

FLOOD RISK ASSESSMENT

Site Address:

102 BULLHEAD ROAD, BOREHAMWOOD, HERTS WD61HU



Site:

The Environment Agency have carried out modelling in the area to give a better representation of the actual flood area should the defences be breached. The proposal to renovate the property and create a rear extension. There will be no sleeping accommodation within the extension. Any additional impermeable area due to the development will be discharged into a soakaway if possible, therefore the development will not increase surface water runoff from the site. The proposed development will not exacerbate flood risk in the area and the client will take all practicable steps to reduce the risk to its occupiers should flooding occur.

Background:

In particular this involves two key issues; whether the development itself would be at risk of being flooded or whether the development would increase the risk of flooding elsewhere.

Site Location:

The proposed development is situated at 102 Bullhead Road, Borehamwood, Herts WD61HU. The site is surrounded mainly by residential developments and access roads.

Site Details:

The existing building is a semi detached 2 storey building. The building is currently used as a dwelling.

Site Flooding Potential:

The development is shown by the Environment Agency flood maps to lie within Flood Zone 1. The Environment Agency's definition of Flood Zone 1 is stated below:

Land within flood zone 1 has a low probability of flooding from rivers and the sea.

Most developments that are less than 1 hectare (ha) in flood zone 1 do not need a flood risk assessment (FRA) as part of the planning application.

Fig. 1



Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
520210/196649

Created
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Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- **In an area with critical drainage problems as notified by the Environment Agency**
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

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Fig. 2



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Proposed Development Description:

The proposed works include renovating the property, works to the rear garden and constructing an extension to the rear.

Proposed Development Surface Water Runoff & Proposals:

Any additional impermeable area will be discharged into a suitable designed soakaway if possible. Investigations will be carried out on site to determine if soakaways are viable. If it is not possible the client will contact the local sewer undertaker regarding connecting to their sewers via a connection to the existing plotwork drainage of the property.

The increase in impermeable area is only slight so it is envisaged that the development will not have a significant impact on the drainage system. However if requested by the sewer undertaker the client will investigate the use of surface water storage on site with a flow restriction placed on the system prior to surface water discharging into the system.

The following items have been incorporated in the design to allow for flood risk:

Floor Construction

Ground supported floors will be installed with a concrete slab of at least 150mm in thickness. Hardcore and blinding: good compaction to be carried out to reduce the risk of settlement and consequential cracking.

Damp Proof Membrane (d.p.m.) to the floor has been included in the design to minimise the passage of water through the ground floor. An impermeable polythene membrane will be installed, of at least 1200 gauge, to minimise ripping. The joining of the membrane sections will be provided with overlaps of 300mm, and also taping (mastic tape with an overlap of 50mm minimum).

Insulation materials: Floor insulation will be of a closed-cell type to minimise the impact of flood water.

Floor finishes: A suitable floor finish with ceramic or concrete-based floor tiles, stone, and sand/cement screeds will be used. All tiles will be bedded on a cement-based adhesive/bedding compound and water resistant grout should be used.

Wall construction

Mortar joints will be thoroughly filled to reduce the risk of water penetration.

Dense concrete blocks have been used to below DPC level and the external skin of the cavity wall up to DPC will be covered with 20mm of sand and cement render to improve its resistance to water penetration.

Doors and Windows

The threshold from the extension to the finished floor level will be >150mm. This is equivalent to that of the existing.

Doors: The threshold is as high as possible. All doors have been made to ensure a good fit and seal to their frames.

Conclusions:

The site is shown to be within flood zone 1 of the Environmental Agency flood maps. Therefore, the risk of flooding is extremely unlikely. There are a vast amount of buildings shown in the area protected by the barriers including residential estates, schools etc so the upkeep of these defences are a priority. There is no sleeping accommodation within the extension. The surface water drainage from the site will be discharged into soakaways if possible and will therefore not increase the risk of flooding elsewhere. The development is therefore deemed as acceptable in relation to flood risk.