

**PROPOSED ALTERATIONS AT 486, BROADGATE, WESTON
HILLS, SPALDING, PE12 6DB.**
FLOOD RISK ASSESSMENT



View of existing bungalow

S M Hemmings B Sc C Eng MICE MIWEM,
13 Lea Gardens,
Peterborough,
PE3 6BY

This flood risk assessment has been prepared solely to support the planning application for the proposed extension at 486 Broadgate, Weston Hills, Spalding. The author has made every effort to provide an accurate assessment of the flood risk but accepts no liability should the information be found to be incorrect or incomplete, or if it is used for any other purposes other than for which it was originally commissioned.

Introduction

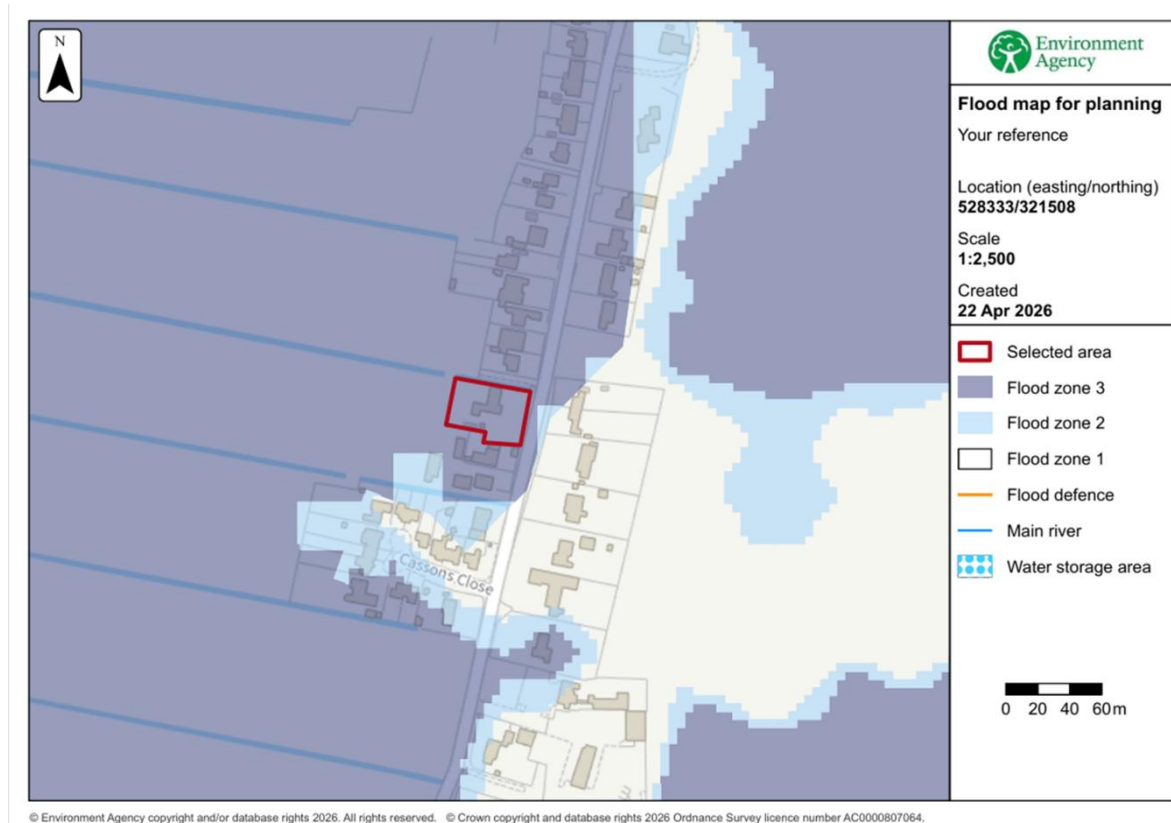
A planning application is due to be submitted to South Holland District Council for permission to carry out alterations, including a new first floor room, which will provide a larger living area at 486, Broadgate, Weston Hills, Spalding, PE12 6DB.

The site is within Flood Zone 3 as shown on the Environment Agency's Flood Zone Map. These maps do not take into account existing flood defences.

The site is shown within the defended area of the South Holland District Council's Strategic Flood Risk Assessment (SHDC SFRA) map and is located in the South Holland Internal Drainage Board district.

Environment Agency (EA) Flood Zones

The map below is taken from the Environment Agency website and shows the flood zones in the area.



It can be seen that most of this area west of Broadgate in Weston Hills is within flood zone 3.

Application Site

As the site is within a defended area the proposed development can be considered to be within Flood Zone 3(a) as detailed on the Environment Agency's flood zone maps without defences, as defined in Table 1 of the Technical Guidance.

Applying the flood risk vulnerability classification in Table 2 of the Guidance, a development consisting of a dwelling house is classified as "more vulnerable".

Table 3 of the Guidance is shown on the next page:

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓*

The above table states that to be satisfactory the sequential and exception test should be applied to the development. However the guidelines state that these tests do not need to be applied to a development of an extension to an existing dwelling.

South East Lincolnshire Planning Website

The relevant part of the map in the South East Lincolnshire SFRA for this area is shown below. This shows the predicted residual peak depth of flooding for the 1 in 200 year tidal or the 1 in 100 year fluvial event in 2115 and indicates that between 250mm and 500mm of flooding could occur on the southern half of the site and between 500mm and 1.0 metre of flooding on the northern half of the site in this event.



Therefore it is assumed that the map predicts that approximately 500mm of flooding could occur on this site in a 1 in 200 year tidal event in 2115.

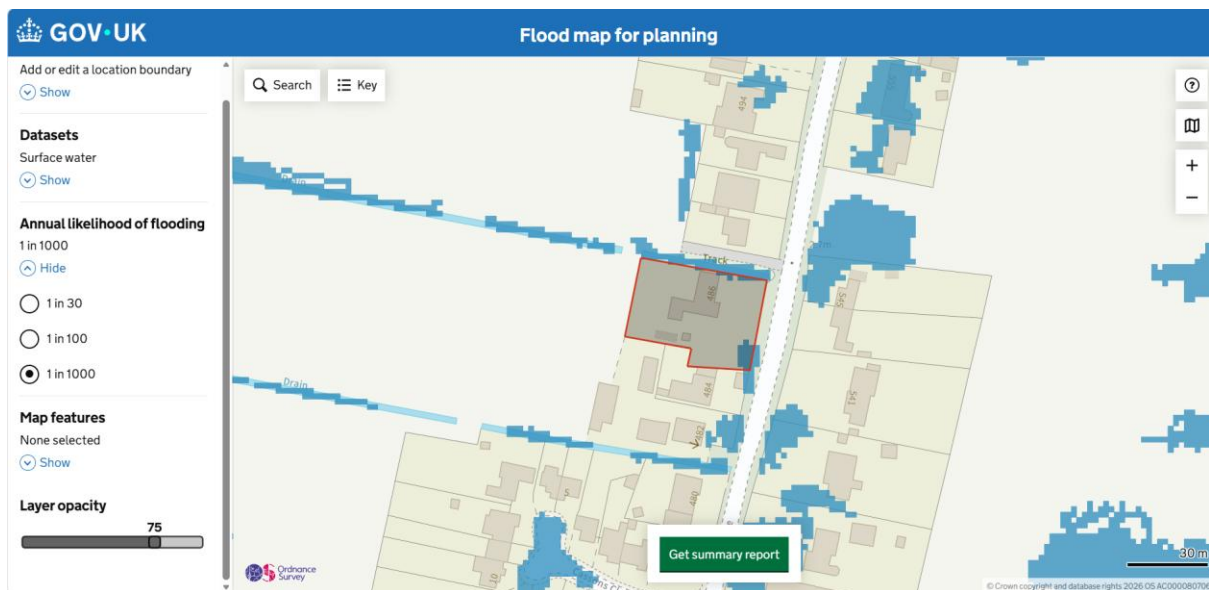
The above map only shows flooding from rivers and the sea. The flooding would occur if a breach occurred in the east bank of the tidal section of the River Welland 3.7km north west of the site or if a breach occurred in the east bank of the Coronation Channel 2.5km west of the site.

Flooding from Internal Drainage Board watercourses

South Holland Internal Drainage Board operate a system of drainage channels and pumping stations which control the water levels in this area. Although this is a well maintained system there is the risk, albeit low, of these watercourses becoming full and spilling out onto adjoining land. However it is unlikely that the depth of flooding from this source would be as high as 500mm.

Surface Water Flooding

The map below is taken from the Environment Agency website and shows the extent of surface water flooding in a 1 in 1000 year event in the area.



It can be seen that there is a small area of predicted surface water flooding on the south east corner of the site in this event. The area of the existing bungalow and the proposed alterations are not predicted to be affected.

Conclusions and Recommendations

The houses and bungalows on the western side of Broadgate could be flooded to a depth of approximately 500mm if a breach occurred in the tidal bank of the River Witham or the bank of Coronation Channel.

The existing ground floor level of the garage and the store which will be converted to two bedrooms is the same level as the ground floor level in the bungalow. The alterations will increase the total number of bedrooms in the bungalow from four to five.

The existing ground floor level is approximately 150mm above the ground level around the house. The proposed alterations include a new first floor to the building which could act as an area of safety for the inhabitants should a significant flood event occur.

It is recommended that all new areas should be designed and constructed with flood resilient measures incorporated. These measures will include;

- All electrical services should be placed at first floor level and cables dropped down to the sockets, which should be a minimum of 600mm above the floor level.
- Skirting boards and plaster finishes should be able to withstand flood damage if 600mm of water entered the building and remained for a few days.
- Suitable tiles should be used as flooring in the refurbished areas.

The owner of the property should register with the Environment Agency's Floodline Warnings Direct Service.

28th April 2026

Stuart Hemmings B Sc C Eng MICE MIWEM

Tel: 01733 566966 or Mobile: 07804 189365

stuart.hemmings@btinternet.com

Appendix

Householder and other minor extensions in Flood Zones 2 and 3

Applications for planning permission should be accompanied by a completed form. An electronic version can be submitted by 'printing' it to a PDF writer.

This guidance is for domestic extensions and non-domestic extensions where the additional footprint created by the development does not exceed 250 sq. metres. It should NOT be applied if an additional dwelling is being created, e.g. a self contained annex.

We recommend that:

Planning Authorities:

- 1) Refer the applicant to the standing advice pages on the Environment Agency website or provide them with a copy of this page for them to include as part of the planning application submission.
- 2) Check the planning application to ensure that one or other of the mitigation measures from the table below has been incorporated.

Applicants:

Complete the table below and include it with the planning application submission. The table, together with the supporting evidence, will form the Flood Risk Assessment (FRA) and will act as an assurance to the Local Planning Authority (LPA) that flood risk issues have been adequately addressed.

Applicant to choose one or other of the flood mitigation measures below	Applicant to provide the LPA with the supporting information detailed below as part of their FRA	Applicant to indicate their choice in the box below. Enter 'yes' or 'no'
Either ; Floor levels within the proposed development will be set no lower than existing levels AND, flood proofing of the proposed development has been incorporated where appropriate.	Details of any flood proofing / resilience and resistance techniques, to be included in accordance with 'Improving the flood performance of new buildings' CLG (2007)	Yes
Or; Floor levels within the extension will be set 300mm above the known or modelled 1 in 100 annual probability river flood (1%) or 1 in 200 annual probability sea flood (0.5%) in any year. This flood level is the extent of the Flood Zones	This must be demonstrated by a plan that shows finished floor levels relative to the known or modelled flood level. All levels should be stated in relation to Ordnance Datum ¹	Yes

Subterranean/basement extensions

Due to the risk of rapid inundation by floodwater basements should be avoided in areas at risk of flooding. The LPA may hold additional guidance for basement extensions.

Self-contained basement dwellings are 'highly vulnerable' development and should not be permitted in Flood Zone 3. We are fundamentally opposed to these developments.

Continued...

¹ Ordnance Datum or the abbreviation 'OD' is the mean level of the sea at Newlyn in Cornwall from which heights above sea level are taken. The contour lines on Ordnance Survey maps measure heights above OD for example, though these are not accurate enough for a flood risk assessment.

Cumulative impact of minor extensions and the removal of Permitted Development rights.

PPS25 paragraph D16 highlights the potential for the cumulative impact of minor extensions to have a significant effect on flood risk. Where local knowledge (Strategic Flood Risk Assessment held by the LPA/information provided by the parish council) suggests this is the case the guidance contained in FRA guidance note 2 should be applied. FRA guidance note 2 can also be applied where permitted development rights have been removed for flood risk reasons. The Environment Agency does not usually comment on minor development in this category.

Permeable paving and changes to permitted development rights for householders

On the 1st October 2008 the General Permitted Development Order (GPDO) in England was amended by the Government (Statutory Instrument 2008 No. 2362).

One of the changes introduced by the GPDO amendment is the removal of permitted development rights for householders wishing to install hard surfacing in front gardens which exceeds 5sq. metres (i.e. 1m x 5 m) without making provision to ensure permeability. This means that use of traditional materials, such as impermeable concrete, where there is no facility in place to ensure permeability, requires an application for planning permission.

In order to help and advise householders of the options for achieving permeability and meeting the condition for permitted development status the Department for Communities and Local Government (CLG) has produced guidance on permeable paving which can be found on the following link <http://www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens>

The Environment Agency support this change to the GPDO as it is in line with the recommendations of the Pitt Report regarding the need to better tackle the impact of surface water flooding. However, Local Planning Authorities should determine these applications in accordance with the CLG guidance **without** consulting the Environment Agency.

End of comment