FLOOD RISK ASSESSMENT
FOR A MINOR EXTENSION (HOUSEHOLD) AT
THE CHASE, CROWLAND

FINAL REPORT

ECL1886a/PDG ARCHITECTS

DATE OCTOBER 2026

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1.0 INTRODUCTION

This Flood Risk Assessment has been prepared in accordance with National Planning Policy Framework (NPPF) and supporting planning practice guidance (PPG) on Flood Risk and Coastal Change.

In areas at risk of flooding or for sites of 1 hectare or more, developers are required to undertake a site-specific Flood Risk Assessment to accompany an application for planning permission. This Flood Risk Assessment has been produced on behalf of Mr & Mrs Knapp in respect of a development that consists of a minor extension (household) at 46 The Chase, Crowland.

A planning application for the proposed development is to be submitted by PDG Architects.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at 46 The Chase, Crowland, Lincolnshire, PE6 0LN. The National Grid Reference of the site is 52460/31053.

The location of the site is shown in Figure 1.



Figure 1 – Location Plan (© OpenStreetMap contributors)

2.2 Existing Site

The site is on the north eastern side of The Chase. The site is a residential dwelling comprising of a bungalow, the surrounding garden and driveway. The site is surrounded by residential dwellings apart from the eastern boundary of the site which is formed by James Road. The area of development is 0.35 hectares.

Environment Agency LiDAR shows that ground levels within the site are between +1.8m OD and +2.2m OD. The lowest ground levels are on the eastern boundary of the site alongside James Road. The carriageway level of The Chase at the entrance to the site is +2.2m OD.

The site is in the North Level Internal Drainage Board (IDB) district. Surface water at the site would naturally drain through soakaway and hence to the riparian and IDB drainage system. The nearest IDB Main Drain is Abbey Drain approximately 500m south of the site.

The online British Geological Survey maps indicate that the site is likely to be underlain by Oxford Clay Formation mudstone. The bedrock is shown to be overlain with superficial deposits of Abbey Sand and Gravel.

2.3 Proposed Development

The development consists of a minor extension to a residential dwelling. Details of the development are within Attachment 1.

As the development is an extension to an existing residential dwelling the Sequential Test and Exception Test have not been applied.

2.4 Local Development Documents

The South East Lincolnshire Local Plan 2011 – 2036, adopted in March 2019, is the Local Plan for the district. Policy 4: Approach to Flood Risk states the requirements for flood risk reduction.

The South East Lincolnshire Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) was prepared in June 2017.

The Joint Lincolnshire Flood Risk and Drainage Management Strategy has been prepared by Lincolnshire County Council as the Lead Local Flood Authority. The purpose of the Strategy is to increase the safety of people across Lincolnshire by reducing the number of people at risk of flooding, increasing the resilience of local communities, and reducing the impact of flooding.

2.5 Flood Zones

An extract from the Environment Agency Flood Map for Planning is shown in Figure 2. Part of the site is located within Flood Zone 3, an area with a high probability of flooding however the dwelling is located in Flood Zone 1.

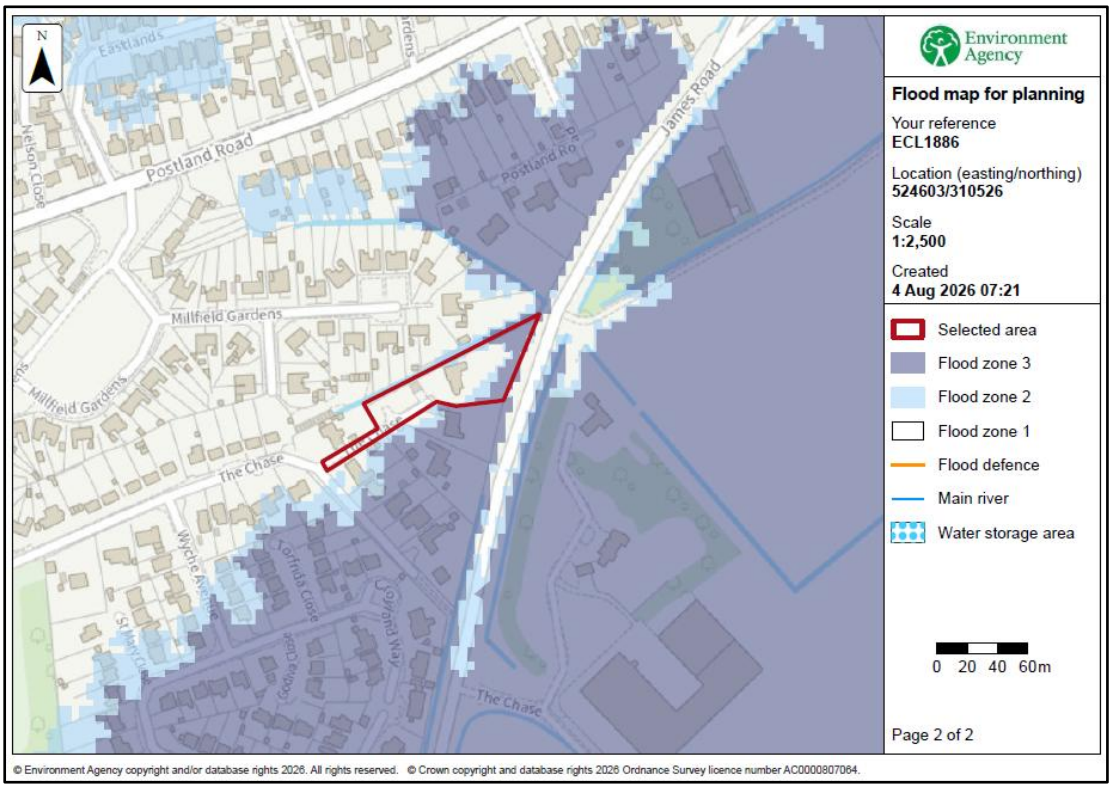


Figure 2 – Environment Agency Flood Map for Planning

The Flood Map for Planning shows that an isolated area alongside the driveway is at risk during the surface water event with a 1 in 100 annual likelihood. When climate change is considered, the isolated area at risk has a maximum depth of 0.15m. It is anticipated that the area shown to be at risk is a localised depression.

The Environment Agency Long Term Flood Risk maps provide an indication of the risk from the primary sources of flooding. The map shows that the site is within an area at risk of reservoir flooding when there is also flooding from rivers.

Table 1 shows the level of risk at the site within the South East Lincolnshire SFRA.

SFRA Map	Present Day	2116
Residual Flood Hazard Map for the 1% fluvial event	The site is outside of the area at risk	Part of the site is in a 'Danger for Some' area
Residual Peak Depth Map for the 1% fluvial event	The site is outside of the area at risk.	The peak flood depth is between 0.25m and 0.5m.

Table 1 – Flood Risk within SFRA Maps

3.0 SITE SPECIFIC FLOOD RISK

3.1 Local Flood Assets

The site is 1.6km east of the River Welland. Crowland Washes provides floodplain storage for the River Welland. The village of Crowland is protected from the River Welland by the Corporation Bank approximately 800m west of the site.

There is a long-term strategy for the maintenance of the Environment Agency defences which is reviewed and updated periodically.

There is an extensive local drainage network managed by North Level Internal Drainage Board. There nearest IDB Main Drain, Abbey Drain, is approximately 500m south of the site. The site is within the Tydd Catchment which discharges to the River Nene via the Tydd Pumping Station.

During the operation and maintenance of its pumping stations, associated structures, and channel systems, the IDB seeks to maintain a general standard capable of providing flood protection to its district. A routine maintenance programme is in place to ensure that the Boards assets are commensurate with the standard of protection that is sought.

Current maintenance standards of the North Level Internal Drainage Board and the Environment Agency are generally good.

3.2 Sources of Flooding

A summary of the sources of flooding is provided in Table 2.

Source of Flooding	Level of Risk
Drainage Network Flooding	The risk is assessed in Section 4.3.
Surface Water Flooding	Based upon the EA maps the risk is low.
Fluvial Flooding	The risk is assessed in Section 4.3 and Section 4.5.
Tidal Flooding	The site is not at risk of tidal flooding.
Reservoir Flooding	The residual risk of a breach of defences is assessed in section 4.6.
Groundwater Flooding	There is no evidence to suggest the site is at risk of groundwater flooding.

Table 2 – Sources of Flooding

3.3 Probability of Flooding

The probability of flooding associated with blockages in the North Level IDB drainage system is low due to the maintenance standards achieved and managed by the IDB.

Through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 years and 1 in 100 years, respectively. The risk associated with flood events that exceed the standard of protection provided is lowered due to the North Level IDB main drains incorporating freeboard. This freeboard provides storage during the exceedance events.

The Corporation Bank provides protection against the 1% annual probability (1 in 100 chance each year) event. The defence falls within the Reservoirs Act 1975 legislation. As such it is inspected annually by a Supervising Engineer who will assess its structural integrity to provide protection to people and property.

3.4 Historic Flooding

During the preparation of this assessment, no evidence was discovered of the site being flooded.

3.5 Climate Change

Climate change is likely to impact the site through increased rainfall intensity and duration affecting the local drainage network and increased flood levels.

The Corporation Bank provides protection against the 1% annual probability (1 in 100 chance each year) event including climate change.

3.6 Residual Risk

There is a residual risk of flooding at the site should a breach occur. The South East Lincolnshire SFRA includes maps demonstrating the impact of a breach in 2116. These show that when the climate change allowances are applied to the combination of a 1% annual probability (1 in 100 chance each year) fluvial event the part of the site that will be occupied by the extensions is at risk with depths between 0.0m and 0.25m. An extract from this map is shown in Figure 3 below.



Figure 3 – SFRA 2116 Residual Peak Depth Map

4.0 FLOOD RISK MITIGATION

4.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Tydd Pumping Station could lead to an increased level of risk at the site.

The probability of the site flooding from any Environment Agency system is less than 1% annual probability (1 in 100 chance each year) because of the standards of the existing flood defences. Over time there will be a gradual increase in risk to the site due to climate change. During the design life of the development it is not anticipated that the site would flood.

The SFRA considers the residual risk associated with a breach in the defences. The residual flood depth during a 1% annual probability (1 in 100 chance each year) fluvial event in 2116 is up to 0.25m.

The proposed development increases the impermeable area and therefore has the potential to increase the rate of surface water runoff from the site.

4.2 Mitigation Measures

Under PPG on Flood Risk and Coastal Change an extension is defined as a minor development. Guidance states that you should follow the Environment Agency's standing advice if you're carrying out a flood risk assessment for a minor extension (household).

The proposed development is a minor extension and the proposals are consistent with the Environment Agency's standing advice for minor extensions. The proposed floor levels are no lower than existing floor levels.

The extension has the potential to be affected by flooding over the lifetime of the development during a breach. It is recommended that there is 0.3m of flood resilient construction above the finished floor level of the extensions.

The developer should ensure that the occupier of the dwelling is sufficiently aware of the risk of flooding, and the standard of the existing defences. The Environment Agency operates a flood warning system for properties at risk of flooding to enable householders to protect life or take actions to manage the effect of flooding on property. Floodline Warnings Service is a national system run by the Environment Agency for broadcasting flooding warnings. The occupier of the dwelling should register to receive flood warnings.

Should there be a failure of Tydd Pumping Station and conditions were such to put properties and land at risk of flooding, the Internal Drainage Board would take emergency action to maintain the drainage level of service by using temporary pumping equipment.

It is recommended that surface water run-off is managed so that stormwater from the development will not affect any adjoining properties or increase the flood risk elsewhere.

5.0 CONCLUSIONS

As a result of the assessment, the following conclusions have been reached.

- The proposed development consists of a minor extension to a residential dwelling at 46 The Chase, Crowland.

- The site is located within an Internal Drainage Board catchment and through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 and 1 in 100 years, respectively.

- The site is partly in Flood Zone 3 however the existing dwelling is in Flood Zone 1.

- The Corporation Bank provides protection against the 1% annual probability (1 in 100 chance each year) event including climate change in the River Welland.

- During the life of the development, a flood depth up to 0.25m could occur should there be a breach of the Corporation Bank.

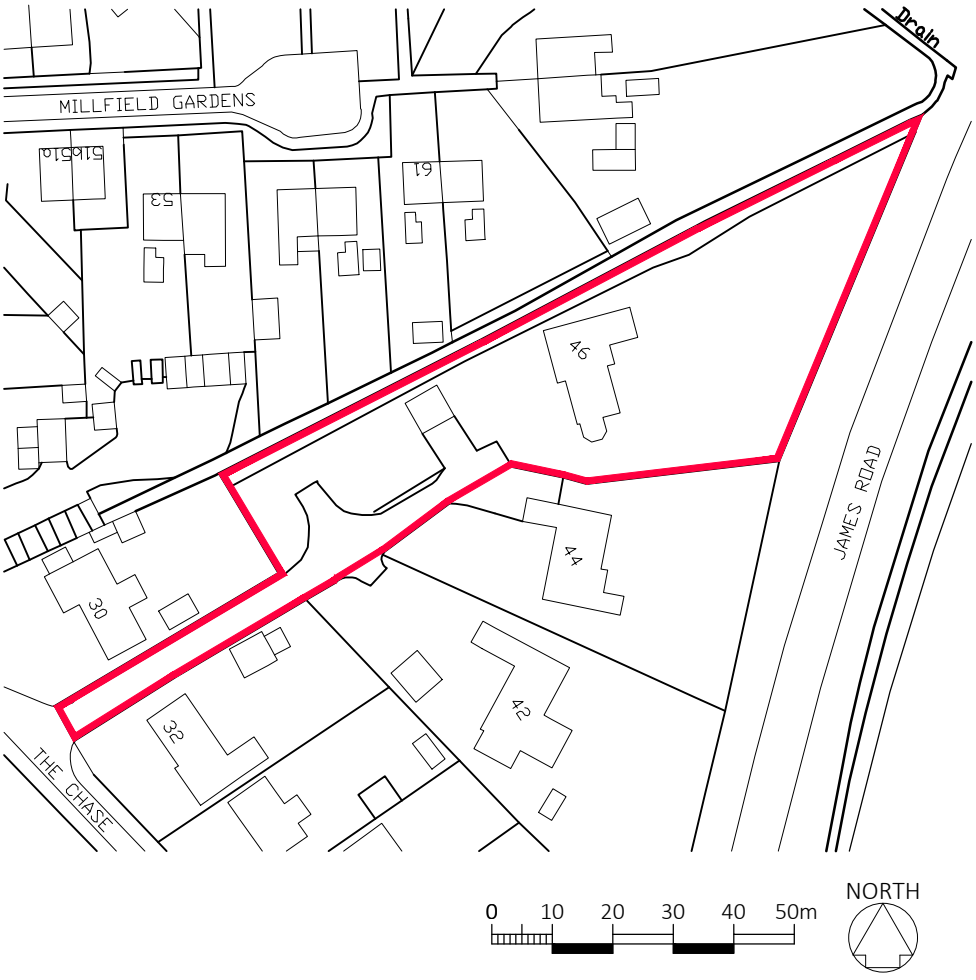
- The proposed floor levels are no lower than existing floor levels and therefore the development is consistent with the Environment Agency's standing advice for minor extensions.

- It is recommended there is 0.3m of flood resilient construction above finished floor level.

ATTACHMENT 1

LOCATION PLAN
(DWG 26011/L01)

SKETCH SCHEME PLANS
(DWG 26011/PL01C)



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EXTENSIONS & ALTERATIONS to 46 THE CHASE, CROWLAND

SITE: LOCATION PLAN

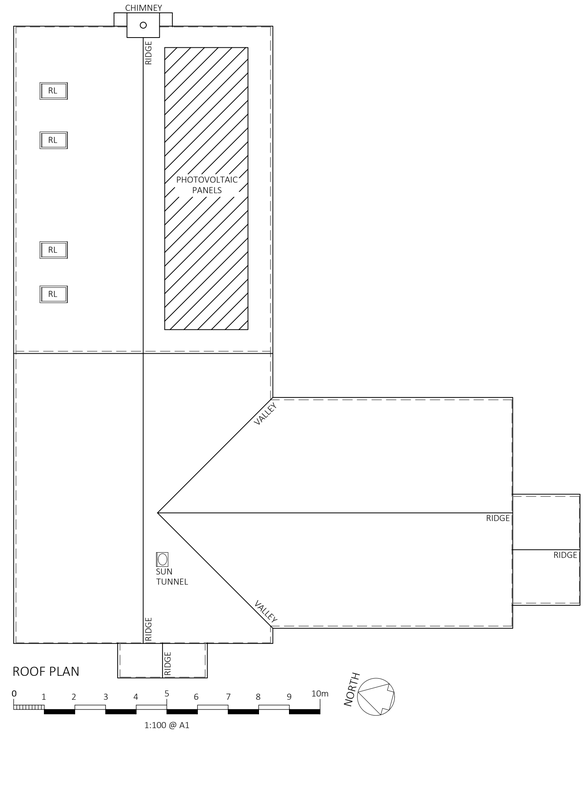
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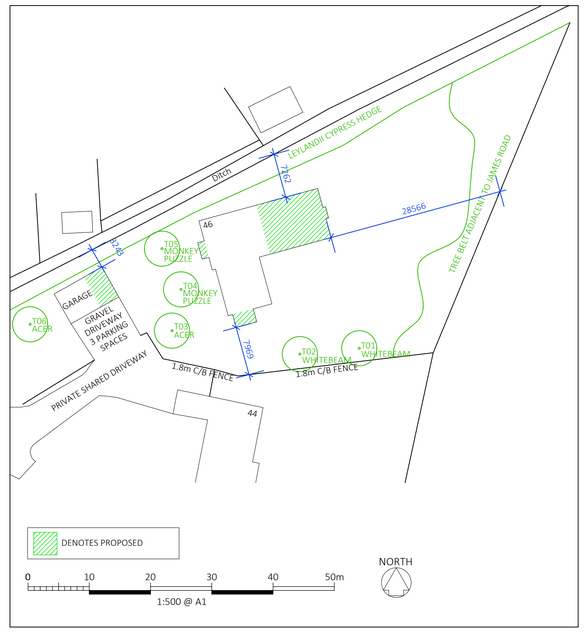
Drawn: DC Dwg No: 26011/L(90.1)01

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REVISION C	OMITTED UTILITY, ADDED WINDOW TO KITCHEN, INCREASED SIZE OF BED 1 WINDOW	DC 08/10/2026
REVISION B	CHANGED BED 4 TO UTILITY & CHANGED WINDOW TO DOOR, CREATED HOME OFFICE	DC 06/08/2026
REVISION A	ADDED SUN TUNNEL	DC 28/07/2026
	REVISED UTILITY ROOF PLAN	

EXTENSIONS & ALTERATIONS to
46 THE CHASE, CROWLAND
PROPOSED: PLANS

Scale: 1:50/1:100 @ A1 Date: 01/07/2026
Drawn: DC Dwg No: 26011/PL01C

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