

jda@ndirect.co.uk

**Our ref:** CCN-2022-284790

**Date:** 09/11/2022

Dear John

## **Provision of Flood Risk Information for South Drove Spalding**

Thank you for your request to use our flood risk information for the above site. The information is set out below and attached. It is important you read any contextual notes on the maps provided.

If you are preparing a Flood Risk Assessment (FRA) for this site, please note this information may not be sufficient by itself to produce an adequate FRA to demonstrate the development is safe over its lifetime. Additional information may be required to carry out an appropriate assessment of all risk, such as consequence of a breach in defences.

We aim to review our information on a regular basis, so if you are using this data more than twelve months from the date of this letter, please contact us again to check it is still valid.

### **1. Flood Map**

The attached map includes the current Flood Map for your area. The Flood Map indicates the area at risk of flooding, **assuming no flood defences exist**, for a flood with a 0.5% chance of occurring in any year for flooding from the sea, or a 1% chance of occurring for fluvial (river) flooding. It also shows the extent of the Extreme Flood Outline which represents the extent of a flood with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater.

In some locations, such as around the fens and the large coastal floodplains, showing the area at risk of flooding assuming no defences may give a slightly misleading picture in that if there were no flood defences, water would spread out across these large floodplains. This flooding could cover large areas of land but to relatively shallow depths and could leave pockets of locally slightly higher land as isolated dry islands. It is important to understand the actual risk of the flooding to these dry islands, particularly in the event of defence failure.

The Flood Map also shows the location of formal raised flood defences and flood storage reservoirs. It represents areas at risk of flooding for present day only and does not take account of climate change.

The Flood Map only indicates the extent and likelihood of flooding from rivers or the sea. It should also be remembered flooding may occur from other sources such as surface water sewers, road drainage, etc.

### **2. Historic Flood Event Outlines**

A copy of the Historic Flood Event Outlines Map showing the extent of previous recorded flooding in your area is attached. This only covers information we hold and it is possible recent flooding may have occurred which we are currently investigating, therefore this information may be subject to change. It is possible other flooding may have occurred which other organisations, such as the Lead Local Flood Authority (ie top tier council), Local Authority or Internal Drainage Board (where they exist), may have records.

### **3. Schemes in the area**

There are no ongoing capital projects to reduce or sustain the current flood risk to this site.

### **4. Fluvial Flood Risk Information**

#### **4.1 Fluvial Defence Information**

The existing fluvial defences reducing the risk of flooding to this site consist of earth embankments. They are in fair condition and reduce the risk of flooding (at the defence) to a 1% (1 in 100) chance of occurring in any year.

A flood storage reservoir also helps to reduce the risk of flooding to this site. We inspect these defences routinely to ensure potential defects are identified.

Refer to paragraph 3 for details of any ongoing capital projects to reduce the flood risk to this site.

#### **4.2 Fluvial Modelled Levels and Flows**

Available modelled fluvial flood levels and flows for the model nodes shown on the attached map are set out in the data table attached. This data is taken from the model named on the data table, which is the most up-to-date model currently available.

Please note these levels are “in-channel” levels and therefore may not represent the flood level on the floodplain, particularly where the channel is embanked or has raised defences.

Our models may not have the most up to date climate change allowances. In time we will update our models for the latest allowances. You should refer to '[Flood risk assessments: climate change allowances](#)' to check if the allowances modelled are appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

#### **4.3 Fluvial Modelled Flood Extents**

Please find attached a map showing available modelled flood extents, taking into account flood defences, for your area. This data is taken from the model named on the map, which is the most up-to-date model currently available.

#### **4.4 Fluvial Hazard Mapping**

For certain locations we have carried out modelling to map the maximum values of flood depth, velocity and hazard rating (danger to people) resulting from overtopping and / or breaching of defences at specific locations for a number of scenarios.

At present this information is available for fluvial flood risk in Northampton, Lincoln, Wainfleet and some isolated rural locations.

The number of locations we have this information for is expected to increase in time.

Detailed Hazard Mapping is available within the 2017 Update of South Holland Strategic Flood Risk Assessment. This can be downloaded via the following link:

<http://www.southeastlincslocalplan.org/water/>

## **5. Tidal Flood Risk Information**

This site is not considered to be at risk from tidal flooding.

## **6. Development Planning**

If you would like local guidance on preparing a flood risk assessment for a planning application, please contact our Sustainable Places team at [Inplanning@environment-agency.gov.uk](mailto:Inplanning@environment-agency.gov.uk). It will help if you mention this data request and attach your site location plan.

We provide free preliminary advice; additional/detailed advice, review of draft FRAs and meetings are chargeable at a rate set to cover our costs, currently £100 (plus VAT) per hour of staff time. Further details are available on our website at <https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals>.

General advice on flood risk assessment for planning applications can be found on GOV.UK at <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>

Climate change will increase flood risk due to overtopping of defences. Please note, unless specified otherwise, the climate change data included has an allowance for 20% increase in flow. Updated guidance on how climate change could affect flood risk to new development - 'Flood risk assessments: climate change allowances' was published on GOV.UK in **July 2021**. The appropriate updated climate change allowance should be applied in a Flood Risk Assessment.

You should also consult the Strategic Flood Risk Assessment produced by your local planning authority.

## **7. Data Licence and Other Supporting Information**

We respond to requests for recorded information we hold under the Freedom of Information Act 2000 (FOIA) and the associated Environmental Information Regulations 2004 (EIR).

This information is provided in accordance with the Open Government Licence which can be found here: <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Further information on flood risk can be found on the GOV.UK website at: <https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather>

## **8. Other Flood Risk Management Authorities**

The information provided with this letter relates to flood risk from main river or the sea. Additional information may be available from other risk management authorities, such as the Lead Local Flood Authority (ie top tier council) or Internal Drainage Board (where they exist).

I hope we have correctly interpreted your request. If you have any queries or would like to discuss the content of this letter further please contact Frederic Stuhldreer using the email address below.

Yours sincerely,



**for Alastair Windler**

**Weland and Nene Partnerships and Strategic Overview Team Leader**

e-mail [PSOWN@environment-agency.gov.uk](mailto:PSOWN@environment-agency.gov.uk)

Enc.

Flood Map

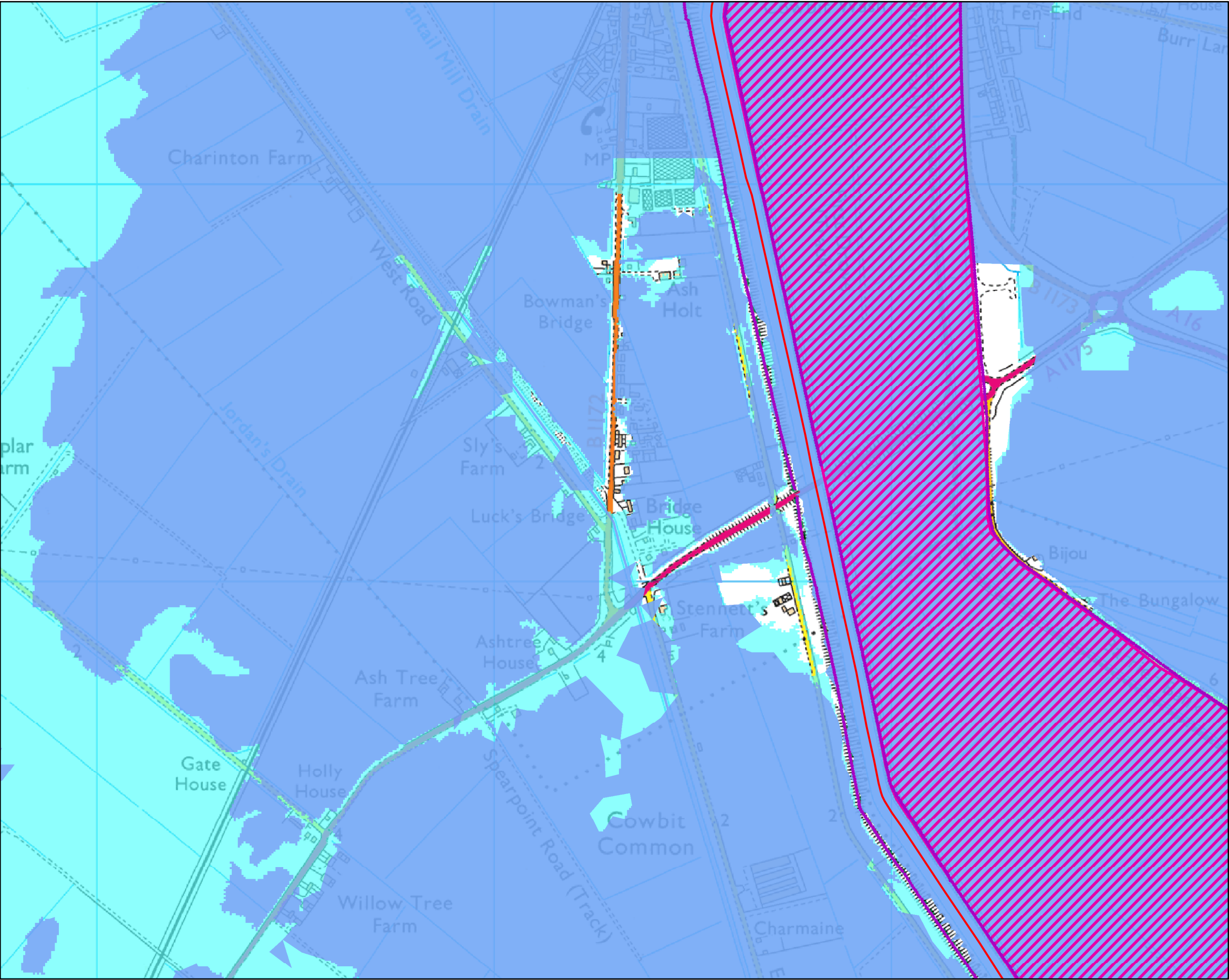
Historic Flood Event Outlines Map

Modelled Node Points Map

Modelled Fluvial Levels and Flows Data Sheet

Modelled Flood Extent Maps

Flood Map centred on TF 23303 19228 - created November 2022 [Ref: CCN-2022-284790]



Scale 1:10,000



- Legend**
- Main River
  - Raised Defences
  - Flood Storage Areas
  - Area at Risk of Flooding from Rivers or The Sea
  - Extreme Flood Outline

Dark blue shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:

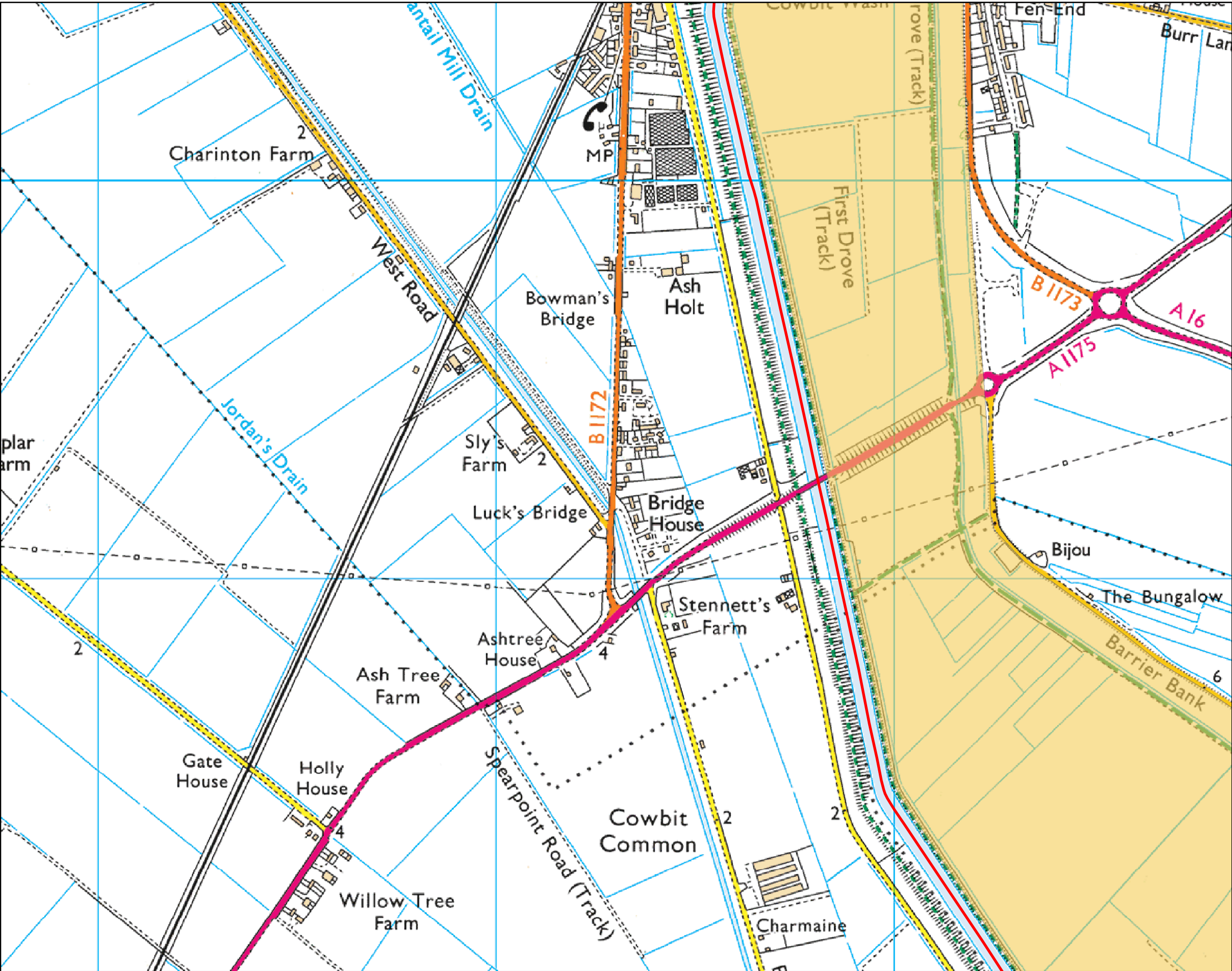
- from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year.
- or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.

Light blue shows the extent of the Extreme Flood Outline, which represents the extent of a flood event with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater.

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements. Sites outside the two extents, but behind raised defences, may be affected by flooding if the defences are overtopped or fail.

Created by the Partnerships and Strategic Overview Team, Kettering

Historic Flood Map centred on TF 23303 19228 - created November 2022 [Ref: CCN-2022-284790]





Scale 1:10,000

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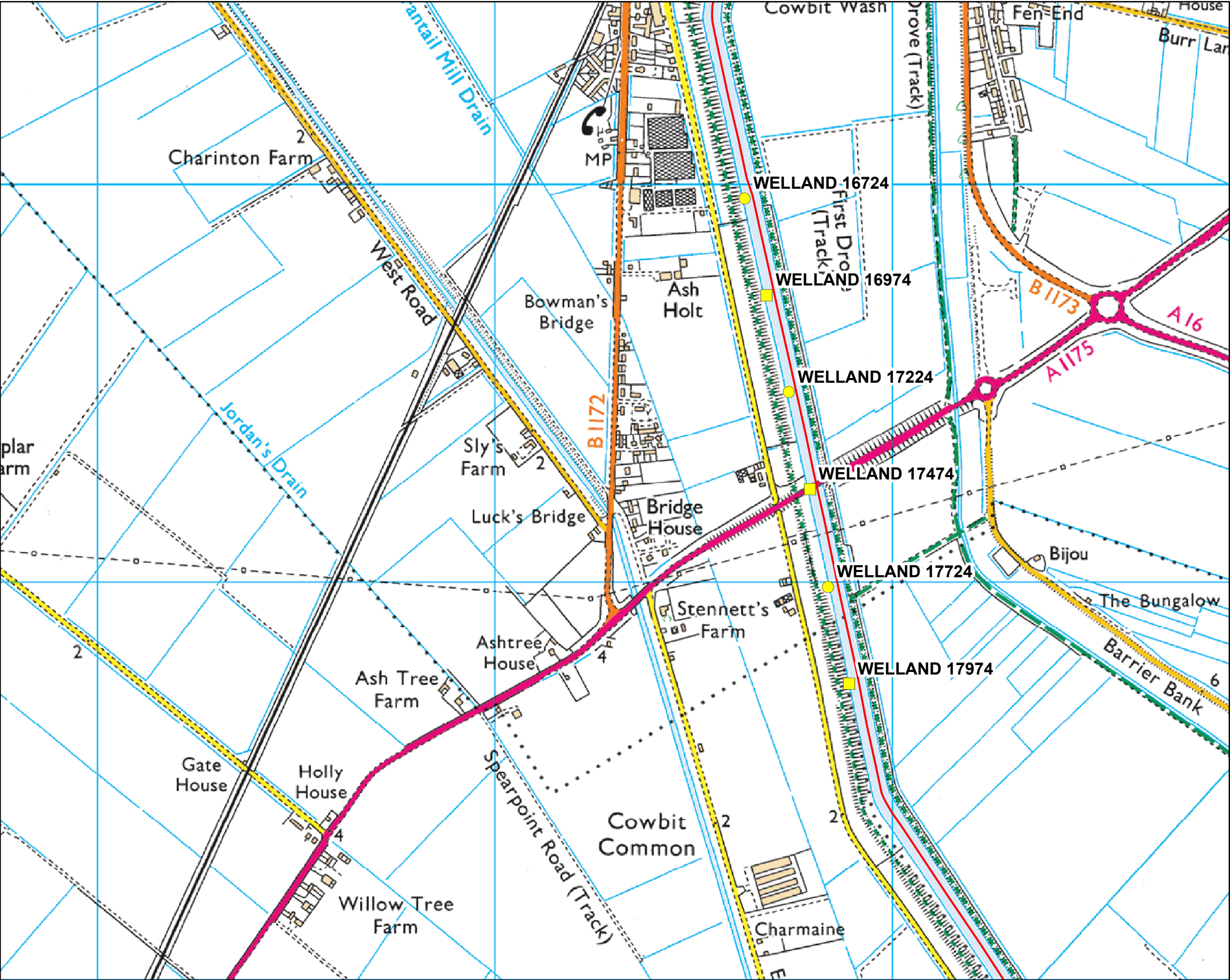


**Legend**

- Main River
- March 1947 on the River Welland near Cowbit

Created by the Partnership & Strategic Overview Team,  
Kettering

Modelled Node Point Map centred on TF 23303 19228 - created November 2022 [Ref: CCN-202-284790]





Environment Agency

Scale 1:10,000 

**Legend**

-  Node Points (levels)
-  Node Points (flows)
-  Main River

Created by the Partnerships and Strategic Overview Team, Kettering

## Fluvial Flood Levels (mODN)

The fluvial flood levels for the model nodes shown on the attached map are set out in the table below. They are measured in metres above Ordnance Datum Newlyn (mODN).

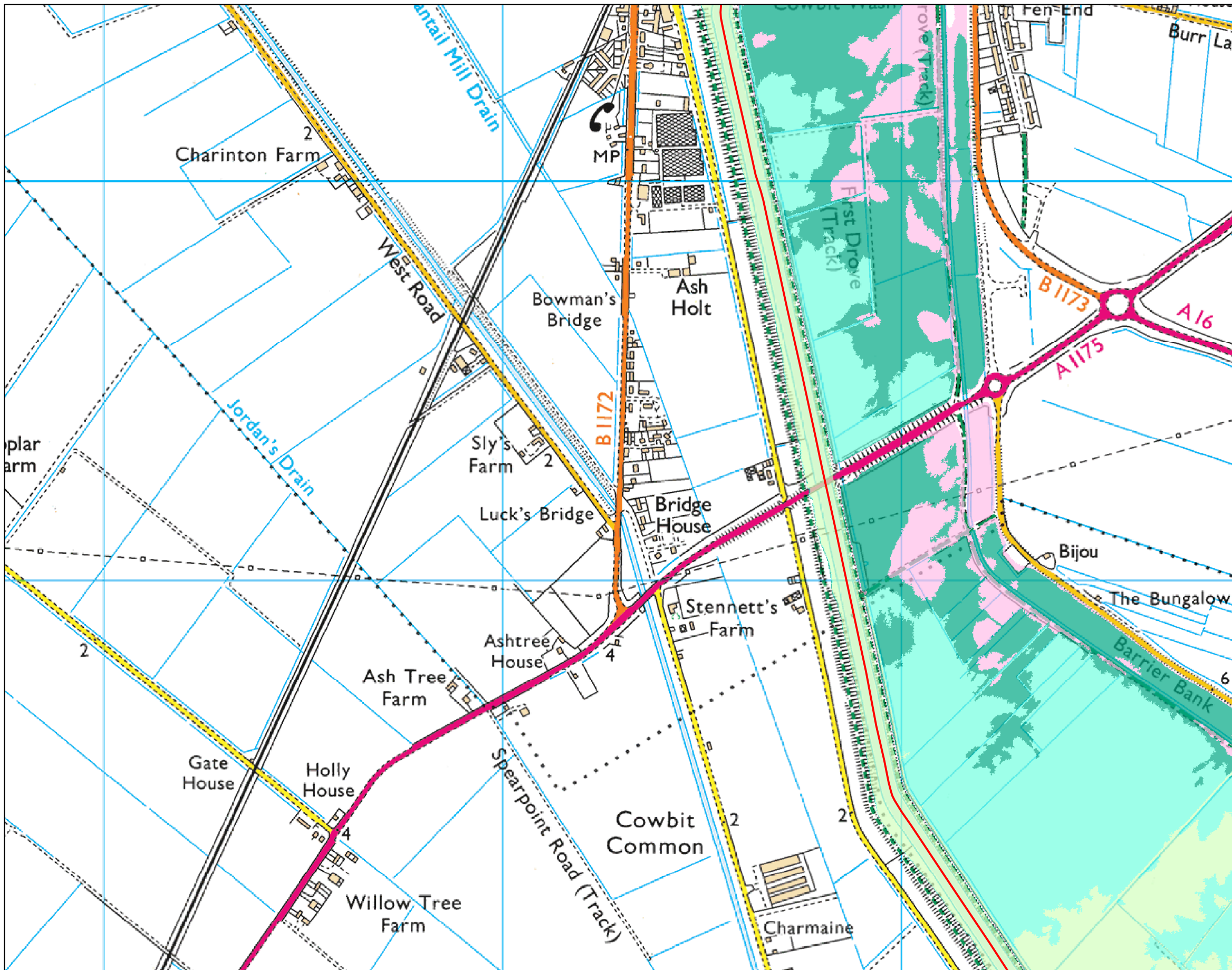
| Node Label    | Easting | Northing | Annual Exceedance Probability - Maximum Water Levels (mODN) |                 |                  |                 |                    |                 |                    |                  |                                                  |                    |                     |                                                     |
|---------------|---------|----------|-------------------------------------------------------------|-----------------|------------------|-----------------|--------------------|-----------------|--------------------|------------------|--------------------------------------------------|--------------------|---------------------|-----------------------------------------------------|
|               |         |          | 50%<br>(1 in 2)                                             | 20%<br>(1 in 5) | 10%<br>(1 in 10) | 5%<br>(1 in 20) | 3.33%<br>(1 in 30) | 2%<br>(1 in 50) | 1.33%<br>(1 in 75) | 1%<br>(1 in 100) | 1%<br>(1 in 100)<br>inc 20%<br>Climate<br>Change | 0.5%<br>(1 in 200) | 0.1%<br>(1 in 1000) | 0.1%<br>(1 in 1000)<br>inc 20%<br>Climate<br>Change |
| WELLAND 16724 | 523630  | 319964   | 3.70                                                        | 3.99            | 4.19             | 4.44            | 4.51               | 4.53            | 4.53               | 4.54             | 4.66                                             | 4.54               | 4.55                | 4.66                                                |
| WELLAND 17224 | 523742  | 319477   | 3.70                                                        | 4.00            | 4.20             | 4.44            | 4.51               | 4.53            | 4.54               | 4.54             | 4.66                                             | 4.54               | 4.56                | 4.66                                                |
| WELLAND 17724 | 523840  | 318987   | 3.70                                                        | 4.01            | 4.20             | 4.45            | 4.52               | 4.54            | 4.54               | 4.55             | 4.65                                             | 4.55               | 4.56                | 4.65                                                |

## Fluvial Flood Flows (m³/s)

The fluvial flood flows for the model nodes shown on the attached map are set out in the table below. They are measured in metres cubed per second (m³/s).

| Node Label    | Easting | Northing | Annual Exceedance Probability - Maximum Flows (m³/s) |                 |                  |                 |                    |                 |                    |                  |                                                  |                    |                     |                                                     |
|---------------|---------|----------|------------------------------------------------------|-----------------|------------------|-----------------|--------------------|-----------------|--------------------|------------------|--------------------------------------------------|--------------------|---------------------|-----------------------------------------------------|
|               |         |          | 50%<br>(1 in 2)                                      | 20%<br>(1 in 5) | 10%<br>(1 in 10) | 5%<br>(1 in 20) | 3.33%<br>(1 in 30) | 2%<br>(1 in 50) | 1.33%<br>(1 in 75) | 1%<br>(1 in 100) | 1%<br>(1 in 100)<br>inc 20%<br>Climate<br>Change | 0.5%<br>(1 in 200) | 0.1%<br>(1 in 1000) | 0.1%<br>(1 in 1000)<br>inc 20%<br>Climate<br>Change |
| WELLAND 16974 | 523686  | 319721   | 59.28                                                | 75.10           | 85.95            | 99.45           | 106.32             | 111.74          | 112.95             | 114.31           | 113.94                                           | 114.87             | 113.65              | 113.62                                              |
| WELLAND 17474 | 523794  | 319233   | 58.53                                                | 74.34           | 85.12            | 98.71           | 106.38             | 111.70          | 112.91             | 114.28           | 114.08                                           | 115.18             | 113.65              | 113.62                                              |
| WELLAND 17974 | 523893  | 318743   | 57.96                                                | 73.76           | 84.47            | 98.12           | 106.41             | 111.67          | 112.88             | 114.26           | 114.22                                           | 115.46             | 113.65              | 113.62                                              |

Map centred on TF 23303 19228 - created November 2022 [Ref: CCN-2022-284790]



Scale 1:10,000



### Modelled Flood Extents (with defences)

- Main River  
 5% (1 in 20) Fluvial Event  
 1% (1 in 100) Fluvial Event  
 1% (1 in 100) Fluvial Event inc Climate Change  
 0.1% (1 in 1000) Fluvial Event  
 0.1% (1 in 1000) Fluvial Event inc Climate Change

Created by the Partnerships & Strategic  
Overview Team, Kettering

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**Contact Us:** National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)