



Flood Risk Assessment

Extension to 14 Hill View Road, Oxford, OX2 0BZ



March 2024

Document Issue

Rev.	Date	Purpose	To
1 st Issue	March 2024	Planning Application	Oxford City Council

1.0 Development site and location

The address of the site is 14 Hill View Road, Oxford, OX2 0BZ, an existing residential terraced house. Location and block plans are available as part of the planning application (Ref: HVR14 001, 005).

The site is in Flood Zone 2 for flooding from rivers. The Environment Agency modelled floodplain flood levels are available in the Product 4 (Detailed flood risk) information for the site submitted with this FRA. (EA Ref: THM259779).

2.0 Development proposals

The proposals are for a minor development, therefore the sequential and exception tests do not need to be applied.

Specifically, the proposal is a single-storey, side-return extension to the existing dwelling to provide additional living space. For details refer to the planning application drawings (Ref: HVR14 020, 040).

Site vulnerability classification of the proposed development: More vulnerable.
Lifetime of the proposed development = 100 years + (residential property).

3.0 Site specific flood risk

Climate change allowances for peak river flows, based on: Flood zone 2, more vulnerable use, lifetime 100 yr+. Therefore use central allowances, 2080s = 26% [Ref: DEFRA climate change allowances, attached].

Environment Agency modelled floodplain flood levels for nearest grid cell:

Floodplain 1, p7:

- 1% AEP + 25% climate change increase in flows = 57.51m *
- 1% AEP + 35% climate change increase in flows = 57.57m
- Therefore: 1% AEP + 26% climate change increase in flows = 57.516m (interpolated).

[Ref: Product 4 Detailed flood risk for 13 Hill View Road, Oxford EA Ref: THM259779]
In area of extension average existing ground level = 57.305m [from topographic survey]

Flood depth at site = 57.516m – 57.305m = 0.211m

*Note data for grid cell reference floodplain 1 shown in product 4 is 25.51 mAOD however this is clearly a typo as the local ground levels are all around 57 mAOD.

4.0 Proposed floor levels

Existing house, lowest floor level (in outrigger) = 57.67m

Proposed floor level in extension = 57.67m to match existing.

5.0 Flood resistance / resilience measures

Site flood depth (outside building) = 0.211m (see section 3.0 above).

Follow water exclusion strategy: materials with low permeability to be used to at least +0.3m above ground level (e.g. engineering bricks).

[Ref: *Improving the flood performance of new buildings: flood resilient construction*, Bowker et al., 2007, RIBA publishing, Fig 4.4. p 50]

6.0 Flood water storage

It is not feasible to build the floor of the extension at a higher level to provide flood water storage because it needs to be set level with the existing outrigger floor.

Flood water storage under the new floor construction is not feasible because the void would be below existing ground level, due to the depth of the new floor construction.

Flood water storage is therefore not possible for this extension due to the floor levels of the existing house and the existing ground levels.