530**	÷150	**37**	Test 3	**5210**	÷150	**35**
Trial Hole 1 – Average V_p			**38**	**Trial Hole 1 – Average Vp**			**36**

Average V_p of Test Holes 1 & 2	37	
Use this averaged V_p figure in the following formula P x V_p x 0.25 = A		