FLOOD RISK ASSESSMENT
FOR COMMERCIAL DEVELOPMENT AT
FULNEY LANE, SPALDING

FINAL REPORT

ECL1555/ROLLINS

DATE JUNE 2025

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CONTENTS

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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 Rollins Group Ltd in respect of a development that consists of the reconfiguring and extension of a car park at Pilgrims Pride, Fulney Lane, Spalding.

As the development is the reconfiguring and extension of a car park that is part of an existing commercial development the Sequential Test and Exception Test have not been applied.

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

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at Pilgrims Pride, Fulney Road, Spalding, Lincolnshire, PE12 6EP. The National Grid Reference of the site is 52639/32329.

The location of the site is shown in Figure 1.

Figure 1 – Location Plan (© OpenStreetMap contributors)

2.2 Existing Site

The site is within an industrial development located on the western side of the A16 Spalding Bypass. The site consists of a new parking area to the south of the existing car park. The car park will occupy an area of land that is currently undeveloped. The area of development is approximately 0.5 hectares.

A topographic survey has been undertaken and spot levels are shown in Attachment 1. The ground level of the existing car park is typically +3.4m OD and the area of the proposed extension has ground levels of +3.0m OD. The agricultural land to the south of the site is typically between +2.5m OD and +3.0m OD.

The site is in the South Holland Internal Drainage Board (IDB) District. Surface water at the site naturally drains through soakaway and hence to the IDB drain system. There are riparian drains on the field boundaries to the south of the site. The nearest IDB watercourse is 1km east 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 clay and silt.

2.3 Proposed Development

The proposed development consists of reconfiguring and extension of the car park at the site. The proposed site plan is shown in Attachment 1.

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. The site is located within Flood Zone 3, an area with a high probability of flooding.

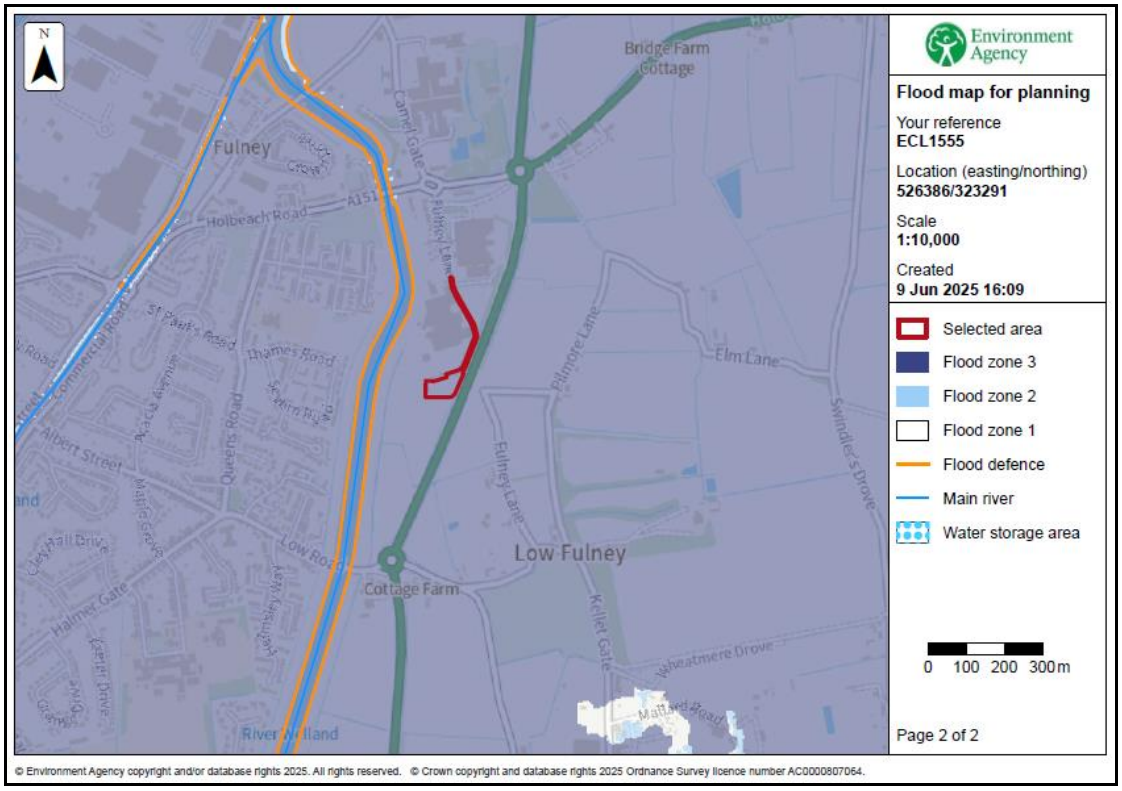


Figure 2 – Environment Agency Flood Map for Planning

The Environment Agency Long Term Flood Risk maps provide an indication of the risk from the primary sources of flooding. The details provided with these maps are summarised in Table 1. The depth of flooding identified is the maximum depth that occurs during a low chance (between 0.1% and 1% chance each year) event.

	Present Day		2050 Epoch	
	Risk of Flooding	**Depth (Low chance)**	**Risk of Flooding**	**Depth (Low chance)**
Rivers and the Sea	The site has a medium chance (between 1% and 3.3% chance each year)	No data available	No data available	No data available
Surface Water	The existing car park has a low chance (between 0.1% and 1% chance each year)	During low chance events depths are below 0.2m	Isolated areas of the existing car park have a medium chance (between 1% and 3.3% chance each year)	During low chance events depths are up to 0.2m
Reservoir	Outside of the area at risk.			

Table 1 – Environment Agency Long Term Flood Risk Maps

Table 2 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 and 0.5% tidal event	The site is in the 'Danger for Most' area	The site is in the 'Danger for All' area
Residual Peak Depth Map for the 1% fluvial and 0.5% tidal	The site is at risk of flooding with depths between 0.5m and 1.0m.	The site is at risk of flooding with depths between 1.0m and 2.0m.

Table 2 – Flood Risk within SFRA Maps

3.0 SITE SPECIFIC FLOOD RISK

3.1 Local Flood Assets

The site is 100m east of the Coronation Channel. The Coronation Channel is a bypass channel of the River Welland constructed in the 1950's to convey river flows around Spalding. The Coronation Channel together with the Crowland and Cowbit Washes offer flood reduction to Spalding and the surrounding district.

North of Spalding downstream of the confluence with the Coronation Channel, the River Welland tidal defences protect the surrounding land. The defences are 800m north west of the site and minimum embankment levels of +7.0m OD. The River Welland and the Coronation Channel are the responsibility of the Environment Agency.

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 South Holland IDB. There is an IDB Ordinary Watercourse 800m east of the site. The site and surrounding land are within the Wisemans catchment and drain by gravity to Wisemans Pumping Station. The pumped water enters the South Holland Main Drain that discharges to the tidal River Nene at the Sutton Bridge Outfall Sluice.

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 South Holland 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 3.

Source of Flooding	Level of Risk
Drainage Network Flooding	The risk is assessed in Section 3.3.
Surface Water Flooding	Based upon the EA maps the risk ranges from very low to medium with flood depths below 0.2m.
Fluvial Flooding	The risk is assessed in Section 3.3 and 3.5.
Tidal Flooding	The risk is assessed in Section 3.3 and 3.5.
Reservoir Flooding	The risk of a tidal breach is assessed in Section 4.6.
Groundwater Flooding	There is no evidence to suggest the site is at risk of groundwater flooding.

Table 3 – Sources of Flooding

3.3 Probability of Flooding

The probability of flooding associated with blockages in the South Holland IDB drainage system is low due to the maintenance standards achieved and managed by the IDB. Failure of Wisemans Pumping Station would lead to an increased level of risk within the IDB catchment.

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 South Holland IDB main drains incorporating freeboard. This freeboard provides storage during the exceedance events.

The Coronation Channel earth embankment has a minimum crest level of +6.0m OD. The 1% annual probability (1 in 100 chance each year) peak flood level inclusive of climate change during the next 100 years in the River Welland is +5.45m OD. The Coronation Channel embankment provides a standard of protection of 1% annual probability (1 in 100 chance each year) with a minimum 0.55m freeboard.

The River Welland tidal defences provide protection during a 0.5% annual probability (1 in 200 chance each year) event.

3.4 Historic Flooding

During the preparation of this assessment, no evidence was discovered of the site being flooded. Previous historic rainfall events of 1968 and 1978, estimated to be greater than 1% annual probability (1 in 100 chance each year), caused no flooding to any residential properties.

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 tide levels.

The flood level in the River Welland at Fossdyke during the 0.5% annual probability (1 in 200 chance each year) event inclusive of climate change to 2069 is estimated to be 6.41m AOD. The minimum defence level of the River Welland embankments is 7.0m AOD.

In summary the site is not at risk for the design life of the development (i.e., 100 years).

3.6 Residual Risk

The South East Lincolnshire SFRA includes maps demonstrating the impact of climate change in 2116. The Residual Peak Depth maps within the SFRA indicate the maximum flood depths associated with a breach of the tidal defences. 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 and a 0.5% annual probability (1 in 200 chance each year) tidal event the peak flood depth at the site is greater than 2m. An extract from this map is shown in Figure 3 below.

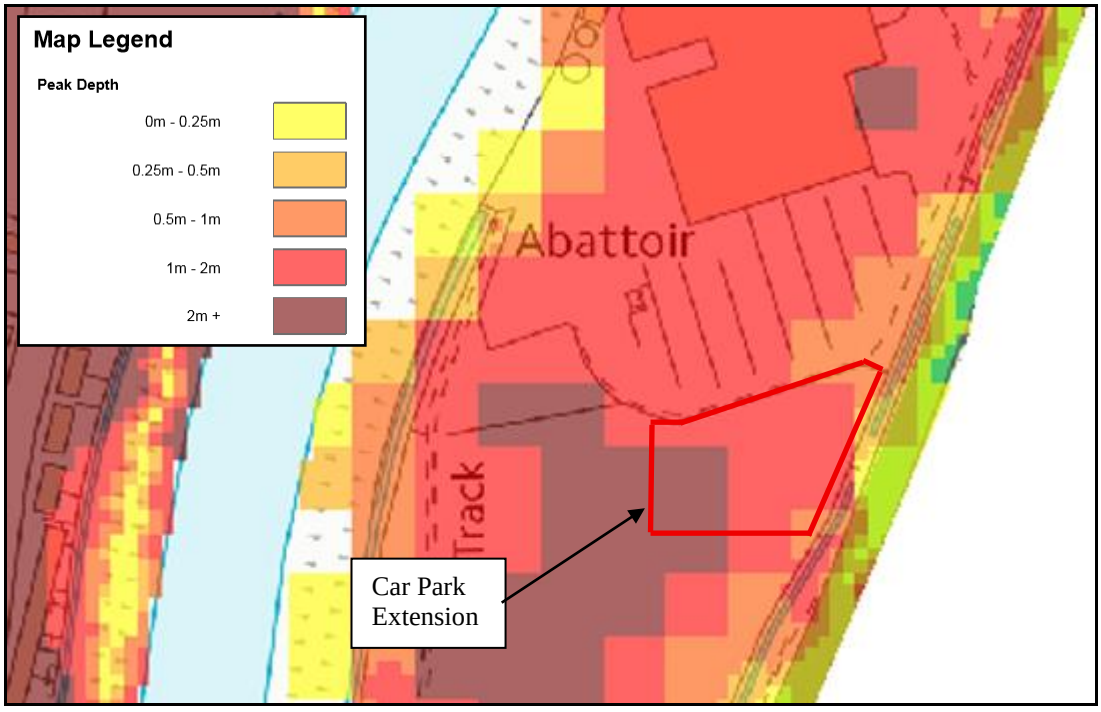


Figure 3 – SFRA 2116 Residual Peak Depth Map

4.0 FLOOD RISK MITIGATION

4.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Wisemans 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 0.5% annual probability (1 in 200 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 from overtopping of the defences.

The SFRA considers the residual risk associated with a breach in the defences in 2116. The peak flood depth during the 0.5% annual probability (1 in 200 chance each year) is between 1.0m and 2.0m.

The proposed development will have a gravel surface so that runoff can infiltrate at source.

4.2 Mitigation Measures

Considering the development is the reconfiguring and extension of a car park there are no specific mitigation measures proposed associated with the design to mitigate the impact of flooding.

The developer should ensure that the users of the site are 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 business based at the site should register to receive flood warnings.

During an exceedance event it is anticipated that sufficient time would be available to take precautionary actions to limit the potential impact of flooding.

Should there be a failure of Wisemans 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.

The permeable surface will facilitate infiltration 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 the reconfiguring and extension to a car park at Pilgrims Pride, Fulney Road, Spalding.

- 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 proposed development is in Flood Zone 3. The site benefits from defences on the River Welland that provide protection during the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 200 chance each year) tidal event including climate change.

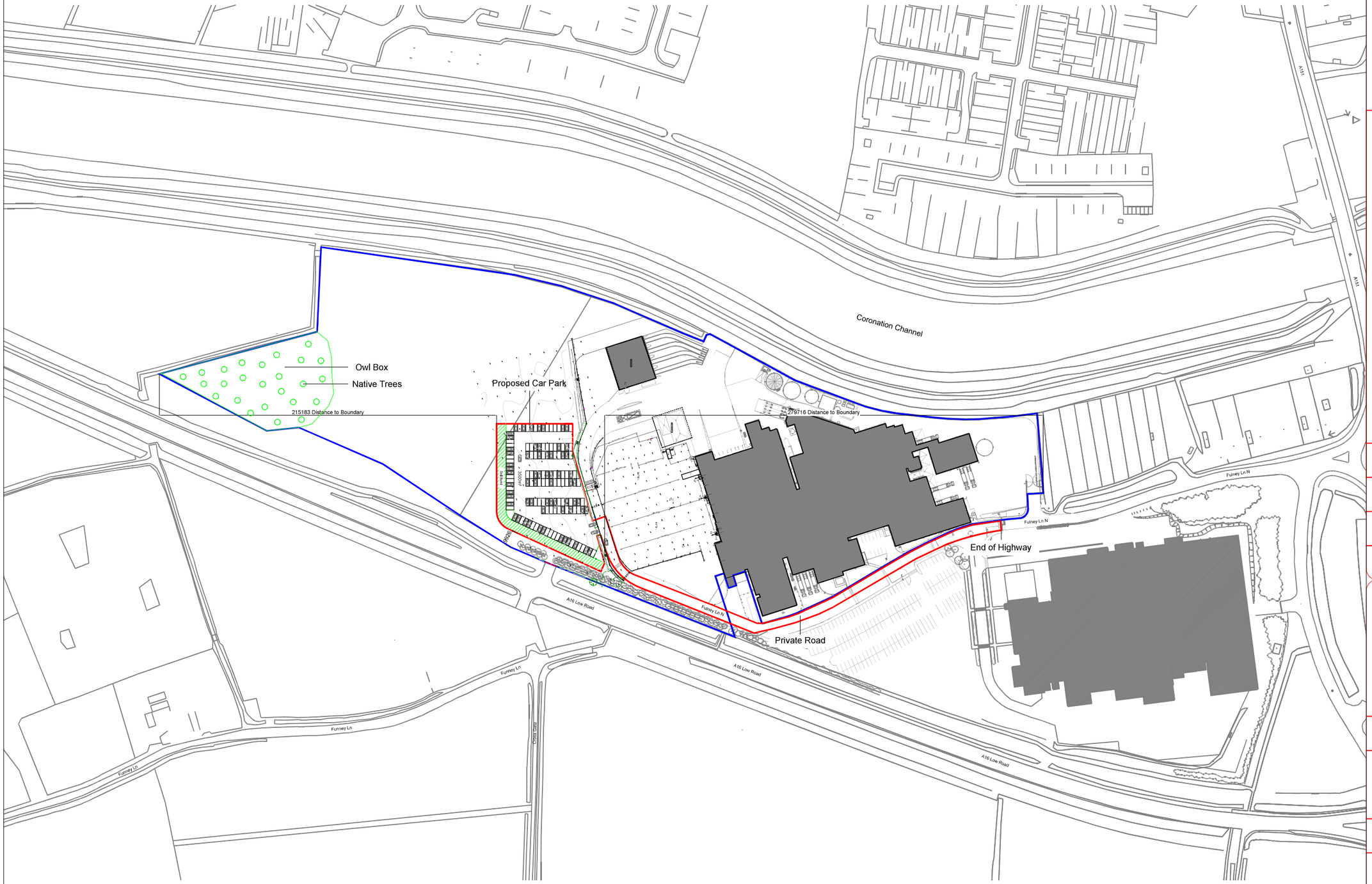
- During a breach of the defences in 2116 the maximum flood depth at the site is greater than 2m.

- There are no specific recommendations associated with the proposed development to mitigate the impact of flooding to the development.

ATTACHMENT 1

SITE PLAN
(DWG 0258/SC-01A)

Site Plan
1:1250



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Notes:

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1.2 Do not scale from this drawing, only stated dimension shall be used.

1.3 Drawing is for representation ONLY.

Legend:

Rev.	Description.	Date.
2	Updated	06/06/2025
1	Revised	03/06/2025
0	Original	28/01/2025

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Client:	Pilgrims Pride UK Spalding
Project:	Proposed Shift Change Car Park at Pilgrims Pride UK Spalding Fulney Lane, Spalding PE12 6EP
Title:	Site Location Plan
Edition:	**A**

P - Preliminary T - Tender
A - Approval C - Construction
I - Information B - As Builts

06/06/2025		Scale: **1/1250**	**A1** Paper
Drawn By:	**KS**	Drawing No.	**0258/SC-01**
Checked By:	**DR**	Revision No.	**2**

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