PROPOSED EXTENSION AT 23 CHILTERN DRIVE, SPALDING, PE11 2DD

FLOOD RISK ASSESSMENT



View of rear of existing house

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This flood risk assessment has been prepared solely to support the planning application for a proposed extension at 23 Chiltern Drive, 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

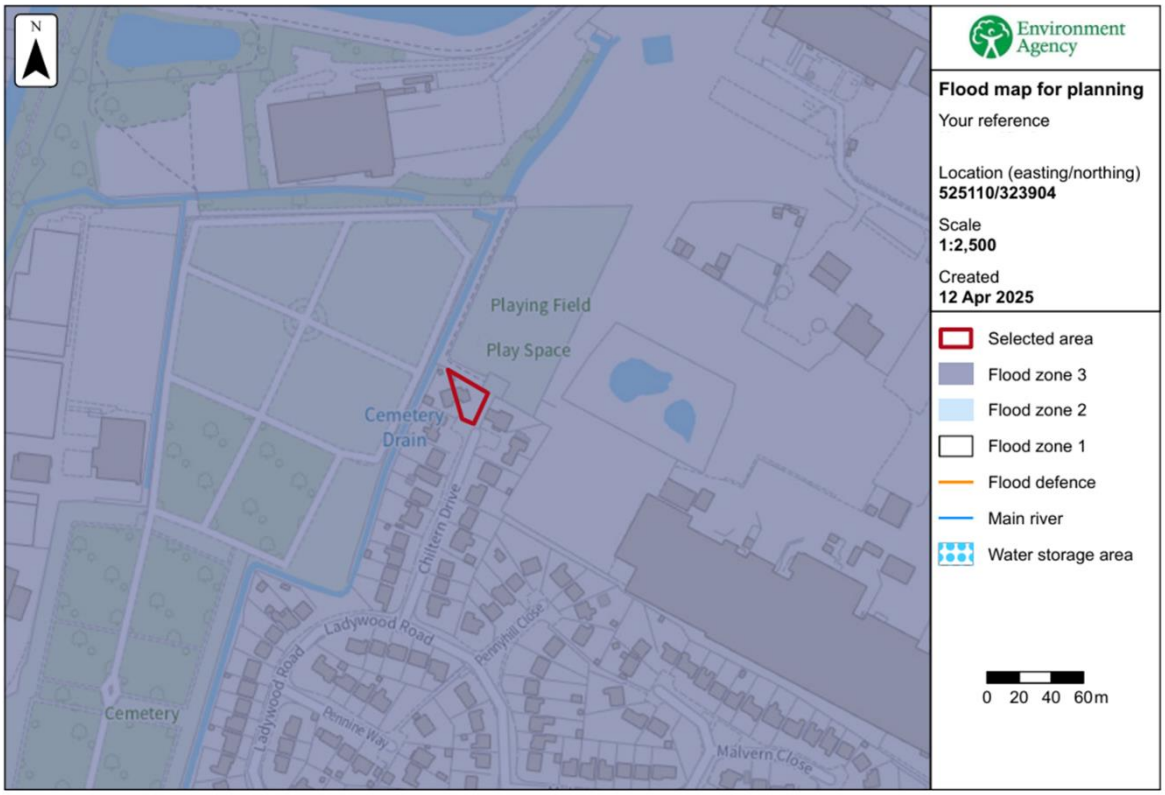
A planning application is due to be submitted to South Holland District Council for permission to construct a single storey rear extension and a new garage at 23 Chiltern Drive, Spalding, PE11 2DD.

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 Welland and Deepings 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.



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It can be seen that all of this area in Spalding 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 below:

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 or for a proposed garage.

South East Lincolnshire Planning Website

Part of the map in the South East Lincolnshire SFRA which shows the predicted residual peak depths in 2115 for the 0.5% (1 in 200 year) tidal or the 1% (1 in 100 year) fluvial event probability is shown below and this predicts approximately 1.0 metre of flooding could occur in the vicinity of the site of the proposed extension if the fluvial or tidal bank of the River Welland north of the site were to breach in a fluvial or tidal event in 2115.



This flooding would result from a breach in the earth bank on the east side of West Marsh Road following an exceptionally high tide in 2115.

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 no predicted surface water flooding on the site in this event.

Conclusions and Recommendations

The proposed extension and garage do not increase the number of bedrooms and the proposed extension only provides additional space on the ground floor. Therefore it can be concluded that no additional people will be in danger if a flood event were to occur.

The existing ground floor level is 150mm above the ground level around the house. It is recommended that the ground floor of the proposed extension should be constructed with the finished ground floor level at the same level as the existing dwelling.

It is recommended that the new extension 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 new extension.

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

14th April 2025

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Appendix

Environment Agency

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.

Yes

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