

P/2023/0713 RESERVED MATTERS

NEW DWELLING replacing existing Workshop adjacent to 'The Old Post Office', Halton, Chirk, LL14 5BG

FOUL DRAINAGE PROVISION

24/03/2025

Independent System –

We have improved upon the Outline Consent septic tank drainage provision by the use of a

TRICEL NOVO UK6 private WasteWater Treatment Plant rather than a septic tank

discharging clean water to the **soakaway chamber on site**- 1050mm Concrete Ring Chamber approx 900mm deep - with no ground infiltration field required for further treatment.

PART H for Septic Tanks– discharge to ground – Ground Conditions 1.38

Drainage field disposal should only be used when percolation tests indicate average values of Vp of between 12 and 100 and the preliminary site assessment report and trial hole tests have been favourable. This minimum value ensures that untreated effluent cannot percolate too rapidly into groundwater. Where Vp is outside these limits effective treatment is unlikely to take place in a drainage field. **However, provided that an alternative form of secondary treatment is provided to treat the effluent from the septic tanks, it may still be possible to discharge the treated effluent to a soakaway.**

The Percolation Test Results attached show average Vp of 7.1

This is outside the range for drainage field for septic tank use

Additional treatment is provided by the private WWTP allowing discharge to a soakaway

NRW Guidance Version 4 28/06/24

Advice to planning authorities for planning applications affecting phosphorus sensitive river Special Areas of Conservation

‘What development proposals are unlikely to increase nutrient levels within a river SAC?’

The following developments can be screened out as **not likely** to have a **significant effect** on a river SAC in relation to phosphorus inputs as there is unlikely to be a source of additional phosphorus or pathway for impacts:

- ***private sewage treatment systems*** discharging domestic wastewater to ground, ***built to the relevant British Standard (BS 6297:2007+A1:2008), YES – actually a private WWTP*** as long as the:-
- ***maximum daily discharge rate is less than 2 cubic metres (m3), YES 0.75m3***
- ***the drainage field is located more than 40m from any surface water feature*** such as a river, stream, ditch or drain ***YES***
- ***and drainage field is located more than 50m from a SAC boundary. YES min 750m direct***
- ***Also, to ensure that there is no significant in combination effect, the discharge to ground should be at least 50m from any other discharge to ground.***

Only the existing Old Post Office dwelling septic tank would be within that 50m distance at approx 42m from the soakaway.

Whilst that is not the full 50m, but noting that the additional discharge would be allowed via that existing septic tank, we believe that them being separate systems would not be any different in terms of discharge to the surrounding ground and any potential for impact on the SAC which is over 750m distant from the site at its nearest point.; and **therefore there would be no adverse impact on the SAC.**

Separate discharges

Existing 'Old Post Office' dwelling assumed 4bed 0.90

Daily discharge calculator for domestic properties V1.0 June 2015

Use this calculator to work out how much effluent your septic tank or small sewage treatment plant will discharge a day when it's being used to treat the sewage from one or more houses or flats.

Number of properties	1	← Enter the number of properties which are connected to the plant
Number of bedrooms	4	← Enter the total number of bedrooms for all of the properties and press return
Cubic metres a day	0.9	← This is how much treated sewage your plant will discharge a day

Eg if you have 2 houses sharing a septic tank, one with 3 bedrooms and the other with 4, enter 2 for the number of properties, 7 for the number of bedrooms, and this will give you a result of 1.65 cubic metres a day.

New dwelling 3bed 0.75

Daily discharge calculator for domestic properties V1.0 June 2015

Use this calculator to work out how much effluent your septic tank or small sewage treatment plant will discharge a day when it's being used to treat the sewage from one or more houses or flats.

Number of properties	1	← Enter the number of properties which are connected to the plant
Number of bedrooms	3	← Enter the total number of bedrooms for all of the properties and press return
Cubic metres a day	0.75	← This is how much treated sewage your plant will discharge a day

Eg if you have 2 houses sharing a septic tank, one with 3 bedrooms and the other with 4, enter 2 for the number of properties, 7 for the number of bedrooms, and this will give you a result of 1.65 cubic metres a day.

Existing dwelling assumed 4bed 0.90 + New dwelling 3bed 0.75 = **total discharge rate**

1.65cubm/day = less than 2cubm/day screening criteria threshold.

The discharge rate into the ground would be the same if combined or if, as proposed, separated by approx. 42m which would give a wider dispersal into the sub-soil.

Therefore there would be no adverse impact on the SAC.

ADDITION MEASURE

However, **additionally**, phosphate reduction measures would also be installed prior to final discharge into the soakaway chamber.

Marsh Industries Phos-Lite prior to discharge which uses **natural mineral media pellets** reducing phosphates down to 0.2mg/l.

Marsh Industries state that these are “Designed to retain up to 8.5kg of phosphorus over five years for a 6PE domestic plant (British Water Flows and Loads 4), Phos-Lite offers reliable performance. After this period, media performance can be reassessed and replaced if necessary, representing approximately 50% of the tested capacity.” Details attached

In contrast to chemical dosing, this is a long-term solution not requiring frequent user intervention which can easily be checked as part of the Method Statement for the annual septic tank servicing.

This provides additional protection to ensure there would be no adverse impact on the SAC.