

# Land at CO10 9NJ Preston St. Mary

## Level 2 Scoping Study Flood Risk Assessment

Report: NE23/009  
03 January 2024  
Rev. 00



**DOCUMENT CONTROL**

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1.0 EXECUTIVE SUMMARY

<b>Site Name &amp; Address:</b>	Land at CO10 9NJ, Preston St. Mary
<b>Client:</b>	James Crawford
<b>Present Site Use:</b>	Agricultural barns
<b>Proposed Site Use:</b>	Class Q conversion of barn to residential
<b>Flood Level Information</b>	Unfortunately, due to the age and type of modelling available for this location, the Environment Agency were unable to provide accurate flood levels for the main probability events.
<b>Summary:</b>	
<ul style="list-style-type: none"> <li>▪ Detailed flood mapping provided by the Environment Agency shows that the barn being considered for residential conversion is located within Flood Zone 3. The risk to the proposed development from fluvial sources is therefore <b>Moderate</b>.</li> <li>▪ The risk of Pluvial and/ or Reservoir flooding on-site is <b>Moderate</b>.</li> <li>▪ The risk of Sewer and/ or Groundwater flooding is <b>Negligible</b>.</li> <li>▪ In terms of sensitivity, the proposed development is classified as ‘More Vulnerable’. The proposed development is considered as a ‘minor development’ and the sequential test need not be applied.</li> </ul>	
<b>Recommendations:</b>	
<ul style="list-style-type: none"> <li>• The principal risk of internal flooding is associated with fluvial flooding. Additionally, the site is also at risk from surface water flooding and reservoir flooding. This risk is expected to increase during the design life of the development due to the effects of climate change. Any development proposal should account for this risk;</li> <li>• Finished floor levels should be set as high as reasonably practicable, and no lower than existing floor levels. Flood resilient construction techniques should be adopted to a height of approximately 43.2m AOD;</li> <li>• SuDS-compliant surface water drainage features should be considered as part of any detailed drainage design. These are likely to take the form of an attenuated discharge into the adjacent inland river;</li> <li>• Professional advice should be sought in connection with dampproofing, which must comply with BS8102:2009; and</li> <li>• A flood response plan should be prepared to further reduce the residual risk to future occupants.</li> </ul>	





## Land at CO10 9NJ, Preston St. Mary

### 2.0 INTRODUCTION

#### 2.1 Brief

- 2.1.1 JPC Environmental Services were appointed to produce a Level 2 Flood Risk Assessment (FRA) to support a planning application for a Class Q residential conversion of an agricultural building located at Land at CO10 9NJ, Preston St. Mary (hereafter referred to as 'the site').
- 2.1.2 Authority to carry out this work was received by email on Wednesday, 25 October 2023, from James Crawford, for whom this report shall be for the private and confidential use. It should not be reproduced in whole or in part or relied upon by a third party for any use without the express written authority of JPC Environmental Services.
- 2.1.3 This Flood Risk Assessment has been written in accordance with, and meeting the requirements of, the National Planning Policy Framework (NPPF), and takes into account 'Standing Advice' issued by the Environment Agency (EA).
- 2.1.4 In producing this report, we have exercised all reasonable skill, care and diligence to be expected of an appropriately qualified and competent consultant, experienced in carrying out equivalent services for similar developments.

#### 2.2 Scope

- 2.2.1 The main objectives of this investigation and risk assessment were to:
- Source detailed flood mapping from the Environment Agency (EA);
  - Ascertain the potential extent of fluvial/ tidal flood zones via a comparison of the detailed mapping against a detailed GPS based topographical survey of the site;
  - Research local incidents of flooding, which may have impacted the site;
  - Explore the risk of pluvial flooding not directly associated with a watercourse;
  - Explore the potential impact of the development with regard to surface water runoff;
  - Make recommendations on any additional investigations or hydraulic modelling required; and
  - Make recommendations regarding any flood mitigation or drainage measures required.

#### 2.3 Location

- 2.3.1 Address: Land at CO10 9NJ, Preston St. Mary
- 2.3.2 Grid Reference: Easting: 595550 Northing: 249922
- 2.3.3 A detailed map of the location is presented within the appendices.

#### 2.4 Site Description

- 2.4.1 The site is occupied by two agricultural buildings, with associated access and areas of soft vegetation. The site is bounded by additional fields in all directions. The site is considered to be approximately 93.5% permeable.



## Land at CO10 9NJ, Preston St. Mary

2.4.2 The site is accessed off an unnamed road to the south-west. See figure below.



Imagery ©2023 CNES/ Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map Data ©2023

Figure 1 – Google Extract of Site Location

## 2.5 Site Setting

### Geology

2.5.1 To determine the nature of the underlying geology, we have consulted the 1:50,000 scale geological maps compiled by British Geological Survey (BGS). Based on these maps, the site is likely to be underlain by superficial deposits comprising Alluvium (clay, silt, sand and gravel) to the north, Head (clay, silt, sand and gravel) to the south, and Lowestoft Formation (diamicton) to the south. These are underlain by bedrock geology comprising Crag Group (sand).

2.5.2 Superficial deposits of Lowestoft Formation (sand and gravel) are located approximately 170m to the south-east.

### Hydrology & Hydrogeology

2.5.3 The site lies within the Old River Brett Water Body Catchment. The underlying superficial deposits are classified as Secondary A Aquifer to the north, and Secondary Undifferentiated to the south. The bedrock geology is classified as Principal Aquifer. The site is located within Groundwater Source Protection Zone 3 (Total Catchment) and a drinking water safeguard zone for surface water. The site is not within a drinking water safeguard zone for groundwater.



## Topography

2.5.4 As part of our desk-based research, we have been provided with a detailed GPS based topographical survey of the site and surrounding area, completed in December 2023 by BB Surveys. The survey reveals that the site slopes downwards from the south of the site to the north. The River Brett is along the north-eastern boundary, and there are ditches along the western, south-eastern, and south-western boundaries. There are grass banks along the River Brett and the south-eastern ditch. Outside the ditches and banks, ground levels range between 44.45m AOD (on the southern boundary) to 42.03m AOD (towards the north-east of the site). The ground near to the existing barns varies between 42.11m AOD for the north-eastern barn, and 42.28m AOD for the southern barn.

## 2.6 Development Proposal

2.6.1 The proposal comprises the conversion of an agricultural building into residential accommodation via a class Q application. At the time of this assessment, no plans of the final architectural layout were made available to us. See Figure 2 below, a copy of the site location plan is included within the appendices.

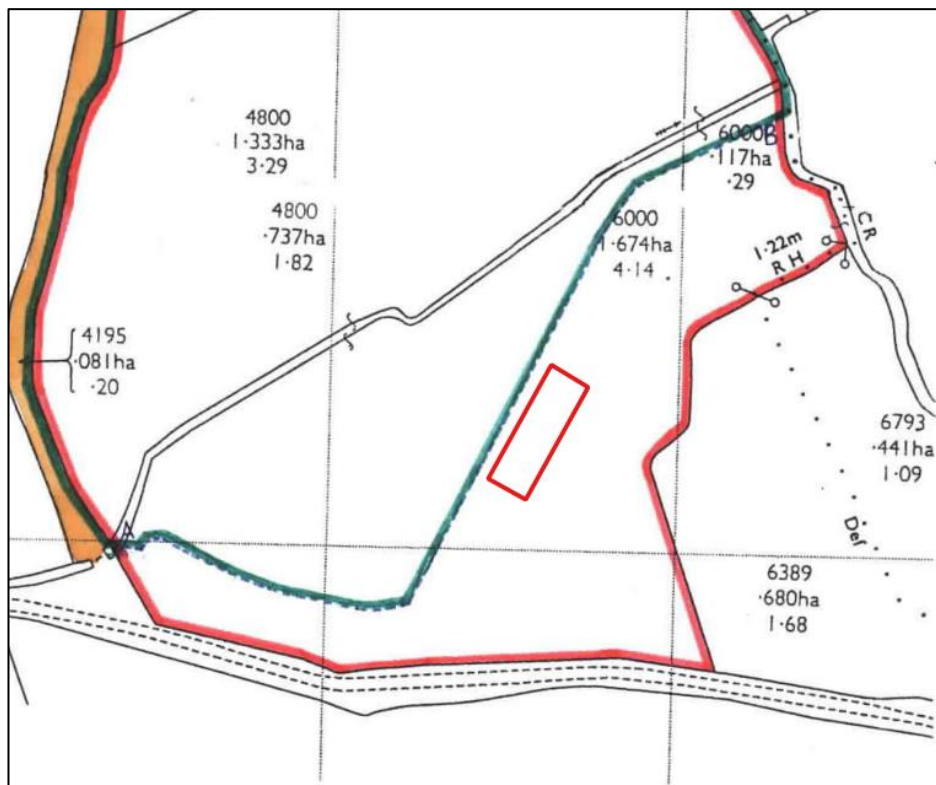


Figure 2 - Existing Site Layout (extract)

## 2.7 Flood Risk Vulnerability Classification

2.7.1 Developments are classified based on their sensitivity to flood risk, the vulnerability of this residential conversion is shown below.

More Vulnerable
<ul style="list-style-type: none"> <li>Hospitals</li> <li>Residential institutions such as residential care homes, children’s homes, social services homes, prisons and hostels.</li> </ul>
<ul style="list-style-type: none"> <li>Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.</li> </ul>
<ul style="list-style-type: none"> <li>Non-residential uses for health services, nurseries and educational establishments.</li> <li>Landfill* and sites used for waste management facilities for hazardous waste.</li> <li>Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.</li> </ul>

Figure 3 - Flood Risk Vulnerability Classification - NPPF (extract)

## 3.0 BACKGROUND TO FLOOD RISK AND REGULATORY CONTEXT

### 3.1 Current Guidance

3.1.1 In relation to flood risk, planning policy in England is currently guided by the National Planning Policy Framework (NPPF) and the associated flood risk guidance. The purpose of the NPPF is to ensure that flood risk is taken into account at each stage of the planning process and that new developments are steered towards lower risk areas (flood zone 1) in preference to higher risk areas (flood zone 3).

3.1.2 At all levels policy relies on a series of predicted flood zones, which are defined by the Environment Agency according to the annual event probability (AEP). These zones are: -

- **Zone 3b** – Functional flood plain, greater than 5% AEP
- **Zone 3a** – Areas with greater than 1% AEP fluvial flooding or 0.5% AEP tidal flooding.
- **Zone 2** – Extreme flood plain – 1 to 0.1% AEP fluvial or 0.5 to 0.1% AEP tidal flooding.
- **Zone 1** – Outside the flood plain – Land with less than 0.1% AEP of tidal or fluvial flooding.

### 3.2 Sequential/ Exception Tests

3.2.1 The NPPF advises local authorities, developers and consultants to follow a sequential, risk-based approach to identifying land suitable for development. The proposal comprises the conversion of agricultural buildings to residential accommodation.

3.2.2 Residential buildings, such as the proposed, are typically classified as ‘More Vulnerable’ due to the long periods of time when the building is occupied and the potential for delayed evacuation should a flood warning be issued. However, as the proposed development involves a change of use (from agricultural to residential), the sequential test need not be applied, in this case.



## 4.0 **DESK STUDY**

### 4.1 **Sources of Information**

4.1.1 As part of the desk-based research, JPC Environmental Services consulted the following sources of information:

- Indicative Flood Map for Planning;
- Environment Agency LiDAR Data;
- BB Surveys Topographical Survey;
- EA Detailed Flood Mapping;
- DEFRA Magic Mapping;
- BGS Geological Mapping and Borehole Records;
- OS Mapping;
- Babergh and Mid Suffolk Level 1 / Level 2 Strategic Flood Risk Assessment;
- Anglian Water asset map; and
- Groundsure Flood.

### 4.2 **Potential Sources of Flooding**

4.2.1 In line with the recommendations contained in the NPPF, we have explored the various potential sources of flooding, which could potentially impact the site both before and after the proposed development. This assessment will evaluate the following sources of potential flood risk:

- Tidal/ Fluvial flooding;
- Surface water (pluvial) flooding;
- Groundwater flooding;
- Reservoir/ Artificial flooding; and
- Sewer flooding.

#### ***Tidal/ Fluvial Flooding***

4.2.2 To confirm the extent of the flood zones, JPC Environmental Services submitted a data request to the Environment Agency (EA) for more detailed mapping. The EA also provided information on relevant historic floods.

4.2.3 The detailed flood mapping, provided by the EA shows that the site lies within Flood Zones 1, 2 and 3. The fluvial River Brett is adjacent to the site to the north-east. A total of 3 no. drainage ditches are located to the east and west. See Figure 4 below.



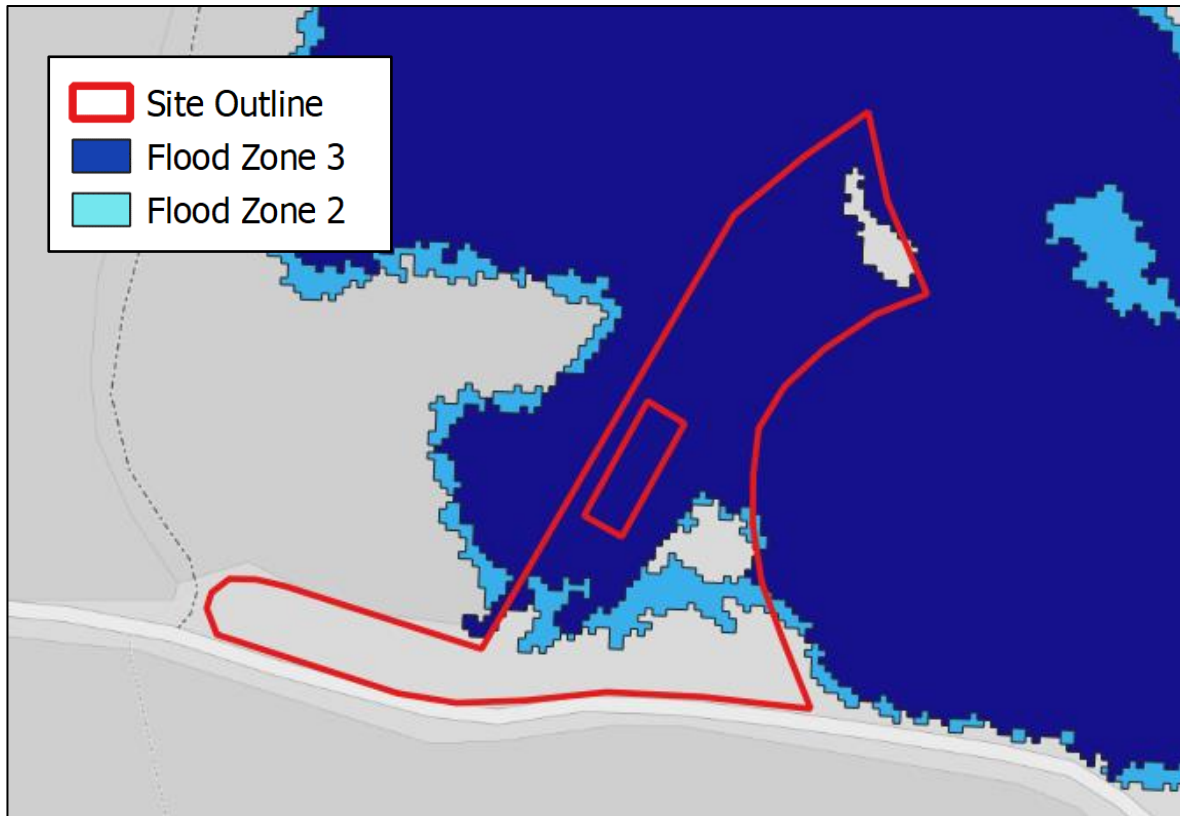


Figure 4 - Extract from EA Indicative Flood Mapping

- 4.2.4 The EA also confirmed that they have not undertaken any 2D modelling for this section of the watercourse and therefore do not have any detailed flood levels for the site. We have therefore made an assessment of the level of flood risk on-site by comparing the detailed flood map provided by the EA with a GPS-based topographical survey of the site. Overlaying the flood map onto the topographical survey indicates that Flood Zone 3 extends to approximately 42.4m AOD. However, this level is only indicative and not considered accurate enough for design purposes.
- 4.2.5 As the edge of Flood Zone 3 denotes the extent of the 1% AEP event (1 in 100 year event), the current predicted level of flooding during the design flood event (with no allowance for climate change) is in the region of 42.4mAOD.
- 4.2.6 When assessing the impact of climate change on fluvial flood levels, the EA has published a series of river flow allowances, which vary depending on the river basin district and vulnerability of the development. For a 'More Vulnerable' development in the Anglian river basin district, the EA advises that the 'Central' values should be utilised. However, in the absence of modelled flood levels, calculating climate change allowances in this way is not possible. We have therefore taken the precautionary allowance of 500mm. The resulting flood level (including an allowance for climate change) is approximately 42.9mAOD.
- 4.2.7 When including allowances for climate change, the entire northern part of the site is expected to flood to a maximum depth of 0.9m, during the 1% +cc design flood event. The whole footprint of the building is expected to flood to a depth of approximately 0.8m.





4.2.8 Based on the above, we consider the risk to the proposed development from fluvial flooding to be **Moderate**. However, this level of risk can be reduced by applying various mitigation measures detailed in Section 4.3 of this report.

**Surface Water (Pluvial) Flooding**

4.2.9 Pluvial flooding typically occurs when excessive rainfall occurs within a catchment to such an extent that it is unable to be absorbed by the underlying soils. Water that is unable to soak into the soil accumulates and migrates in line with the local topography, towards the nearest watercourse or surface water sewer. Due to the anticipated effects of climate change, this is expected to be a more frequent and increasing source of flood risk.

4.2.10 Pluvial flooding can be difficult to predict due to the difficulties in forecasting the location and volume of rainfall. In addition, local features can greatly affect the chance and severity of flooding. The EA defines pluvial flood risk as categories from ‘Very Low’ to ‘High’. These categories are:

- **Very Low** - area of less than 0.1% chance of flooding each year;
- **Low** - area of between 0.1% and 1% chance of flooding each year;
- **Medium** - area of between 1% and 3.3% chance of flooding each year. This category is designated the ‘design event’ for pluvial flooding; and
- **High** - area of more than 3.3% chance of flooding each year.

4.2.11 The EA’s pluvial flood risk mapping shows that the site is expected to experience flooding during all of the modelled flood events. See Figure 5 below.

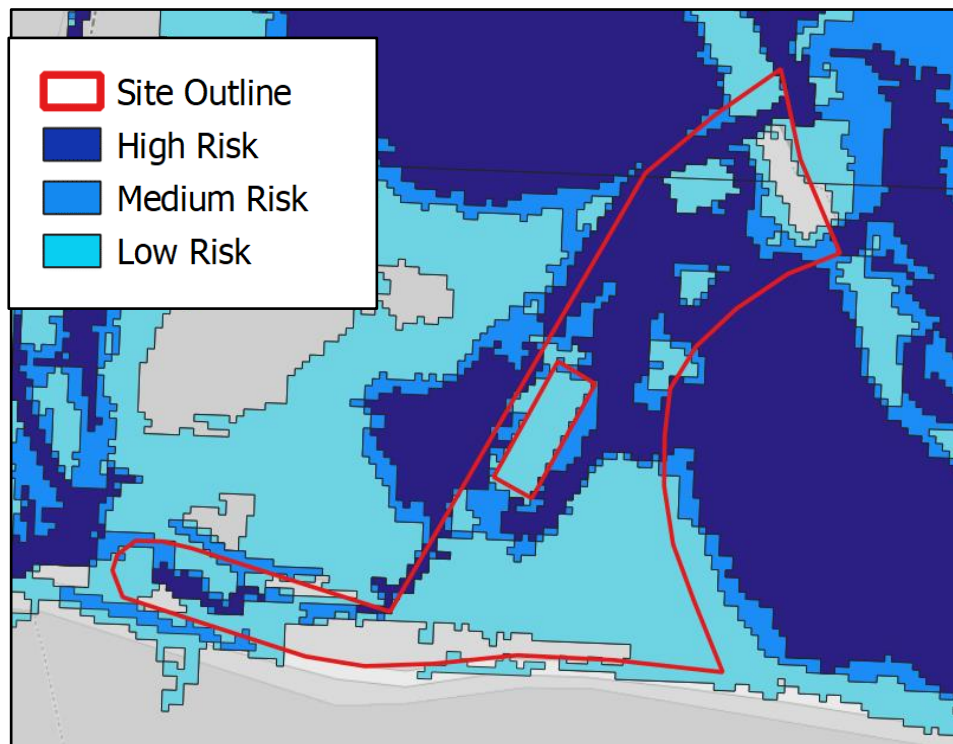


Figure 5 - Extent of surface water flooding (extract, data from Environment Agency)



Land at CO10 9NJ, Preston St. Mary

4.2.12 During the medium risk 'Design' flood event, the maximum depth of flooding is expected to be over 1.2m. However, this is limited to isolated low spots and perimeter ditches. The maximum depth around the existing building is expected to be between 0.3m and 0.6m. See Figure 6 below.

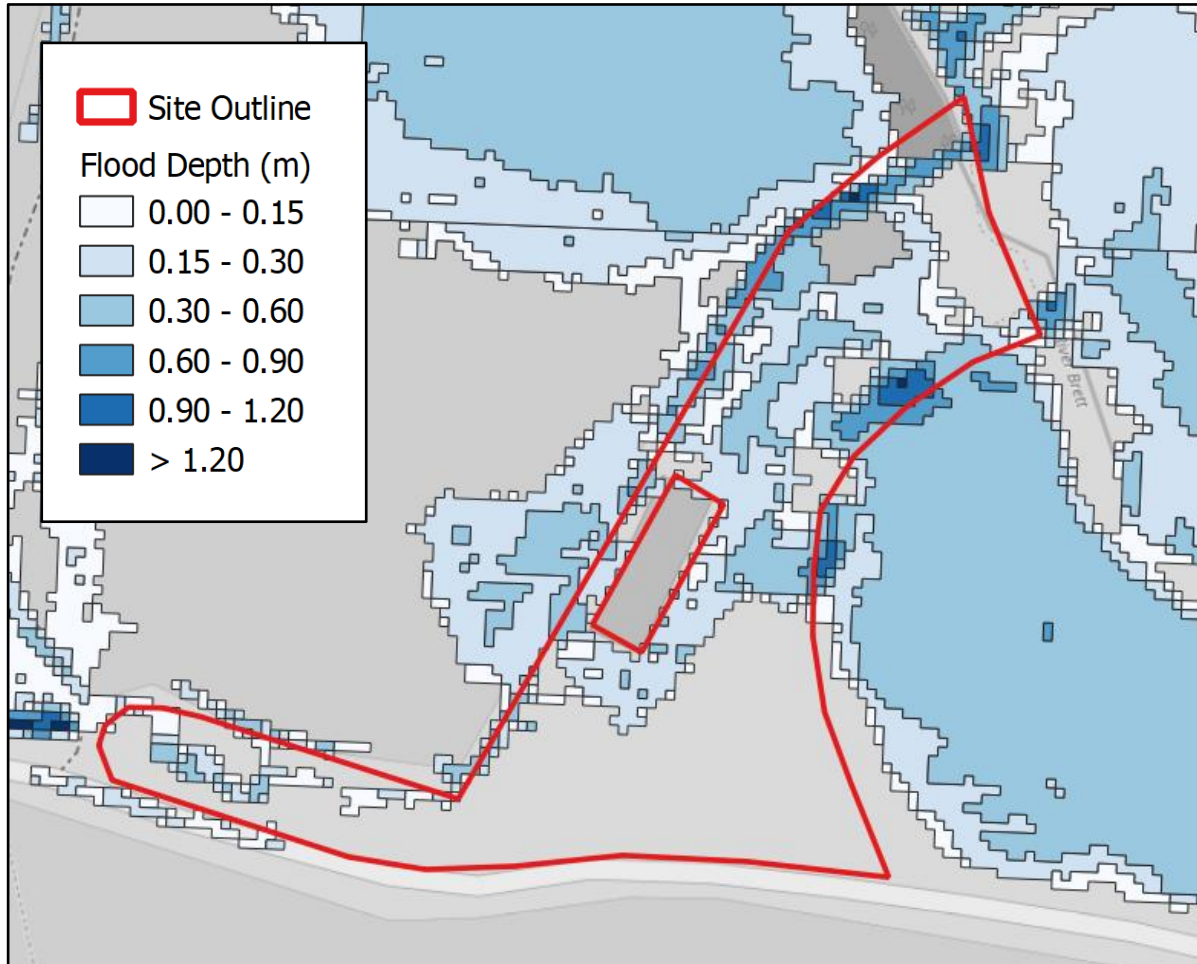


Figure 6 - Depth of surface water flooding, Medium risk event (extract, data from Environment Agency)

4.2.13 The maximum speed of flood waters is expected to be between 0.5 and 1.0m/s. When combined with the flood depths described above, the maximum hazard level is between 1.25 and 2.00. This is reduced to between 0.75 and 1.25 around the existing building. These figures constitute a 'danger for most' when between 1.5 and 2.5, and a 'danger for some' when between 0.75 and 1.5. See Figures 7 and 8 below.

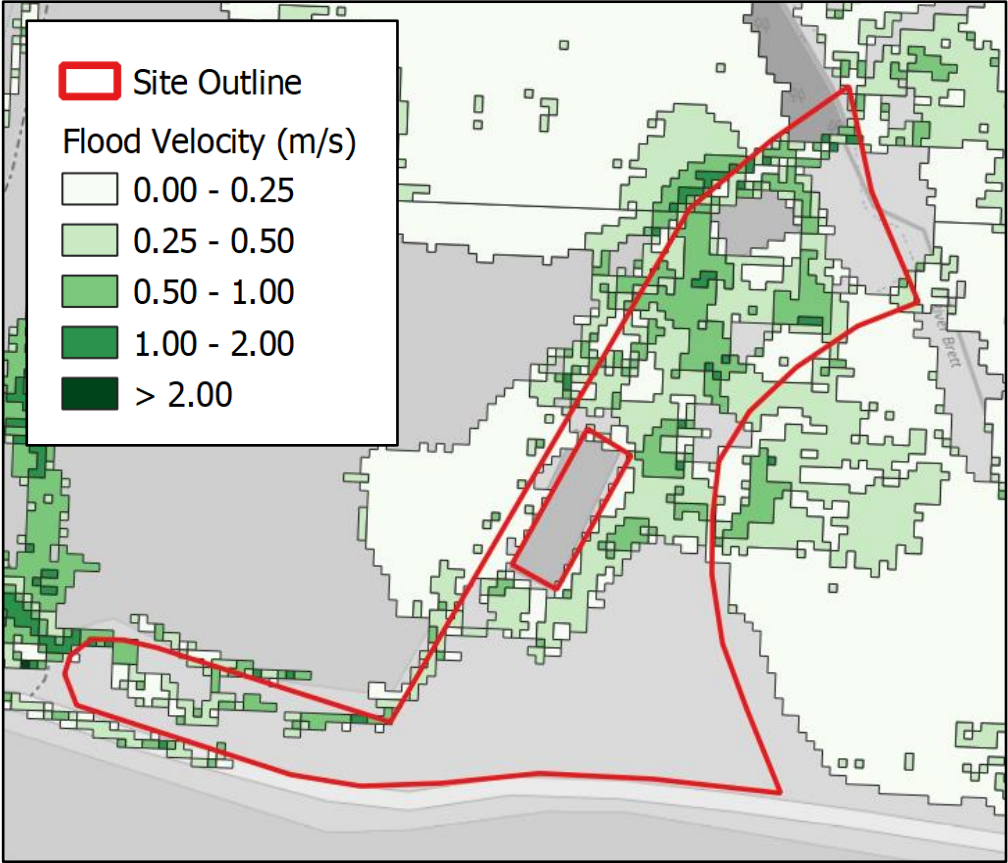


Figure 7 - Velocity of surface water flooding, Medium risk event (extract, data from Environment Agency)

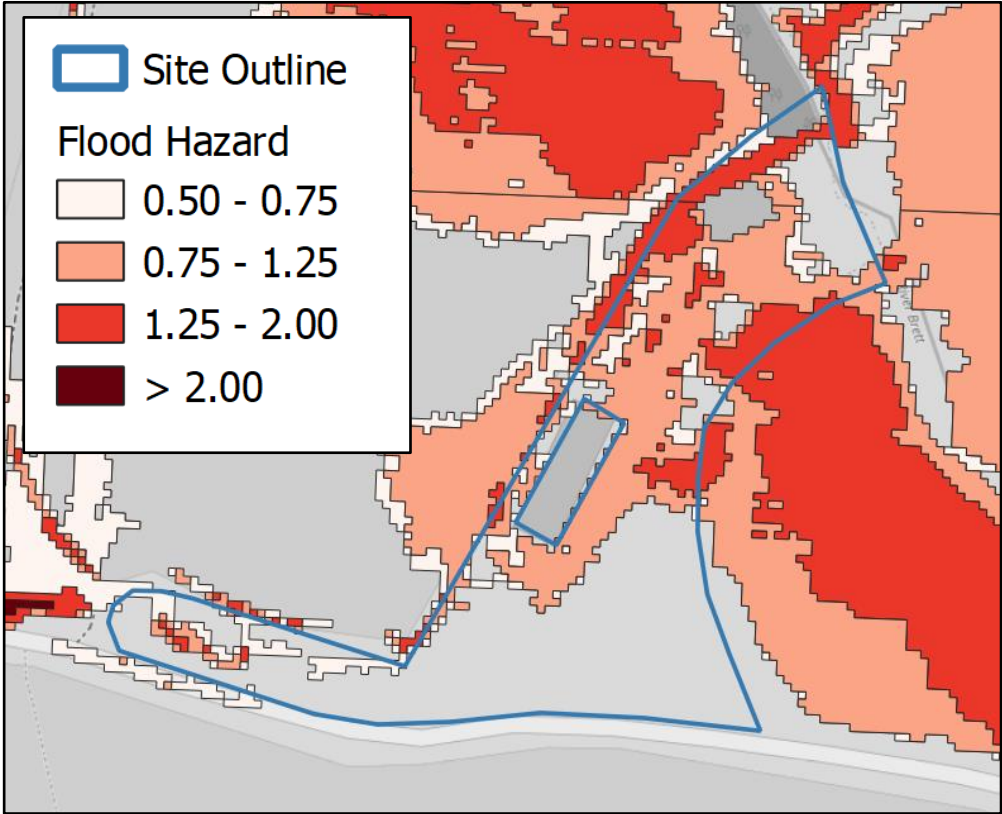


Figure 8 - Hazard of surface water flooding, Medium risk event (extract, data from Environment Agency)



## Land at CO10 9NJ, Preston St. Mary

4.2.14 Based on the above, we consider the risk of flooding from surface water to be **Moderate**.

4.2.15 The proposed development will not result in any increase in the area of impermeable surfacing on site. However, surface water runoff is expected to increase during the design life of the development due to the effects of climate change. Consideration should therefore be given to the inclusion of a SuDS compliant drainage design, when converting the existing barn to residential use.

### **Groundwater Flooding**

4.2.16 Groundwater flooding occurs when water levels in the underlying soil rise, after prolonged rainfall. The areas at most risk are often low-lying areas where the water table is more likely to be at a shallow depth and flooding can be experienced through water rising up from the underlying aquifer or from water flowing from springs.

4.2.17 The GroundSure Flood report identifies the risk of groundwater flooding to be low. This level of risk indicates that basement areas are unlikely to be affected during a 1 in 100-year groundwater flood event occur. As the proposal comprises solely above ground construction, we consider the overall risk of groundwater flooding to be **Negligible**.

### **Reservoir/Artificial Flooding**

4.2.18 Non-natural sources of flooding include reservoirs, canals and lakes where water is retained above natural ground level and industrial processes such as quarrying, as they may increase floodwater depths and velocities in adjacent areas. The potential effects of flood risk management infrastructure also need to be considered.

4.2.19 The 'extent of flooding from reservoirs' mapping provided by the Environment Agency shows that the site and existing building lie within an area known to be at risk from reservoir flooding during both dry-day and wet-day scenarios. The dry-day scenario is defined by the EA as the predicted flooding that would occur if the reservoir fails when the rivers are at normal levels, and the wet-day scenario is defined as flooding that would occur from a reservoir failure at the same time as the river having already overflowed its banks. The risk of reservoir flooding to the site is therefore considered to be **Moderate**.

4.2.20 The predicted flooding is associated with Rushbrook Farm reservoir, located approximately 1.2km to the north, and Birds Farm reservoir, located approximately 3.9km to the north-west.

### **Sewer Flooding**

4.2.21 To explore the potential risk of sewer flooding, we have purchased an asset map from Anglian Water. The report states that there are no recorded public sewers on site or within 200m of the site boundary. We therefore consider the risk of sewer flooding to be **Negligible**. A copy of the Anglian Water asset map is included within the appendices.





## Land at CO10 9NJ, Preston St. Mary

### 4.3 Proposed Mitigation Measures

4.3.1 The key objectives of flood risk mitigation are:

- To reduce the risk of the development being flooded;
- To ensure continued operation and safety during flood events;
- To ensure that flood risk downstream of the site is not made worse by increased runoff; and
- To ensure the development does not have an adverse impact on flood risk elsewhere.

#### Freeboard Allowance

4.3.2 When setting finished floor levels, the EA typically require developers to adopt a freeboard allowance on top of modelled flood levels to act as a factor of safety and account for wind driven wave action and other residual uncertainties.

4.3.3 The EA advises that the finished floor levels should be set no lower than existing floor levels or 300mm above the estimated flood level. Flood resistant materials should be used up to at least 300mm above the estimated flood level. In this case, the estimated flood level is 42.9m AOD, including an allowance for climate change.

4.3.4 As the proposed development comprises a change of use of an existing building, raising the floor level by a significant amount may not be possible, but should be considered. The floor should be raised as high as reasonably practicable, with flood resilient construction employed within the buildings up to the recommended threshold of 43.2m AOD.

4.3.5 Flood resilient construction measures that could be considered within the converted barn comprise the following:

- Raised floor level, with compensatory storage provided elsewhere on-site;
- Raised sockets on the ground floor;
- Non-absorbent insulation in the floor & walls;
- Non-absorbent floor coverings, such as ceramic tiles, polished concrete or similar;
- Non-return valves within foul drainage;
- Demountable flood boards to maximum height of 600mm – these could be left in-situ if the property is left unattended; and
- An escape of water/ moisture alarm, with text message functionality.

### 4.4 Access and Egress

4.4.1 During the design flood event, the converted barn may be surrounded by flood waters to a depth of approximately 0.12m. No flooding is predicted within the adjacent highway. Safe access and egress during this event can be maintained via the adjacent highway to the west. A dry causeway should be constructed linking the barn to the higher ground to the south-west. Levels along this route range from approximately 42.28m AOD adjacent to the existing barn, to 48.90m AOD approximately 260m to the west. See Figure 9 below.



Land at CO10 9NJ, Preston St. Mary

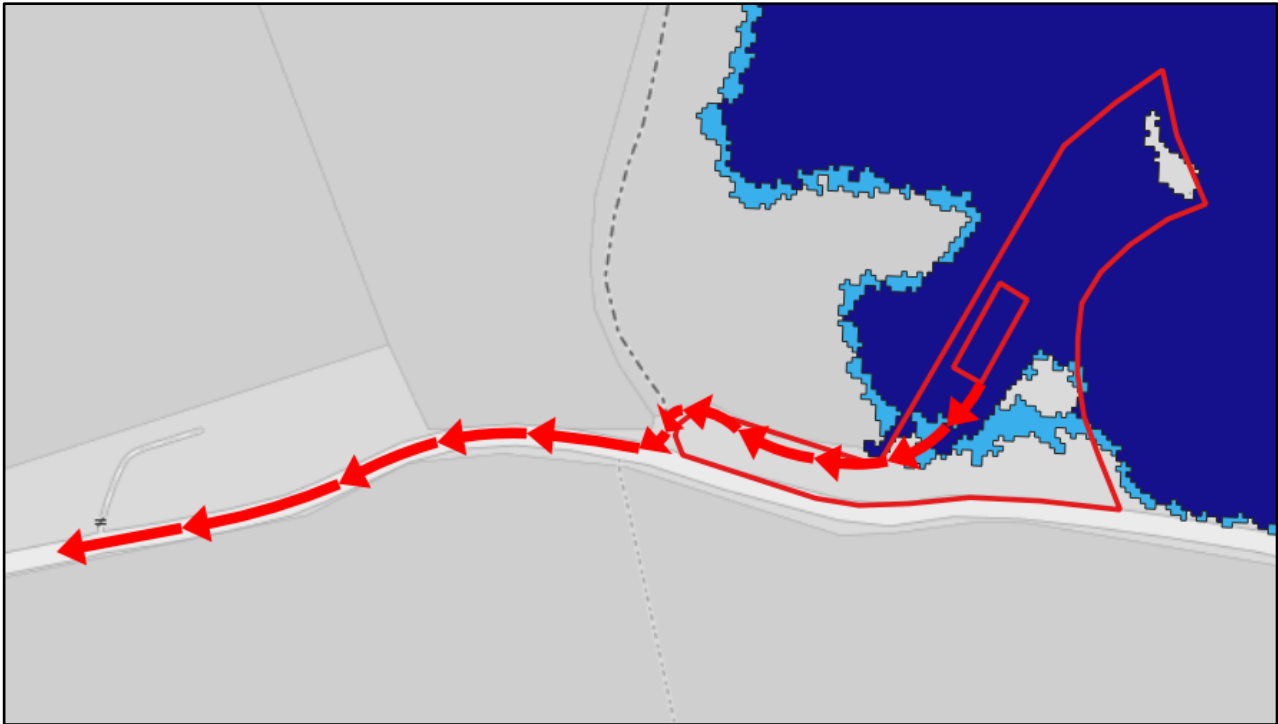


Figure 9 - Access/ Egress Routes





## 5.0 Drainage

### 5.1 Background And Policy

5.1.1 The Flood and Water Management Act 2010 National Standards and the NPPF require all new developments to ensure that peak discharge rate and volume of surface water runoff does not exceed that of the existing site.

### 5.2 Current Drainage Strategy

5.2.1 The site is currently occupied by both hard and soft landscaping, with areas of grass, existing buildings and access roads. We understand that there are no formal drainage arrangements for the site in its current state. Surface water that is unable to infiltrate locally is likely to flow towards one of the perimeter drainage ditches and into the River Brett.

### 5.3 Pre and Post Development Runoff Rates

5.3.1 Developers are required to demonstrate that the peak rate of surface water run-off from any given site is no greater for the developed site than it was previously, and where possible reduced rates of discharge are encouraged. The guidance also requires that peak rainfall intensity should be increased by an additional 45%, to take in to account the potential impact of climate change on future weather patterns, during the design life of the building.

5.3.2 Any additional volume of rainwater arising from a 1-in-100 year (1% AEP) storm event with a 6 hour duration should ideally be managed on site, using techniques such as infiltration, or recycled for non-potable applications such as flushing toilets or irrigation. Where this is not possible, post development discharges should be restricted to Greenfield rates.

5.3.3 The **Pre**-development runoff rates for the site have been calculated as follows:

- 1 in 1 year = 2.20 l/s
  - 1 in 30 year = 5.96 l/s
  - 1 in 100 year = 8.27 l/s
- } Based on 0.071 ha of 'impermeable' surfacing with the remainder of the site classified as 'permeable'

5.3.4 Although the development will not result in any increase in the area of impermeable surfacing, the effects of climate change should be considered as part of any detailed drainage design. The detailed calculations for both pre and post development run-off rates are presented within the appendices.

5.3.5 Current Building Regulations (2015) require foul water to be discharged 'in order of priority'; to a public sewer, a private sewer communicating with a public sewer, a package treatment plant, a septic tank, and finally to a cesspool if the other options are not available. As there are no public sewers within 200m of the site, It is recommended that any additional foul water is discharged into a package treatment plant.



## 6.0 SUMMARY / RECOMMENDATIONS

### 6.1 Summary

6.1.1 We understand the site is likely to be underlain by superficial deposits comprising Alluvium (clay, silt, sand and gravel) to the north, Head (clay, silt, sand and gravel) to the south, and Lowestoft Formation (diamicton) to the south. These are underlain by bedrock geology comprising Crag Group (sand).

6.1.2 The risk of fluvial flooding onsite is considered to be **Moderate**. The proposed development is classified as More Vulnerable and the sequential test need not be applied.

6.1.3 The risk of pluvial and/ or reservoir flooding on-site is considered to be **Moderate**.

6.1.4 The risk of groundwater, and/ or sewer flooding is considered to be **Negligible**.

### 6.2 Recommendations

6.2.1 Based on the information gathered as part of this desk-based risk assessment JPC Environmental Services would advise as follows:

- The principal risk of internal flooding is associated with fluvial flooding. Additionally, the site is also at risk from surface water flooding and reservoir flooding. This risk is expected to increase during the design life of the development due to the effects of climate change. Any development proposal should account for this risk;
- Finished floor levels should be set as high as reasonably practicable, and no lower than existing floor levels. Flood resilient construction techniques should be adopted to a height of approximately 43.2m AOD;
- SuDS-compliant surface water drainage features should be considered as part of any detailed drainage design. These are likely to take the form of an attenuated discharge into the adjacent inland river;
- Professional advice should be sought in connection with dampproofing, which must comply with BS8102:2009; and
- A flood response plan should be prepared to further reduce the residual risk to future occupants.

6.2.2 The opinions and recommendations expressed within this report are based on the results of desk-based research and information provided by third party agencies. No groundwater monitoring has been undertaken as part of this commission.



## **APPENDIX A**

### Site Location Plan



JPC Environmental Services (A division of J P Chick & Partners Limited) 7 Museum Street Ipswich IP1 1HQ	<b>Project:</b> Land at CO10 9NJ, Preston St. Mary
	<b>Job Number:</b> NE23/009
	<b>Scale:</b> NTS
<b>Drawing Title:</b> Site Location Plan	<b>Drawing Number:</b> 1

**These are the notes referred to on the following official copy**

The electronic official copy of the title plan follows this message.

Please note that this is the only official copy we will issue. We will not issue a paper official copy.

This official copy was delivered electronically and when printed will not be to scale. You can obtain a paper official copy by ordering one from HM Land Registry.

This official copy is issued on 11 August 2023 shows the state of this title plan on 11 August 2023 at 14:44:54. It is admissible in evidence to the same extent as the original (s.67 Land Registration Act 2002). This title plan shows the general position, not the exact line, of the boundaries. It may be subject to distortions in scale. Measurements scaled from this plan may not match measurements between the same points on the ground. This title is dealt with by the HM Land Registry, Kingston Upon Hull Office .

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# H.M. LAND REGISTRY

TITLE NUMBER

## SK150783

ORDNANCE SURVEY  
PLAN REFERENCE

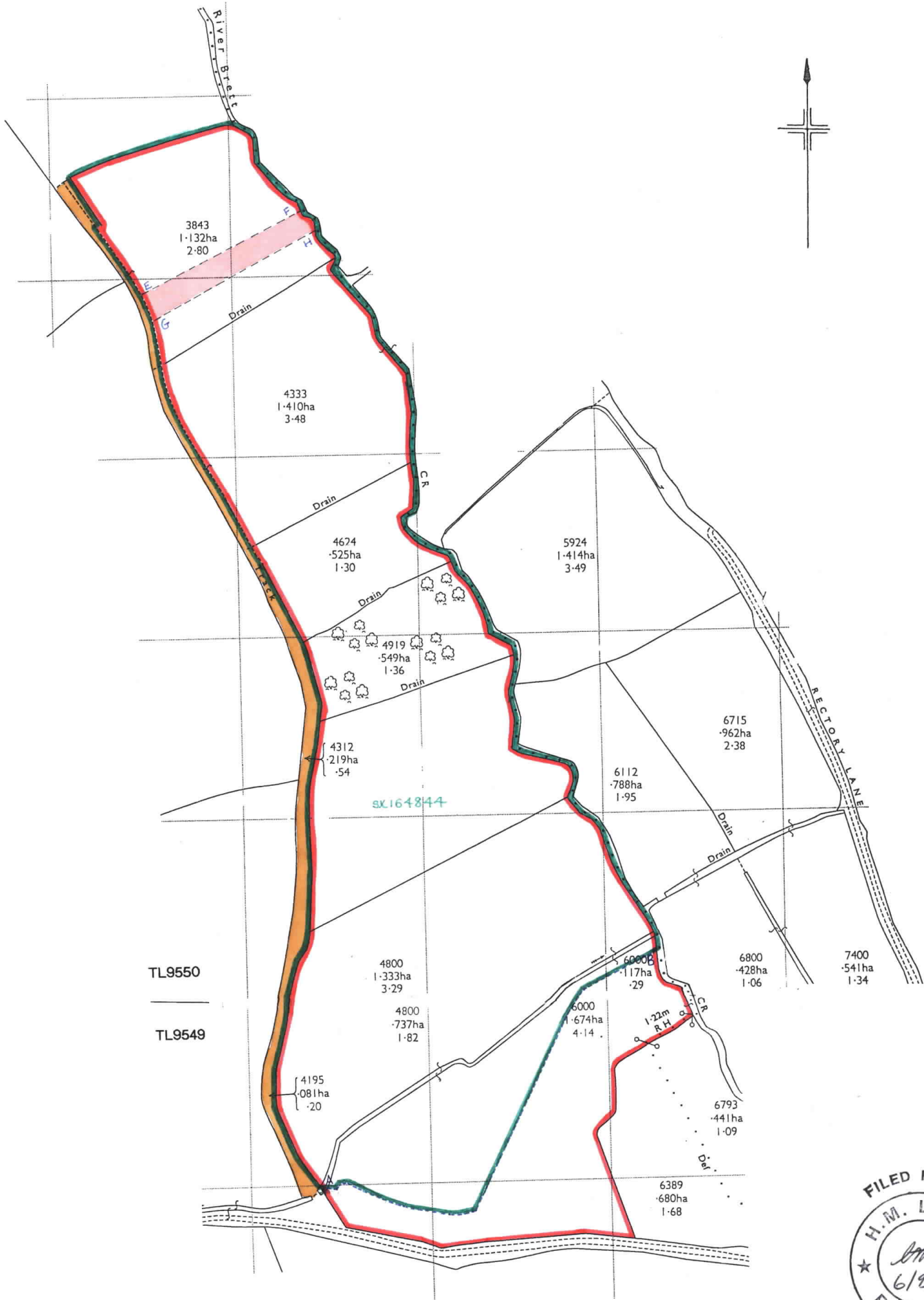
TL9549 TL9550

Scale  
1/2500

COUNTY SUFFOLK

DISTRICT BABERGH

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## **APPENDIX B**

### Environment Agency Information

# Flood risk assessment data

**Location of site:** 595573 / 249922 (shown as easting and northing coordinates)

**Document created on:** 10 November 2023

**This information was previously known as a product 4.**

**Customer reference number:** PRD6EDKDW1G9

Map showing the location that flood risk assessment data has been requested for.



## How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

**We recommend that you work with a flood risk consultant to get your flood risk assessment.**

## Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- historic flooding
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

## Not included in this document

This document does not include a Flood Defence Breach Hazard Map.

If your location has a reduced flood risk from rivers and sea because of defences, you need to request a Flood Defence Breach Hazard Map and information about the level of flood protection offered at your location from the East Anglia Environment Agency team at [enquiries\\_eastanglia@environment-agency.gov.uk](mailto:enquiries_eastanglia@environment-agency.gov.uk). This information will only be available if modelling has been carried out for breach scenarios.

Include a site location map in your request.

## Information that's unavailable

This document **does not** contain:

- flood defences and attributes
- modelled data
- climate change modelled data

We aren't able to display flood defence locations and attributes as there are no formal flood defences in the area of interest.

There is not any modelled data available for this location. This is because detailed modelling hasn't been carried out in this area.

There is not any modelled climate change data for this location. This is because detailed modelling hasn't been carried out in this area. You will need to consider the [latest flood risk assessment climate change allowances](#) and factor in the new allowances to demonstrate the

development will be safe from flooding.

## Surface water and other sources of flooding

Use the [long term flood risk service](#) to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

For information about sewer flooding, contact the relevant water company for the area.

## Terminology used

### Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occurring in any one year, is described as 1% AEP.

### Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

## **Flood map for planning (rivers and the sea)**

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change

This data is updated on a quarterly basis as better data becomes available.









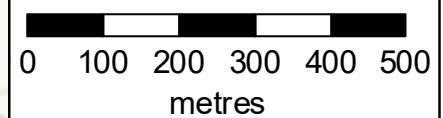
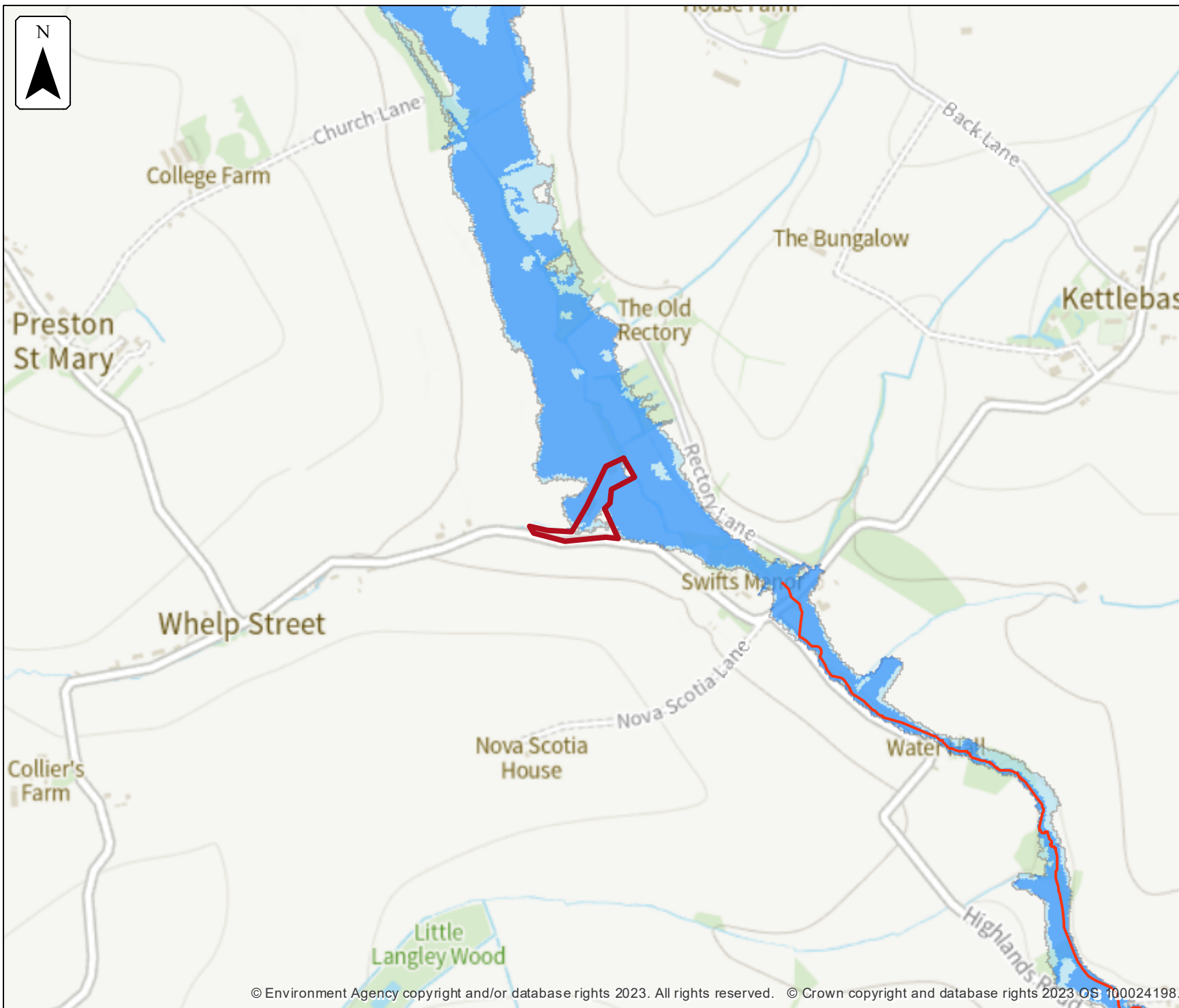
### Flood map for planning

Location (easting/northing)  
**595573/249922**

Scale  
**1:10,000**

Created  
**10 Nov 2023**

-  Selected area
-  Main river
-  Flood zone 3
-  Flood zone 2



## Historic flooding

This map is an indicative outline of areas that have previously flooded. Remember that:

- our records are incomplete, so the information here is based on the best available data
- it is possible not all properties within this area will have flooded
- other flooding may have occurred that we do not have records for
- flooding can come from a range of different sources - we can only supply flood risk data relating to flooding from rivers or the sea

You can also contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

[Download recorded flood outlines in GIS format](#)






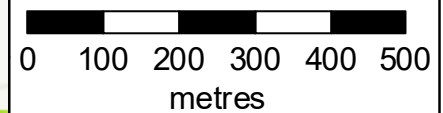
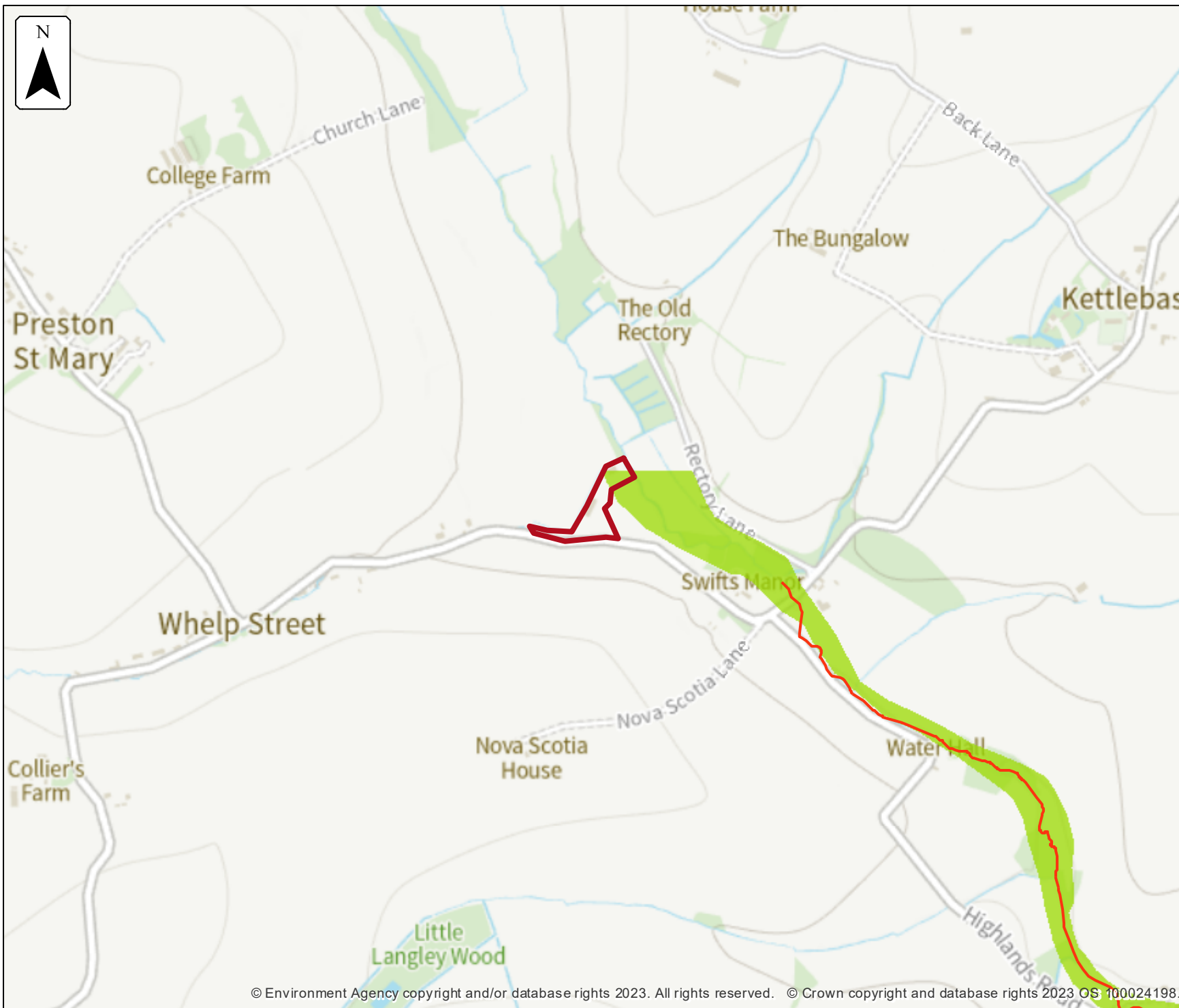
### Historic flood map

Location (easting/northing)  
**595573/249922**

Scale  
**1:10,000**

Created  
**10 Nov 2023**

-  Selected area
-  Main river
- Date of flood event
-  January, 1968



## Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
12 January 1968	15 January 1968	main river	channel capacity exceeded (no raised defences)	Yes

## Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

## About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

## Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

[Find out more about flood risk activity permits](#)

## Help and advice

Contact the East Anglia Environment Agency team at [enquiries\\_eastanglia@environment-agency.gov.uk](mailto:enquiries_eastanglia@environment-agency.gov.uk) for:

- [more information about getting a product 5, 6, 7 or 8](#)
- general help and advice about the site you're requesting data for



## **APPENDIX C**

### Groundsure Flood

Land at CO10 9NJ, Preston St. Mary, CO10 9NJ

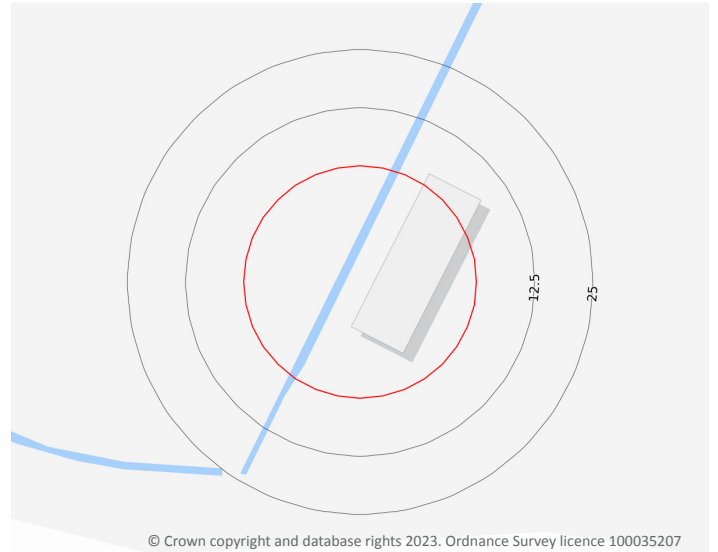
## Overall Flood Risk



**HIGH**

Groundsure Flood complies with relevant Law Society practice notes on flood risk in property transactions.

## Site plan



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## Search Results



### Rivers and the Sea

**High**

[page 3 >](#)



### Surface Water

**Significant**

[page 4 >](#)



### Groundwater

**Low**



### Historic Flood

**Not identified**



### Flood Defences

**No**



### FloodScore™ insurance rating

**High**

[page 6 >](#)

Full assessments for other environmental risks are available in additional Groundsure searches including the Groundsure Avista 7 in 1 report. Contact Groundsure or your search provider for further details.



## Overview of findings and recommendations

To save you time when assessing the report, we only provide maps and data tables of features within the search radius that we have identified to be of note. These relate to environmental risks that may have liability implications, affect insurance premiums, property values and/or a lender's willingness to lend.

You can view the fully comprehensive library of information we have searched on [page 5](#) >.



### Flooding

#### Flooding

An elevated level of flood risk has been identified at the property.

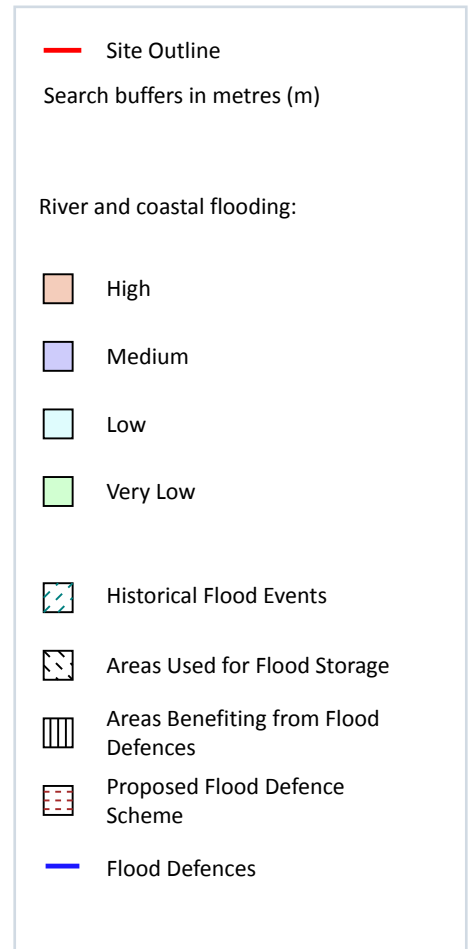
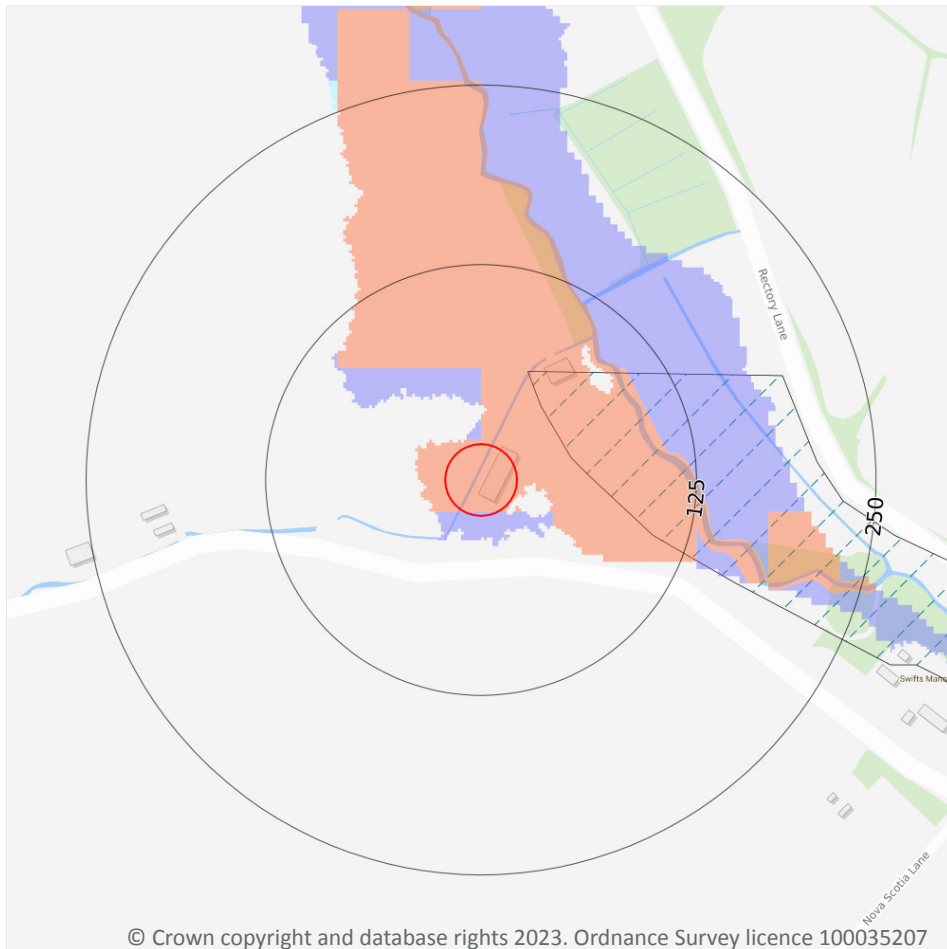
##### Next steps for consideration:

- check to see if the property is eligible for the Flood Re scheme, which enables many properties at risk of flooding to be insured at reasonable rates: <http://www.floodre.co.uk/homeowner/about-us/> ↗
- investigate the insurance on offer for the property to ensure any implications on premiums are fully understood before completion
- the assessment in this report is based on the highest flood risk found within the site boundary. The maps within the flood risk section clearly highlight which parts have a higher probability of flood risk, allowing you to visualise whether flood risk affects the buildings or the associated land. If required, we can provide an assessment that provides separate flood risk ratings for the main building and for the land/gardens around it. This assessment is carried out manually by one of our in house experts and can only be ordered by contacting our customer support team at [info@groundsure.com](mailto:info@groundsure.com) ↗
- if the property has recently been constructed, the flood risk assessment contained within this report will not take into account any measures put in place by the developer to deal with flooding. You should seek further information from the developer on flood risk mitigation for the site
- investigate the various forms of flood resistance and resilience measures that will help protect your property in the event of a flood

Please note this report has been run on a point location buffered to 25m to account for uncertainties of the size of the property. Therefore some risk assessments and measurements may be overestimated.



## Flooding / Risk of flooding from rivers and the sea



### Risk of flooding from rivers and the sea

The property has a High chance of flooding in any given year, according to Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) data. This could cause problems with insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: [www.floodre.co.uk/](http://www.floodre.co.uk/)

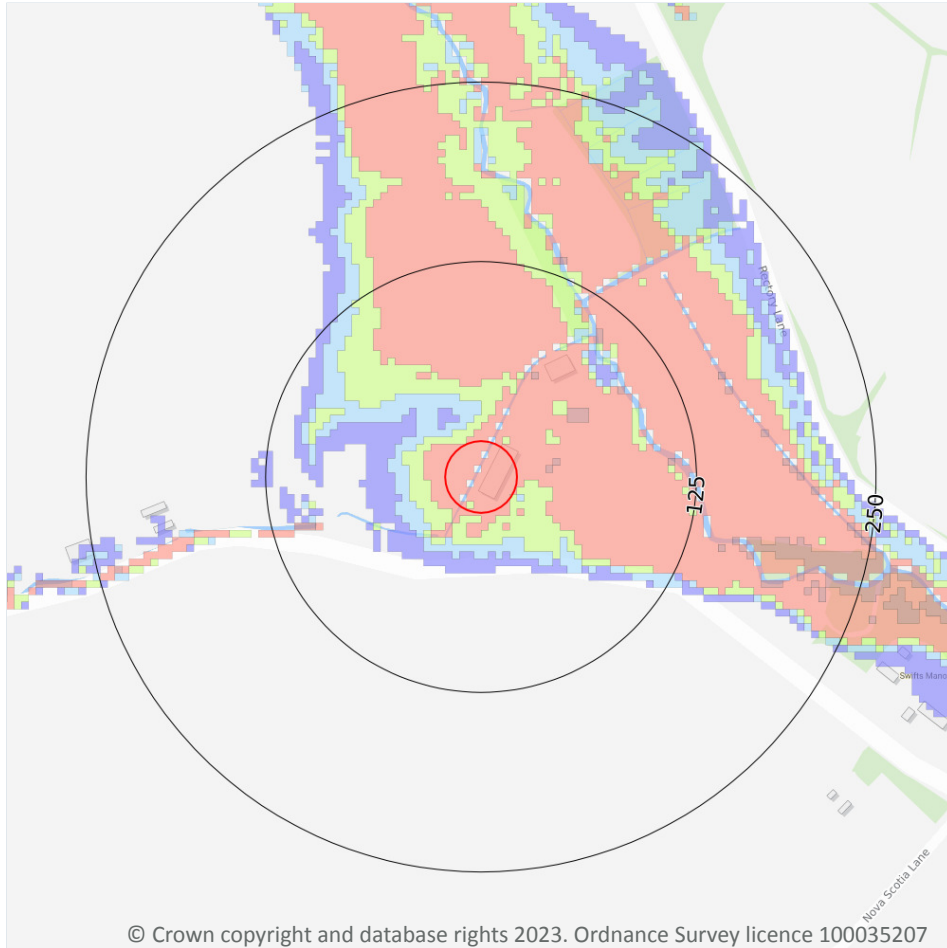
RoFRaS/FRAW assesses flood risk from rivers and the sea in England and Wales, using local data and expertise. It shows the chance of flooding from rivers or the sea, taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk. See [page 6](#) > for explanation of the levels of flood risk.

Please see [page 2](#) > for further advice.

This data is sourced from the Environment Agency and Natural Resources Wales.



**Flooding / Surface water flood risk**



— Site Outline

Search buffers in metres (m)

Surface water flood risk

- Highly significant
- Significant
- High
- Moderate to high
- Moderate
- Low to moderate
- Low

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**Surface water flood risk**

The property is likely to be prone to flooding following extreme rainfall, which may have an impact on insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: [www.floodre.co.uk/](http://www.floodre.co.uk/)

The area in which the property is located has been assessed to be at a Significant risk of surface water flooding. This area is considered to have a 1 in 30 probability of surface water flooding due to rainfall in a given year to a depth of between 0.3m and 1.0m. However, as is the case with probability statistics and predictions, this information should be used as a guideline only. The area may flood several years in a row, or not at all for many years. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

These risk calculations are based on Ambiental Risk Analytics maps.



## Datasets searched

This is a full list of the data searched in this report. If we have found results of note we will state "Identified". If no results of note are found, we will state "Not identified". Our intelligent filtering will hide "Not identified" sections to speed up your workflow.

### Flooding

#### Risk of flooding from rivers and the sea **Identified**

Flood storage areas: part of floodplain	Not identified
---	----------------

Historical flood areas	Not identified
------------------------	----------------

Areas benefiting from flood defences	Not identified
--------------------------------------	----------------

Flood defences	Not identified
----------------	----------------

Proposed flood defences	Not identified
-------------------------	----------------

#### Surface water flood risk **Identified**

Groundwater flooding	Not identified
----------------------	----------------



## Flood information

The Flood Risk Assessment section is based on datasets covering a variety of different flooding types. No inspection of the property or of the surrounding area has been undertaken by Groundsure or the data providers. The modelling of flood hazards is extremely complex and in creating a national dataset certain assumptions have been made and all such datasets will have limitations. These datasets should be used to give an indication of relative flood risk rather than a definitive answer. Local actions and minor variations, such as blocked drains or streams etc. can greatly alter the effect of flooding. A low or negligible modelled flood risk does not guarantee that flooding will not occur. Nor will a high risk mean that flooding definitely will occur. Groundsure's overall flood risk assessment takes account of the cumulative risk of river and coastal data, historic flood events and areas benefiting from flood defences provided by the Environment Agency/Natural Resources Wales (in England and Wales) and surface water (pluvial) and groundwater flooding provided by Ambient Risk Analytics. In Scotland the river and coastal flood models are also provided by Ambient Risk Analytics.

### Risk of flooding from rivers and the sea

This is an assessment of flood risk for England and Wales produced using local data and expertise, provided by the Environment Agency (RoFRaS model) and Natural Resources Wales (FRAW model). It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk.

The categories associated with the Environment Agency and Natural Resources Wales models are as follows:

RoFRaS (rivers and sea) and FRAW (rivers):

**Very Low** - The chance of flooding from rivers or the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

**Low** - The chance of flooding from rivers or the sea is considered to be less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

**Medium** - The chance of flooding from rivers or the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 100 (1%) in any given year.

**High** - The chance of flooding from rivers or the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

FRAW (sea):

**Very Low** - The chance of flooding from the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

**Low** - The chance of flooding from the sea is considered to be less than 1 in 200 (0.5%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

**Medium** - The chance of flooding from the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 200 (0.5%) in any given year.

**High** - The chance of flooding from the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

### Historic flood events

Over 86,000 events are recorded within this database. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that Environment Agency/Natural Resources Wales do not currently have records of flooding within the area. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

### Surface water flooding

Ambient Risk Analytics surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally vulnerable to surface water or "pluvial" flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1000 year rainfall events. The flood risks for these rainfall events are reported where the depth would be greater than the threshold for a standard property to modern building standards. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.



## Proposed flood defences

The data includes all Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards.

## Flood storage areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and Environment Agency/Natural Resources Wales, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

## Groundwater flooding

Groundwater flooding is flooding caused by unusually high groundwater levels. It occurs as excess water emerging at the ground surface or within underground structures such as basements. Groundwater flooding tends to be more persistent than surface water flooding, in some cases lasting for weeks or months, and it can result in significant damage to property. This risk assessment is based on a 5m Digital Terrain Model (DTM) and 1 in 100 year and 1 in 250 year return periods.

## Ambiental FloodScore™ insurance rating

The property has been rated as **High** risk. Please see [page 2 >](#) for further advice.

Ambiental's FloodScore™ risk rating gives an indicative assessment of the potential insurance risk classification from flooding, which can provide an indication of how likely it is that a property's policy will be ceded to Flood Re. The assessment is based on Ambiental's river, tidal and surface water flood data and other factors which some insurers may use in their assessment are not included.

Flood Re is a re-insurance scheme that makes flood cover more widely available and affordable as part of your residential property home insurance. Properties at higher risk of flooding may have the flood part of their policy ceded to Flood Re by their insurer. It is important to understand that Flood Re does not apply to all situations. Exclusions from Flood Re includes properties constructed after 1 January 2009; properties not within domestic Council Tax bands A to H (or equivalent); commercial properties, certain buy to let scenarios and buildings comprising four or more residential units. A full list of the exemptions can be found on the Flood Re website (<https://www.floodre.co.uk/can-flood-re-help-me/eligibility-criteria/>) ↗.

The Ambiental FloodScore™ insurance rating is classified into six different bandings:

**Very High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a very high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**Moderate-High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a moderate possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**Moderate** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a low possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

**Low** indicates a level of risk that is likely to mean standard cover and premiums are available for flood cover. There is a low possibility the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

**Very Low** indicates a level of flood risk that should not have any impact on the provision of flood cover for the property.



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### IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: [info@groundsure.com](mailto:info@groundsure.com) ↗. Groundsure adheres to the Conveyancing Information Executive Standards.

### The Standards

- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.

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If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure.

If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs.

### COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: [info@groundsure.com](mailto:info@groundsure.com)

↗ If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: [admin@tpos.co.uk](mailto:admin@tpos.co.uk) ↗ We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

Groundsure's Terms and Conditions can be viewed online at this link: [www.groundsure.com/terms-and-conditions-april-2023/](http://www.groundsure.com/terms-and-conditions-april-2023/) ↗

## Important consumer protection information

All of the advice and reports that Groundsure produces are covered by a comprehensive Remediation Contribution policy to ensure customers are protected, see [www.groundsure.com/remediation](http://www.groundsure.com/remediation) ↗ for full details.

## Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information in your Flood report. To find out who they are and their areas of expertise see [www.groundsure.com/sources-reference](http://www.groundsure.com/sources-reference) ↗.



[Back to Summary](#)

Contact us with any questions at:  
[info@groundsure.com](mailto:info@groundsure.com) ↗  
01273 257 755

Ref: GEO-G2868261-1  
Your ref: G2868261-1  
Grid ref: 595550 249922





## **APPENDIX D**

### Anglian Water Asset Map



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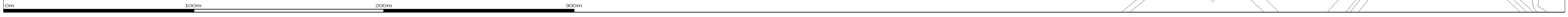
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There are no assets within this map area



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Foul Sewer		Outfall*
Surface Sewer		
Combined Sewer		
Final Effluent		Inlet*
Rising Main*		
Private Sewer*		Manhole*
Decommissioned Sewer*		

	Sewage Treatment Works		andrew.cartwright@chick.co.uk
	Public Pumping Station		NE23/009
	Decommissioned Pumping Station		

\*Colour denotes effluent type







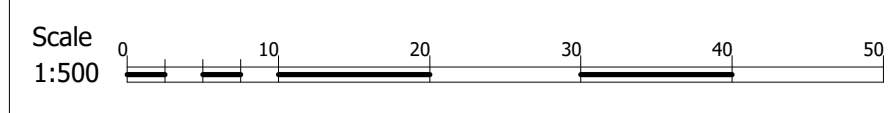
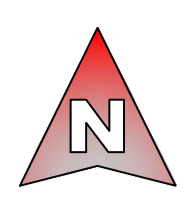
## **APPENDIX E**

### Topographical Survey



File Path: C:\Users\Super Charlie\Desktop\2219-4248 - PC Environmental - Land at CO10 9EJ - PC Environmental - Land at CO10 9EJ.dwg  
 Plot Date 04 December 2023 Plot Style: BB Surveys Std.ctb Saved By: Super Charlie on 04 December 2023

**BBS-CP-EGL-SU-00**  
 Originator Initials Detail Type Number



**Notes:**

AV	Air Valve	FH	Fire Hydrant	SP	Sign Post
BB	Bottom Bank	FP	Footpath	STAY	Stay
BH	Bore Hole	G	Gully Grate	SV	Sluice Valve
BL	Li Bollard	GV	Gas Valve	TAC	Tactile Paving
BOL	Bollard	Hedge	Hedge	TB	Top Bank
BN	Bin	IC	Inspection Cover	TBOX	Telephone Box
BS	Bus Stop	IL	Invert Level	TL	Traffic Light
Bus	Bus	KO	Kerb Outlet	TOK	Top Of Kerb
BT	BT Box	LP	Lamp Post	TP	Telegraph Pole
CAB	Cabinet	MH	Manhole	TRK	Track
CHNL	Channel	MP	Marker Post	TS	Traffic Sign MH
CL	Centreline	NB	Name Board	VENT	Vent
CONC	Concrete	PW	Partition Wall	W	Water Cover
COL	Column	PB	Post Box	WL	White Line
DB	Ditch Bottom	PM	Parking Meter	WO	Wash Out
DCHNL	Drainage Channel	PO	Post	YL	Yellow Line
Door	Door	RE	Rodding Eye		
EEB	Electric MH Cover	Ridge	Ridge Level		
EP	Electric Pole	RP	Reflector Post		
ER	Earth Road	RS	Road Sign		
ET	EP Transformer	SETTS	Grass Setts		
Feeder	Feeder Pillar	SF	Safety Fence		

FCB	Close Boarded	CS	Control Station
FCL	Chain Link	Column	Column
FHD	Hoarding	K.X.S	Floor to Ceiling Height
FHR	Hoops Fence	K.X.S. R.C	Floor to False Ceiling Height
FPL	Palisade		
FPR	Post & Rail		
FPW	Post & Wire		
RAIL	Railings		

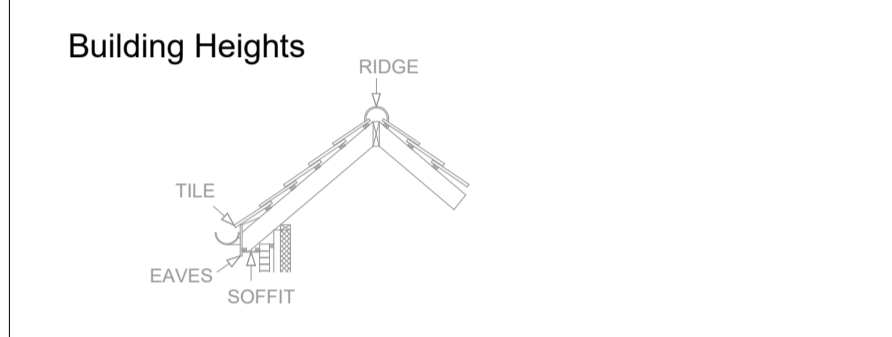
**Features**

Fences	FCB 1.0m	
Walls	Wall 1.2m	
Hedges	Hedge 1.2m	Average root line shown.
Overhead Line	OK	Indicative position of cables.

**Services**

Foul Sewers	0.2250	0.750m	Pipe position and alignment is indicative only.
Storm Sewers	0.2250	0.750m	



SURVEY CARRIED OUT USING TRIMBLE S6 TOTAL STATION & TRIMBLE R10 GPS.  
 THE SURVEY HAS BEEN ACCURATELY POSITIONED ON THE ORDNANCE SURVEY NATIONAL GRID SYSTEM USING GPS OBSERVATIONS TO THE OS ACTIVE NETWORK AND THE LATEST ORDNANCE SURVEY TRANSFORMATION (OSTN15/OSGM15).  
 LOCAL SCALE FACTOR HAS BEEN REMOVED TO TRANSFORM THE SURVEY TO A FLAT EARTH GRID (SCALE FACTOR 1.00000).  
 ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM (NEW LN). VERTICAL CONTROL HAS BEEN ESTABLISHED USING GPS OBSERVATIONS TO THE OS ACTIVE NETWORK AND THE LATEST ORDNANCE SURVEY TRANSFORMATION (OSTN15/OSGM15).  
 ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.  
 ANY CRITICAL DIMENSIONS AND MEASUREMENTS SHOULD BE BASED ON THE ORIGINAL DIGITAL DATA AND CONFIRMED WITH BB SURVEYS LTD.  
 ANY ERRORS SHOULD BE NOTIFIED TO BB SURVEYS LTD.  
 NO ATTEMPT HAS BEEN MADE TO ENTER ANY CONFINED SPACES ON THIS SITE. WE HAVE MEASURED INVERT DEPTHS, ESTIMATED PIPE SIZES AND SHOWN THE DIRECTION OF FLOW ONLY WHERE DRAIN RUNS ARE ACTIVE AT THE TIME OF SURVEY. INSPECTION COVERS WHICH WE WERE UNABLE TO LIFT BY MANUAL METHODS ARE DENOTED AS MH (U/L). WE DO NOT QUOTE FOR THE USE OF HYDRAULIC LIFTING EQUIPMENT.  
 DRAINAGE RUNS BETWEEN INSPECTION COVERS HAVE NOT BEEN INVESTIGATED. ANY SHOWN ARE ESTIMATED AND NOT CONFIRMED. ALL DRAINAGE RUNS SHOULD BE PROVIDED BY EYE TRACING AND IF NECESSARY BY RADIO DETECTION METHODS PRIOR TO ANY DESIGN WORK. ALL PIPE SIZES AND CONNECTIONS SHOULD ALSO BE CONFIRMED WITH YOUR LOCAL DRAINAGE AUTHORITY PRIOR TO ANY DESIGN WORK.  
 THERE MAY BE INSPECTION COVERS ON SITE WHICH WERE NOT VISIBLE AT THE TIME OF SURVEY. THEY MAY HAVE BEEN BURIED OR COVERED BY VEGETATION. YOU SHOULD CONSULT YOUR LOCAL DRAINAGE AUTHORITY OR COMMISSION A CCTV DRAINAGE SURVEY TO ENSURE THAT YOU LOCATE ANY MISSING COVERS OR DRAINAGE RUNS.

-	04.12.23	CP	First Issue
REV	Date	Created By	Comments
Scale at A1		Project Number	
1:500		2219-4248	

**Drawing Status**  
 Existing Topographic Survey  
 As Built Survey  
 For Information



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**Project**  
 Land at CO10 9EJ

**Title**  
 Existing Ground Level Survey  
 Overview

**BBS-CP-EGL-SU-00**  
 Originator Initials Detail Type Number









