DOCUMENT:
FLOOD RISK STATEMENT

Proposal: Extension to:

Location: 32 The Hawthorns, Sutton-in-Craven, BD20 8BP

Prepared by: Planet Architecture ltd
Mill Cottage
Ickornshaw
Cowling
BD22 0DB

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Purpose of document

The purpose of this document is to comply with the National Planning Policy Framework, Department for Communities and Local Government (2012) and to support the submitted Flood Matrix for a residential development.

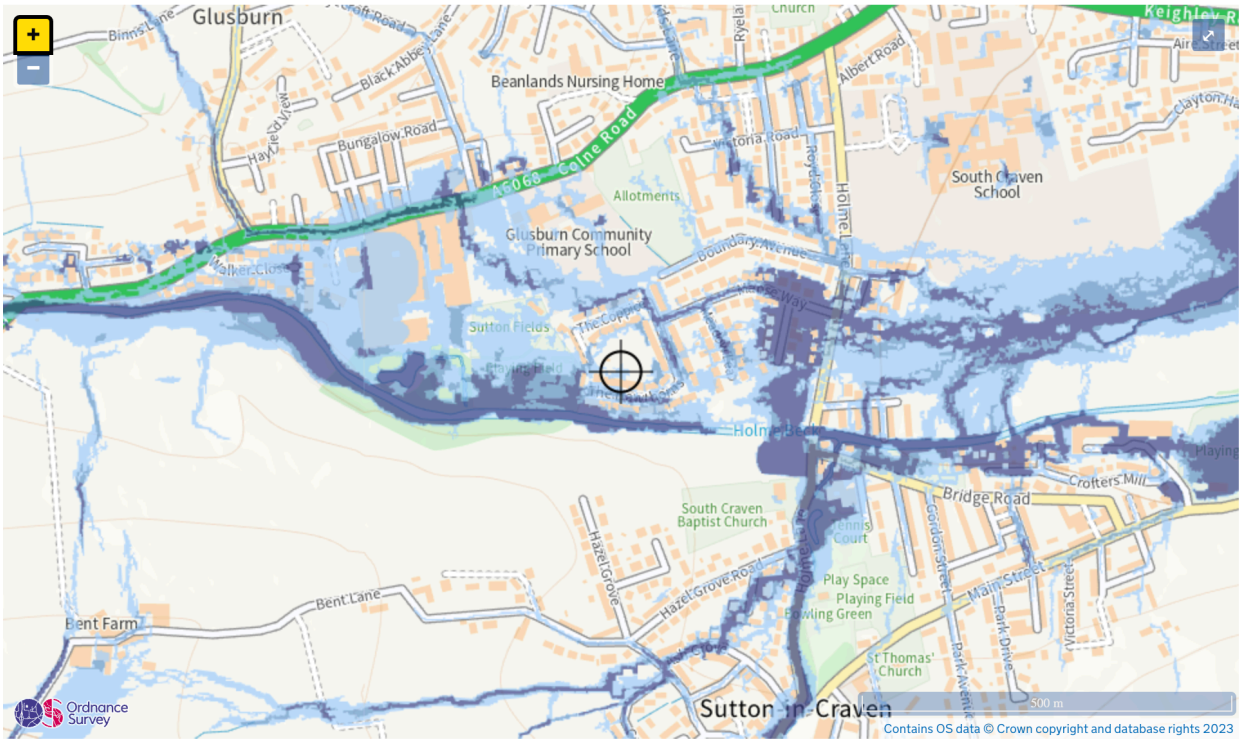
Environment Agency Flood Risk From Surface Water:

Flood risk

Extent of flooding

Location

Enter a place or postcode



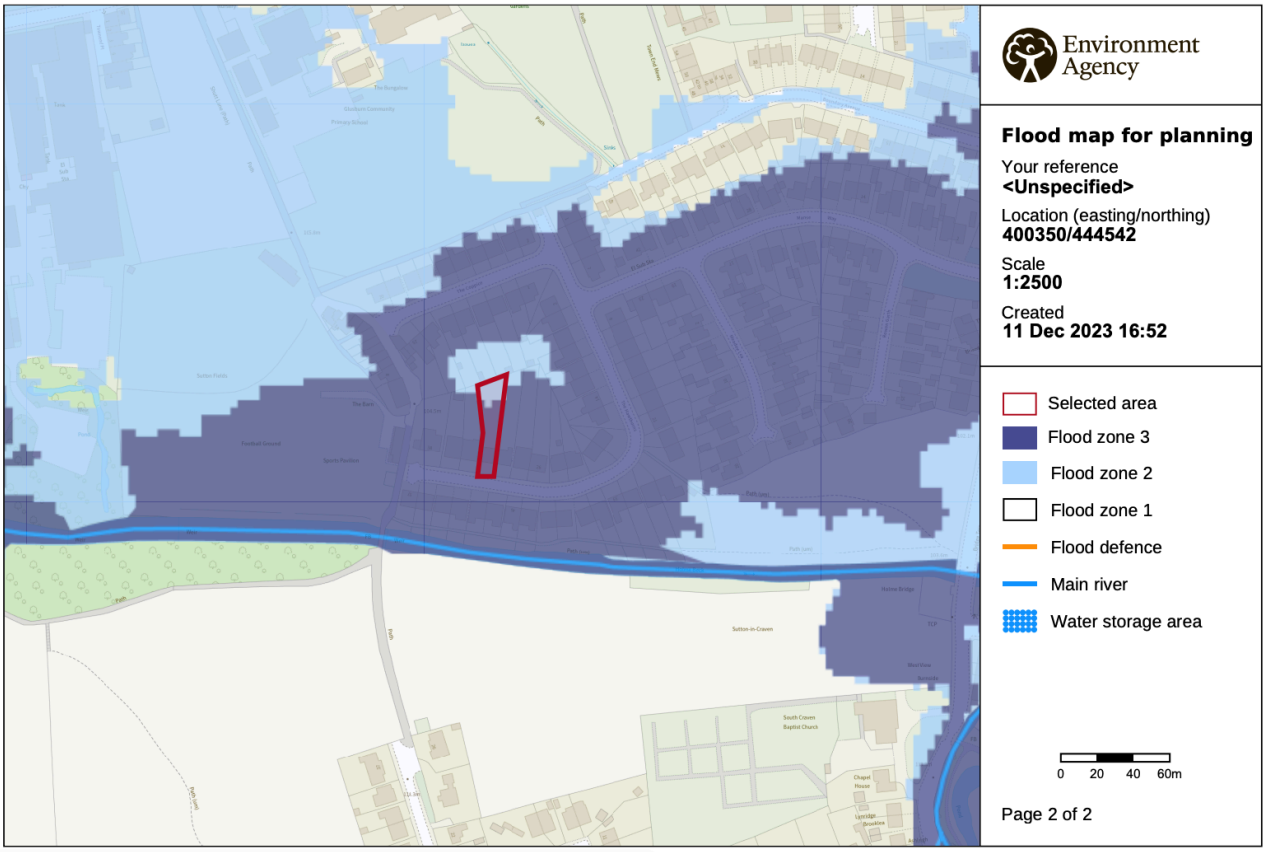
Extent of flooding from surface water

High Medium Low Very low Location you selected

Environment Agency Flood Risk From Rivers:

In deriving the risk of an event, consideration of the probability of the event and its consequence must be made. The probability must consider a flood happening at all and the probability of the level if it does. The consequence depends on the level reached when the event occurs and the time taken for water to subside. This document will therefore consider these aspects and then put forward measures to mitigate damage to the property yet keep these measures commensurate with probability and costs associate

This risk assessment is written in line with the guidance and check sheet given in local government document, Planning Policy Statement 25, Development and Flood Risk Practice, Guidance Document. Headings are taken from that document.



Location of the Extension
The proposed side extension is within the footprint of the existing house and the rear extension is within the curtilage. It is not within 20m of the beck but at level vulnerable to flooding from the river.

Vulnerability Classification (Ref: Appendix D PPS25 Tables D1 to D3) As this is an addition to an existing property within the flood risk zone the vulnerability classifications may be chosen as Less Vulnerable (although strictly there is no obvious choice. Table D.323: Flood Risk Vulnerability and Flood Zone 'Compatibility' shows that for a Flood Zone 3 for a More Vulnerable category, development would not be compatible.Yet the house is existing.

Sequential and Exception Testing Annex B of PPS25, D15, Minor development, states that applications for minor development and changes of use should not be subject to the Sequential or Exception Tests but will still have to meet the requirements for FRAs and flood risk reduction. Minor developments are unlikely to raise significant flood risk issues unless they would: a) have an adverse effect on a watercourse, floodplain or its flood defences; b) would impede access to flood defence and management facilities; or c) where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows. It is believed that none of the above will be affected by this development.

Effects of additional area to the property.
The rear extension does not represent any significant increase in roof area as it replaces existing hardstanding - the effect of this will place negligible strain on the drainage system and no effects on any flood precautions that may be implemented at the property.

The location has several potential sources for flooding as follows. a) Glusburn Beck or other artificial source flooding b) Heavy rainfall or pluvial flooding c) Flooding from land d) Flooding from ground water.

Surface water flooding: The EA map shows only water courses which in the main have a high risk of flood. This in effect shows their natural state in carrying surface/ground water to outlets and thus preventing build up i.e. performing their duty as drainage channels.

Flood risk from reservoirs: As no substantial reservoirs are in the vicinity this shows no risk.

The EA map shows flood risk from the sea and rivers: The site is not within risk of flooding from the sea or a major river. Risk from Pluvial flooding is shown and again the proposed level of the extensions means the proposal is no worse than the host dwelling. .

Surface Water Drainage.
Currently the route of the surface water drainage system from the existing development at The Hawthorns is via a combined mains surface water drain - though it is likely that rainwater is discharged to the beck. The existing access is impermeable macadam

hardstanding with run-off to the bordering planters. Rainwater falling on it soaks away to ground and eventually the beck.

Flood Risk Management Proposals:
Given that there is a high possibility of flooding at the property the following measures will be taken:

1 The proposed footprint is predominantly either roofing or hardstanding - therefore the proposed extension roof will not present additional non-permeable surfaces with run-off which must be controlled.

2 The specification for the new doors will aim at high quality seal features for flood resistance. The floor is 150mm above ground level, and no lower than the existing ground level.

3 The will be no air-brick vents in the walls as the floor construction will be an unventilated, ground-bearing slab.

4 The accommodation is already domestic and therefore a flood refuge is not required.

5 All electric sockets will be above 450mm from floor level.

6 The floor of the garage is concrete and will be raised 150mm.

7 No service penetrations through the walling below 600mm.

8. New drainage runs to be provided with back-check valves.

Summery
It is believed this minor development will not increase flood risk elsewhere and will have negligible effect on the drainage flow. Run off from the roof will be to the existing watercourse as existing - therefore will have little effect on current ground water flow.

The residual risks that cannot be designed out will be the human factors inherent in providing equipment to be erected/fitted prior to a flood warning when it may be ignored and become too late to action them. However, the residual risk must be considered against that of neglecting to address the safety measures. The overall risk is considered very low.

This FRA for the minor development at The hawthorns has considered the sources of possible flooding and has looked at the history of flooding in the area. With a low level land mass compared to the levels of the beck there is significant risk of flooding which should be mitigated as suggested.