

# Flood risk assessment data

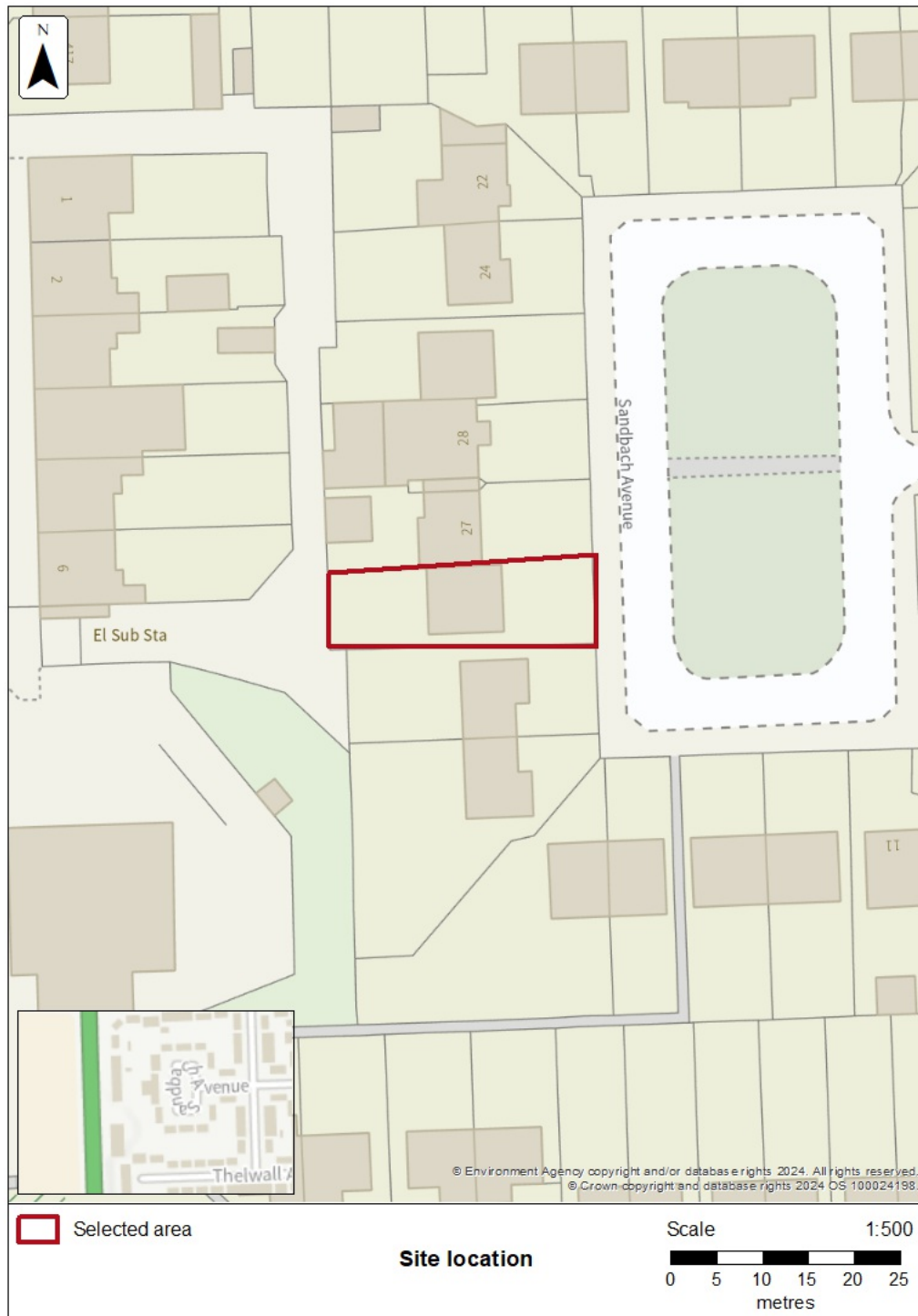
**Location of site:** 383945 / 393960 (shown as easting and northing coordinates)

**Document created on:** 30 April 2024

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

**Customer reference number:** PMJ9JVNJ5M9R

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)
- 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

## Information that's unavailable

This document **does not** contain:

- historic flooding

We do not have historic flooding data for this location.

Please note that:

- 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 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.

## 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.

## About the models used

Model name: Corn Brook 2017

Scenario(s): No defences exist fluvial, no defences exist climate change fluvial

Date: 31 December 2017

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

These models contain 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

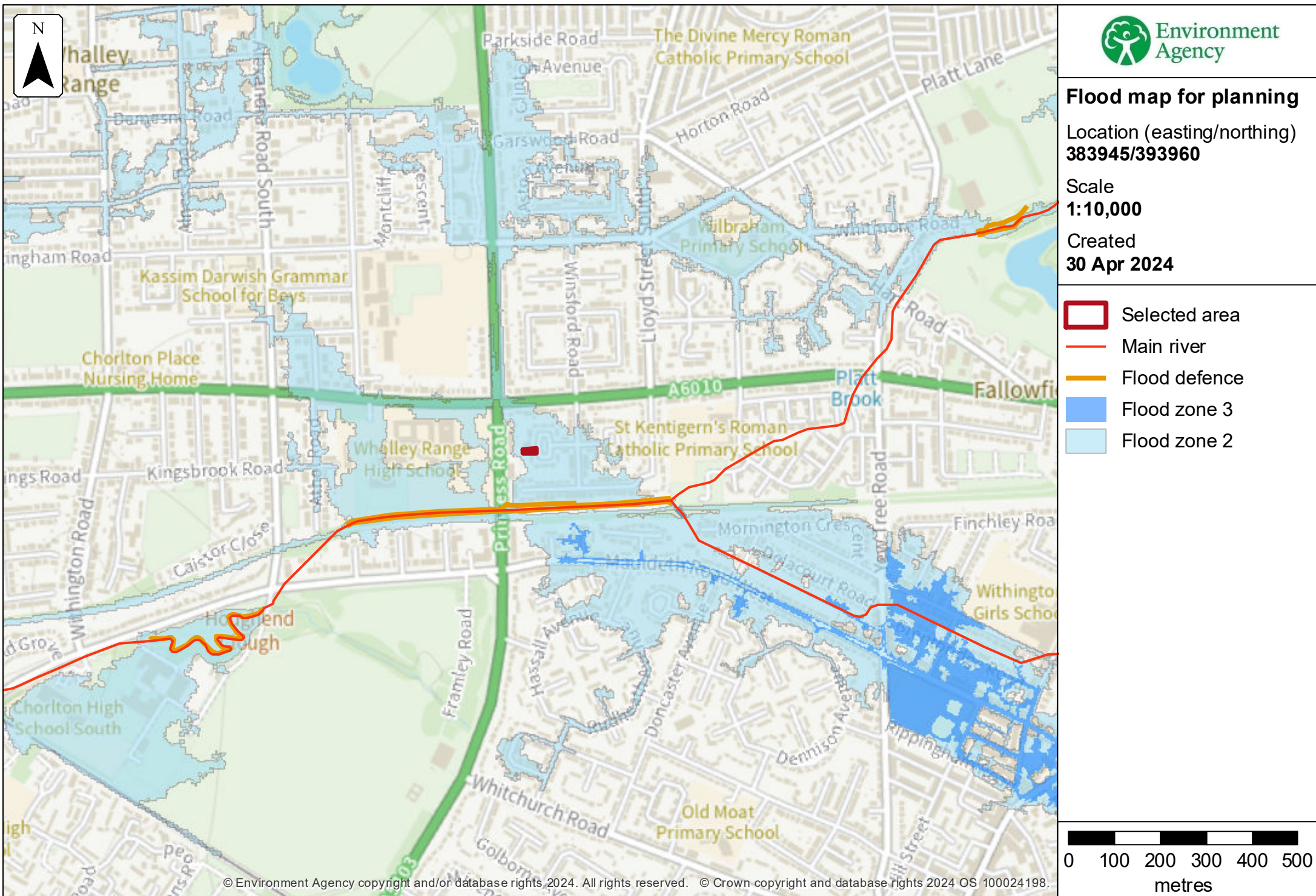
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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 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



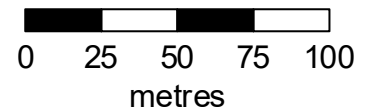
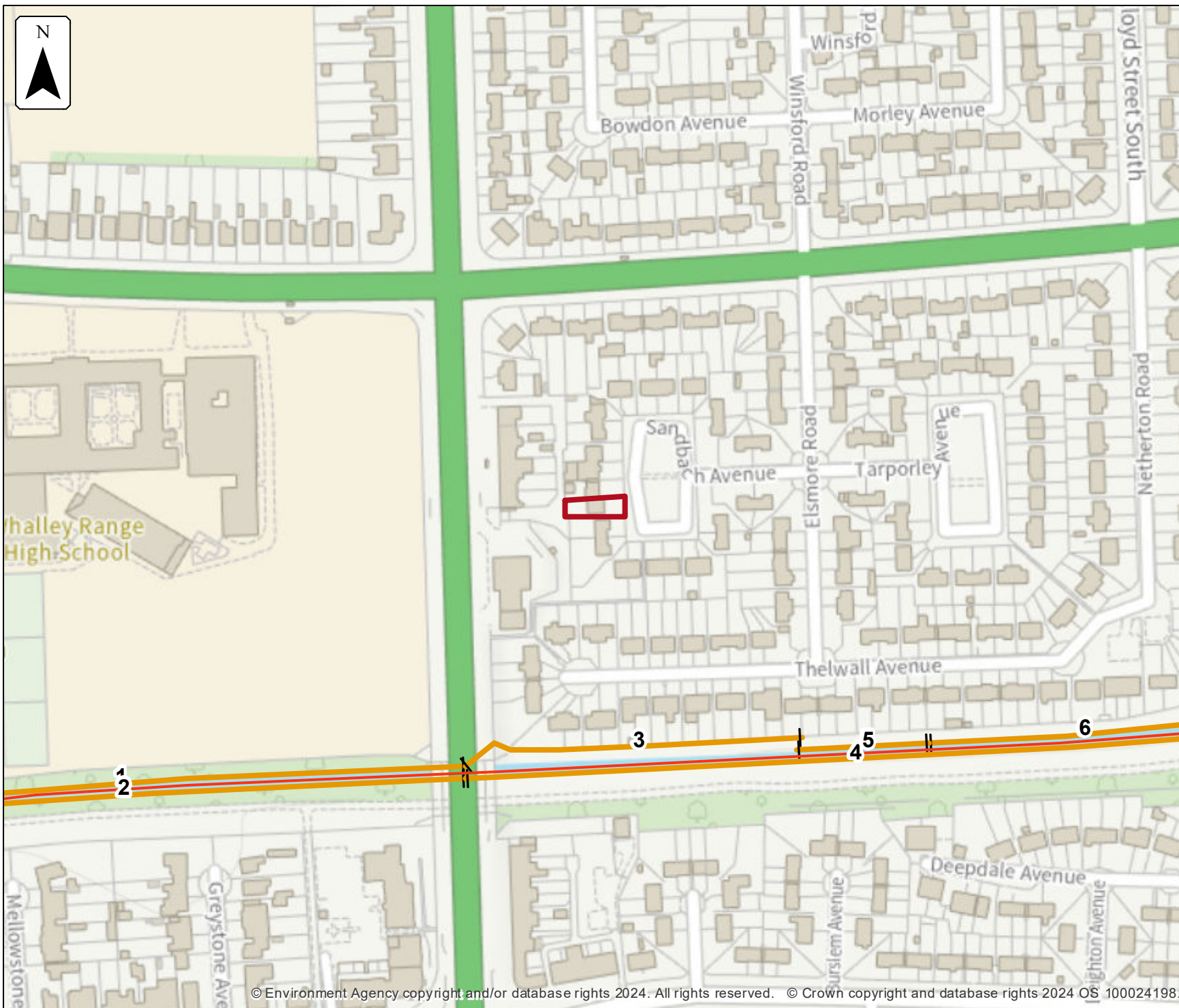
## Flood defences

Location (easting/northing)  
**383945/393960**

Scale  
**1:2,500**

Created  
**30 Apr 2024**

-  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                            | Fair              | 30.25                                | 31.38                              |                              |
| 2     | 32515    | Embankment | 100                            | Fair              | 30.29                                | 31.52                              |                              |
| 3     | 32518    | Wall       | 100                            | Poor              | 31.48                                | 31.84                              |                              |
| 4     | 60038    | Embankment | 100                            | Fair              | 31.39                                | 32.25                              |                              |
| 5     | 59788    | Embankment | 100                            | Fair              | 31.81                                | 32.82                              |                              |
| 6     | 122064   | Wall       | 100                            | Fair              | 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

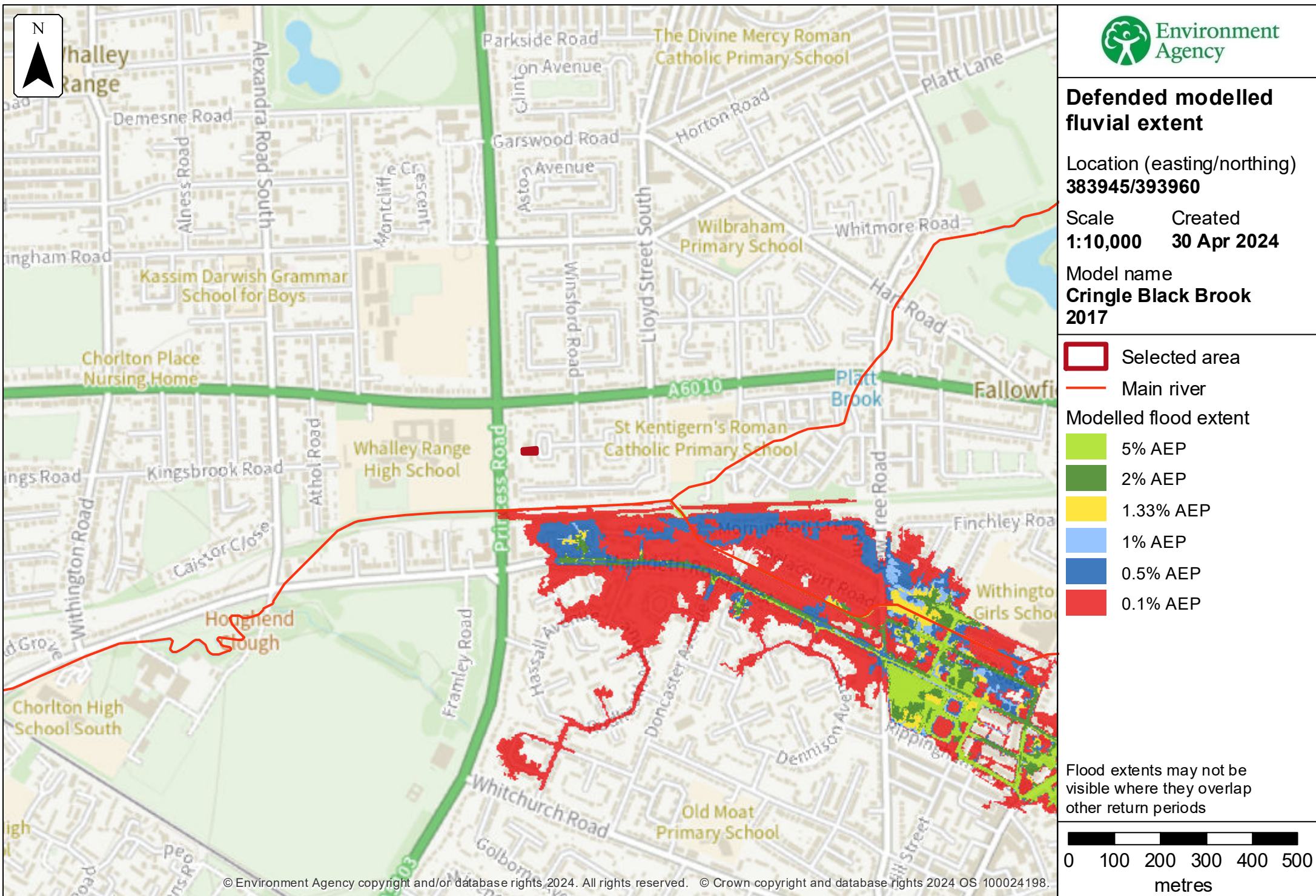
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

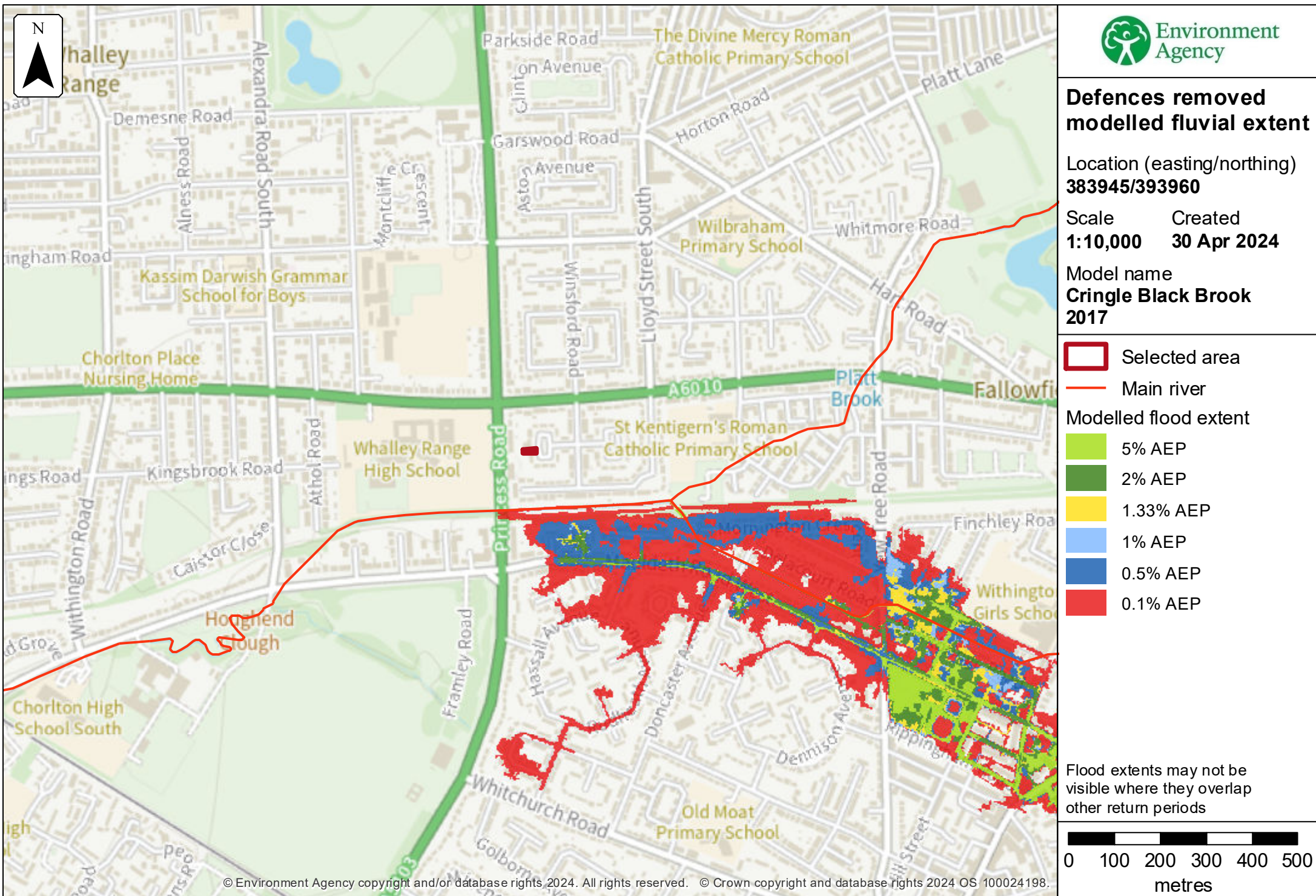
The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

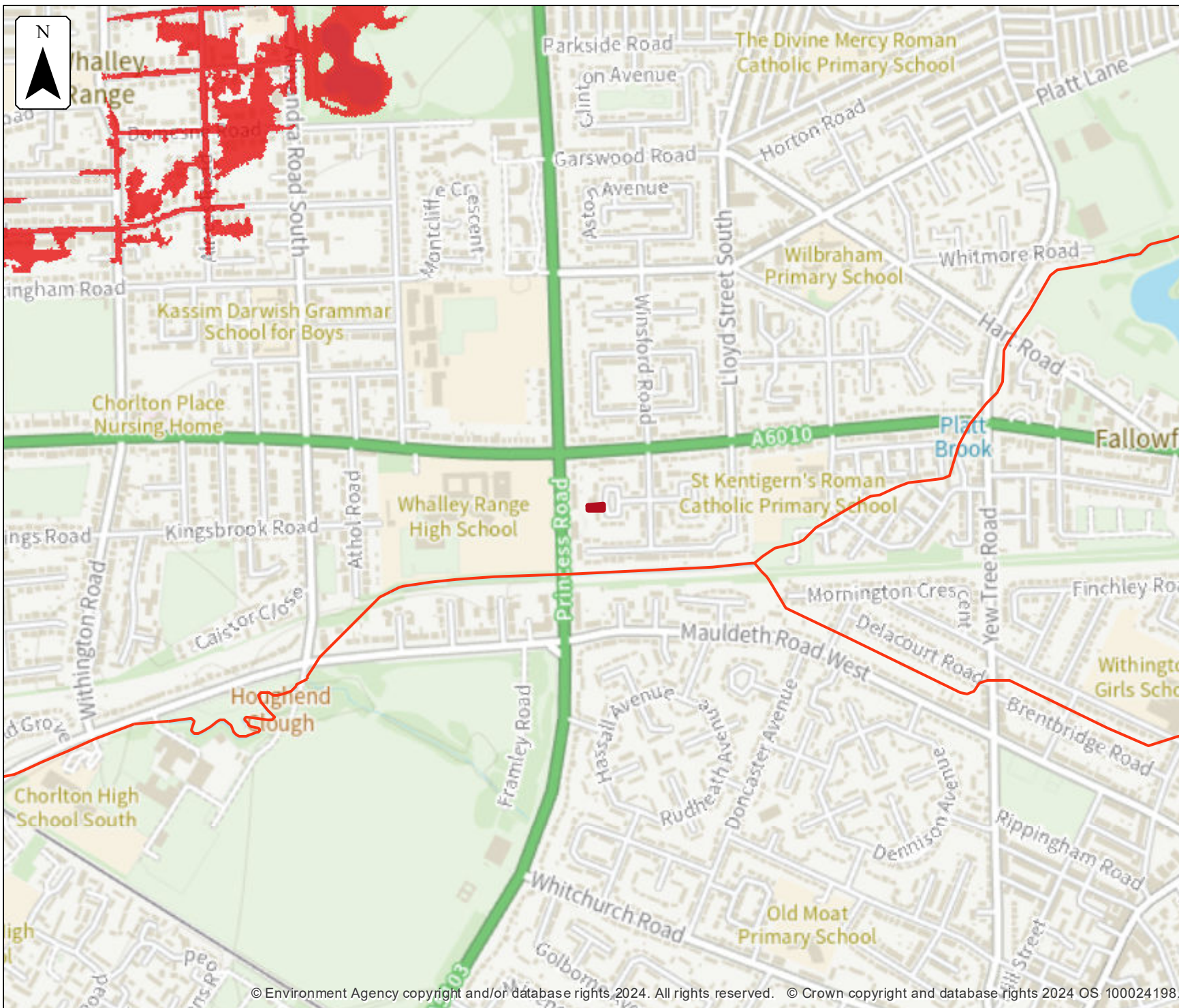
## Modelled scenarios

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
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- 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
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change







## No defences exist modelled fluvial extent

Location (easting/northing)  
**383945/393960**

Scale Created  
**1:10,000 30 Apr 2024**

Model name  
**Corn Brook 2017**

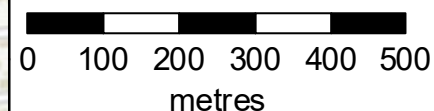
 Selected area

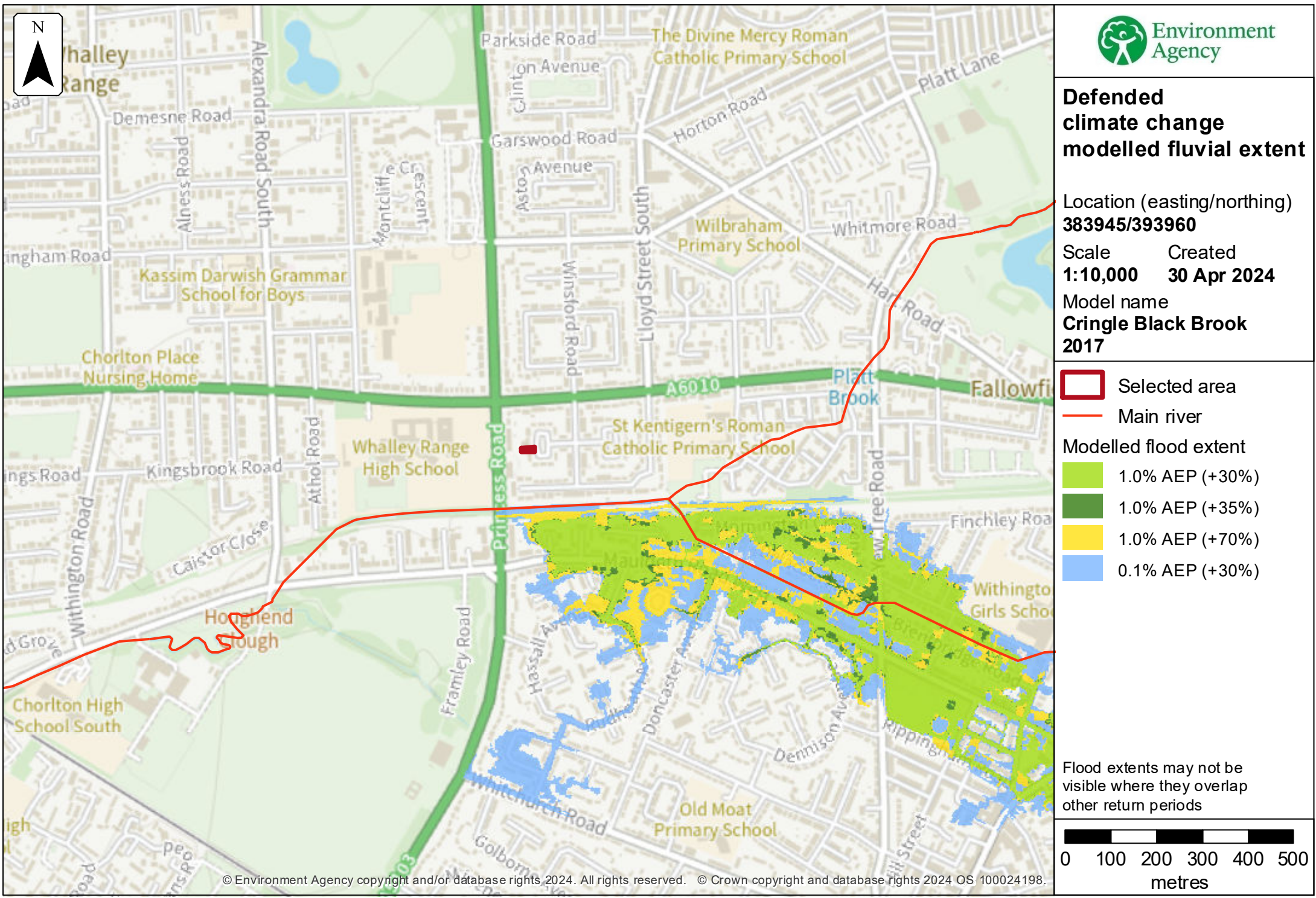
 Main river

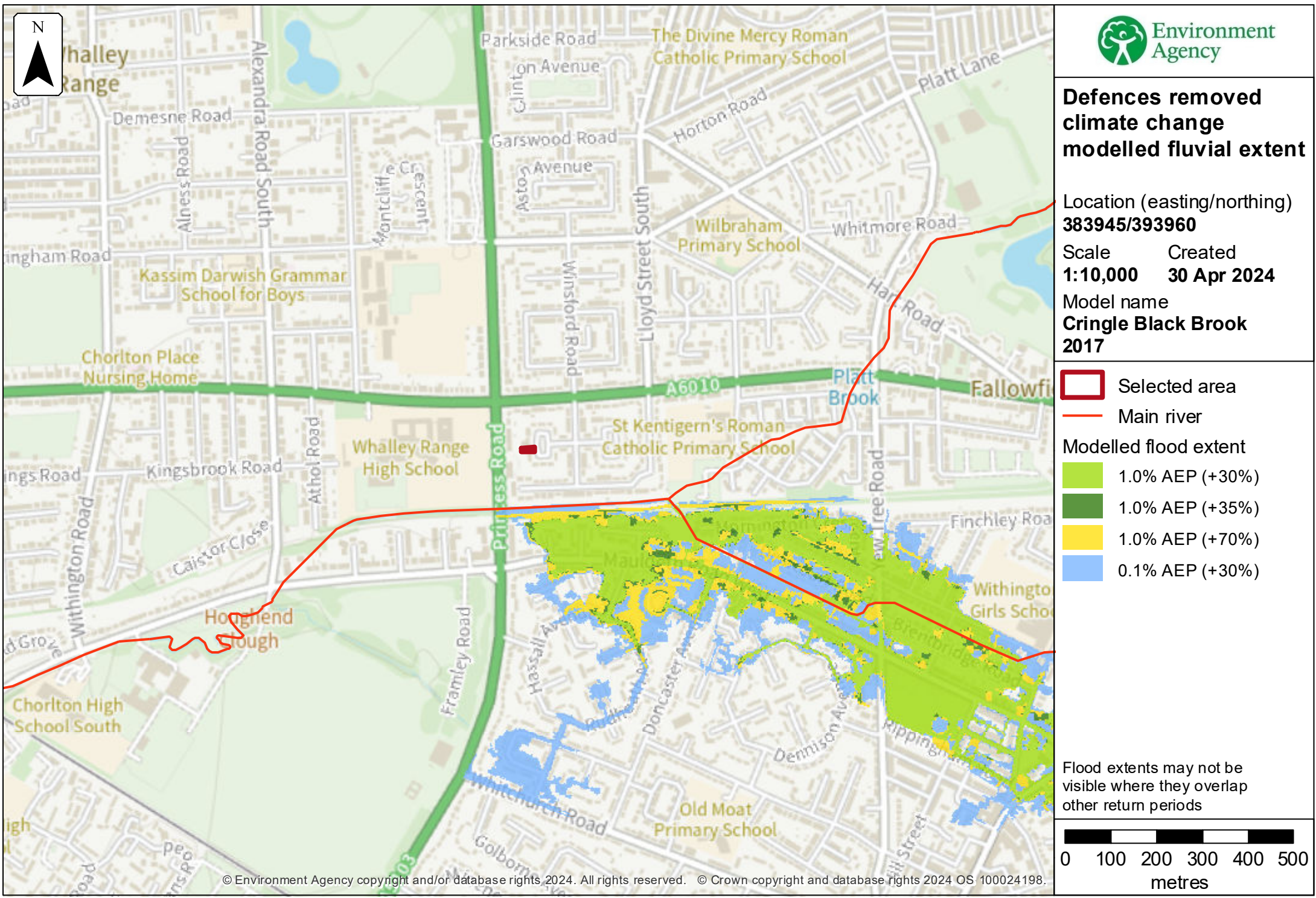
Modelled flood extent

 0.1% AEP

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







**Defences removed  
climate change  
modelled fluvial extent**

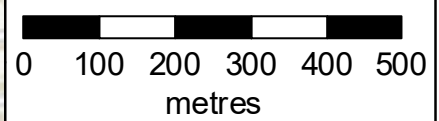
Location (easting/northing)  
**383945/393960**

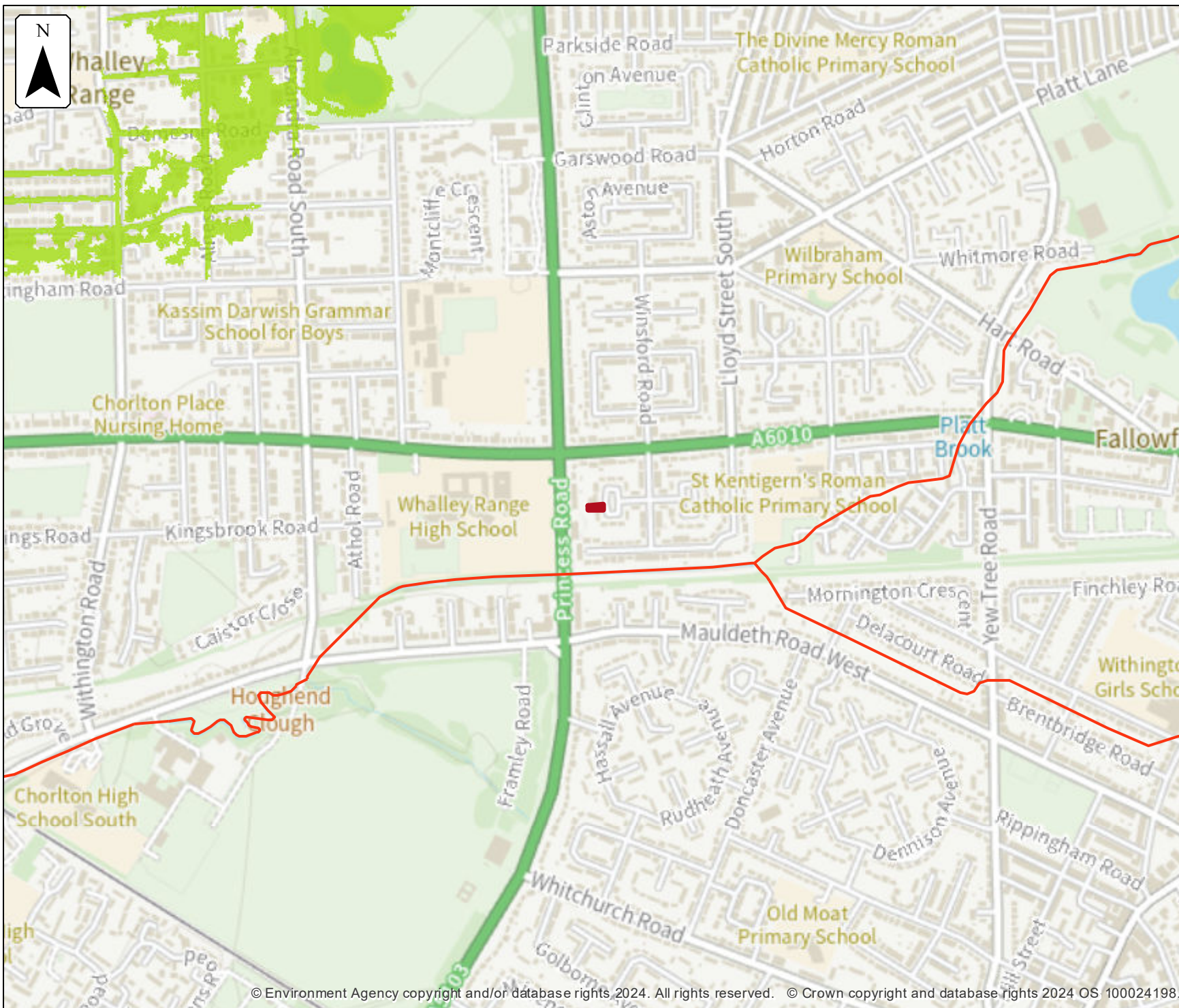
Scale      Created  
**1:10,000      30 Apr 2024**

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





**No defences exist  
climate change  
modelled fluvial extent**

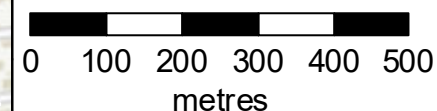
Location (easting/northing)  
**383945/393960**

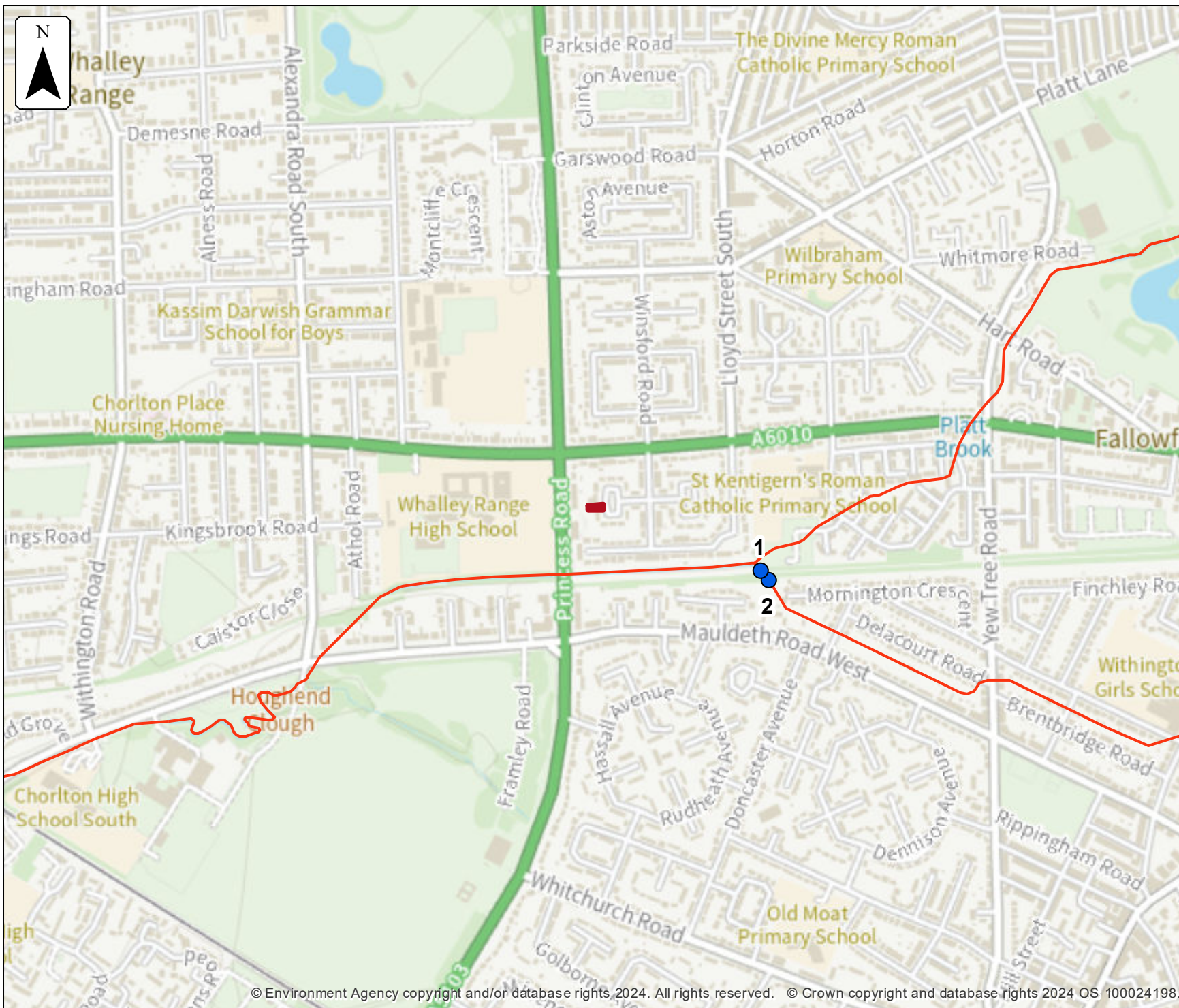
Scale Created  
**1:10,000 30 Apr 2024**

Model name  
**Corn Brook 2017**

-  Selected area
-  Main river
- Modelled flood extent
  -  0.1% AEP (+30%)

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





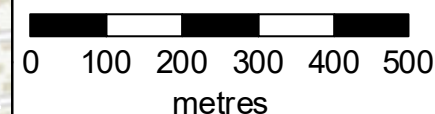
## Defended modelled fluvial node locations

Location (easting/northing)  
**383945/393960**

Scale Created  
**1:10,000 30 Apr 2024**

Model name  
**Cringle Black Brook  
2017**

-  Selected area
-  Modelled location
-  Main river

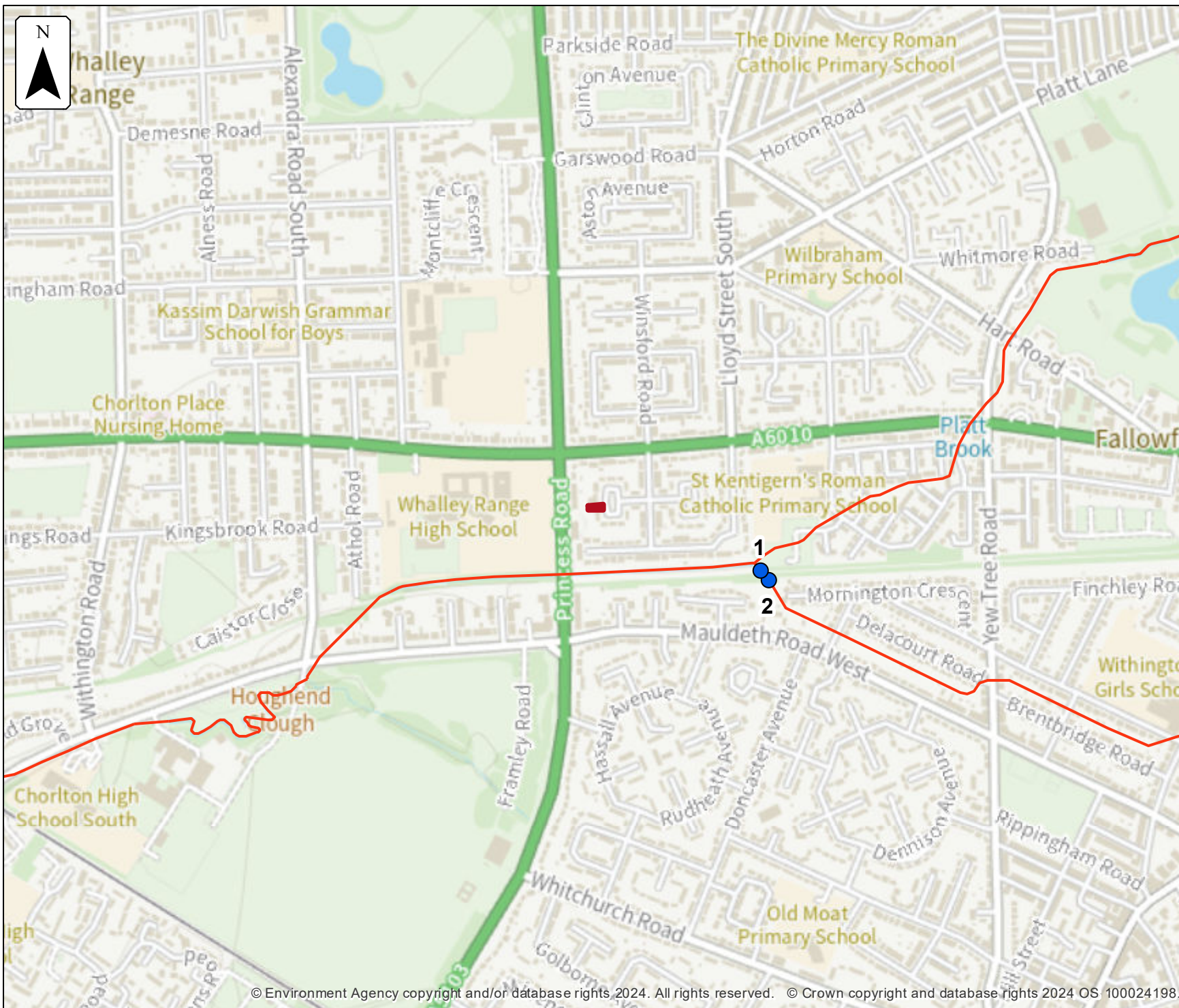


# Modelled node locations data

## Defended

| Label | Modelled location ID | Easting | Northing | 5% AEP |      | 2% AEP |      | 1.33% AEP |      | 1% AEP |      | 0.5% AEP |      | 0.1% AEP |      |
|-------|----------------------|---------|----------|--------|------|--------|------|-----------|------|--------|------|----------|------|----------|------|
|       |                      |         |          | Level  | Flow | Level  | Flow | Level     | Flow | Level  | Flow | Level    | Flow | Level    | Flow |
| 1     | 1440128              | 384264  | 393837   | 31.85  | 3.96 | 31.85  | 3.96 | 31.85     | 3.96 | 31.85  | 3.96 | 31.85    | 3.96 | 31.89    | 4.24 |
| 2     | 1440127              | 384280  | 393819   | 31.85  | 3.96 | 31.85  | 3.96 | 31.85     | 3.96 | 31.85  | 3.96 | 31.85    | 3.96 | 31.89    | 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.



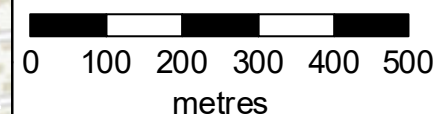
## Defences removed modelled fluvial node locations

Location (easting/northing)  
**383945/393960**

Scale Created  
**1:10,000 30 Apr 2024**

Model name  
**Cringle Black Brook  
2017**

-  Selected area
-  Modelled location
-  Main river

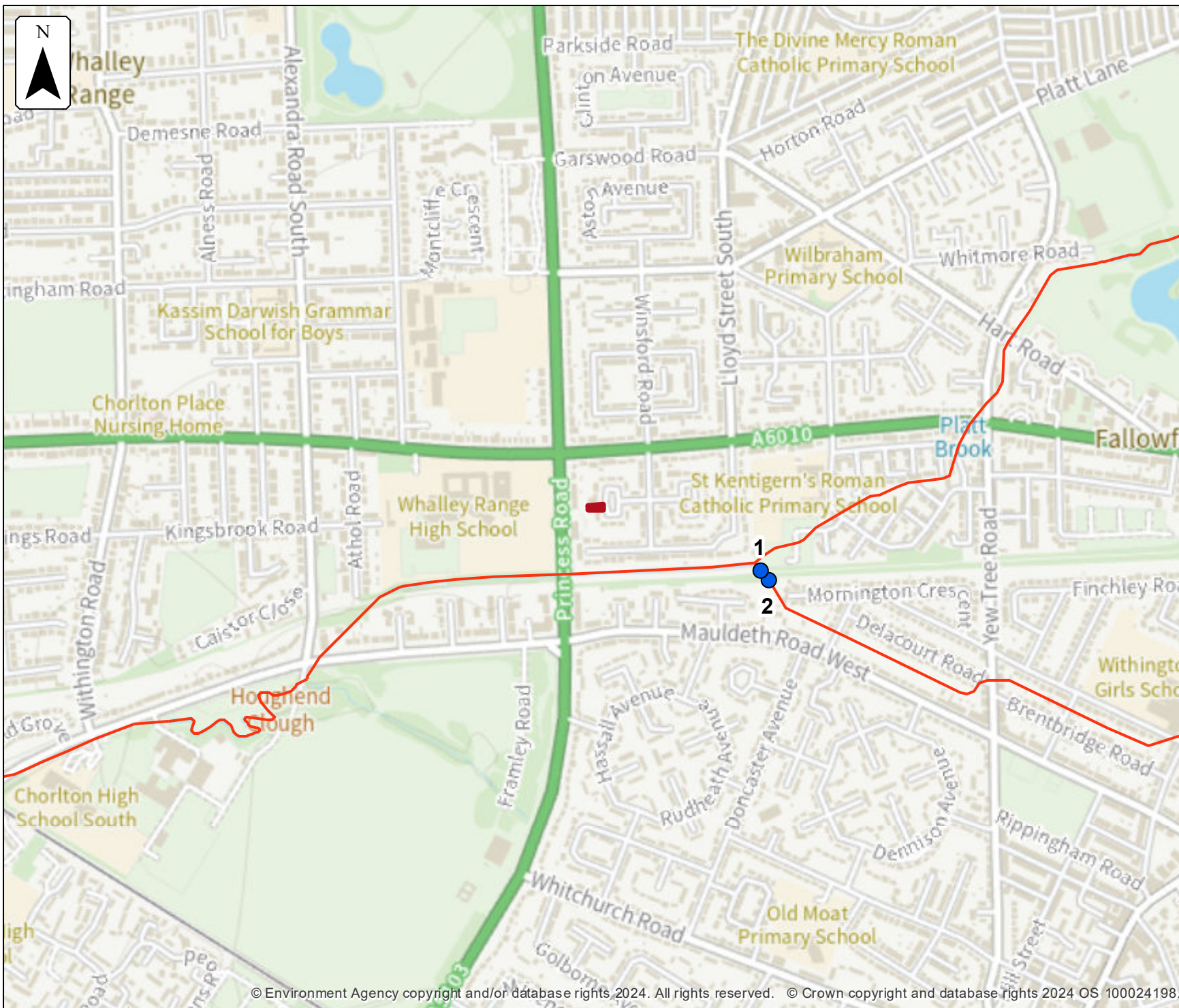


# Modelled node locations data

## Defences removed

| Label | Modelled location ID | Easting | Northing | 5% AEP |      | 2% AEP |      | 1.33% AEP |      | 1% AEP |      | 0.5% AEP |      | 0.1% AEP |      |
|-------|----------------------|---------|----------|--------|------|--------|------|-----------|------|--------|------|----------|------|----------|------|
|       |                      |         |          | Level  | Flow | Level  | Flow | Level     | Flow | Level  | Flow | Level    | Flow | Level    | Flow |
| 1     | 1440128              | 384264  | 393837   | 31.85  | 3.96 | 31.85  | 3.96 | 31.85     | 3.96 | 31.85  | 3.96 | 31.85    | 3.96 | 31.89    | 4.24 |
| 2     | 1440127              | 384280  | 393819   | 31.85  | 3.96 | 31.85  | 3.96 | 31.85     | 3.96 | 31.85  | 3.96 | 31.85    | 3.96 | 31.89    | 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.



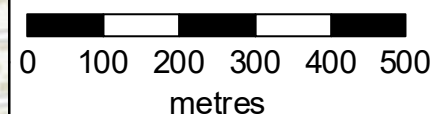
## Defended climate change modelled fluvial node locations

Location (easting/northing)  
**383945/393960**

Scale Created  
**1:10,000 30 Apr 2024**

Model name  
**Cringle Black Brook  
2017**

-  Selected area
-  Modelled location
-  Main river

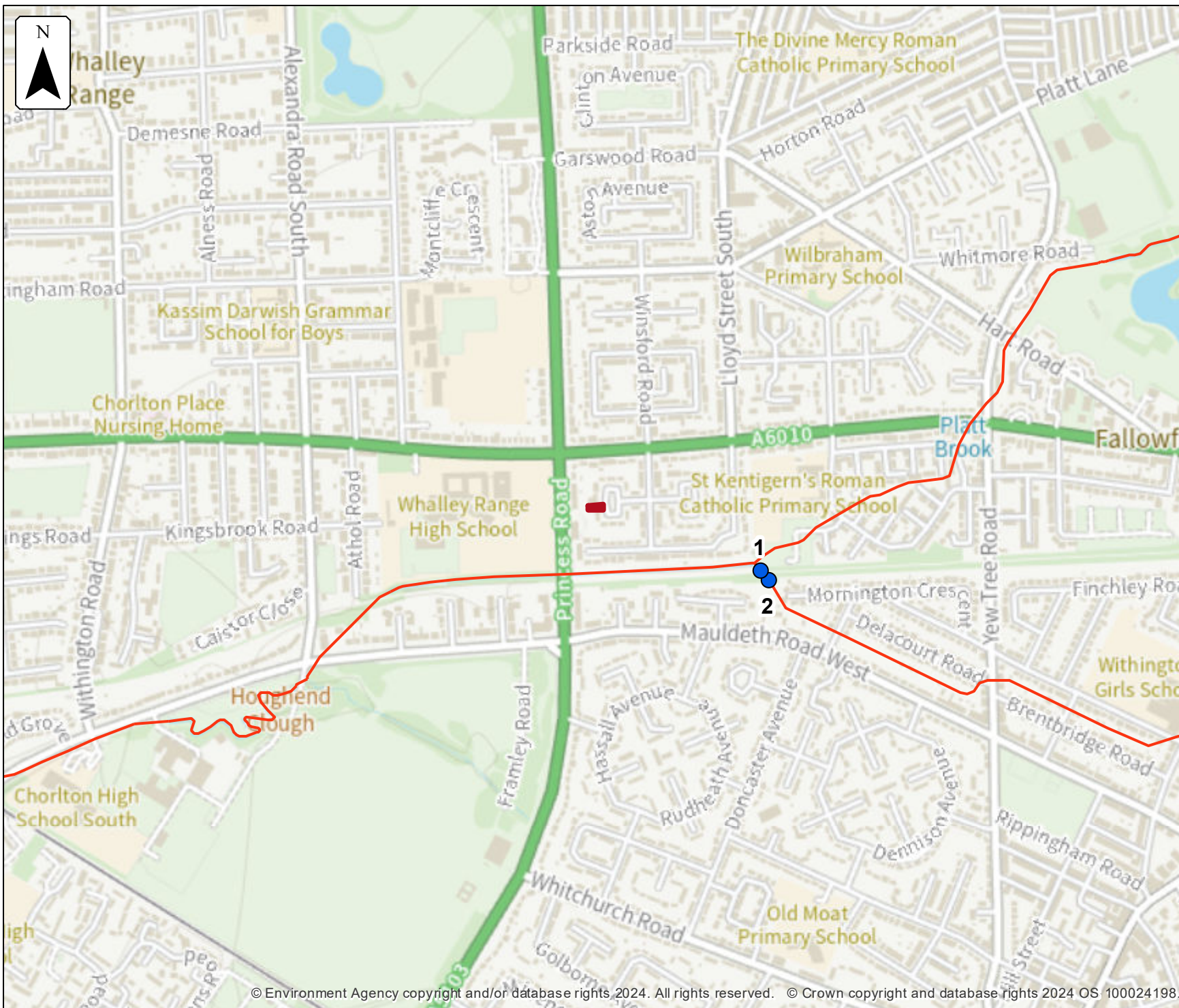


# Modelled node locations data

## Defended climate change

| Label | Modelled location ID | Easting | Northing | 1.0% AEP (+30%) |      | 1.0% AEP (+35%) |      | 1.0% AEP (+70%) |      | 0.1% AEP (+30%) |      |
|-------|----------------------|---------|----------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|
|       |                      |         |          | Level           | Flow | Level           | Flow | Level           | Flow | Level           | Flow |
| 1     | 1440128              | 384264  | 393837   | 31.85           | 3.97 | 31.85           | 3.97 | 31.86           | 3.97 | 31.91           | 4.75 |
| 2     | 1440127              | 384280  | 393819   | 31.85           | 3.97 | 31.85           | 3.97 | 31.85           | 3.97 | 31.91           | 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.



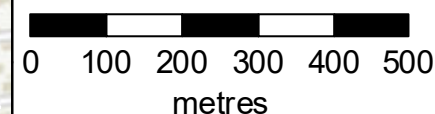
## Defences removed climate change modelled fluvial node locations

Location (easting/northing)  
**383945/393960**

Scale Created  
**1:10,000 30 Apr 2024**

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 | 1.0% AEP (+30%) |      | 1.0% AEP (+35%) |      | 1.0% AEP (+70%) |      | 0.1% AEP (+30%) |      |
|-------|----------------------|---------|----------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|
|       |                      |         |          | Level           | Flow | Level           | Flow | Level           | Flow | Level           | Flow |
| 1     | 1440128              | 384264  | 393837   | 31.85           | 3.97 | 31.85           | 3.97 | 31.86           | 3.97 | 31.91           | 4.75 |
| 2     | 1440127              | 384280  | 393819   | 31.85           | 3.97 | 31.85           | 3.97 | 31.85           | 3.97 | 31.91           | 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.



**No defences exist  
modelled fluvial  
extent and height**

Location (easting/northing)  
**383945/393960**

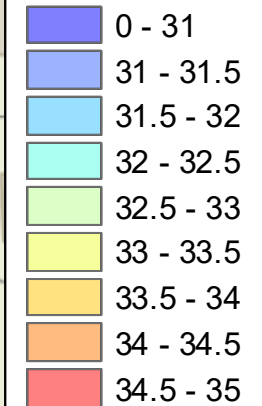
Scale Created  
**1:500 30 Apr 2024**

Model name  
**Corn Brook 2017**

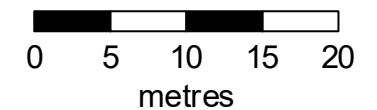
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*



This map shows the  
0.1% AEP height data



## Sample point data

No defences exist

| Label | Easting | Northing | 5% AEP |        | 2% AEP |        | 1.33% AEP |        | 1% AEP |        | 0.5% AEP |        | 0.1% AEP |        |
|-------|---------|----------|--------|--------|--------|--------|-----------|--------|--------|--------|----------|--------|----------|--------|
|       |         |          | Depth  | Height | Depth  | Height | Depth     | Height | Depth  | Height | Depth    | Height | Depth    | Height |
| 1     | 383923  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 2     | 383930  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 3     | 383937  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 4     | 383944  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 5     | 383951  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 6     | 383958  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 7     | 383965  | 393949   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 8     | 383923  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 9     | 383930  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 10    | 383937  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 11    | 383944  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 12    | 383951  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 13    | 383958  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 14    | 383965  | 393956   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 15    | 383923  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 16    | 383930  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |

| Label | Easting | Northing | 5% AEP |        | 2% AEP |        | 1.33% AEP |        | 1% AEP |        | 0.5% AEP |        | 0.1% AEP |        |
|-------|---------|----------|--------|--------|--------|--------|-----------|--------|--------|--------|----------|--------|----------|--------|
|       |         |          | Depth  | Height | Depth  | Height | Depth     | Height | Depth  | Height | Depth    | Height | Depth    | Height |
| 17    | 383937  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 18    | 383944  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 19    | 383951  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 20    | 383958  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 21    | 383965  | 393963   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 22    | 383923  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 23    | 383930  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 24    | 383937  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 25    | 383944  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 26    | 383951  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 27    | 383958  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |
| 28    | 383965  | 393970   |        |        |        |        |           |        |        |        |          |        | NoData   | NoData |

Data in this table comes from the Corn 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.



**No defences exist  
climate change  
modelled fluvial  
extent and height**

Location (easting/northing)  
**383945/393960**

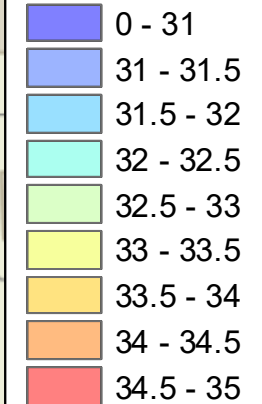
Scale Created  
**1:500 30 Apr 2024**

Model name  
**Corn Brook 2017**

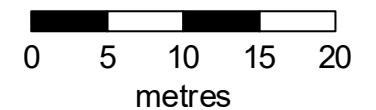
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*



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



## Sample point data

### No defences exist climate change

| Label | Easting | Northing | 0.1% AEP (+30%) |        |
|-------|---------|----------|-----------------|--------|
|       |         |          | Depth           | Height |
| 1     | 383923  | 393949   | NoData          | NoData |
| 2     | 383930  | 393949   | NoData          | NoData |
| 3     | 383937  | 393949   | NoData          | NoData |
| 4     | 383944  | 393949   | NoData          | NoData |
| 5     | 383951  | 393949   | NoData          | NoData |
| 6     | 383958  | 393949   | NoData          | NoData |
| 7     | 383965  | 393949   | NoData          | NoData |
| 8     | 383923  | 393956   | NoData          | NoData |
| 9     | 383930  | 393956   | NoData          | NoData |
| 10    | 383937  | 393956   | NoData          | NoData |
| 11    | 383944  | 393956   | NoData          | NoData |
| 12    | 383951  | 393956   | NoData          | NoData |
| 13    | 383958  | 393956   | NoData          | NoData |
| 14    | 383965  | 393956   | NoData          | NoData |
| 15    | 383923  | 393963   | NoData          | NoData |
| 16    | 383930  | 393963   | NoData          | NoData |

| Label | Easting | Northing | 0.1% AEP (+30%) |        |
|-------|---------|----------|-----------------|--------|
|       |         |          | Depth           | Height |
| 17    | 383937  | 393963   | NoData          | NoData |
| 18    | 383944  | 393963   | NoData          | NoData |
| 19    | 383951  | 393963   | NoData          | NoData |
| 20    | 383958  | 393963   | NoData          | NoData |
| 21    | 383965  | 393963   | NoData          | NoData |
| 22    | 383923  | 393970   | NoData          | NoData |
| 23    | 383930  | 393970   | NoData          | NoData |
| 24    | 383937  | 393970   | NoData          | NoData |
| 25    | 383944  | 393970   | NoData          | NoData |
| 26    | 383951  | 393970   | NoData          | NoData |
| 27    | 383958  | 393970   | NoData          | NoData |
| 28    | 383965  | 393970   | NoData          | NoData |

Data in this table comes from the Corn 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.

## 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 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