From: Allen, Jennifer (02) <Jennifer.Allen2@balfourbeatty.com>
Sent: 20 April 2021 14:58
To: Lewis, Adam (Planning) <Adam.Lewis@herefordshire.gov.uk>
Cc: Wager, Alastair <alastair.wager@herefordshire.gov.uk>
Subject: {Disarmed} 203335 - Land at 83 Broomy Hill, Hereford

Hi Adam,

I believe you have taken over this planning application? Please find attached the drainage consultation response for the above site, which follows on from the initial response Joel sent last year (also attached).

Kind regards,

Jenny

Jennifer Allen

Assistant Drainage Engineer | Balfour Beatty | Services | Living Places | Herefordshire Public Realm

M: 07849 570146 | E: jennifer.allen2@balfourbeatty.com
(Please note that due to working from home, I have poor mobile signal, therefore email is the best form of contact)

Balfour Beatty Living Places | Unit 3, Thorn Business Park | Rotherwas | Hereford | HR2 6JT

Download the : Herefordshire SuDS Handbook and the Strategic Flood Risk Assessment (Level 1)

From: Hockenhull, Joel <Joel.Hockenhull@balfourbeatty.com>
Sent: 24 November 2020 10:52
To: Wager, Alastair <alastair.wager@herefordshire.gov.uk>
Subject: 203335 - Land at Broomy House, 83 Broomy Hill, Hereford,

Alasdair

We have reviewed the application and we have no objections to the development

However we note that there is a foul pumping station proposed. The applicant will need to contact DCWW to ensure that a connection can be granted, but also to ensure that the pumping station can be positioned appropriately on the site, in accordance with DCWW requirements. Our understanding is that the pumping station would need to be adopted by DCWW, although this needs to be confirmed through dialogue with DCWW. If a privately owned pumping station is proposed then further discussions will be required regarding maintenance

Joel

Joel Hockenhull CEng MICE

Senior Drainage Engineer | Balfour Beatty | Services | Living Places | Herefordshire Public Realm

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SITE:	Land at 83 Broomy Hill, Hereford, HR2 7AX
TYPE:	Pre-application Advice
DESCRIPTION:	Proposed residential development of four detached market dwellings each with associated garaging & private gardens
APPLICATION NO:	191143
GRID REFERENCE:	OS 349558, 239324
APPLICANT:	Mr & Mrs B Bushnell
AGENT:	

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

- Application for Planning Permission;
- Location Plan (Ref: 7367-01-01);
- Proposed Site Layout (Ref: 7367-1-02);
- Pre-application Supporting Statement (dated 27th March 2019).

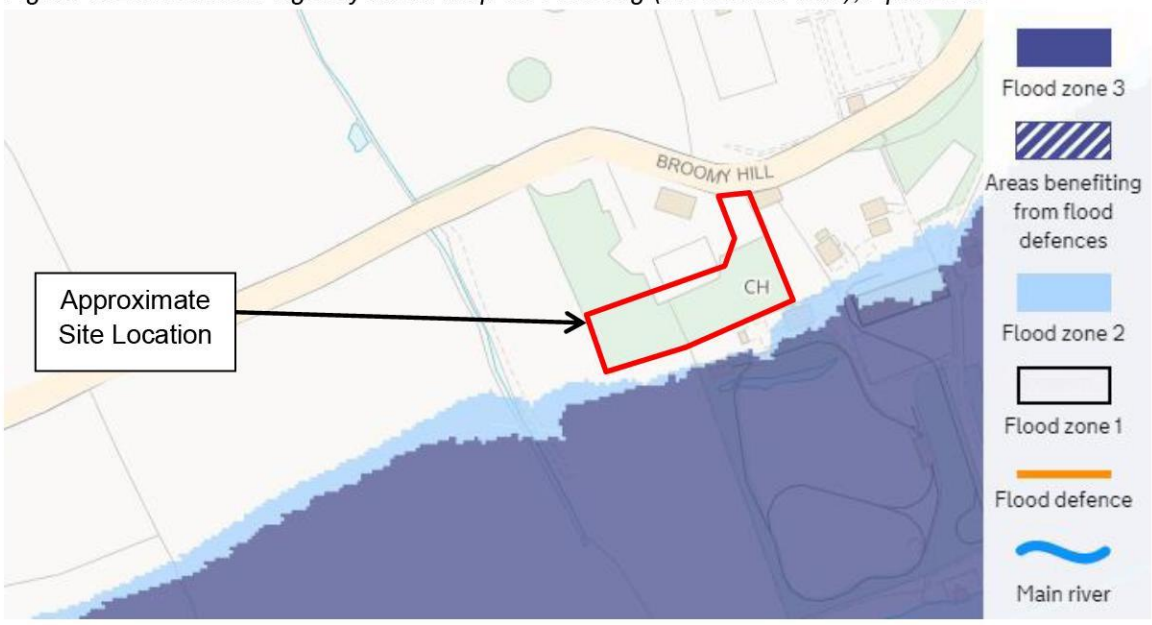
Overview of the Proposal

The Applicant proposes the construction of 4 dwellings, garages and access road. The site covers an area of approx. 0.50ha and is currently a Greenfield site. The River Wye is located approx. 167m to the south of the site. In addition to this, there is an ordinary watercourse located approx. 41m to the west.

The topography of the site slopes down from approx. 64.7m AOD in the north of the site to approx. 56m AOD in the south of the site.

Site Location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), April 2019



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, however is adjacent to Flood Zone 2 and 3. Flood Zone 1 comprises land assessed as having less than a 1 in 1,000 annual probability of river flooding. Flood Zone 2 comprises land where the annual probability of flooding from fluvial sources is between 1% and 0.1% (between 1 in 100 and 1 in 1000). Flood Zone 3 comprises land where the annual probability of flooding from fluvial sources is greater than 1% (1 in 100).

Due to the steep sloping nature of the site, fluvial flood risk is likely to not be a concern for this site, thus we consider that a Flood Risk Assessment would not be required for this site. Review of the EA's Risk of Flooding from Surface Water map indicates that the site is also not at risk of surface water flooding.

However, due to the steep sloping nature of the site, we do recommend that consideration would need to be given to the likely flow routes in the vicinity of the proposed development site. It may be necessary to raise the threshold levels slightly to prevent ingress. This should also include extreme event exceedance route plans.

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

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. 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.

The Cranfield University Soilscapes 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 the use of infiltration techniques are a viable option. Where site conditions and groundwater levels permit, the use of combined attenuation and infiltration features are promoted to provide treatment and reduce runoff during smaller rainfall events.

It should be noted that soakaways should 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.

For any proposed outfall to an adjacent watercourse, the Applicant must consider the risk of water backing up and/or not being able to discharge during periods of high river levels in the receiving watercourses. Any discharge of surface water to an ordinary watercourse will require Ordinary Watercourse Consent from Herefordshire Council prior to construction.

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. The Applicant must consider the management of surface water during extreme events that overwhelm the surface water drainage system (including temporary surcharging of gullies) and/or occur as a result of blockage. 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. The Drainage Layout plan should reflect the ownership of the respective drainage components.

Foul Water Drainage

We suggest that the Applicant completes the Foul Drainage Assessment Form. https://www.gov.uk/government/publications/foul-drainage-assessment-form-fda1

There is a Welsh Water combined sewer within 30m of the proposed development site, however this is located on higher land (to the north), thus a pumping station would be required to achieve this connection. Discussions should be held with Welsh Water to establish whether this is a feasible option and whether a connection onto the combined sewer is possible.

If it is not a feasible option, the Applicant should demonstrate that the alternative proposals are compliant with the general Binding Rules and are in accordance with the Building Regulations Part H Drainage and Waste Disposal.

The Applicant should undertake percolation tests in accordance with BS6297 to determine whether infiltration techniques are a viable option for managing treated effluent (see Section 1.32 of Building Regulations Part H Drainage and Waste Disposal).

If infiltration testing results prove soakage is viable, the following must be adhered to for Package Treatment Plants:

- 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.

If infiltration testing results prove soakage is not viable, outfall to a watercourse or ditch with a non-seasonal constant flow may be permitted, however this must be approved by an ecology representative and requires approval from Natural England. As the site is within 500m of a Site of Special Scientific Interest (SSSI), discharge of treated effluent to a watercourse would only be acceptable if Natural England provide consent. This often relates to the phosphate levels.

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.