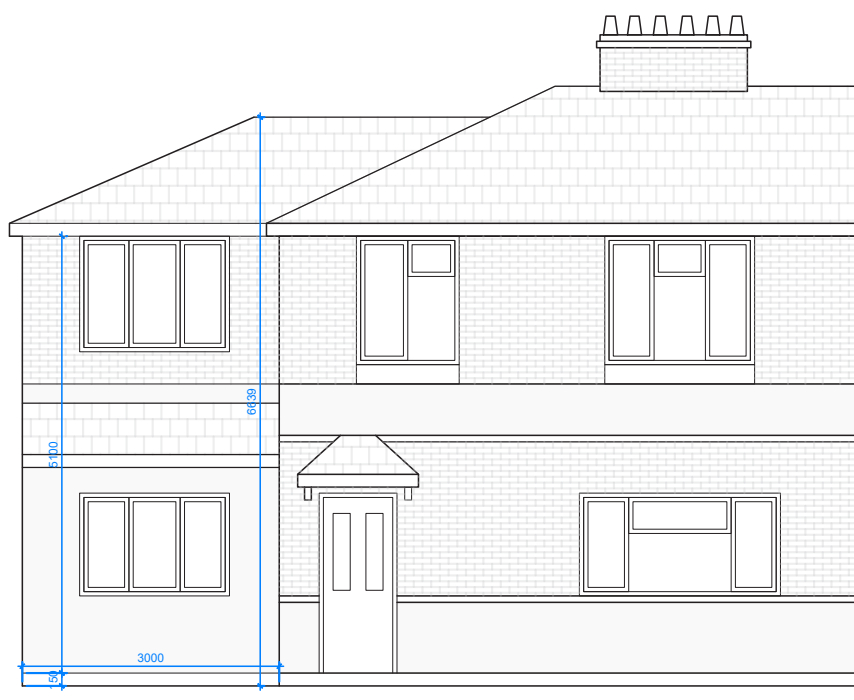




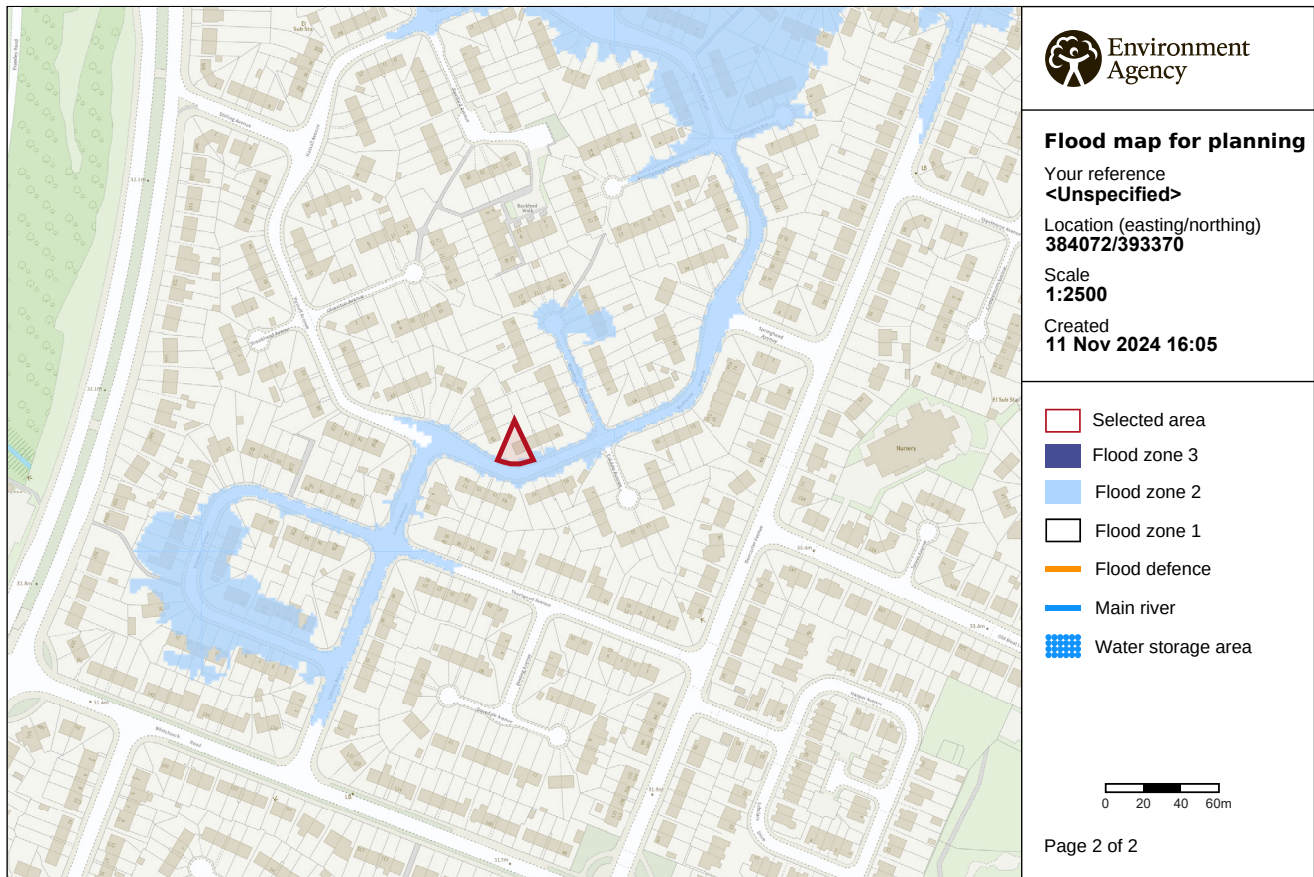
## FLOOD RISK STATEMENT - REV B

62 RUDHEATH AVENUE  
WITHINGTON  
M20 1PL

## Development Description

Proposal to include a two storey side extension with single storey rear extension as per the approved planning application 140381/FH/2024

The proposed works will retain the existing conditions of access and threshold levels to the property. As a minor residential development, the proposed works will not be negatively impact the surrounding properties flood resilience.



## Flood Risk Assessment

As per the floor map for planning, the site is located in the Flood Zone 2 area with a medium risk of flooding. However, following the LPA guidance on the 2Diagram 2: Application of the Sequential Test for Local Plan preparation" it states through table 1 that the development will fall in the category of 1 in 100 to 1 in 1000 chance of flooding. As this proposal is a minor development by extending the existing house to the same floor level, we believe that the risk of flooding caused by the development will be low. The existing floor finish levels are approximately 150mm from ground level. Our proposal is set out to be finished at the same level to provide adequate protection from flooding. Increasing the level in this area will reduce the internal ceiling heights within the space and require a stepped access internally. This would be an unnecessary feature which limits the proposal for flush level access throughout. Further to this, the minor development proposed is stated to be exempt from the Sequential Test as per Paragraph: 033 Reference ID: 7-033-20140306 on the Flood Risk and Coastal Change Guidance.

Furthermore, as indicated on the flood map above, the proposed setting out of the extended area is not directly impacted by potential flooded areas as shown on the road.

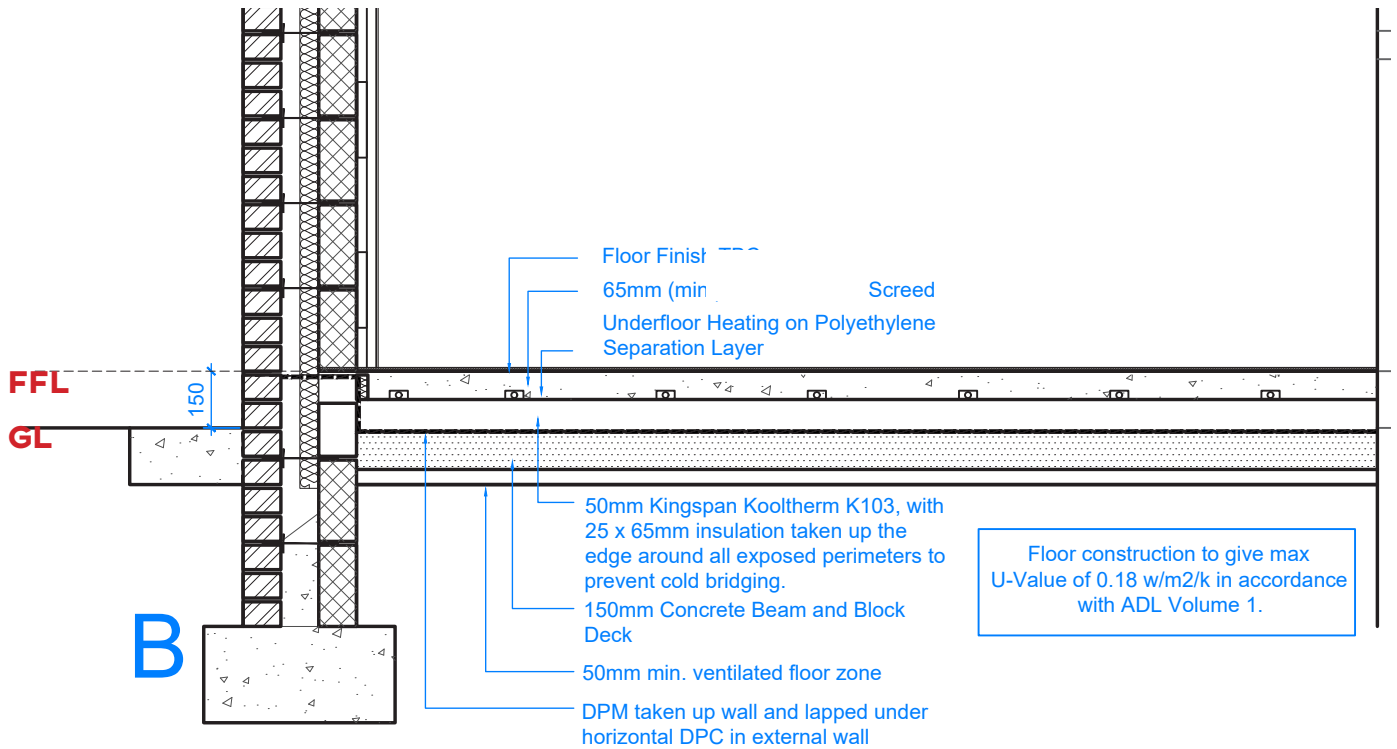
## **Flood Resilience Strategy**

To aid with the resilience to flooding within the development, we have proposed that the majority of floor finishes for the extension will be from tiling. This will prevent issues such as rot and decay of primary timber structure found on typical house developments. The electrical outlets will also be positioned an additional 300mm from the FFL to aid with the reduction of hazards in the case of a flood. We are also to propose an aco drain to the side of the property to ensure any substantial rainfall can drain and elevate the risk of puddling. There is also a clear route of escape through the proposed rear garden or existing front door which will remain unobstructed through the design. Existing drainage will be checked on site by the contractor and will be incorporated into the development. This will be addressed in detail through the building control process. A pitch in the extensions roof will allow any rain water to fall into adequate drainage guttering and pipework. Please refer to the attached proposed drawings for further information.

The proposal for the extension at 62 Rudheath Avenue includes the installation of a perimeter ACO drain to enhance flood resilience measures. This drainage system will efficiently manage surface water runoff, directing it away from the building to reduce the risk of water pooling and potential flooding. The design ensures compliance with best practices for sustainable drainage, contributing to the long-term durability and protection of the property.

## Details of Finished Floor Levels

As indicated on the detail and map snippets below, the floor finish level (FFL) will be consistent level access to the existing house, which is 150mm above ground level (GL). it would not be feasible to increase the FFL within the house as this would significantly reduce the clear floor to ceiling heights as designed to building regulations and in keeping with planning legislation. it is also evident from the flood map information that the potential flooding area affects the road, which will inevitably fall into the main gutter drainage system as standard with UK roads. There is also a gradient to the site which will naturally drain surface water away from the property.



## Product 4 Information

The proposed extension is located within Flood Zone 2, meaning it has a low to moderate probability of fluvial flooding, with an annual probability between 0.1% and 1%. However, the site benefits from existing flood defences that provide a 100-year standard of protection, significantly reducing flood risk. Modelled data confirms that even in extreme events, including a 1% annual exceedance probability (AEP) flood and a 0.1% AEP flood, the site remains largely unaffected under defended conditions. Furthermore, climate change scenarios, including a +70% increase in peak river flows, do not show significant changes in flood levels that would compromise the safety of the development. Given this evidence, the risk of flooding to the proposed extension is minimal, and the development will remain safe throughout its lifetime.

In addition to fluvial flood risk, surface water drainage has been considered. The site is not identified as being at significant risk of surface water flooding, and the local authority's flood risk database does not highlight any critical drainage issues in the area. Even in cases of extreme rainfall, the risk of street drainage blockage causing flooding to the site is low, as confirmed by long-term flood risk assessments. The extension itself will not contribute to increased flood risk, as it does not significantly alter surface permeability or existing drainage patterns. Given these factors, the proposal aligns with national and local planning policies on flood risk management, and there is no justification for refusal based on flood risk concerns.

Please see the Flood Risk Assessment Data Product 4 from the Environmental Agency at the end of this document - Reference GG7R2V7FPKTN

References



Flood map for planning

|                |                             |                   |
|----------------|-----------------------------|-------------------|
| Your reference | Location (easting/northing) | Created           |
| <Unspecified>  | 384072/393370               | 11 Nov 2024 16:05 |

**Your selected location is in flood zone 2, an area with a medium probability of flooding.**

**This means:**

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see [www.gov.uk/guidance/flood-risk-assessment-standing-advice](http://www.gov.uk/guidance/flood-risk-assessment-standing-advice))

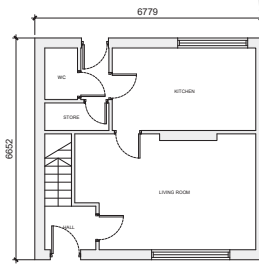
**Notes**

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

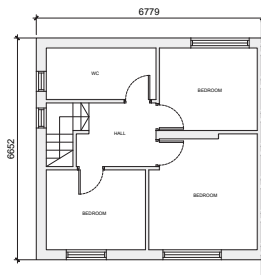
This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

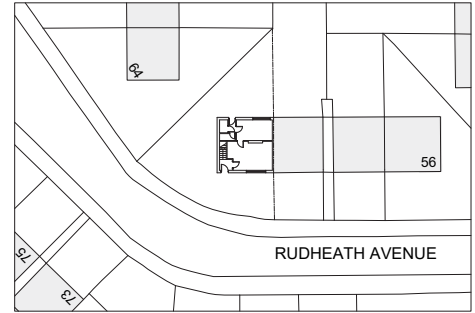
Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2024 OS AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>



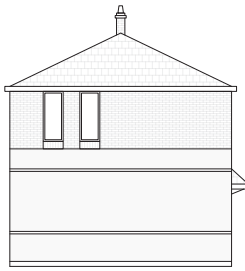
EXISTING GROUND FLOOR @1:50



EXISTING FIRST FLOOR @1:50



EXISTING SITE PLAN @ 1:200



EXISTING LEFT ELEVATION @1:50



EXISTING FRONT ELEVATION @1:50



EXISTING REAR ELEVATION @1:50



EXISTING RIGHT ELEVATION @1:50

**LBV\***

CLIENT:

PROJECT:  
73 RUDHEATH AVENUE  
WITHINGTON, M20 1PL

TITLE:  
EXISTING  
DRAWINGS

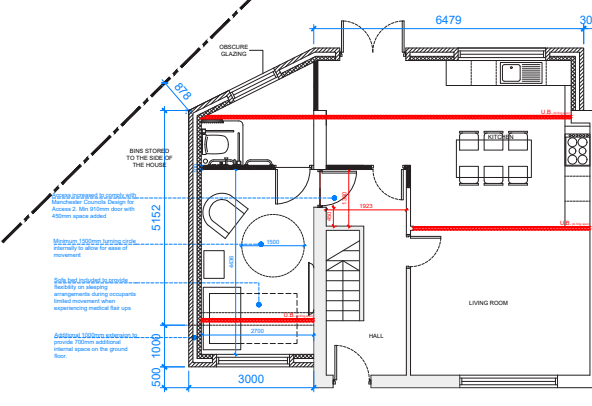
DRAWING:  
ED.01

JOB: SCALE:  
RP.37 1:50 & 1:200 @A1

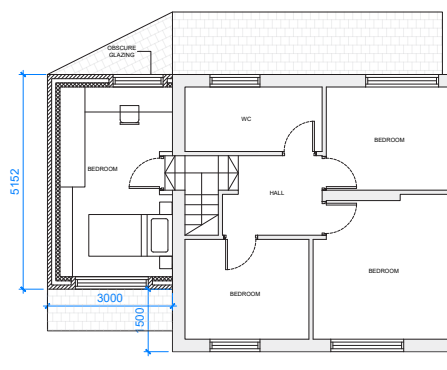
DRAWN: HK

REVISION:  
A

E-MAIL: PROJECTS@LBVDEVELOPMENTS.COM  
WEBSITE: WWW.LBVDEVELOPMENTS.COM  
SOCIALS: @LBVDEVELOPMENTS



PROPOSED GROUND FLOOR @1:50



PROPOSED FIRST FLOOR @1:50

**LBV\***

CLIENT:  
CLIENT

PROJECT:  
62 RUDHEATH AVENUE  
WITHINGTON, M20 1PL

TITLE:  
PROPOSED  
PLANS

DRAWING:  
C-PP.01

JOB: SCALE:  
RP.37 1:40 @A1

DRAWN: YK

REVISION:  
A

E-MAIL: PROJECTS@LBVDEVELOPMENTS.COM  
WEBSITE: WWW.LBVDEVELOPMENTS.COM  
SOCIALS: @LBVDEVELOPMENTS

**LBV\***



# Flood risk assessment data

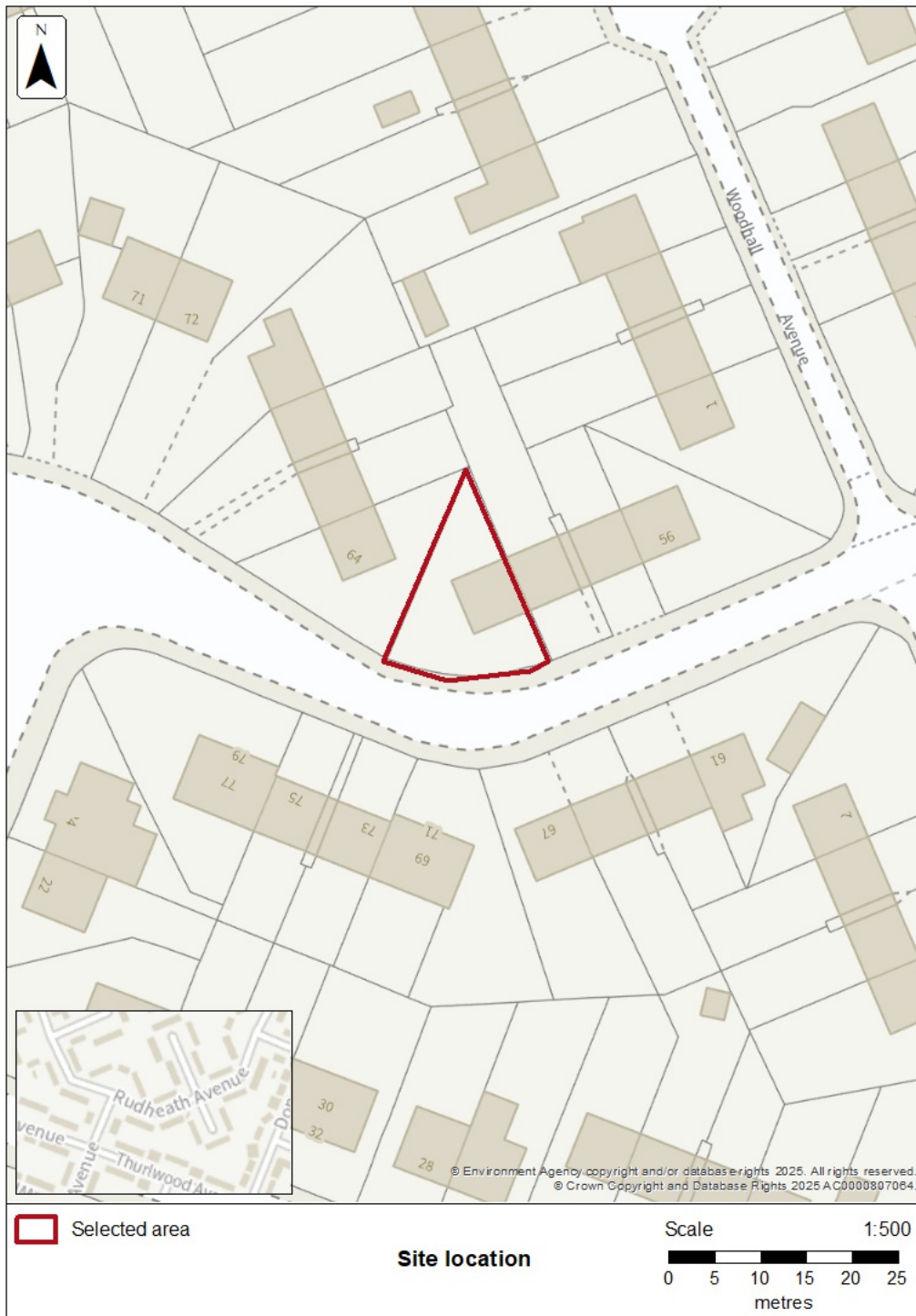
**Location of site:** 384072 / 393367 (shown as easting and northing coordinates)

**Document created on:** 7 February 2025

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

**Customer reference number:** GG7R2V7FPKTN

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
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- climate change modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

## 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

Or you can contact your Lead Local Flood Authority for further information.

Your Lead Local Flood Authority is Manchester District.

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

## About the models used

Model name: Cringle Black Brook 2017

Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial, defences removed climate change fluvial

Date: 1 April 2018

This model contains the most relevant data for your area of interest.

## 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 2.

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

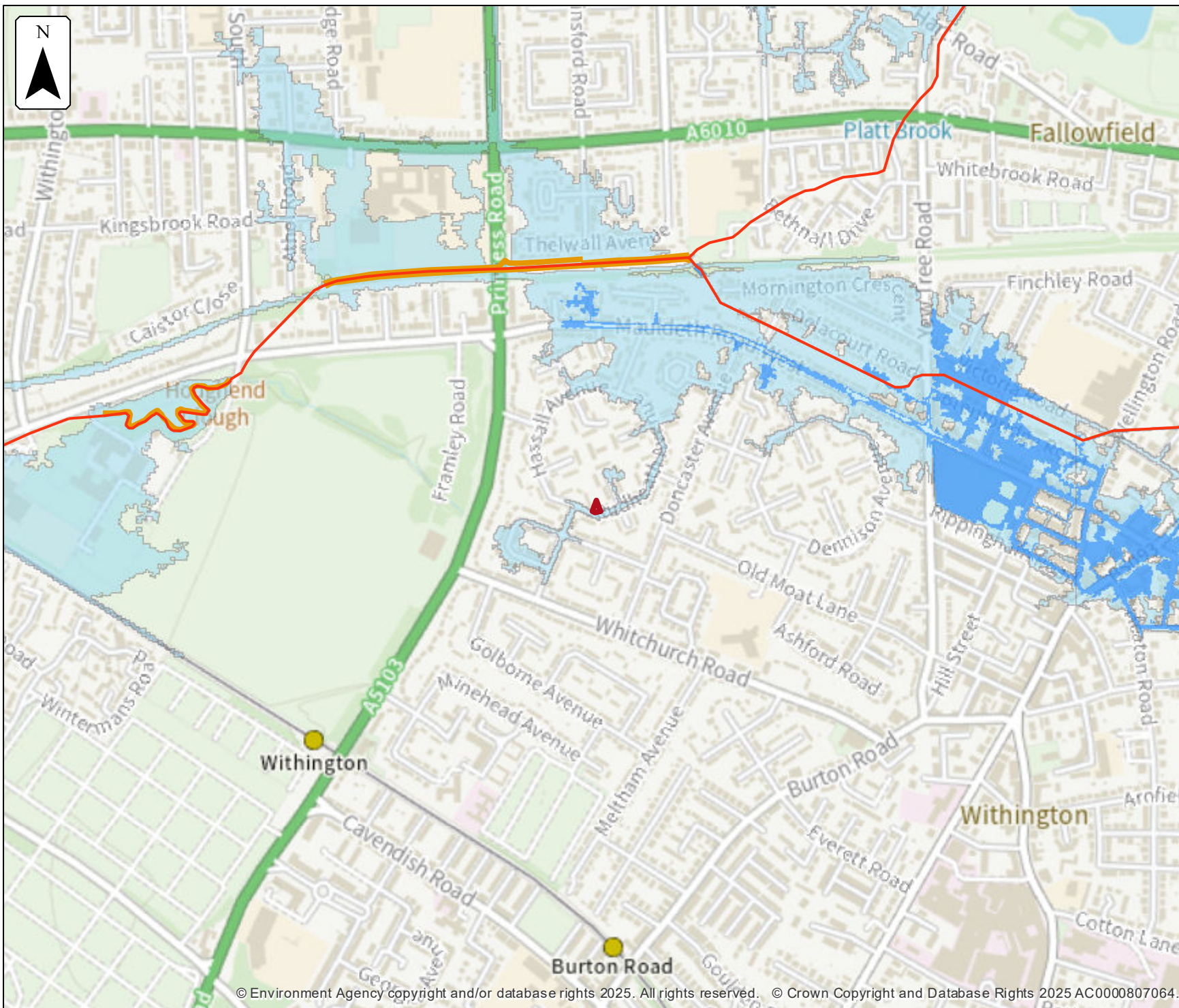
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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

The flood zones are not currently being updated. The last update was in November 2023. Some of the flood zones may have changed, however all source data is included in the models below.



## Flood map for planning

Location (easting/northing)  
**384072/393367**

Scale  
**1:10,000**

Created  
**7 Feb 2025**

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



## **Flood defences and attributes**

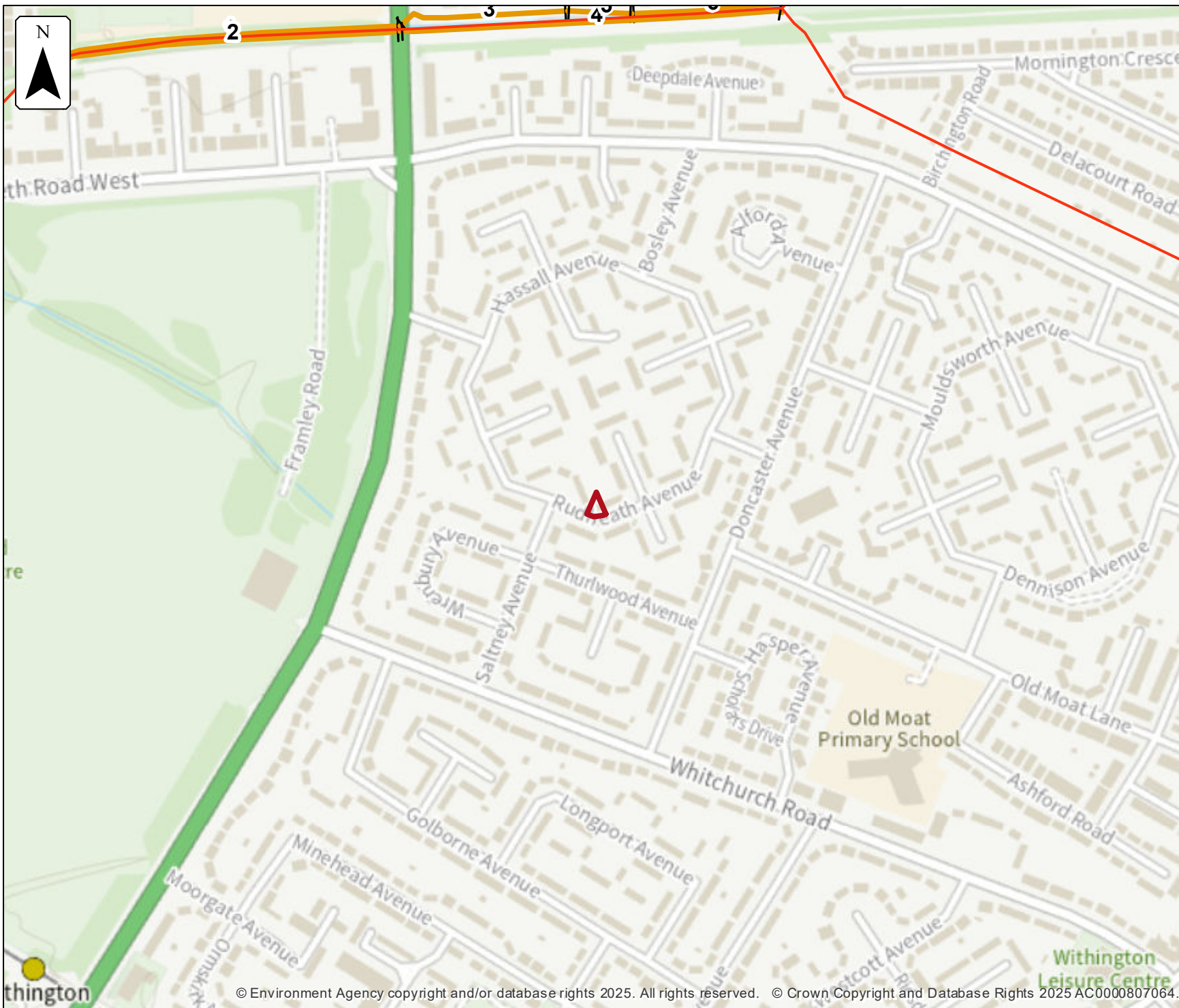
The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



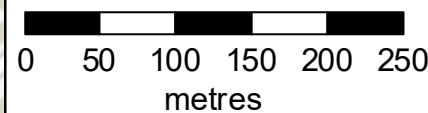
### Flood defences

Location (easting/northing)  
**384072/393367**

Scale  
**1:5,000**

Created  
**7 Feb 2025**

-  Selected area
-  Main river
-  Flood defence



## Flood defences data

| Label | Asset ID | Asset Type | Standard of protection (years) | Current condition | Downstream actual crest level (mAOD) | Upstream actual crest level (mAOD) | Effective crest level (mAOD) |
|-------|----------|------------|--------------------------------|-------------------|--------------------------------------|------------------------------------|------------------------------|
| 1     | 120082   | Embankment | 100                            |                   | 30.25                                | 31.38                              |                              |
| 2     | 32515    | Embankment | 100                            |                   | 30.29                                | 31.52                              |                              |
| 3     | 32518    | Wall       | 100                            |                   | 31.48                                | 31.84                              |                              |
| 4     | 60038    | Embankment | 100                            |                   | 31.39                                | 32.25                              |                              |
| 5     | 59788    | Embankment | 100                            |                   | 31.81                                | 32.82                              |                              |
| 6     | 122064   | Wall       | 100                            |                   | 31.84                                | 31.90                              |                              |

Any blank cells show where a particular value has not been recorded for an asset.

## Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

## Climate change

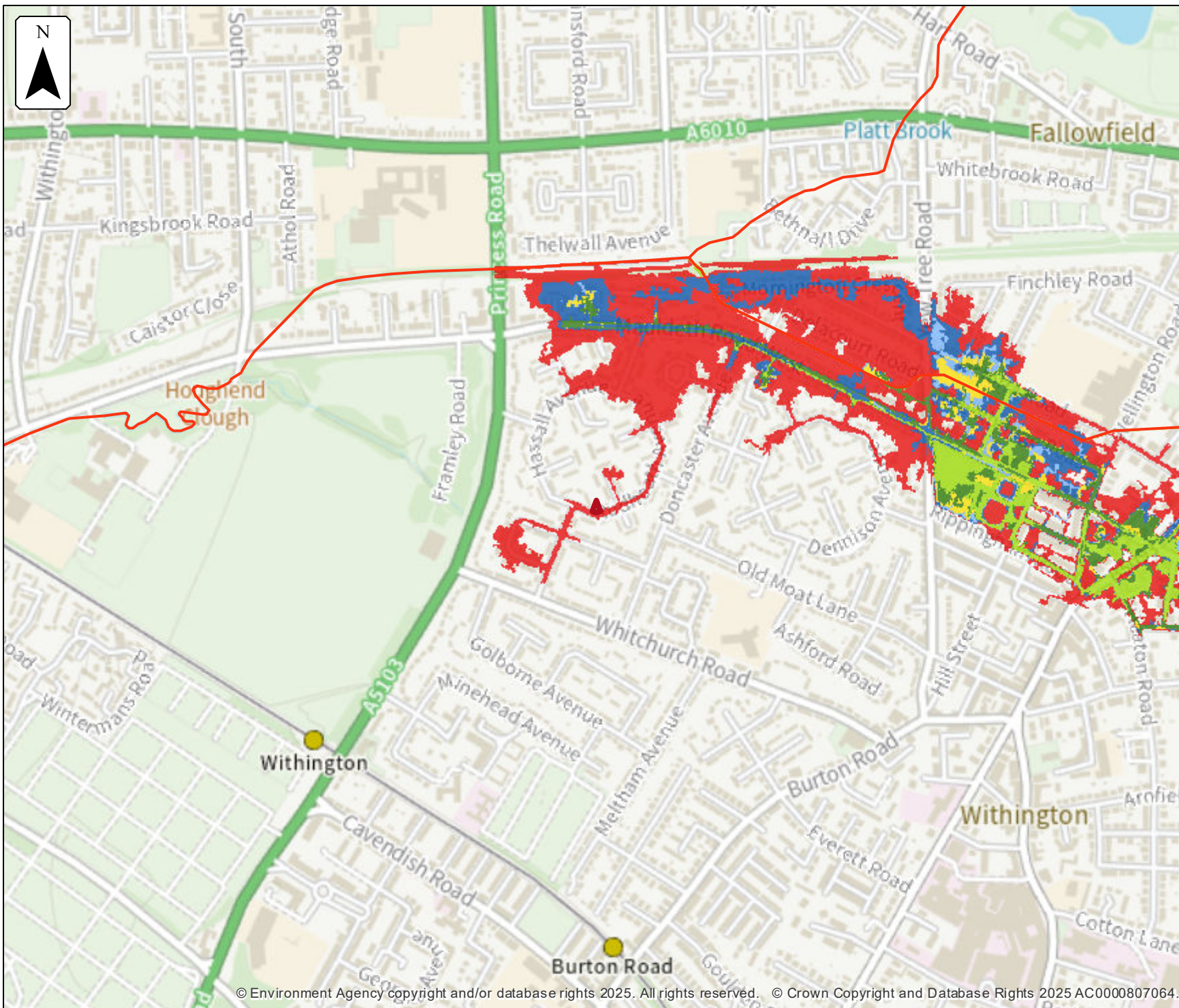
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

## Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change



## Defended modelled fluvial extent

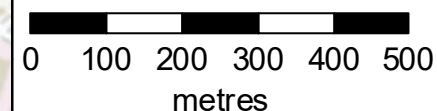
Location (easting/northing)  
**384072/393367**

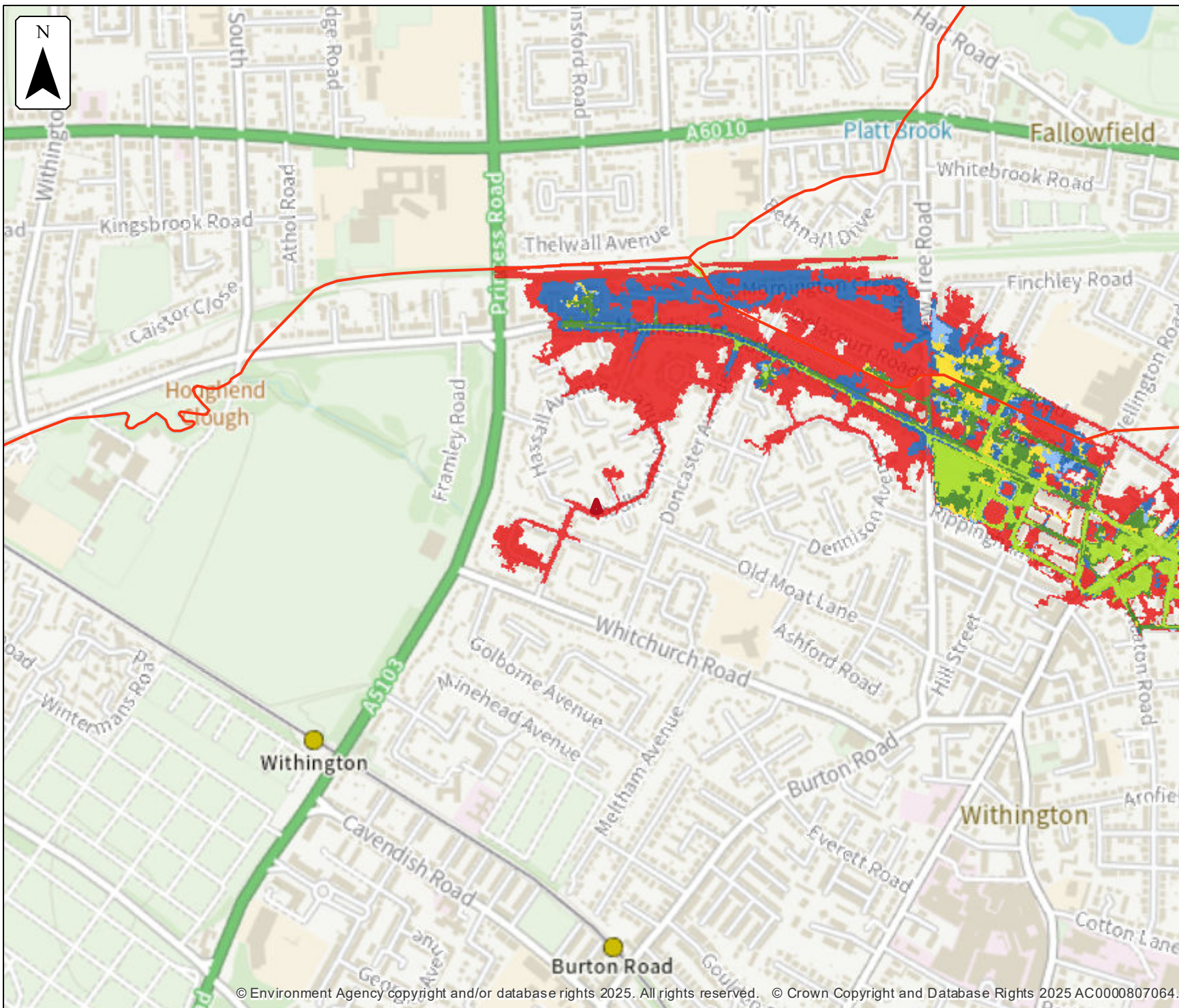
Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook  
2017**

- Selected area
- Main river
- Modelled flood extent
  - 5% AEP
  - 2% AEP
  - 1.33% AEP
  - 1% AEP
  - 0.5% AEP
  - 0.1% AEP

Flood extents may not be  
visible where they overlap  
other return periods





## Defences removed modelled fluvial extent

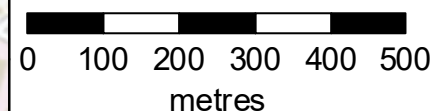
Location (easting/northing)  
**384072/393367**

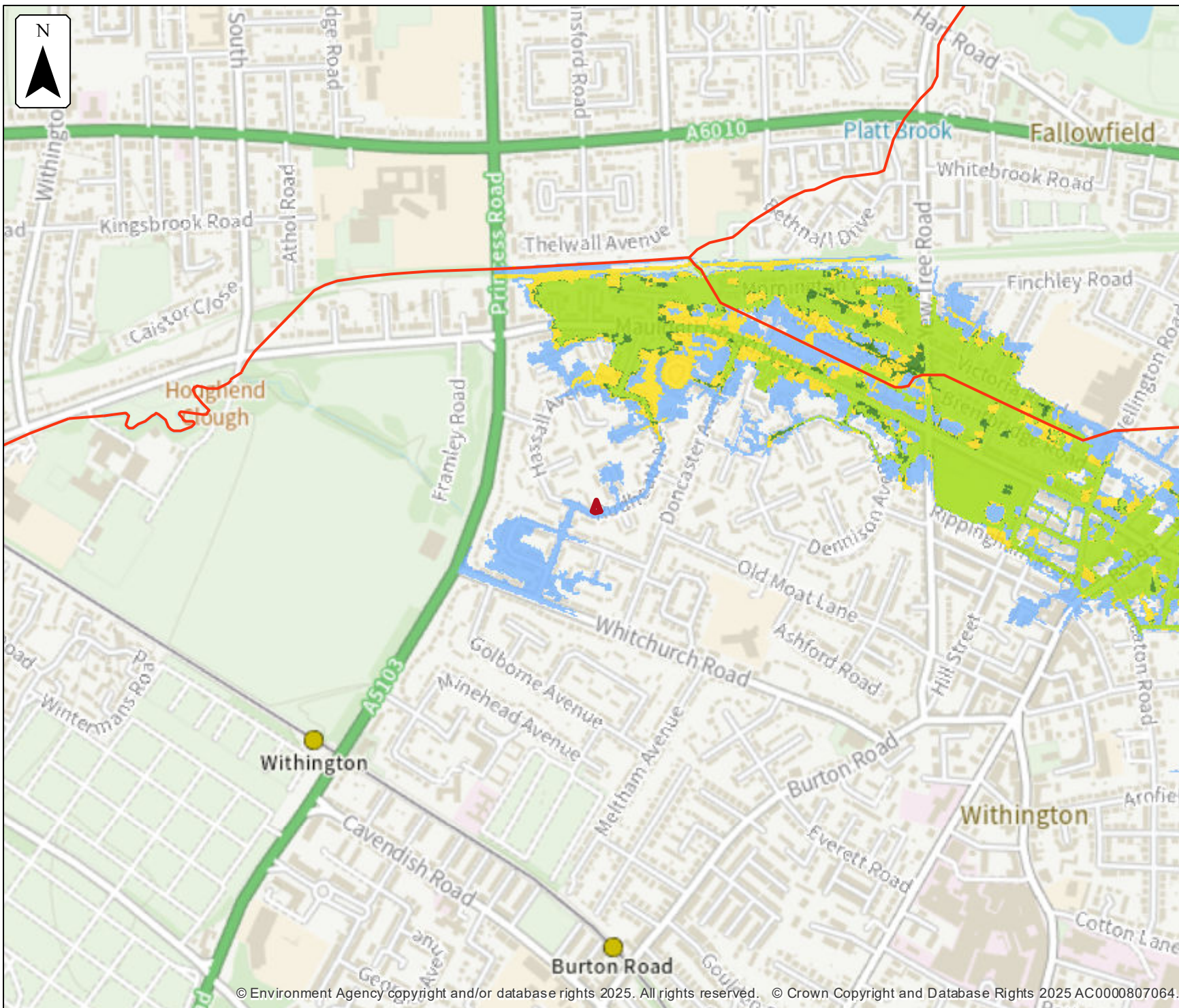
Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook  
2017**

-  Selected area
-  Main river
- Modelled flood extent
  -  5% AEP
  -  2% AEP
  -  1.33% AEP
  -  1% AEP
  -  0.5% AEP
  -  0.1% AEP

Flood extents may not be  
visible where they overlap  
other return periods





## Defended climate change modelled fluvial extent

Location (easting/northing)  
**384072/393367**

Scale      Created  
**1:10,000      7 Feb 2025**

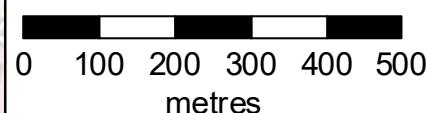
Model name  
**Cringle Black Brook  
2017**

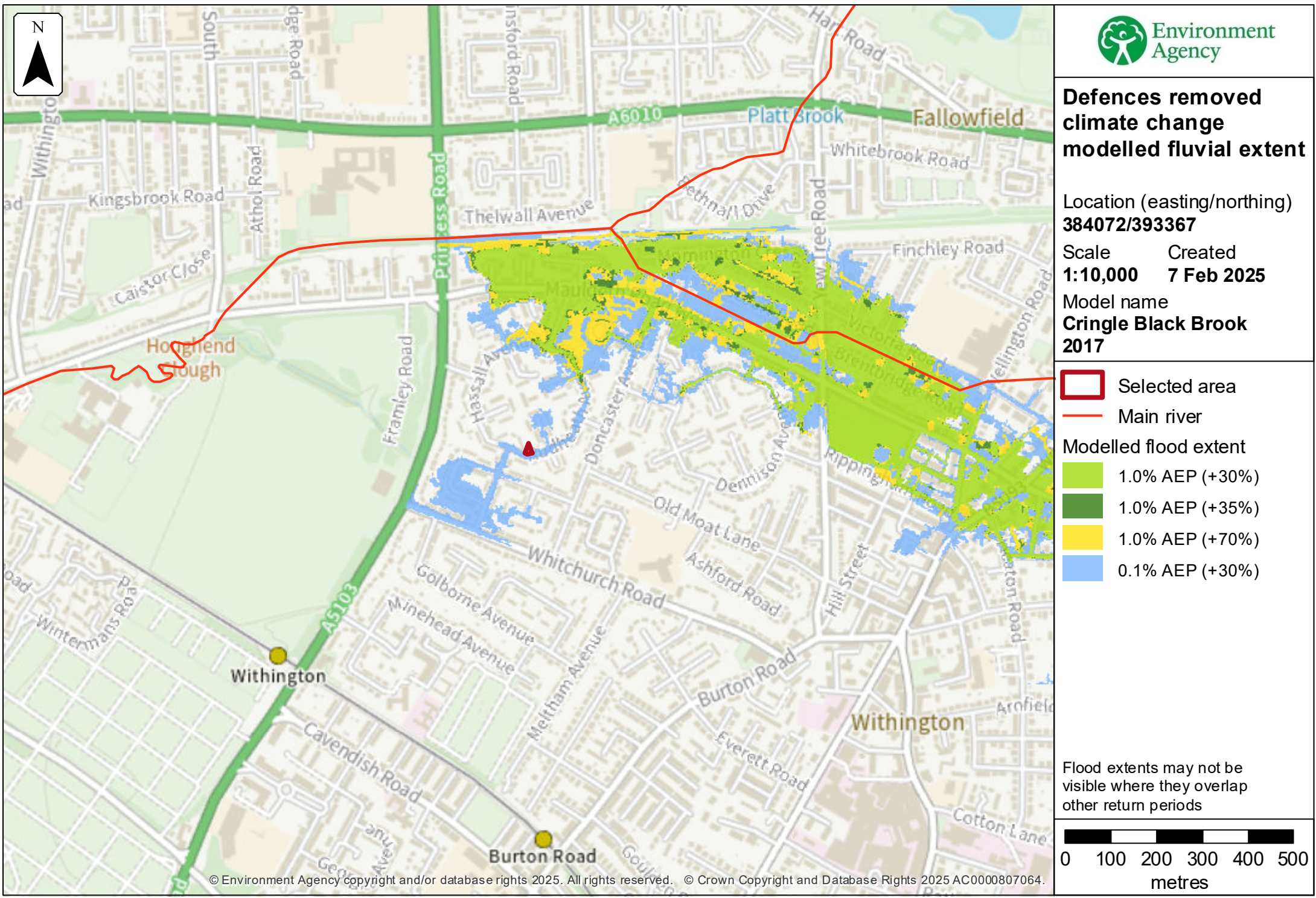
- Selected area
- Main river

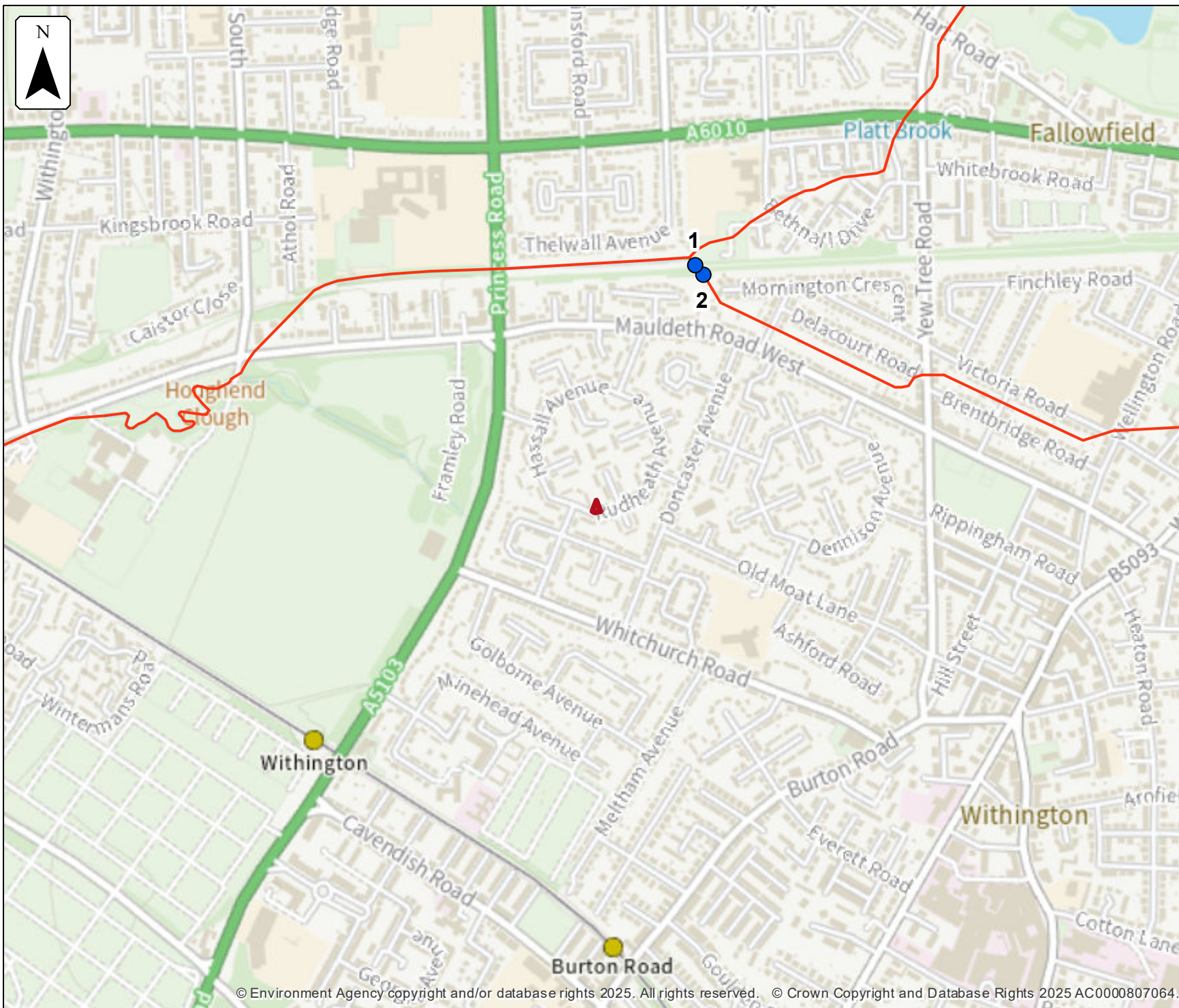
### Modelled flood extent

- 1.0% AEP (+30%)
- 1.0% AEP (+35%)
- 1.0% AEP (+70%)
- 0.1% AEP (+30%)

Flood extents may not be  
visible where they overlap  
other return periods







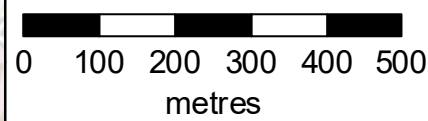
## Defended modelled fluvial node locations

Location (easting/northing)  
**384072/393367**

Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook 2017**

-  Selected area
-  Modelled location
-  Main river



## Modelled node locations data

### Defended

| Label | Modelled location ID | Easting | Northing | 50% AEP | 20% AEP | 10% AEP | 5% AEP | 4% AEP | 3.33% AEP | 2% AEP | 1.33% AEP | 1% AEP | 0.5% AEP | 0.1% AEP |
|-------|----------------------|---------|----------|---------|---------|---------|--------|--------|-----------|--------|-----------|--------|----------|----------|
|       |                      |         |          | Level   | Level   | Level   | Level  | Level  | Level     | Level  | Level     | Level  | Level    | Level    |
| 1     | 1440128              | 384264  | 393837   | 31.85   | 31.85   | 31.85   | 31.85  | 31.85  | 31.85     | 31.85  | 31.85     | 31.85  | 31.85    | 31.89    |
| 2     | 1440127              | 384280  | 393819   | 31.85   | 31.85   | 31.85   | 31.85  | 31.85  | 31.85     | 31.85  | 31.85     | 31.85  | 31.85    | 31.89    |

Data in this table comes from the Cringle Black Brook 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

If no level or flow data is available for a scenario, no table will be shown.

## Defended

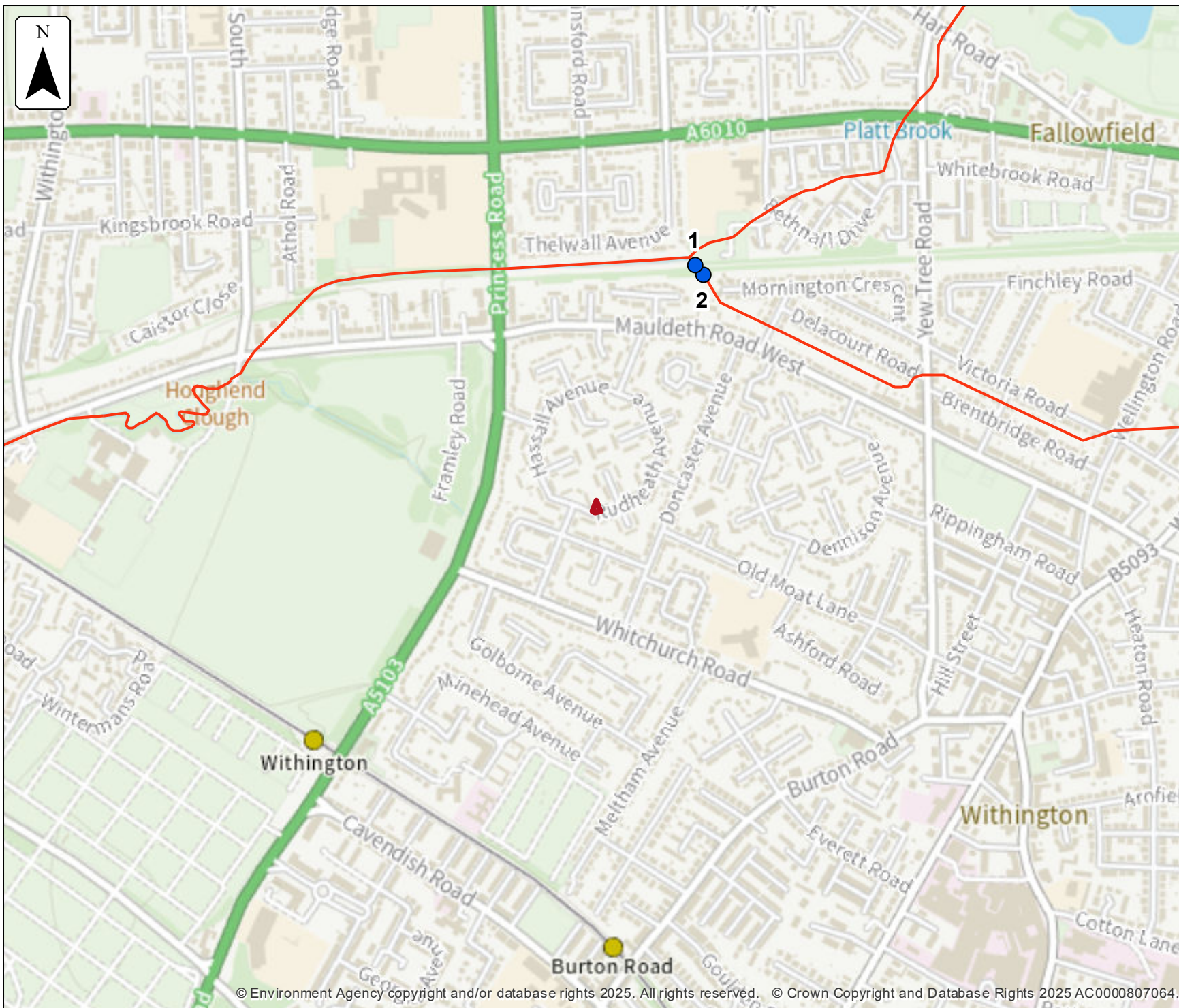
| Label | Modelled location ID | Easting | Northing | 50% AEP | 20% AEP | 10% AEP | 5% AEP | 4% AEP | 3.33% AEP | 2% AEP | 1.33% AEP | 1% AEP | 0.5% AEP | 0.1% AEP |
|-------|----------------------|---------|----------|---------|---------|---------|--------|--------|-----------|--------|-----------|--------|----------|----------|
|       |                      |         |          | Flow    | Flow    | Flow    | Flow   | Flow   | Flow      | Flow   | Flow      | Flow   | Flow     | Flow     |
| 1     | 1440128              | 384264  | 393837   | 3.02    | 3.68    | 3.96    | 3.96   | 3.96   | 3.96      | 3.96   | 3.96      | 3.96   | 3.96     | 4.24     |
| 2     | 1440127              | 384280  | 393819   | 3.02    | 3.68    | 3.96    | 3.96   | 3.96   | 3.96      | 3.96   | 3.96      | 3.96   | 3.96     | 3.98     |

Data in this table comes from the Cringle Black Brook 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

If no level or flow data is available for a scenario, no table will be shown.



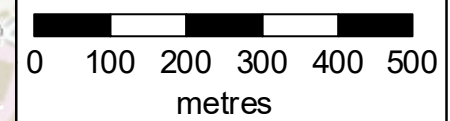
# Defences removed modelled fluvial node locations

Location (easting/northing)  
**384072/393367**

Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook 2017**

-  Selected area
-  Modelled location
-  Main river



## Modelled node locations data

### Defences removed

| Label | Modelled location ID | Easting | Northing | 50% AEP | 20% AEP | 10% AEP | 5% AEP | 4% AEP | 3.33% AEP | 2% AEP | 1.33% AEP | 1% AEP | 0.5% AEP | 0.1% AEP |
|-------|----------------------|---------|----------|---------|---------|---------|--------|--------|-----------|--------|-----------|--------|----------|----------|
|       |                      |         |          | Level   | Level   | Level   | Level  | Level  | Level     | Level  | Level     | Level  | Level    | Level    |
| 1     | 1440128              | 384264  | 393837   | 31.85   | 31.85   | 31.85   | 31.85  | 31.85  | 31.85     | 31.85  | 31.85     | 31.85  | 31.85    | 31.89    |
| 2     | 1440127              | 384280  | 393819   | 31.85   | 31.85   | 31.85   | 31.85  | 31.85  | 31.85     | 31.85  | 31.85     | 31.85  | 31.85    | 31.89    |

Data in this table comes from the Cringle Black Brook 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

If no level or flow data is available for a scenario, no table will be shown.

## Defences removed

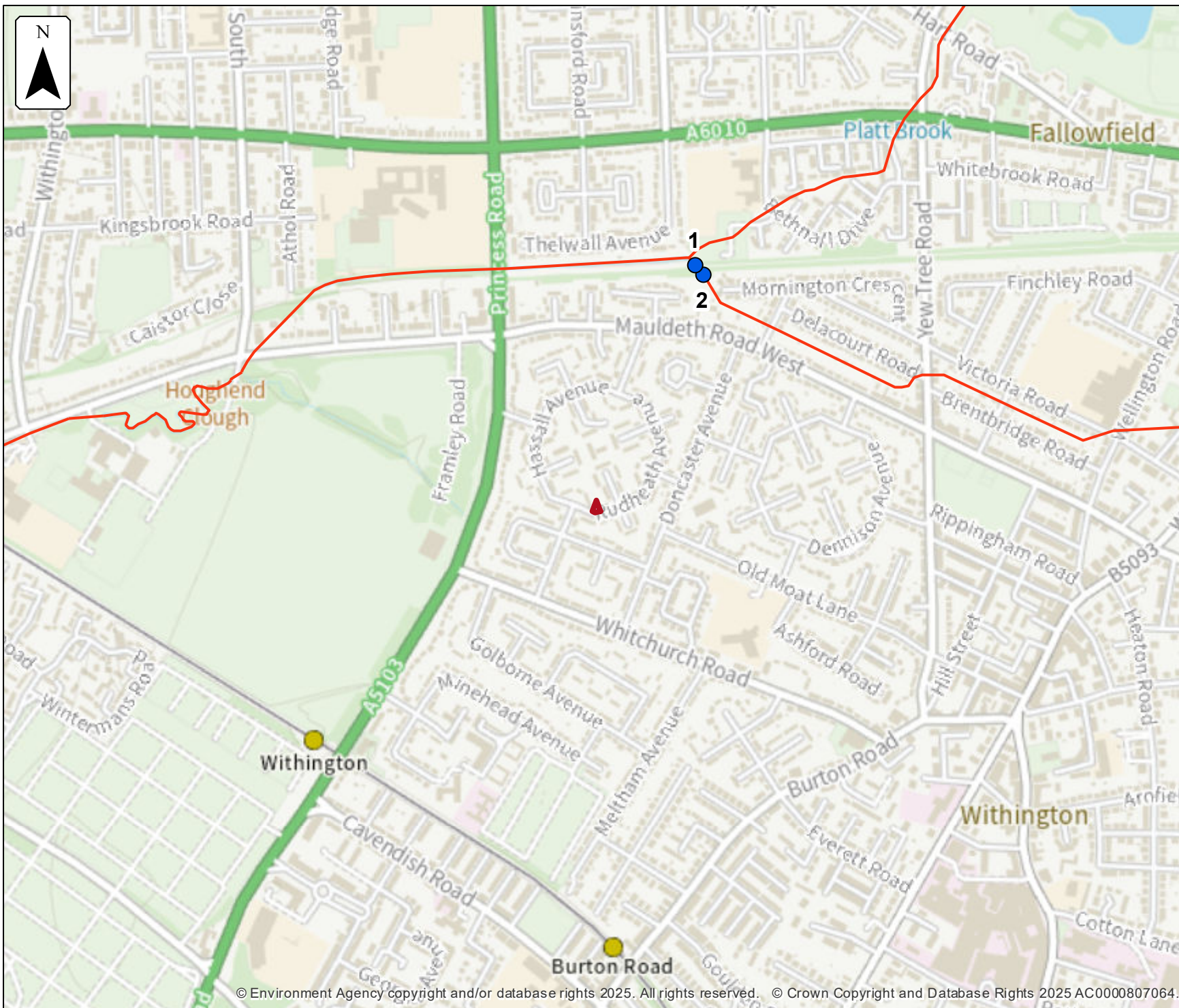
| Label | Modelled location ID | Easting | Northing | 50% AEP | 20% AEP | 10% AEP | 5% AEP | 4% AEP | 3.33% AEP | 2% AEP | 1.33% AEP | 1% AEP | 0.5% AEP | 0.1% AEP |
|-------|----------------------|---------|----------|---------|---------|---------|--------|--------|-----------|--------|-----------|--------|----------|----------|
|       |                      |         |          | Flow    | Flow    | Flow    | Flow   | Flow   | Flow      | Flow   | Flow      | Flow   | Flow     | Flow     |
| 1     | 1440128              | 384264  | 393837   | 3.02    | 3.68    | 3.96    | 3.96   | 3.96   | 3.96      | 3.96   | 3.96      | 3.96   | 3.96     | 4.24     |
| 2     | 1440127              | 384280  | 393819   | 3.02    | 3.68    | 3.96    | 3.96   | 3.96   | 3.96      | 3.96   | 3.96      | 3.96   | 3.96     | 3.98     |

Data in this table comes from the Cringle Black Brook 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

If no level or flow data is available for a scenario, no table will be shown.



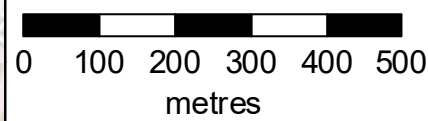
**Defended climate change modelled fluvial node locations**

Location (easting/northing)  
**384072/393367**

Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook 2017**

-  Selected area
-  Modelled location
-  Main river



## Modelled node locations data

### Defended climate change

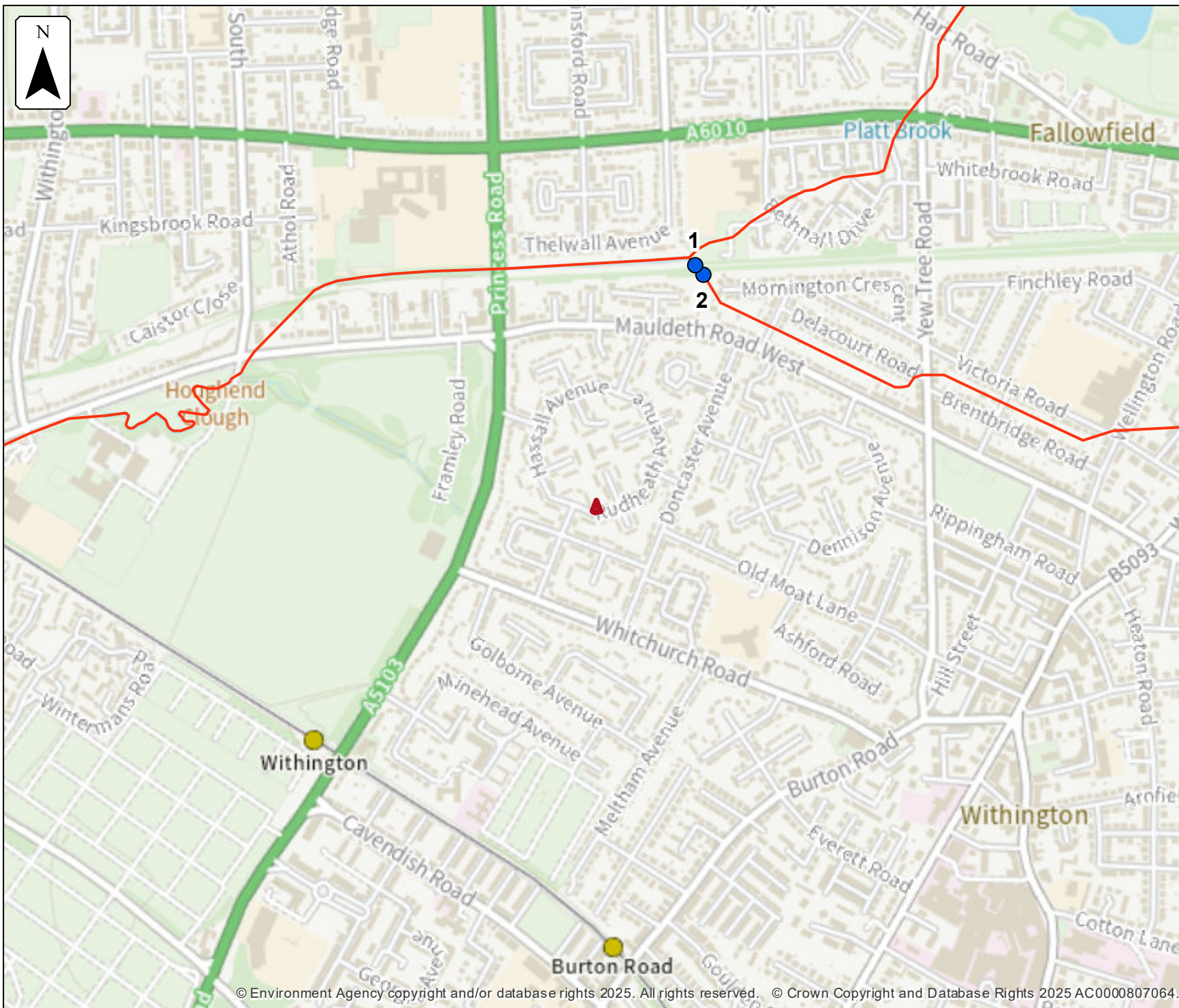
| Label | Modelled location ID | Easting | Northing | 1% AEP (+30%) | 1% AEP (+35%) | 1% AEP (+70%) | 0.1% AEP (+30%) | 1% AEP (+30%) | 1% AEP (+35%) | 1% AEP (+70%) | 0.1% AEP (+30%) |
|-------|----------------------|---------|----------|---------------|---------------|---------------|-----------------|---------------|---------------|---------------|-----------------|
|       |                      |         |          | Level         | Level         | Level         | Level           | Flow          | Flow          | Flow          | Flow            |
| 1     | 1440128              | 384264  | 393837   | 31.85         | 31.85         | 31.86         | 31.91           | 3.97          | 3.97          | 3.97          | 4.75            |
| 2     | 1440127              | 384280  | 393819   | 31.85         | 31.85         | 31.85         | 31.91           | 3.97          | 3.97          | 3.97          | 3.99            |

Data in this table comes from the Cringle Black Brook 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

If no level or flow data is available for a scenario, no table will be shown.



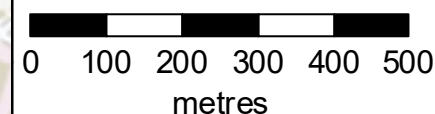
## Defences removed climate change modelled fluvial node locations

Location (easting/northing)  
**384072/393367**

Scale Created  
**1:10,000 7 Feb 2025**

Model name  
**Cringle Black Brook  
2017**

-  Selected area
-  Modelled location
-  Main river



# Modelled node locations data

## Defences removed climate change

| Label | Modelled location ID | Easting | Northing | 1% AEP (+30%) | 1% AEP (+35%) | 1% AEP (+70%) | 0.1% AEP (+30%) | 1% AEP (+30%) | 1% AEP (+35%) | 1% AEP (+70%) | 0.1% AEP (+30%) |
|-------|----------------------|---------|----------|---------------|---------------|---------------|-----------------|---------------|---------------|---------------|-----------------|
|       |                      |         |          | Level         | Level         | Level         | Level           | Flow          | Flow          | Flow          | Flow            |
| 1     | 1440128              | 384264  | 393837   | 31.85         | 31.85         | 31.86         | 31.91           | 3.97          | 3.97          | 3.97          | 4.75            |
| 2     | 1440127              | 384280  | 393819   | 31.85         | 31.85         | 31.85         | 31.91           | 3.97          | 3.97          | 3.97          | 3.99            |

Data in this table comes from the Cringle Black Brook 2017 model.  
Level values are shown in mAOD, and flow values are shown in cubic metres per second.  
Any blank cells show where a particular scenario has not been modelled for this location.  
If no level or flow data is available for a scenario, no table will be shown.



## Defended modelled fluvial extent and height

Location (easting/northing)  
**384072/393367**

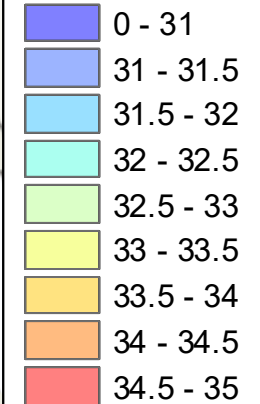
Scale Created  
**1:500 7 Feb 2025**

Model name  
**Cringle Black Brook  
2017**

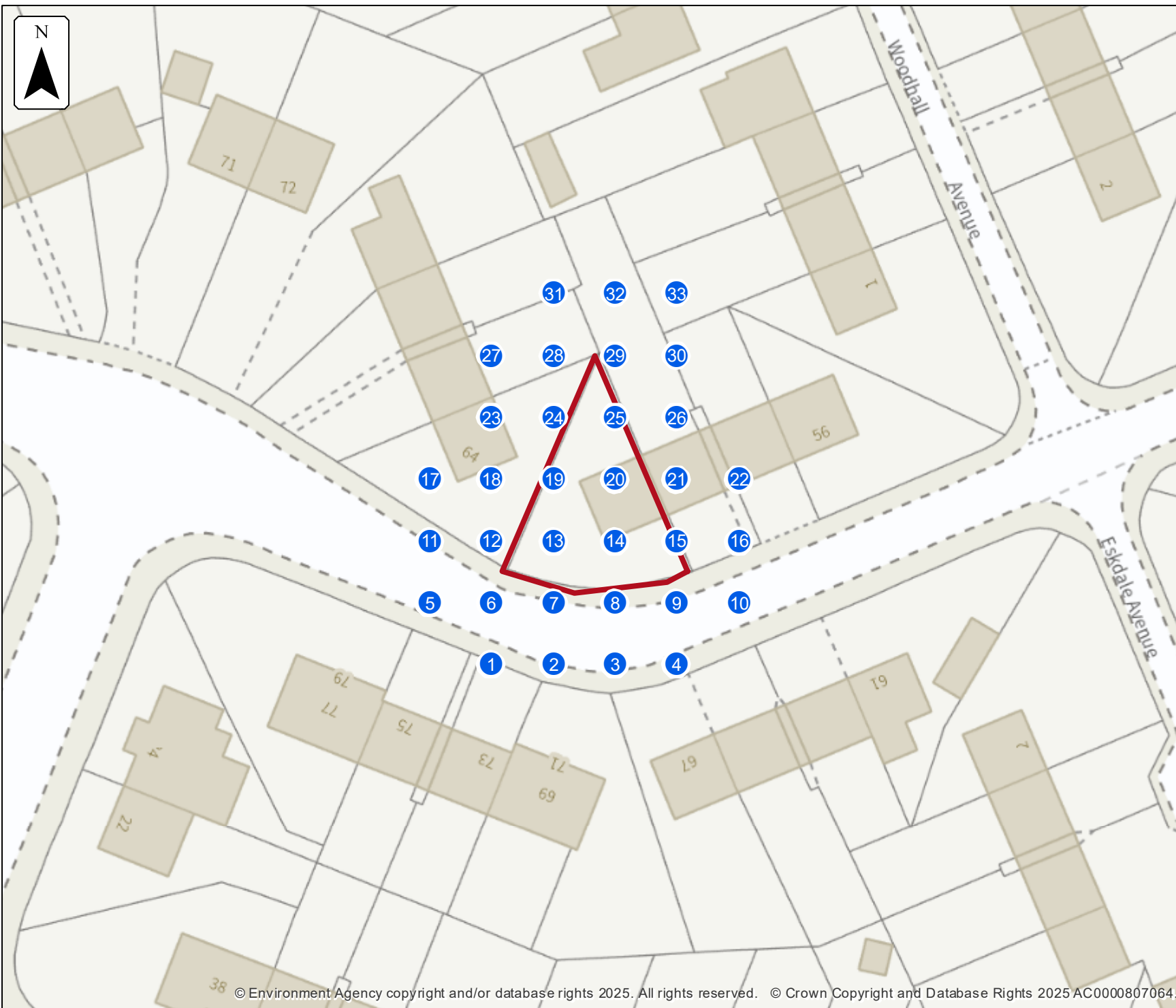
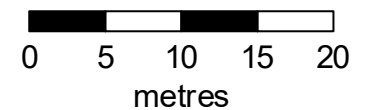
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*



This map shows the  
0.5% AEP height data



## Sample point data

### Defended

| Label | Easting | Northing | 50% AEP | 10% AEP | 5% AEP | 4% AEP | 2% AEP | 1% AEP | 0.5% AEP | 0.1% AEP |
|-------|---------|----------|---------|---------|--------|--------|--------|--------|----------|----------|
|       |         |          | Depth   | Depth   | Depth  | Depth  | Depth  | Depth  | Depth    | Depth    |
| 1     | 384062  | 393352   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.01     |
| 2     | 384068  | 393352   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.14     |
| 3     | 384074  | 393352   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.24     |
| 4     | 384080  | 393352   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.14     |
| 5     | 384056  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.22     |
| 6     | 384062  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.16     |
| 7     | 384068  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.17     |
| 8     | 384074  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.21     |
| 9     | 384080  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.21     |
| 10    | 384086  | 393358   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.20     |
| 11    | 384056  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.14     |
| 12    | 384062  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | NoData   |
| 13    | 384068  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | NoData   |
| 14    | 384074  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | NoData   |
| 15    | 384080  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | NoData   |
| 16    | 384086  | 393364   | NoData  | NoData  | NoData | NoData | NoData | NoData | NoData   | 0.07     |

| Label                       | Easting | Northing | 50% AEP             | 10% AEP             | 5% AEP              | 4% AEP              | 2% AEP              | 1% AEP              | 0.5% AEP            | 0.1% AEP |
|-----------------------------|---------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|
|                             |         |          | Depth               | Depth               | Depth               | Depth               | Depth               | Depth               | Depth               | Depth    |
| 17                          | 384056  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 18                          | 384062  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 19                          | 384068  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 20                          | 384074  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 21                          | 384080  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 22                          | 384086  | 393370   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 23                          | 384062  | 393376   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 24                          | 384068  | 393376   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 25                          | 384074  | 393376   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 26                          | 384080  | 393376   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 27                          | 384062  | 393382   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 28                          | 384068  | 393382   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 29                          | 384074  | 393382   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 30                          | 384080  | 393382   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 31                          | 384068  | 393388   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 32                          | 384074  | 393388   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| 33                          | 384080  | 393388   | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData              | NoData   |
| Max value in selected area: |         |          | Could not determine | Could not determine | Could not determine | Could not determine | Could not determine | Could not determine | Could not determine | 0.12     |

Data in this table comes from the Cringle Black Brook 2017 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

If no height or depth data is available for a scenario, no table will be shown.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



# Defences removed climate change modelled fluvial extent and height

Location (easting/northing)  
**384072/393367**

Scale Created  
**1:500 7 Feb 2025**

Model name  
**Cringle Black Brook  
2017**

 Selected area

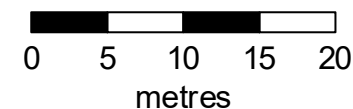
 Main river

Modelled 2D grid

*Water level in mAOD*

-  0 - 31.0
-  31.0 - 31.125
-  31.125 - 31.25
-  31.25 - 31.375
-  31.375 - 31.5
-  31.5 - 31.625
-  31.625 - 31.75
-  31.75 - 31.875
-  31.875 - 32.0

This map shows the  
0.1% AEP +30% height data



## Sample point data

### Defences removed climate change

| Label | Easting | Northing | 0.1% AEP<br>(+30%) | 0.1% AEP<br>(+30%) |
|-------|---------|----------|--------------------|--------------------|
|       |         |          | Depth              | Height             |
| 1     | 384062  | 393352   | 0.05               | 31.78              |
| 2     | 384068  | 393352   | 0.18               | 31.78              |
| 3     | 384074  | 393352   | 0.29               | 31.78              |
| 4     | 384080  | 393352   | 0.19               | 31.78              |
| 5     | 384056  | 393358   | 0.26               | 31.77              |
| 6     | 384062  | 393358   | 0.20               | 31.78              |
| 7     | 384068  | 393358   | 0.22               | 31.78              |
| 8     | 384074  | 393358   | 0.25               | 31.78              |
| 9     | 384080  | 393358   | 0.25               | 31.78              |
| 10    | 384086  | 393358   | 0.24               | 31.78              |
| 11    | 384056  | 393364   | 0.18               | 31.77              |
| 12    | 384062  | 393364   | 0.01               | 31.77              |
| 13    | 384068  | 393364   | NoData             | NoData             |
| 14    | 384074  | 393364   | NoData             | NoData             |
| 15    | 384080  | 393364   | 0.00               | 31.78              |
| 16    | 384086  | 393364   | 0.12               | 31.78              |

| Label                       | Easting | Northing | 0.1% AEP<br>(+30%) | 0.1% AEP<br>(+30%) |
|-----------------------------|---------|----------|--------------------|--------------------|
|                             |         |          | Depth              | Height             |
| 17                          | 384056  | 393370   | NoData             | NoData             |
| 18                          | 384062  | 393370   | NoData             | NoData             |
| 19                          | 384068  | 393370   | NoData             | NoData             |
| 20                          | 384074  | 393370   | NoData             | NoData             |
| 21                          | 384080  | 393370   | NoData             | NoData             |
| 22                          | 384086  | 393370   | NoData             | NoData             |
| 23                          | 384062  | 393376   | NoData             | NoData             |
| 24                          | 384068  | 393376   | NoData             | NoData             |
| 25                          | 384074  | 393376   | NoData             | NoData             |
| 26                          | 384080  | 393376   | NoData             | NoData             |
| 27                          | 384062  | 393382   | NoData             | NoData             |
| 28                          | 384068  | 393382   | NoData             | NoData             |
| 29                          | 384074  | 393382   | NoData             | NoData             |
| 30                          | 384080  | 393382   | NoData             | NoData             |
| 31                          | 384068  | 393388   | NoData             | NoData             |
| 32                          | 384074  | 393388   | NoData             | NoData             |
| 33                          | 384080  | 393388   | NoData             | NoData             |
| Max value in selected area: |         |          | 0.17               | 31.78              |

Data in this table comes from the Cringle Black Brook 2017 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

If no height or depth data is available for a scenario, no table will be shown.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

## 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

Your Lead Local Flood Authority is Manchester District.

## 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 Greater Manchester Merseyside and Cheshire Environment Agency team at [inforequests.gmmc@environment-agency.gov.uk](mailto:inforequests.gmmc@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