

SITE: 31 Traherne Close, Lugwardine, Herefordshire HR1 4AF
TYPE: Planning Permission
DESCRIPTION: Proposed residential development of 7 detached dwelling houses with demolition of existing dwelling at 31 Traherne Close to facilitate vehicle access.
APPLICATION NO: 212992
GRID REFERENCE: OS 354928 - 241158
APPLICANT: Ms D Charity
AGENT: Mr DF Baume

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

- Updated Drainage Design Report 8.7.22;
- Townsend Water Engineering Response 8.7.21.

Overview of the Proposal

The Applicant proposes the demolition of an existing dwelling at 31 Traherne Close with the construction of 7 detached dwelling houses (1x2 bed, 5x3 bed and 1x4 bed) and vehicle access. The site covers an area of approx. 0.99ha and is currently greenfield and an existing property. An ordinary watercourse flows approximately 90m to the north of the site. The topography of the site slopes down from the southeast to the northwest by approx. 6m.

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 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

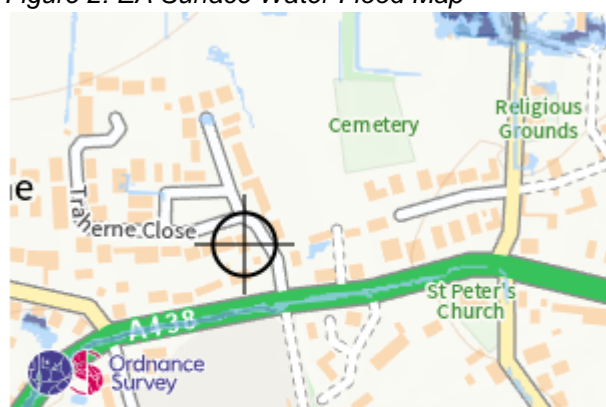
| | Within Flood Zone 3 | Within Flood Zone 2 | Within Flood Zone 1 |
|----------------------------|---------------------|---------------------|---------------------|
| Site area less than 1ha | FRA required | FRA required | FRA not required* |
| Site area greater than 1ha | FRA required | FRA required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

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

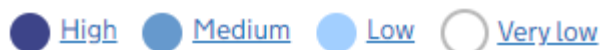
Surface Water Flood Risk

Review of the EA's Risk of Flooding from Surface Water map indicates that the site is not at risk of surface water flooding. There is a very small area of low surface water flood risk in the north-western area of the site which is not proposed to be built upon.

Figure 2: EA Surface Water Flood Map



Extent of flooding from surface water



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 understand that infiltration testing has been undertaken at the site with 2 trial pits being excavated to a depth of 1.5m. The lowest rates obtained from each pit are 1.7×10^{-6} (IFT1) and 2.3×10^{-6} m/s (IFT2) which are on the lower side of acceptable. We note that there was no evidence of groundwater 2.5mBGL.

It is stated that the driveways and parking areas will all be constructed from permeable paving. However, we note that the new impermeable site areas table includes shared driveways and entrance.

The total impermeable area being added to the site is approximately 2,610m². Please can the applicant advise whether this is correct or amend the table and calculations.

We understand that the majority of the site will drain to an infiltration basin located in the north-eastern corner of the site. This feature has been sized using the infiltration rate obtained from IFT2 as this was undertaken in the proposed infiltration basin location. The required dimensions of the infiltration basin for a 1 in 100yr + 45% CC event is for a top area of 854m² with a depth of 1.4m. A catchpit chamber is proposed upstream of the pond inflow.

An access route for the infiltration basin is shown on the layout plan. The width of the access is not shown. The applicant will need to clarify which equipment will be used to maintain the basin and whether the access is wide enough. Also, the access appears to rely on crossing the proposed private gardens for access.

An individual soakaway is proposed to discharge the surface water from the Plot 1 dwelling to ground. This will be located to the north-west of the dwelling to facilitate a gravity fed discharge. This has been sized using the infiltration rate obtained from IFT1 as this was undertaken in the proposed soakaway location. For a 1 in 100yr + 45% CC event, the required volume is 13.5m³. Therefore, the proposed soakaway dimensions are 10m x 9m x 0.5m (L x W x D) which assumes 30% porosity.

In order to drain the shared impermeable areas outside Plot 4 and the site entrance, another soakaway is proposed and is to be located to the north of the access road. We understand that this soakaway has been sized using the rate obtained from IFT2 despite being more closely located to IFT1. As IFT1 is a slower infiltration rate, this soakaway should be resized using this. The report suggests an 8m x 23m x 0.5m granular bed would be constructed. As the proposals are unclear, we request clarification regarding what is proposed, where the soakaway would be positioned and the correct sizing in line with the above advice.

The soakaway appears to be within the curtilage of Plot 1, however it should be a feature that is jointly owned by the development residents. The proposed ownership and maintenance arrangements of this shared feature are unclear and should be clarified.

Foul Water Drainage

We understand that Welsh Water has now confirmed that a connection to the public foul sewer located within Traherne Close can be accommodated for the additional foul flows of the proposed development. It is stated that this will be a solely gravity fed discharge as this can be achieved. Six of the seven proposed dwellings will discharge via gravity naturally. However, the finished floor level of the proposed dwelling in Plot 1 will be raised by 600mm to facilitate a gravity-fed discharge to the public foul sewer. Therefore, no pumps would be required onsite which is favourable.

Overall Comment

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

- Clarification of the proposed permeable and impermeable areas of the site development.
- Clarification of whether the infiltration basin access width is adequate for the required maintenance equipment. The matter regarding the access crossing through proposed private gardens should also be addressed.
- Submission of amended surface water drainage calculations for the soakaway proposed to serve the shared driveways/entrance, in line with the above advice.

Date of Response: 19/07/2022

- Clarification of the proposed ownership and maintenance arrangements of the soakaway proposed to serve the shared driveways/entrance.