FLOOD RISK ASSESSMENT
FOR A CHANGE OF USE ON
HIGH STREET, LONG SUTTON

FINAL REPORT

ECL1586/PETER HUMPHREY ASSOCIATES

DATE JULY 2025

ELLINGHAM CONSULTING LTD
Email: tim@ellinghamconsulting.co.uk

CONTENTS

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 I Green in respect of a development that comprises the conversion and change of five flats to form one dwelling at 31 High Street, Long Sutton.

A planning application for the proposed development is to be submitted by Peter Humphrey Associates.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at 31 High Street, Long Sutton, Spalding, PE12 9DB. The National Grid Reference of the site is 54328/32297.

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 northern side of the High Street. The site consists of a four storey building comprising of a shop to part of the lower ground floor, with the remaining ground floor, first floor and second floor being five separate flats. There is a vehicular access on the eastern side of the site that serves other dwellings. The area of development is approximately 0.02 hectares.

Environment Agency LiDAR data shows that ground levels on the access alongside the site range from the site is flat with ground levels typically between +3.5m OD at the northern extent of the building to +4.4m OD on the High Street.

The site is in the South Holland Internal Drainage Board (IDB) District. Surface water at the site would naturally drain through soakaway and hence to the IDB drain system. There is an IDB Watercourse 150m north of the site.

The online British Geological Survey maps indicate that the site is likely to be underlain by Ampthill 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 the conversion of five flats to form one dwelling. The shop is to be unchanged. Details of the proposed development are provided 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 within Flood Zone 3, an area with a high probability of flooding.

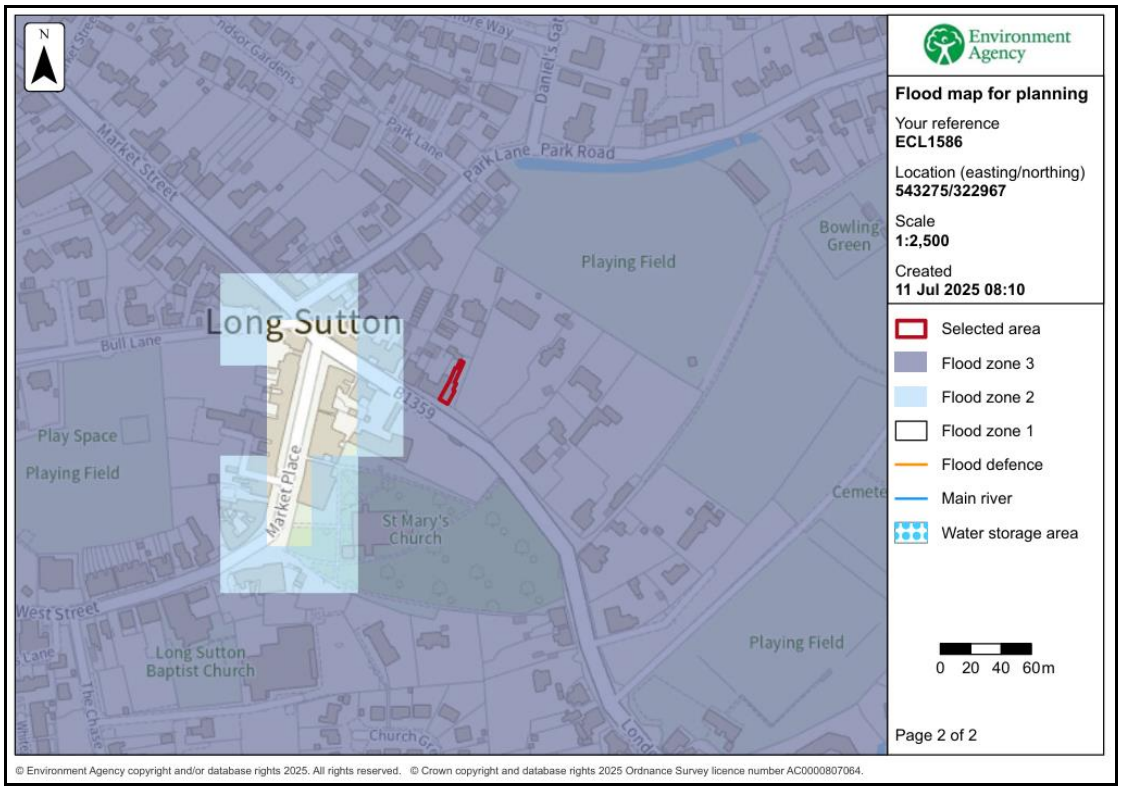


Figure 2 – Environment Agency Flood Map for Planning

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 surface water flooding in Table 1 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 low chance (between 0.1% and 1% chance each year)	No data available	No data available	No data available
Surface Water	The site is outside the area with a low chance (between 0.1% and 1% chance each year)	Not at risk	The site is outside the area with a low chance (between 0.1% and 1% chance each year)	Not at risk
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 outside the 'Low Hazard' area	Part of the site is in the 'Danger for Some ' area
Residual Peak Depth Map for the 1% fluvial and 0.5% tidal	The site is not at risk.	Part of the site is in an areas with a flood depth between 0.5m and 1.0m

Table 2 – Flood Risk within SFRA Maps

3.0 FLOOD RISK VULNERABILITY

3.1 The Sequential and Exception Test

The NPPF requires the application of a Sequential Test to ensure that new development is in areas with the lowest probability of flooding.

The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

3.2 Vulnerability Classification

Table 2 of the PPG Flood Risk and Coastal Change categorises different types of uses and development according to their vulnerability to flood risk. The proposed development is covered by the description of buildings used for dwellings and is classified as 'More Vulnerable'.

Table 3 of the PPG Flood Risk and Coastal Change sets out Flood Risk Vulnerability and flood zone 'compatibility'. The site is in Flood Zone 3 and the development is 'More Vulnerable' therefore it is necessary to complete the Exception Test.

PPG Flood Risk and Coastal Change defines that the lifetime of the development in terms of flood risk and coastal change is 100 years.

3.3 Application of the Sequential and Exception Test

It is for the Local Planning Authority, using the evidence provided and taking advice from the Environment Agency as appropriate, to consider whether an application passes the Sequential Test.

Paragraph 033 of planning practice guidance (PPG) on Flood Risk and Coastal Change states that 'The Sequential Test does not need to be applied for applications for Change of Use (except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site)'.

Paragraph 048 of the PPG states that 'A Change of Use may involve an increase in flood risk if the vulnerability classification of the development is changed. In such cases, the applicant will need to show in their flood risk assessment that future users of the development will not be placed in danger from flood hazards throughout its lifetime.' The mitigation measures proposed in Section 5.2 of this flood risk assessment are such that risks to future users are mitigated.

The Exception Test requires consideration of the wider sustainability benefits of a development and that the development would be safe and residual risks managed.

The Local Plan has a target of a net increase of at least 11,681 dwellings in South Holland over the 25-year local plan period. The Plan considers this new housing is

required to ensure the sustainability of the Local Plan area. The proposed development will contribute to this target.

Section 5 of this Flood Risk Assessment describes the flood mitigation measures and the management of the residual risks, demonstrating that this development will be safe and not increase flood risk elsewhere. The development is considered to pass the Exception Test.

4.0 SITE SPECIFIC FLOOD RISK

4.1 Local Flood Assets

The site is 5.2km west of the tidal River Nene. The site is protected by the River Nene tidal defences between Wisbech and Sutton Bridge. The River Nene is 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 Watercourse 150m north of the site. The site and the surrounding land are within the Lutton Leam catchment and which discharges to the tidal River Nene at Lutton Leam Tidal 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.

4.2 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 4.3.
Surface Water Flooding	Based upon the EA maps the risk is very low.
Fluvial Flooding	The risk is assessed in Section 4.3.
Tidal Flooding	The risk is assessed in Section 4.3 and 4.6.
Reservoir Flooding	Based upon the EA maps the site is not at risk of flooding from reservoirs.
Groundwater Flooding	There is no evidence to suggest the site is at risk of groundwater flooding.

Table 3 – Sources of Flooding

4.3 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.

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 site benefits from defences on the River Nene that provide protection during a 0.5% annual probability (1 in 200 chance each year) tidal event and a 1% annual probability (1 in 100 chance each year) fluvial event.

4.4 Historic Flooding

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

4.5 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 in the River Nene.

The River Nene tidal defences have been designed to include an allowance for climate change.

In summary the existing systems and defences are appropriate for the design life of the development (i.e. 100 years).

4.6 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 residual peak depth in 2116. When climate change allowances are applied to the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 100 chance each year) tidal event the peak depth at the site from direct overtopping together with breach failure is between 0.5m and 1.0m. An extract from this map is shown in Figure 3 below.

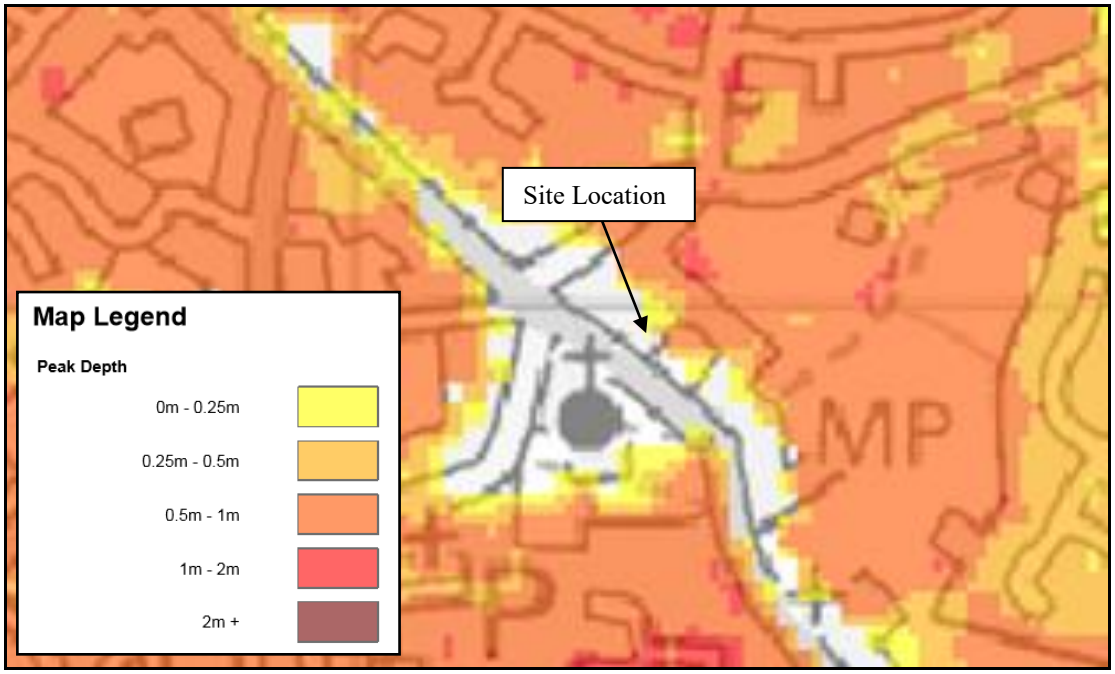


Figure 3 – SFRA 2116 Residual Peak Depth Map (0.5% annual probability)

The lower ground floor is at risk during a breach.

5.0 FLOOD RISK MITIGATION

5.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Lutton Leam Tidal Sluice 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 overtopping and a breach in the defences in 2116. The maps show that the peak flood depth, which occurs in the northern part of the site, is between 0.5m and 1.0m.

There will be no increase in impermeable area associated with the development so there is no potential that flood risk will be increased elsewhere.

These risks will be addressed through the mitigation measures set out below.

5.2 Mitigation Measures

The site has a low 'actual risk' of flooding. There is no increase in risk associated with the proposed conversion. Within the proposed dwelling all sleeping accommodation will be above the flood level.

It is recommended that the conversion of the lower ground floor considers 1.0m of flood resilient (recovery) construction above finished floor level.

The developer should ensure that the eventual 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.

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 Lutton Leam Tidal Sluice 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.

6.0 CONCLUSIONS

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

- The proposed development consists of the conversion of five flats to form one dwelling at 31 High Street, Long Sutton.

- 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 tidal River Nene that provide protection during the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 200) tidal event including climate change.

- There is a residual risk to the site associated with a breach of the tidal defences with a maximum flood depth in the northern part of the site between 0.5m and 1.0m that could affect the lower ground floor.

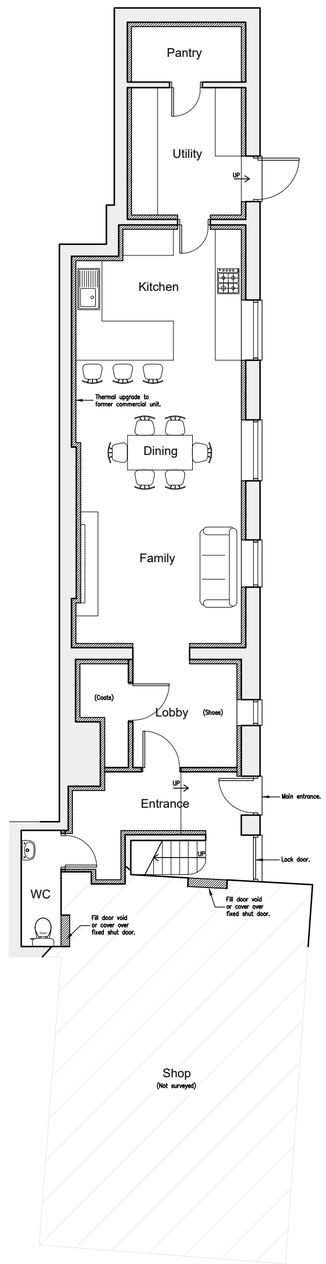
- It is recommended that the conversion of the lower ground floor considers 1.0m of flood resilient (recovery) construction above finished floor level and the occupants of the dwelling receive flood warnings.

- The development passes the Sequential Test and Exception Test and is therefore suitable for the proposed location.

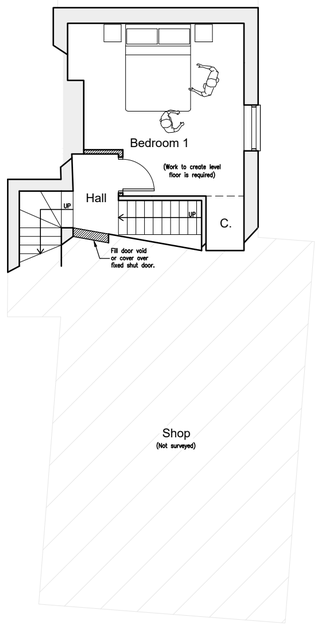
ATTACHMENT 1

EXISTING AND PROPOSED FLOOR PLANS
(DWG 7221/PL01)

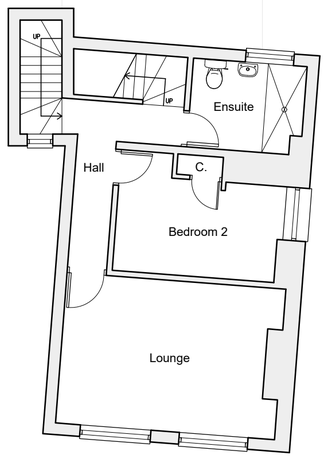
SITE AND LOCATION PLAN
(DWG 7221/PL02)



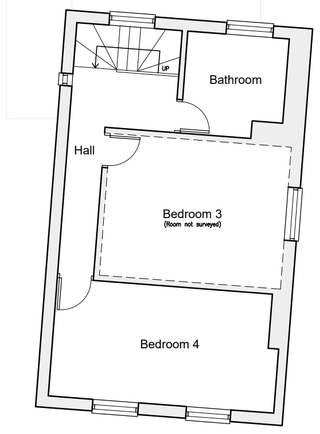
Proposed Lower Ground Floor 1:100



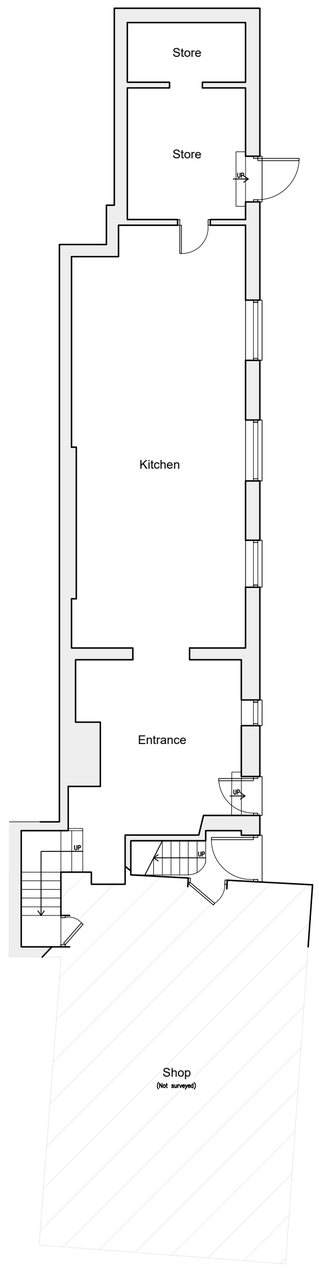
Proposed Ground Floor 1:100



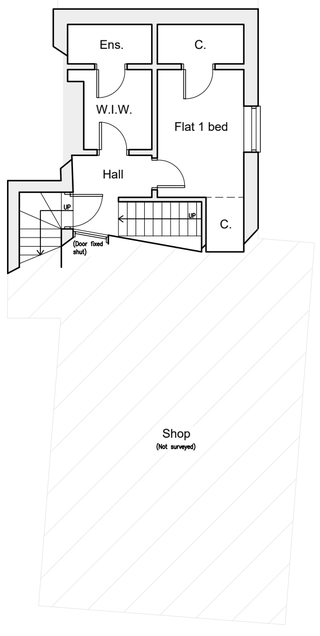
Proposed First Floor 1:100



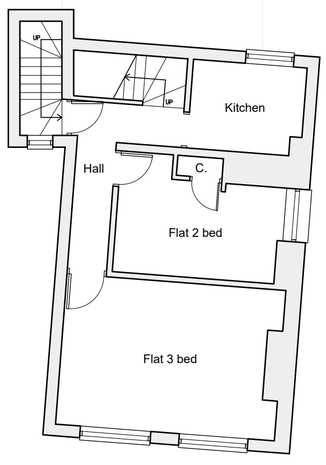
Proposed Second Floor 1:100



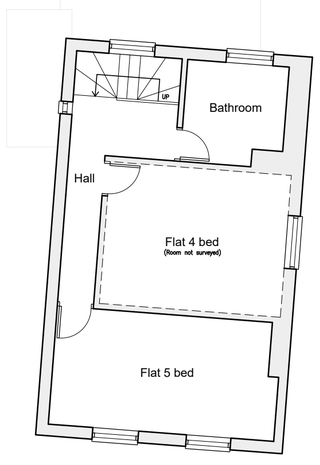
Existing Lower Ground Floor 1:100



Existing Ground Floor 1:100



Existing First Floor 1:100



Existing Second Floor 1:100

A -

REVISIONS

JOB NO.	PAPER SIZE	DATE
7221/PL01	A1	JUNE 2025

CLIENT
MR R GREEN

PROJECT
CONVERSION AND CHANGE OF USE.

SITE
31 HIGH STREET
LONG SUTTON
LINCOLNSHIRE
PE12 9DB

DRAWING
COMBINATION DRAWING

PETER HUMPHREY ASSOCIATES

ADDRESS: 2 CHAPEL ROAD, WISBECH, CAMBS, PE13 1RG.

TELEPHONE: 01945 466966
E-MAIL: info@peterhumphrey.co.uk
WEB: www.peterhumphrey.co.uk

Existing and Proposed Site Plan 1:200

Location Plan 1:1250

N

A -
REVISIONS

PETER HUMPHREY
ASSOCIATES

ADDRESS: 2 CHAPEL ROAD, WISBECH, CAMBS, PE13 1RG.

TELEPHONE: 01945 466966
E-MAIL: info@peterhumphrey.co.uk
WEB: www.peterhumphrey.co.uk

CLIENT
MR R GREEN

PROJECT
CONVERSION AND CHANGE OF USE.

SITE
31 HIGH STREET
LONG SUTTON
LINCOLNSHIRE
PE12 9DB

DRAWING
SITE & LOCATION PLAN

JOB NO.	PAPER SIZE	DATE
7221/PL02	A2	JUNE 2025