SITE :	Hazelhurst Nursing Home, Bishopswood, Ross-On-Wye, Herefordshire HR9 5QX
TYPE:	Planning Permission
DESCRIPTION:	Proposed 13 bedroom extension to existing nursing home, new free standing 25 bedroom EMI care unit with associated car/cycle parking, biomass boiler building, new access road and landscaping scheme.
APPLICATION NO:	150509
GRID REFERENCE:	OS 358787, 218601

Introduction

This response is in regard to flood risk and land drainage aspects, with information obtained from the following sources:

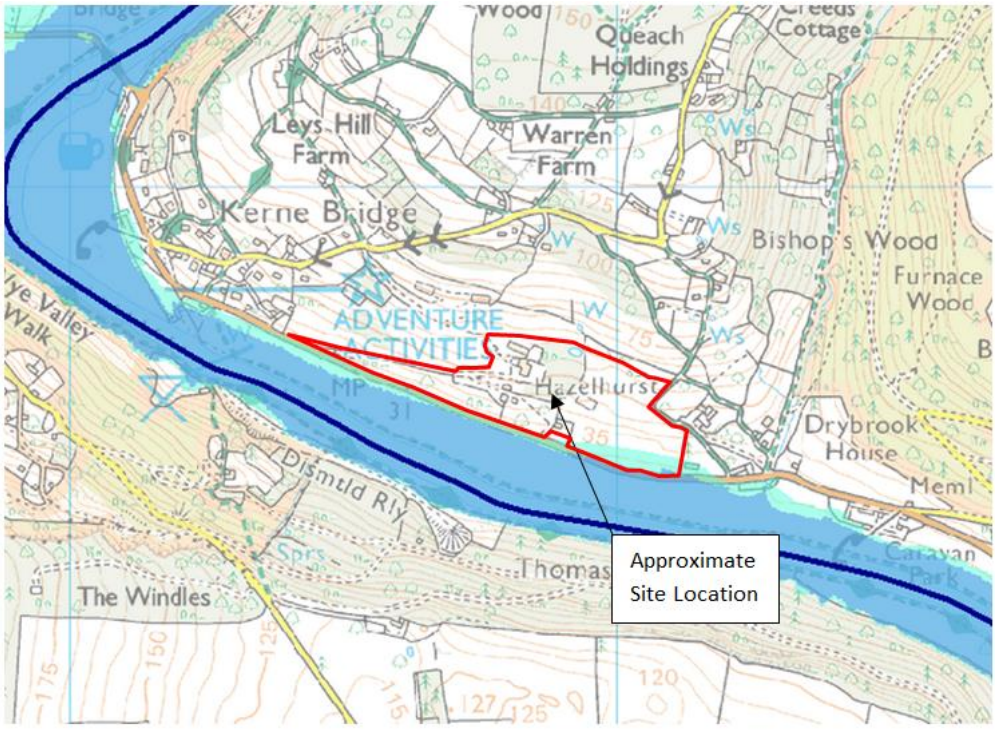
- Environment Agency (EA) indicative flood maps available through the EA website;
- EA groundwater maps available through the EA website;
- Ordnance Survey mapping;
- Strategic Flood Risk Assessment for Herefordshire;
- Herefordshire Unitary Development Plan - March 2007.

Our knowledge of the development proposals has been obtained from the following sources:

- Planning Application Advice Request
- Flood Risk Assessment Report (February 2015);
- Proposed Site Location Plan (Ref: 2013.103_E_001);
- Landscape strategy Proposals Plan (Ref: LA3372_1_B);
- Site Plan showing traffic routes under normal and flood conditions drawing (Ref: 2013.100_E_003);
- Emergency Vehicle Access Routes (Ref: 2013.103_E_002).

Site location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), May 2014



Overview of the Proposal

The proposed development comprises a 13 bedroom extension of the existing nursing home, a new freestanding 25 bedroom unit, a new access driveway and a biomass boiler. The site is 7.7ha and largely located in land classified as Flood Zone 1. A new proposed entrance to the site is located in Flood Zone 2.

The site is located within the Wye Valley AONB.

Fluvial Flood Risk

Review of the EA Flood Map for Planning (Figure 1) indicates that the majority of the site is located in Flood Zone 1, a low risk flood area with an annual probability of flooding from rivers or the sea of less that 0.1% (1 in 1000 years). The location of the turning from the B4234 onto the new driveway proposed in the east of the site is located partially in Flood Zone 2, a medium risk flood area with an annual probability of flooding from rivers or the sea of between 0.1% (1 in 1000) and 1% (1 in 100).

The Technical Guidance to NPPF identifies five classifications of flood risk vulnerability and provides recommendations on the compatibility of each vulnerability classification within each of the Flood Zones, as shown in Table 1.

Table 1: Flood risk vulnerability and flood zone compatibility

EA Flood Zone	Essential Infrastructure	Water Compatible	Highly Vulnerable	More vulnerable	Less vulnerable
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception test required	✓	✓
Zone 3a	Exception test required	✓	×	Exception test required	✓
Zone 3b	Exception test required	✓	×	×	×

✓ Development considered acceptable

× Development considered unacceptable

The Technical Guidance to NPPF states that residential institutions such as care homes are to be considered as 'more vulnerable' development and are therefore acceptable in Flood Zone 1. More vulnerable development is also considered acceptable in Flood Zone 2, although a sequential approach should be applied to steer the most vulnerable aspects of the development away from those areas at greatest flood risk.

As the site is partially located in Flood Zone 2 and covers an area greater than 1ha, a Flood Risk Assessment (FRA) is required as part of the planning application.

A FRA has been submitted by the Applicant which focusses on the provision of safe access and egress to the site given that the proposed access route passes through Flood Zone 2. The FRA states that in the event of flooding to the proposed access road, access can be maintained to all areas of the site via the existing access driveway in the west of the site. This route is located entirely within Flood Zone 1 but it is noted that the junction of this road with the B4234 is close to the extent of Flood Zones 2 and 3.

The Strategic Flood Risk Assessment for Herefordshire (SFRA) states that more vulnerable development must provide a safe flood free route for people and vehicles from the site on land at or above the 1% plus climate change flood level. The SFRA continues to state that:

"The requirements for safe access and exit from new developments in flood risk areas are as follows, in decreasing order of preference:

- Safe dry route for people and vehicles at or above the 1% plus climate change flood level.

- Safe flood free route for people, at or above the 1% plus climate change flood level, including consultation with the Emergency Services/Planners.
- If a flood free route is not possible, a route for people where the flood hazard (in terms of depth and velocity of flooding) is low and should not cause a risk to people, including consultation with the Emergency Services/Planners and consideration of a Flood Evacuation Management Plan.
- If a flood free route for vehicles is not possible, a route for vehicles where the flood hazard (in terms of depth and velocity of flooding) is low to permit access for emergency vehicles, including consultation with the Emergency Services/Planners and consideration of a Flood Evacuation Management Plan."

In accordance with these requirements, the Applicant should consider the impacts of climate change on the access to the development and whether safe access and egress can be maintained to the site when accounting for the impacts of climate change. The Environment Agency may be able to provide flood levels in the River Wye that take climate change into account which may enable a more detailed assessment of the extents of the flood plain along the B4234 and existing/proposed access to the site.

This assessment of the impact of climate change is required to ensure a safe means of access and egress for the proposed increases elderly residential population at the site remains in case of emergency for the lifetime of the development.

Surface Water Flood Risk

The Applicant states that the Environment Agency's Risk of Flooding from Surface Water map shows that the site is located in an area classified as being at very low risk of flooding from surface water.

Other Considerations and Sources of Flood Risk

The FRA submitted also states that there is a low risk of groundwater flooding at the site and that are no artificial sources of flood risk that could affect the site. The site is served by an in-situ sewage digester.

Surface Water Drainage

The Applicant's FRA states that a SuDS scheme will be incorporated into the scheme and that it has been agreed that this can be conditioned as part of an approval of the application.

Whilst the details of a surface water drainage scheme may be approved as part of conditions approval, as per our pre-application advice we recommend that an outline surface water drainage strategy is provided with sufficient evidence to demonstrate that there is a feasible means of managing surface water generated within the site boundary.

The strategy should demonstrate that runoff will not exceed pre-development rates and ensure no increase in flood risk to the development or to people/property elsewhere up to and including the 1 in 100 year event, including an allowance for climate change.

In accordance with the National Standards for Sustainable Drainage and Policy DR4 of the Unitary Development Plan, the drainage strategy should incorporate the use of Sustainable Drainage (SUDS) where possible. The surface water drainage strategy should be designed to mimic the existing drainage of the site. Infiltration measures are to be used unless it is demonstrated that infiltration is unfeasible due to the underlying soil conditions or groundwater contamination risks.

If drainage of the site cannot be achieved successfully through infiltration, the preferred options are (in order of preference): (i) a controlled discharge to a local watercourse, or (ii) a controlled discharge into the public sewer network (depending on availability and capacity). The rate and volume of discharge should be restricted to the pre-development Greenfield values for all events between the 1 in 1 year and up to and including the 1 in 100 year event and allowing for the potential effects of climate change. Reference should be made to

Defra/EA document 'Preliminary Rainfall Runoff Management for Developments' (Revision E, January 2012) for guidance on calculating Greenfield runoff rates and volumes.

The site is not located in a groundwater Source Protection Zone. Therefore, all type of infiltration techniques will be acceptable – subject to review of soil infiltration rates and groundwater levels. Where infiltration techniques are proposed, the applicant should provide soil infiltration test results undertaken in accordance with the methodology laid out in BRE Digest 365 to inform the design prior to construction. The applicant should also provide information on groundwater levels as Standing Advice recommends that the invert level of a soakaway should be at least 1m above the groundwater level.

Details of any necessary maintenance of the surface water drainage system should be provided by the Applicant along with who will be responsible for undertaking maintenance.

The drainage strategy must also be designed for exceedance such that in the event that a flood event greater than the 1 in 100 year event occurs, or in the event that the system fails to operate correctly, surface water will be directed away from people and property both within the development and in reference to third party land.

Foul Water Drainage

The Applicant states that the existing site is serviced by a sewage digester on site with capacity for 100 persons, sufficient to cater for the proposed expansion of the site. We recommend that the Applicant contacts the Environment Agency to enquire if the sewage digester plant is acceptable for the additional foul water discharge and if discharge consent is required for the volume of treated water proposed to be discharged per day.

Overall Comment

We recommend that further information should be provided prior to approval of this planning application. The following information should be provided:

- A consideration of the impacts of climate change on the provision of safe access and egress to the site;
- An outline surface water drainage strategy which demonstrates a feasible means of managing surface water generated within the site. This should aim to mimic existing surface water drainage, incorporate SUDS features where feasible, provide details of any maintenance required and consider the need for designing for exceedance.