37 Fray's Waye
Uxbridge
UB8 2QU

Flood Risk Assessment
January 2021
Proposed Single Storey Outbuilding to Rear Garden

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Project ref: 262

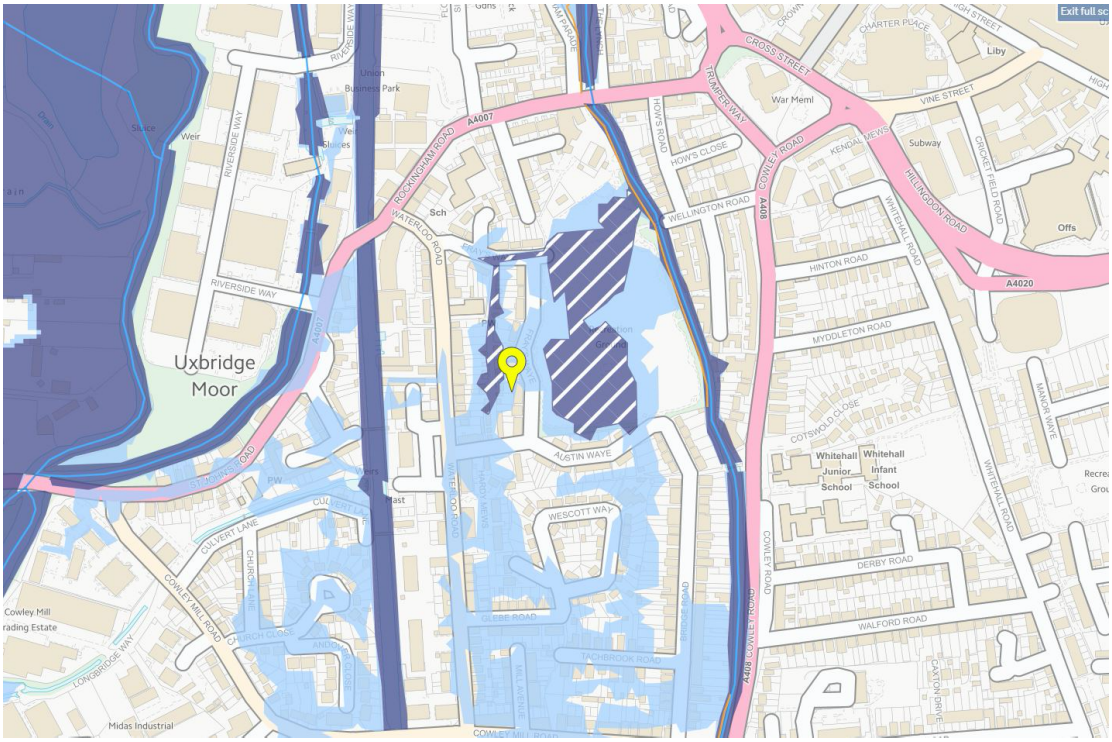
1.0 Introduction

This report has been prepared in support of a Householder Planning Application for the above-mentioned site, and gives a brief outline of the existing site, and description of the Approved and Proposed schemes. It adheres to the criteria within the National Planning Policy Framework (NPPF) and its guidance notes, as well as the Environment Agency (EA) advice notes to Local Authorities.

2.0 Existing Site

The site is located on the West side of Fray's Waye, facing an area of open green. The existing site is rectangular in shape and covers an area of 203m² and is relatively flat in nature. It contains 2 buildings, the main house and a garage in the rear garden, with a small front garden. The main building is a mid-terraced, 2 storey house with an existing lean-to extensions to the rear and front porch extension.

The site is partly located within Flood Risk Zone 2; the front drive is located outside of any flood risk zone.



3.0 Proposal

The proposal seeks to build a single storey outbuilding within the rear garden, following a successful Certificate of Lawfulness issue ref: 75562/APP/2020/1417. The footprint remains the same as with the PD application. The works involved are considered minor under the NPPF criteria. The proposal increases the footprint of the original garage by 14.3m2 and will be built on current non-permeable hardstanding.

4.0 Flood Risk

Under the NPPG it states that minor developments are unlikely to cause significant flood risk unless they:

- Have an adverse effect on a watercourse, flood plain or its flood defences
- Would impede access to flood defence and management facilities, or
- Where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows.

None of the above apply in this case.

The EA advises that the minimum requirements for an FRA submitted to the LA for residential extensions less than 250m2 within Flood Zone 2 & 3, should confirm that:

- Floor levels within the proposed development will be set no lower than existing levels, and
- Flood proofing of the proposed development has been considered by the applicant and will be incorporated where appropriate, or
- Floor levels within the extension will be set 300mm above the known or modelled 1% (1 in 100 chance each year) river flood level or 0.5% (1 in 200 chance each year) tidal and coastal flood level.

It is considered that the second option is applicable in this case, and we have employed several strategies to mitigate the risks:

Flood Volume

An area of the garden measuring 55m2 in area will be lowered by 5cm to increase the site water holding capacity by 2.75m3. The FFL of the proposed building is 360mm lower than the existing garden level. This provides a sunken front patio with an increased flood volume holding capacity of 3.0m3.

Drainage

New manhole to be installed on site will employ a backflow non-return valve, to prevent surcharge of effluent back into building.

Replacing the remaining impermeable hard standing to the rear garden, with permeable paving, resulting in an increase of 27.4m² of permeable surface.

Soakaway

New soakaway to be installed designed to accommodate a 1/100-year storm.

We will also use water-butts to collect rainwater from the roofs, which can then be used for garden cleaning & watering.

Protection

We will protect against water damage through the following measures:

1. Sealing all joints between walls and frames of doors.
2. Inside face of the cavity wall will be coated with waterproof sealant, to lap with both the DPM and up to a height of 450mm above FFL.
3. Electrical wiring to from ceiling to sockets & switches.
4. Sealing all joints between walls and frames of doors.
5. Sealing all joints between new and old brickwork.
6. Ground floor walls will be constructed beginning with horizontal plasterboards, to limit the amount of replacement in case of water damage.
7. No metal piping should be used under the extension to avoid future corrosion.
8. Fitting of temporary Flood Defense Barriers, such as Floodshield demountable barrier, by Floodshield, (or similar) which provides protection up to 600mm above the cill for the standard doors.
9. Storage of inflatable sandless sandbags, such as Floodsax or Osmo Flood Barrier, by Floodshield, (or similar) to be used to protect the large, outward opening, bi-folding doors. These are stackable and can protect to a height of 600mm.
10. Waterproof concrete to form the hull of the construction, with an additional layer of the Fosroc waterproofing system to the outside.
11. Cavity below the external timber decking provides a large volume of water to be stored, with a head of 190mm to the u/s of the door cills, and will be drained to the garden soakaway.

Evacuation

Vehicular access & parking arrangements remain exactly the same, with the capacity for 2 off-street parking spaces. The front of the house does not fall within the flood risk zone; therefore, the occupants will have safe ingress and egress from the property during flooding periods.