

lower abbott house



flood risk assessment

october 2025

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FLOOD RISK ASSESSMENT

1 Introduction

1.1 This Flood Risk Assessment has been prepared by Stanton Andrews to support a Planning Application for a Replacement Dwelling at Lower Abbott House, Abbott Brow, Osbaldeston, BB2 7HU

This application is only seeking amendment to the facing material of a previous approval (ref.3/2022/0449) for a replacement dwelling at the same address.

The building will be served by a new gravel finished parking area, paving and garden. There will be no overall increase to the impermeable areas on the site, and therefore no additional surface water management required to control surface water runoff.



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2 Site Description and Location

2.1 The site covers an area of approximately 0.1ha, with associated parking, external grassed and paved areas.

The site is bounded by Abbott Brow to the North, a commercial unit to the North West and open countryside on all other sides, to the South of the site is an un-named watercourse that runs from East to West and is culverted behind the property.

The site is centred at Ordnance Survey reference 364772 E, 431630 N.

2.2 The nearest watercourse is an un-named brook which runs along the South site boundary and flows from East to West down-hill towards Longsight Road.

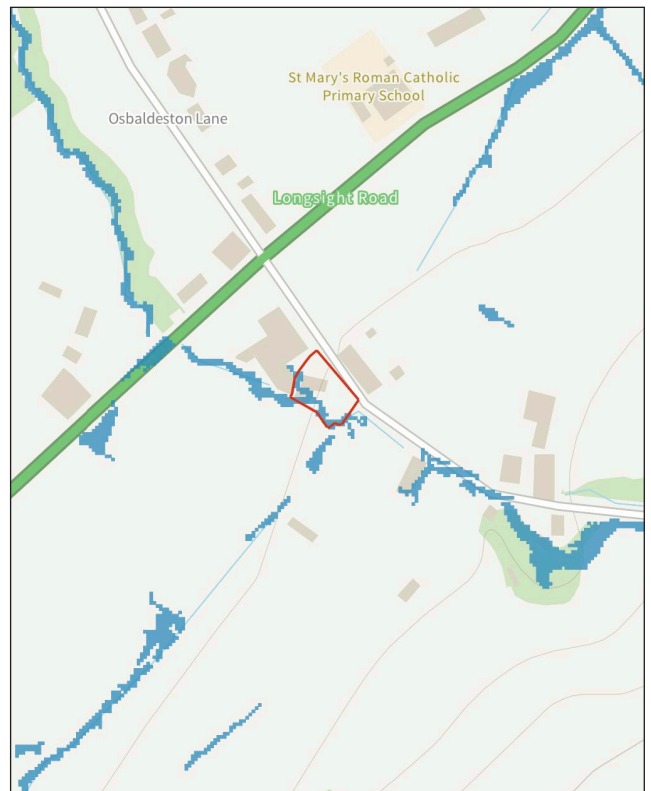
3 Investigations and Enquiries

3.1 Initial investigations show that the site is in flood zone 1 as shown below. This indicates a low risk of flooding from rivers and the sea.

3.2 The online flood risk service was reviewed, indicating there is a risk from surface water flooding, see below. The chance of surface water flooding at this location could be more than 3.3% (1 in 30) each year.



Flood risk map



Surface water flood risk map

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4 Design for Flood Resilience

4.1 Finished levels

Proposed finished floor levels are the same as previously approved. The vast majority of the dwelling has already been constructed in accordance with existing approvals. It is not feasible to change the finished floor levels. It is expected an exemption will be granted.

4.2 Flood resistance/resilience measures

In order to provide an extra element of safety it is recommended that flood resilience/resistance measures are set 300mm above the proposed finished floor level in the property. Flood proofing is a technique by which buildings are designed to withstand the effects of flooding. There are two main categories of flood proofing, which are dry proofing and wet proofing.

Dry proofing methods are designed to keep water out of the building, and wet proofing methods are designed to improve the ability of the property to withstand effects of flooding once the water has entered the building.

In addition, fixtures and fittings should be built to withstand immersion in water or designed to be easily replaced. The differential pressures across load bearing walls and the flotation effect that will occur during flood events should be taken into account when considering dry proofing techniques.

The table summarises recommendations for flood proofing measures which can be incorporated within the design for the proposed works. Such measures are put forward in accordance with 'Development and Flood Risk Guidance for the Construction Industry' CIRIA C624, London 2004

It would be preferable to avoid external doors as this would remove a potential point of flood inflows. However, since free access and egress into the building will be required, flood resistant doors and/or the use of flood resistant stop logs or flood boards could be considered.

Feature	Considerations to Improve Flood Proofing
External walls	Careful consideration of materials: use low permeability materials to limit water penetration if dry proofing required. Consider applying a water-resistant coating. Provide fitting for flood boards or other temporary barriers across openings in the walls.
Internal walls	Avoid use of gypsum plaster and plasterboard; use more flood resistant linings (e.g. hydraulic lime, ceramic tiles). Avoid use of stud partition walls.
Floors	Avoid use of chipboard floors. Use concrete floors with integrated and continuous damp proof membrane and damp-proof course. Solid concrete floors are preferable; if a suspended floor is to be used, provide facility for drainage of sub-floor void. Use solid insulation materials.
Fittings, fixtures and services.	If possible, locate all fittings, fixtures and services above design floor level. Avoid chipboard and MDF. Consider use of removable plastic fittings. Use solid doors treated with waterproof coatings. Avoid using double-glazed window units that may fill with flood water. Use solid wood staircases. Avoid fitted carpets. Locate electrical, gas and telephone equipment and systems above flood level. Fit anti-flooding devices to drainage systems.

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5 Flood Protection Equipment

Keeping water out of the building, or limiting the ingress of floodwater, is recommended when considering flood protection measures.

Excluding water will help to reduce damage to the internal fabric of the building and its contents. Such measures are referred to as dry proofing and include:

- Temporary flood barriers.
- Measures to reduce seepage through walls and floors.
- The installation of non-return valves on sewers.

Movable flood barriers can be very effective in preventing or reducing the volume of floodwater entering through doors and other external openings in walls, such as windows and airbricks, as long as a good quality product is installed in accordance with the manufacturer's instructions.

Although barriers may not totally prevent the ingress of water into a building, they can provide valuable time in which to move people, vehicles, expensive equipment and other essential items to higher levels before floodwater rises inside the building.

Flood barriers on wall openings can also reduce the amount of contaminated silt and debris entering the property. Water that seeps through the ground or walls is likely to be filtered to some extent and therefore is usually cleaner than floodwater entering larger openings such as gaps around doors and airbricks.

A successful resistance strategy ensures that every water entry point on the property is protected. If a single point is missed or a flood defence product fails, the property will begin to take in floodwater which compromises all other protection measures and results in a failed package of works.

6 Recommendations and conclusions

Online research indicates that the site is located within Flood Zone 1, with a very low risk of flooding from rivers and the sea and some risk of flooding from surface water.

New flood prevention measures as outlined in the designing for flood resilience section of this report could be implemented to mitigate damage from flooding. However as the building is largely complete and the application is a technical requirement to allow a change in cladding, it doesn't seem reasonable to expect any measures for the building to be adopted, that said as the risk of flooding is almost entirely due to the culvert, then annual inspections should be undertaken to ensure that the culvert is not blocked and for it to be cleared if required.