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Sent: 25 June 2018 16:11
To: Webster, Gemma (Senior Planning Officer) <Gemma.Webster2@herefordshire.gov.uk>
Cc: Hockenhull, Joel <Joel.Hockenhull@balfourbeatty.com>
Subject: 181978 - Land At Stone Farm, Felton, HR1 3PW comments

Hi Gemma,

Please find attached our responses for applications 181975 and 181978

If you have any further questions, please do not hesitate to contact me or Joel

Regards,

Ruth Blair BSc (Hons)

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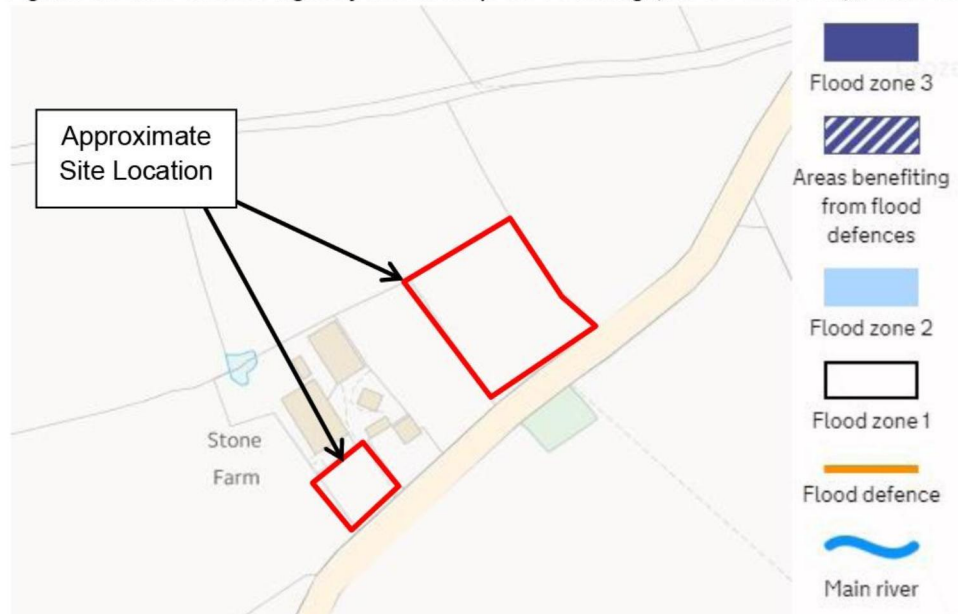
SITE: Land At Stone Farm, Felton, Herefordshire, HR1 3PW
TYPE: Planning Permission
DESCRIPTION: Proposed residential development comprising 3 no. self-build dwellings and associated works
APPLICATION NO: 181975
GRID REFERENCE: OS 357438, 248723
APPLICANT: Mr David Abell
AGENT: Mr Matt Tompkins

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

- Application for Planning Permission;
- Location Plan (Ref: 1106-00-DR-001 Rev D01);
- Block Plan (Ref: 1106-00-DR-011 Rev P01);
- Proposed Site Plan (Ref: 1106-20-DR-0100 Rev P01);
- Drainage Layout (Ref: 1106-00-DR-008 Rev P01);
- Klargester Literature.

Site Location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), June 2018



Overview of the Proposal

The Applicant proposes the construction of 3 self-build dwellings. The site covers an area of approx. 0.70ha and is currently redundant agricultural land. The topography of the site slopes towards the southwest.

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 site is located within Flood Zone 1 and is less than 1h, 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 located within an area at significant risk of surface water flooding.

Other Considerations and Sources of Flood Risk

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 Applicant is proposing to use soakaways to manage the surface water runoff generated by the proposed buildings.

The Applicant should provide a surface water drainage strategy showing how surface water from the proposed development will be managed. The strategy must demonstrate that there is no increased risk of flooding to the site or downstream of the site as a result of development between the 1 in 1 year event and up to the 1 in 100 year event and allowing for the potential effects of climate change. Where possible, betterment over existing conditions should be promoted. Note that in February 2016 the EA updated their advice on the potential effects of climate change and that a range of allowances should be considered to understand the implications: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>.

All new drainage systems for new and redeveloped sites must, as far as practicable, meet the Non-Statutory Technical Standards for Sustainable Drainage Systems and will require approval from the Lead Local Flood Authority (Herefordshire Council).

In accordance with the NPPF, Non-Statutory Technical Standards for Sustainable Drainage Systems and Policy SD3 of the Core Strategy, the drainage strategy should incorporate the use of Sustainable Drainage (SUDS) where possible. The approach promotes the use of infiltration features in the first instance. If drainage cannot be achieved solely through infiltration due to site conditions or contamination risks, 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 as far as practicable. Reference should be made to The SUDS Manual (CIRIA C753, 2015) for guidance on calculating runoff rates and volumes.

As there are no watercourses or public sewers within the vicinity of the site, we request that infiltration testing is undertaken (in accordance with BRE365) to determine whether there is a viable option for managing surface water runoff.

The Cranfield University Soils Map identifies the soils within the proposed development area to be clayey soils with impeded drainage, thus the use of infiltration techniques may not be a viable option for managing surface water. On-site testing undertaken in accordance with BRE365 should be undertaken to determine whether infiltration techniques are a viable option.

It should be noted that soakaways should be designed for a minimum 1 in 30 year design standard, be located a minimum of 5m from building foundations, that the base of soakaways and unlined storage/conveyance features should be a minimum of 1m above groundwater levels, and must have a half drain time of no greater than 24 hours.

The drainage system should be designed to ensure no flooding from the drainage system (which can include on-the-ground conveyance features) in all events up to the 1 in 30 year event. Surface water should either be managed within the site boundary or directed to an area of low vulnerability. Guidance for managing extreme events can be found within CIRIA C635: Designing for exceedance in urban drainage: Good practice.

The Applicant must confirm the proposed adoption and maintenance arrangements for the surface water drainage system.

Foul Water Drainage

The Applicant has stated that a Vp value of 46 has been determined.

It is proposed that plot 1 will use existing treatment plant installed on the site in 2015. It is assumed that this treatment plant is serving an existing dwelling. It has not been clarified how the treated effluent is being managed.

It is proposed that plots 2 and 3 will be served by a Kingspan Klargest BioDisc. The drainage field area has been calculated to be 184m².

We recommend the use of individual package treatment plants and individual drainage fields serving each property. If the Applicant wishes to use one package treatment plant serving multiple properties, the attached guidance should be reviewed.

It is not clear as to whether the Applicant owns the land on which the drainage field is located. The land on which the drainage field is located should be owned by the homeowner(s).

The Applicant should demonstrate that the proposals are compliant with the general Binding Rules and are in accordance with the Building Regulations Part H Drainage and Waste Disposal.

For information:

- The drainage field should be located a minimum of 10m from any watercourse, 15m from any building, 50m from an abstraction point of any groundwater supply and not in any Zone 1 groundwater protection zone. The drainage field should be sufficiently far from any other drainage field, to ensure that overall soakage capacity of the ground is not exceeded.
- Drainage fields should be constructed using perforated pipe, laid in trenches of uniform gradient which should not be steeper than 1:200. The distribution pipes should have a minimum 2m separation.
- Drainage fields should be set out in a continuous loop, i.e. the spreaders should be connected. If this feature is missed, it will gradually clog with debris and the field will become increasingly ineffective.

In accordance with Policy SD4 of the Core Strategy, the Applicant should provide a foul water drainage strategy showing how it will be managed. Foul water drainage must be separated from the

surface water drainage. The Applicant should provide evidence that contaminated water will not get into the surface water drainage system, nearby watercourse and ponds.

Overall Comment

As there are no watercourses or public sewers within the vicinity of the site, we request that infiltration testing is undertaken in accordance with BRE365 (this should including determining that the groundwater level is a minimum of 1m below the base of any proposed infiltration features) for surface water disposal prior to the council granting planning permission to ensure there is a solution for disposal of surface water runoff.

Once the above information has been submitted and approved, should the Council be minded to grant planning permission, the following information should be provided within suitably worded planning conditions:

- Provision of a detailed drainage strategy that demonstrates that opportunities for the use of SUDS features have been maximised, where possible, including use of infiltration techniques and on-ground conveyance and storage features;
- A detailed surface water drainage strategy with supporting calculations that demonstrates there will be no surface water flooding up to the 1 in 30 year event, and no increased risk of flooding as a result of development between the 1 in 1 year event and up to the 1 in 100 year event and allowing for the potential effects of climate change;
- Evidence that the Applicant is providing sufficient on-site attenuation storage to ensure that site-generated surface water runoff is controlled and limited to agreed discharge rates for all storm events up to and including the 1 in 100 year rainfall event, with an appropriate increase in rainfall intensity to allow for the effects of future climate change;
- A detailed foul water drainage strategy showing how foul water from the development will be disposed of in line with our comments above;
- Confirmation of the proposed authority responsible for the adoption and maintenance of the proposed drainage systems;

Please refer to "Herefordshire Council Planning Applications: Flood Risk and Drainage Checklist" (Ref: RCLHP001-AM0070-RP-003) for details of the documentation to be submitted for planning applications.