

SITE: Land at Arbour Hill Farm, Lincoln Hill, Ross-on-Wye, Herefordshire HR9 7TH
TYPE: Planning Permission
DESCRIPTION: Proposed construction of a four bedroom detached dwelling and separate double garage (with office over).
APPLICATION NO: 214212
GRID REFERENCE: OS 358801 - 222620
APPLICANT: Mr Martin Boynton
AGENT: Mr Michael Plageman

Our knowledge of the development proposals has been obtained from the additional sources following our previous comments in December 2021 and March 2022:

- Drainage Layout 24.8.22 (Ref: 100 Rev P3).

Overview of the Proposal

The Applicant proposes the construction of a four bedroom detached dwelling and separate double garage. The site covers an area of approx. 0.18ha. The site is currently occupied by a previously approved basement and ground floor slab. An existing pond is located approx. 200m to the south of the site. The site appears to be located on the top of a hill and the topography is relatively flat.

Site Location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), December 2021;



Flood Risk

Fluvial Flood Risk

Review of the Environment Agency's Flood Map for Planning (Figure 1) indicates that the site is located within the low risk Flood Zone 1. As the proposed development is less than 1ha and is located within Flood Zone 1, in accordance with Environment Agency standing advice, the planning application does not need to be supported by a Flood Risk Assessment (FRA). This is summarised in Table 1:

Table 1: Scenarios requiring a FRA

	Within Flood Zone 3	Within Flood Zone 2	Within Flood Zone 1
Site area less than 1ha	FRA required	FRA required	FRA not required*
Site area greater than 1ha	FRA required	FRA required	FRA required

**except for changes of use to a more vulnerable class, or where they could be affected by other sources of flooding*

Surface Water Flood Risk

Review of the EA's Risk of Flooding from Surface Water map indicates that the site is not at risk of surface water flooding.

Other Considerations

Review of the EA's Groundwater map indicates that the site is not located within a designated Source Protection Zone or Principal Aquifer.

Surface Water Drainage

We note that the basement and ground floor slab have already been constructed as part of a previous planning permission. We had assumed that surface water drainage run, and soakaway had been constructed, however we understand that this is not the case, and we were not in receipt of the drainage arrangements prior to construction. As part of this planning application, an amended drainage design drawing has been submitted comprising a revised scheme which includes an attenuation tank with a controlled offsite discharge to an 'existing surface water drain'.

We had anticipated that a surface water discharge to ground would be viable given that an acceptable Vp rate was obtained. **In order to adhere to the drainage hierarchy, a discharge to ground must be sought in the first instance. Despite our previous requests, infiltration testing and a groundwater level assessment have still not been undertaken at the site.** We cannot accept the offsite surface water drainage proposals until this information has been provided.

Should soakage prove viable, a discharge to ground via a soakaway should be proposed along with supporting calculations. The infiltration rate should be used to size the soakaway to accommodate a 1 in 100yr + 40% CC event.

If infiltration testing fails to obtain an acceptable rate, the proposed attenuation tank with an offsite discharge to the existing surface water drain would require more information, including the layout and invert level. We are not aware that the owner of the existing surface water drain has confirmed that a proposed connection would be acceptable. We are unclear as to where this drain discharges. The possible requirement for a pump to achieve this surface water discharge connection would not be acceptable to Land Drainage.

Foul Water Drainage

We previously understood that the proposed foul drainage arrangements (package treatment plant and drainage field) had already been installed due to the construction of the basement and ground floor slab. It appears that the drainage field is located in the neighbouring field; however, we understand that this is within the land ownership boundary.

The proposed dwelling will have 4 bedrooms. The Soakaway Design document states that the package treatment will be sized for a population of 5 however the revised Drainage Design drawing still labels the PTP as a 10-person plant; this should be clarified.

Percolation testing has been undertaken at the site. It is understood that only one trial pit was excavated to 0.6mBGL in the proposed drainage field location. Three tests appear to have been conducted and the slowest Vp rate recorded was acceptable at 35s/mm.

We note that the proposed drainage field dimensions have been amended to accommodate a population of 6 for a 4-bed dwelling. The proposed dimensions are 10m x 9.9m, to be laid in 0.45m trenches. As the required drainage field area is 42m², the required pipework length is 93.3m at 0.45m wide. Therefore, the proposed length of 99m is adequate.

We assume that a gravity fed discharge can be achieved.

Overall Comment

We recommend that the following information is provided prior to the Council granting planning permission:

- **Results of infiltration testing undertaken in accordance with BRE365 and confirmation of groundwater levels to demonstrate that the invert level of any soakaways or unlined attenuation features can be located a minimum of 1m above groundwater levels in accordance with Standing Advice.**
- Should soakage prove viable, details regarding the soakaway layout and sizing must be provided. This must include calculations to show that the soakaway has been sized to accommodate a 1 in 100yr + 40% CC storm event.
- Confirmation of the population size which the package treatment plant can serve.