

H+H Drainage

Tremayne, Mortimer's Cross, Herefordshire HR6 9TG
Phone: 0845 2008421. Mobile: 07837 628764

4th September 2022

For the Attention of Mr Bryan Thomas

Architectural Design Ltd

btadesignltd@gmail.com

Dear Sir,

Ref: The off-mains foul drainage system at Moor Farm, Kinnerton, Powys.

Many thanks for your instruction to attend Moor Farm. Kinnerton. We have recently attended the property and we hope that the following information is more than satisfactory to you.

We can confirm that this property is served by a shared private packaged sewage treatment plant as there is no Public Sewer in the local area. The packaged sewage treatment plant (PSTP) is located to the Southwest of the existing houses and is located within reach of a vacuum tanker in line with Building Regulations. The PSTP is also more than 7m away from any habitable buildings, again in line with Building Regulations.

The PSTP at this site was installed in 2014/2015. As specified in the Environment Agency General Binding Rules, an off-mains foul drainage system must conform to the regulations in force at the time of its construction. Therefore, this installation must comply with Building Regulations Part H (2015).

The PSTP is a Marsh Ensign EN40+P. This treatment plant is manufactured by Marsh Industries. This PSTP conforms to BSEN.12566-3 and also appears on the British Water list of Certified Small Sewage Treatment Plants

<https://www.britishwater.co.uk/Accreditation-Certification/certified-small-wastewater-treatment-systems-for-up-to-50-pt.aspx>



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At the time of our inspection the PSTP effluent was found to be at the correct working level. This indicates that the PSTP does not leak as required under the General Binding Rules.

The PSTP access covers were found to be in good order and were also fully serviceable.

As can be seen below, the PSTP is vented to atmosphere



The secondary treated effluent resulting from this PSTP is pumped to a private drainage field. It is not possible to measure the size of the existing drainage field, but we can confirm that there was no evidence of pollution or failure at the time of our visit.



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In addition, and as previously noted, the foul drainage system at this site was installed in 2014/15. As such, we must assume that this drainage field was installed and completed in line with Building Regulations; as required under the General Binding Rules.

The existing PSTP serves the following dwellings:

5x 4-bedroom dwellings	6pe each
1x 3-bedroom dwelling	5pe

Total population equivalence in accordance with British Water Flows & Loads 4 = 35pe

Flow balancing (in line with British Water Flows & Loads 4) = $35 \times 0.8 = 28\text{pe}$

As Marsh Industries manufacture a 30pe, a 35pe and a 40pe PSTP, we must assume that this off-mains foul drainage system was installed with additional capacity so as to allow for future development of the site. Therefore, it is logical to assume that the drainage field is also designed and sized for a potential population of 40pe.



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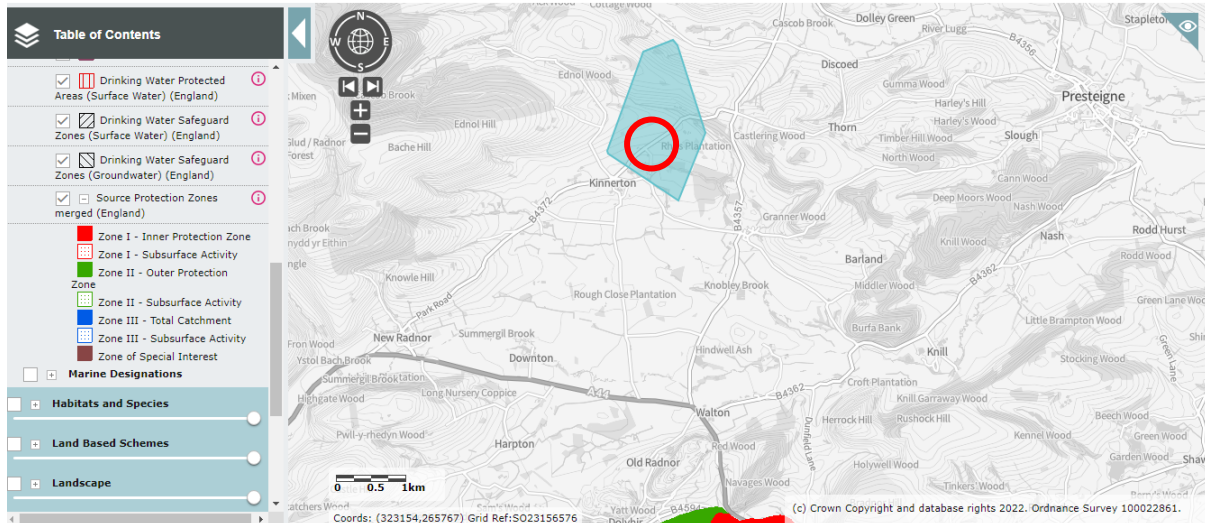
The proposed development is for 1x 3-bedroom dwelling. This dwelling has a design population equivalent of 5pe (in line with British Water Flows & Loads 4).

As noted above, the current design population is 35pe. With the additional dwelling, the revised design population is 40pe. Noting British Water Flows & loads 4, we can apply a flow balancing factor of 0.8, thus giving a design population equivalence of (40×0.8) 32pe.

With the above in mind, we can see that the current off-mains foul drainage system at this site is more than sufficient for the proposed additional 3-bedroom dwelling.

The properties receive potable water from the local water company. We can confirm that there are no water abstraction points within 50m of this drainage field.

In addition, we can confirm that the PSTP discharges to ground and we can confirm that there are no SPZ1 or SPZ2 Source Protection Zones within 50m of this drainage field. As shown in the following plan.



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As noted, the PSTP at this property was installed in 2014 / 2015 and is therefore classed as new installation. The following bullet points are taken from the Environment Agency General Binding Rules:

#	Discharges to surface water	Discharges to ground	General binding rule	
1		X	The discharge must be 2 cubic metres or less per day in volume.	✓
2	X		The discharge must be 5 cubic metres or less per day in volume.	N/A
3	X	X	The sewage must only be domestic.	✓
4	X	X	The discharge must not cause pollution of surface water or groundwater.	✓
5		X	The sewage must receive treatment from a septic tank and infiltration system (drainage field) or a sewage treatment plant and infiltration system.	✓
6	X		The sewage must receive treatment from a sewage treatment plant.	N/A
7		X	The discharge must not be within a groundwater Source Protection Zone 1 or within 50 metres from any well, spring or borehole that is used to supply water for domestic or food production purposes.	✓
8	X		For discharges in tidal waters, the discharge outlet must be below the mean spring low water mark.	N/A



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#	Discharges to surface water	Discharges to ground	General binding rule	
9	X	X	All works and equipment used for the treatment of sewage effluent and its discharge must comply with the relevant design and manufacturing standards ie the British Standard that was in force at the time of the installation, and guidance issued by the appropriate authority on the capacity and installation of the equipment.	✓
10	X	X	The system must be installed and operated in accordance with the manufacturer's specification.	✓
11	X	X	Maintenance must be undertaken by someone who is competent.	✓
12	X	X	Waste sludge from the system must be safely disposed of by an authorised person.	✓
13	X	X	If a property is sold, the operator must give the new operator a written notice stating that a small sewage discharge is being carried out, and giving a description of the waste water system and its maintenance requirements.	✓
14	X	X	The operator must ensure the system is appropriately decommissioned where it ceases to be in operation so that there is no risk of pollutants or polluting matter entering groundwater, inland fresh waters or coastal waters.	N/A



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#	Discharges to surface water	Discharges to ground	General binding rule	
15	X	X	New discharges must not be within 30 metres of a public foul sewer.	✓
16	X	X	For new discharges, the operator must ensure that the necessary planning and building control approvals for the treatment system are in place.	✓
17	X		New discharges must not be in or within: 500 metres of a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, biological Site of Special Scientific Interest (SSSI), freshwater pearl mussel population, designated bathing water, or protected shellfish water; 200 metres of an aquatic local nature reserve; 50 metres of a chalk river or aquatic local wildlife site.	N/A
18		X	New discharges must not be in, or within 50 metres of, a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, or biological Site of Special Scientific Interest (SSSI), and must not be in an Ancient Woodland.	✓
19	X		New discharges must be made to a watercourse that normally has flow throughout the year.	N/A
20	X		For new discharges, any partial drainage field must be installed within 10 metres of the bank side of the watercourse.	N/A
21	X		New discharges must not be made to an enclosed lake or pond.	N/A



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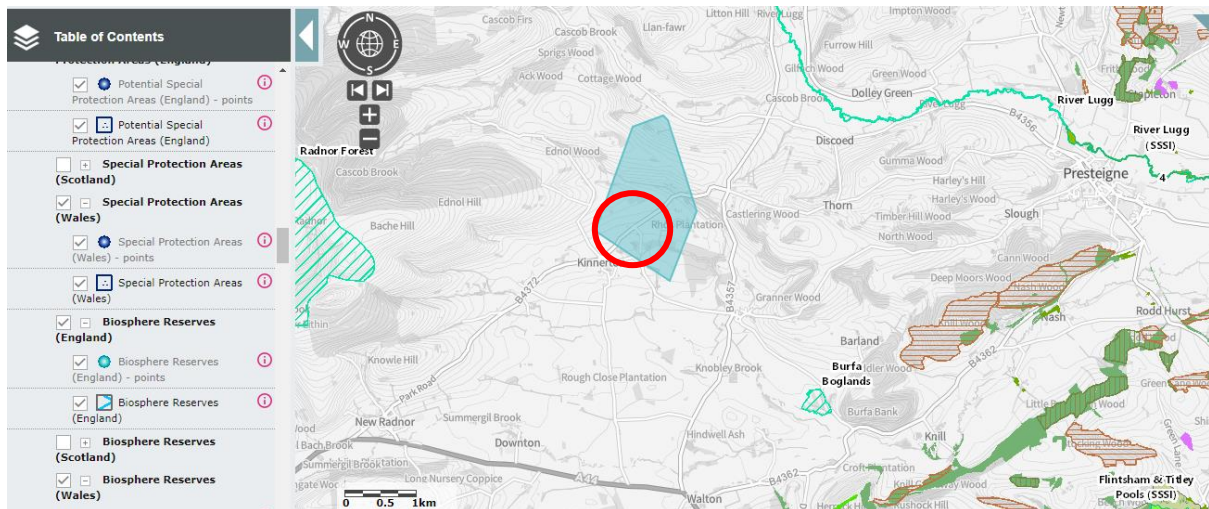
Noting **General Binding Rule 1**, we must note that the current discharge volume is (150-litres x 28) = 4,200-litres per day. There is currently no discharge permit in place, however, this is currently being addressed by the residents.

With the additional proposed dwelling, the discharge volume will be (150-litres x 32) = 4,800-litres per day.

Noting **General Binding Rule 11**, we can confirm that H+H Drainage complete the necessary maintenance in line with the Manufacturer's Guidelines and the General Binding Rules.

Noting **General Binding Rules 12**, we can confirm that the PSTP is desludged by a local waste management company.

Noting **General Binding Rule 18**, the following map demonstrates that there are no designated habitats within 50m of the drainage field.



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We can confirm that the existing off-mains foul drainage system at this site is more than sufficient to serve the proposed 3-bedroom dwelling.

Yours Faithfully,

Alex Taysum-Hunter

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