

Flood risk assessment data

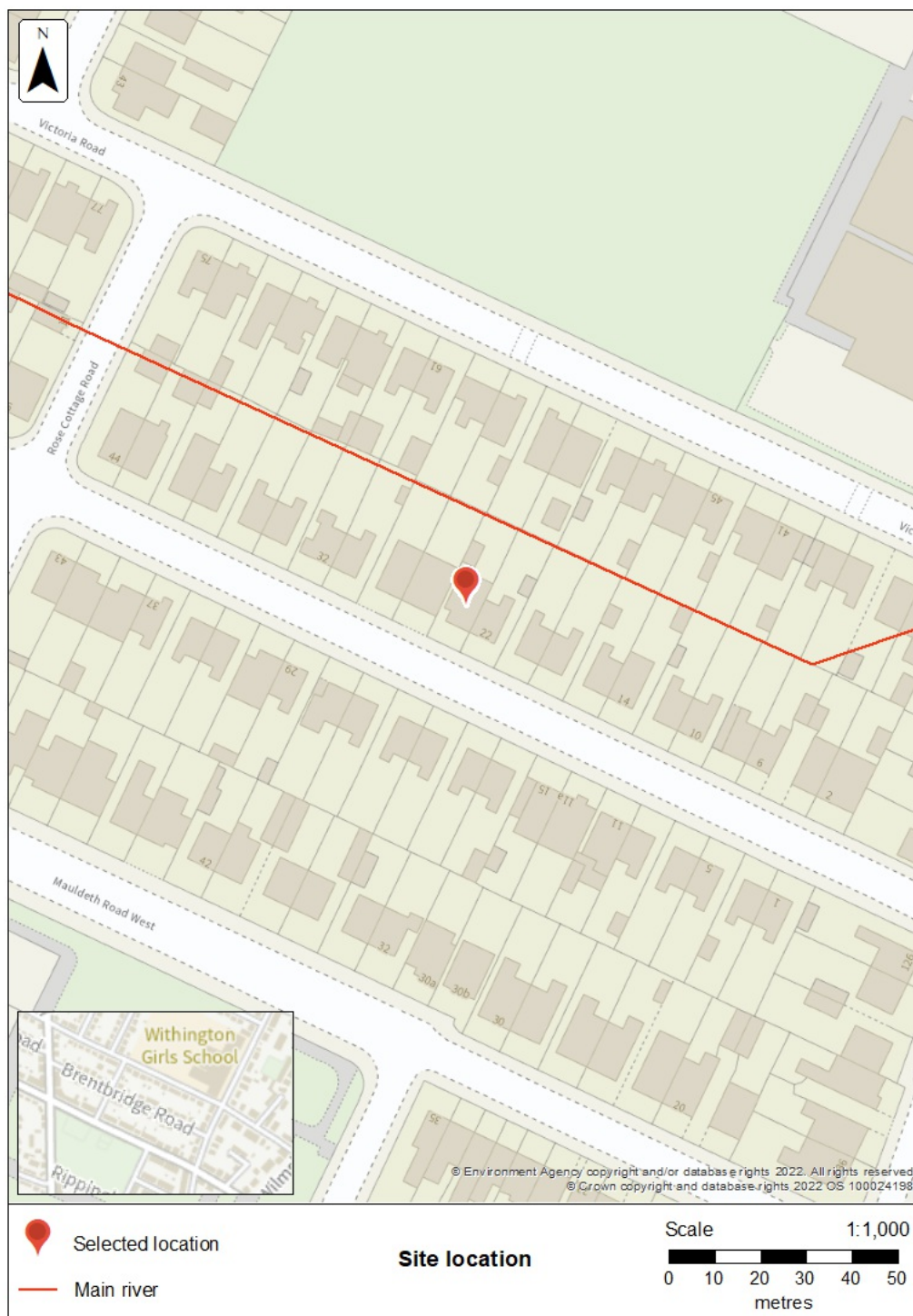
Location of site: 384940 / 393511 (shown as easting and northing coordinates)

Document created on: 05 July 2022

This information was previously known as a product 4.

Customer reference number: GMMC265678AB

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)
- historic flooding
- flood defences and attributes
- 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

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

About the models used

Model name: CHOP_2012_D

Scenario(s): Defended fluvial

Date: 16 March 2012

Model name: CHOP_2012_U

Scenario(s): No defences exist fluvial

Date: 16 March 2012

Model name: Cringle Brook

Scenario(s): Defended fluvial, no defences exist fluvial

Date: 17 May 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

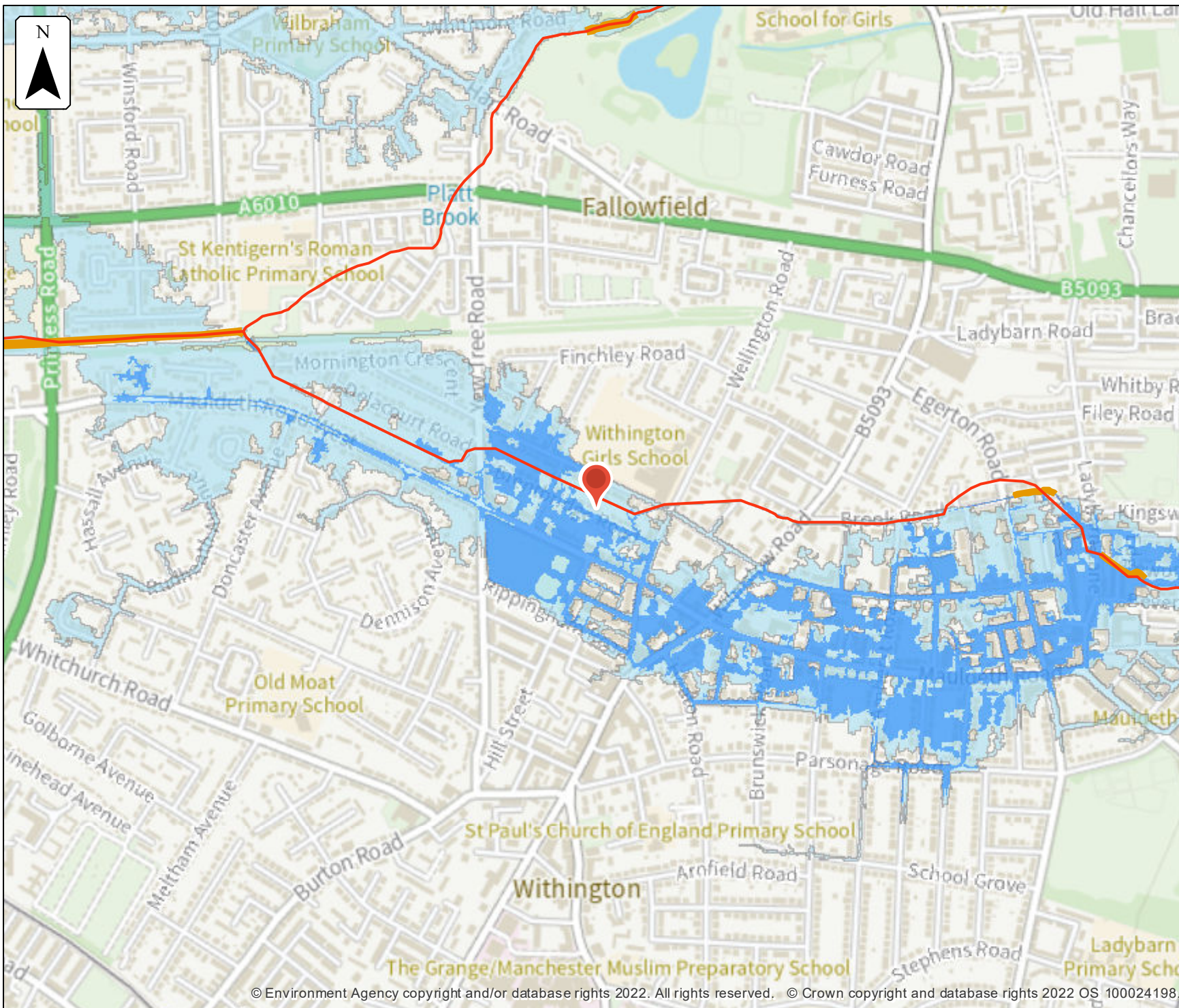
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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

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



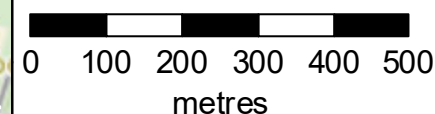
Flood map for planning

Location (easting/northing)
384940/393511

Scale
1:10,000

Created
5 July 2022

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



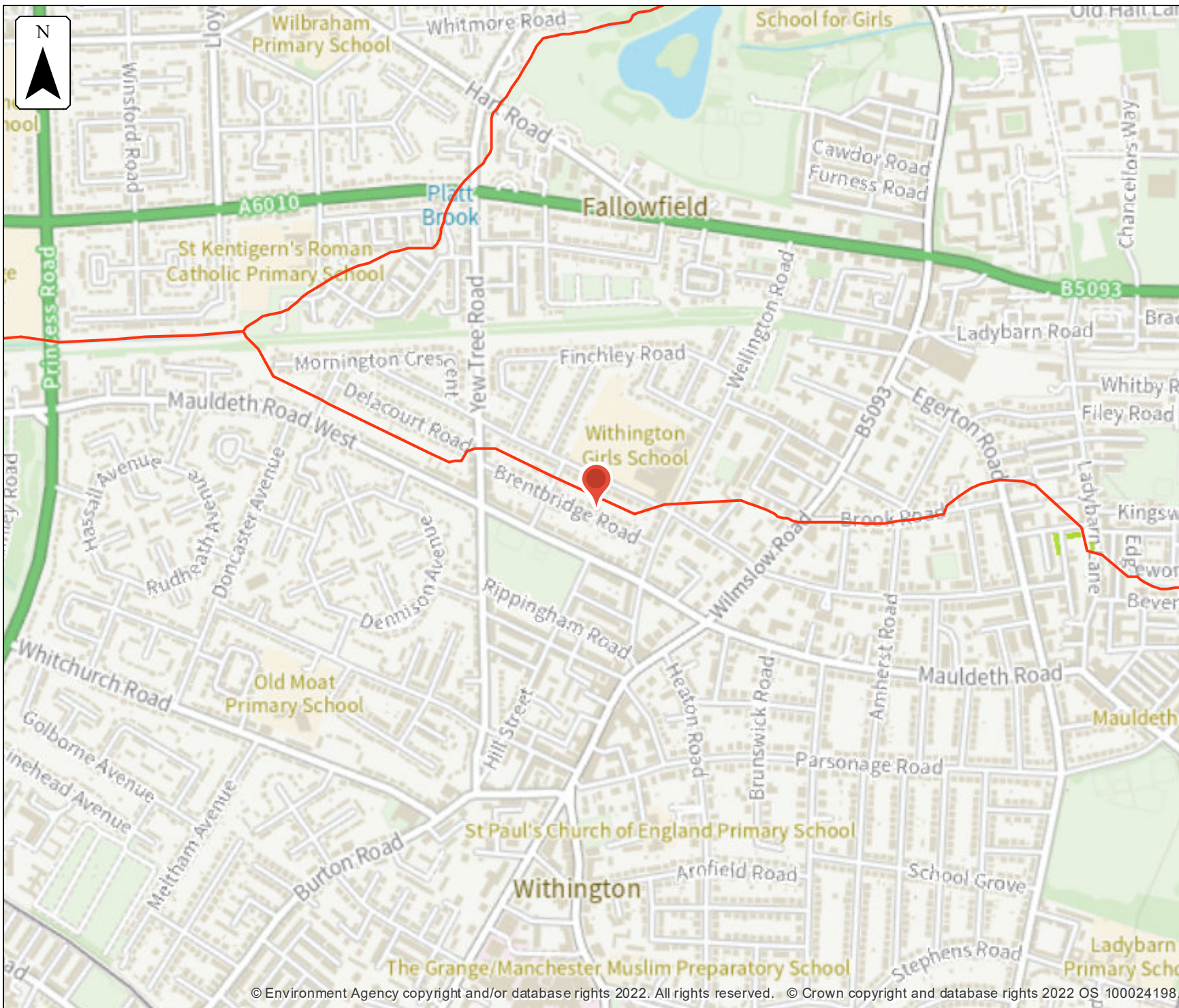
Historic flooding

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)
384940/393511

Scale
1:10,000

Created
5 July 2022



Selected location

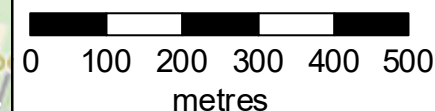


Main river

Date of flood event



October, 2001



Historic flood event data

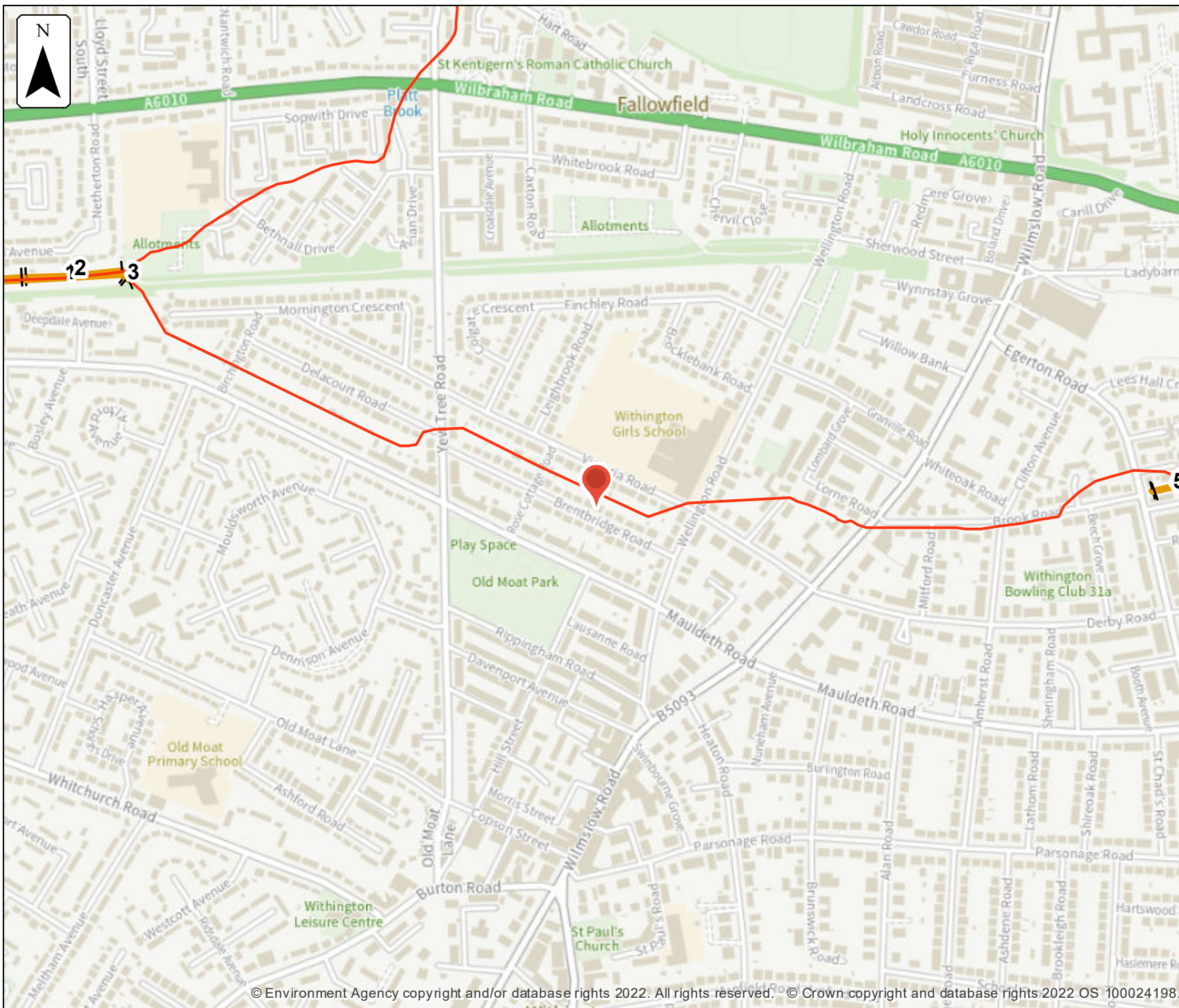
Start date	End date	Source of flood	Cause of flood	Affects location
26 October 2001	27 October 2001	main river	obstruction/blockage - channel	No

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.



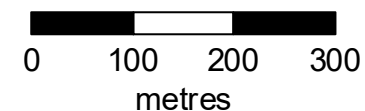
Flood defences

Location (easting/northing)
384940/393511

Scale
1:7,500

Created
5 July 2022

-  Selected location
-  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	60038	Embankment	100	Fair	31.39	32.25	
2	122064	Wall	100	Poor	31.84	31.90	
3	8987	Engineered High Ground	5	Fair	31.60	31.99	
4	121699	Wall	100	Fair	39.28	39.24	
5	32270	Wall	100	Fair	39.21	39.28	

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

Modelled data

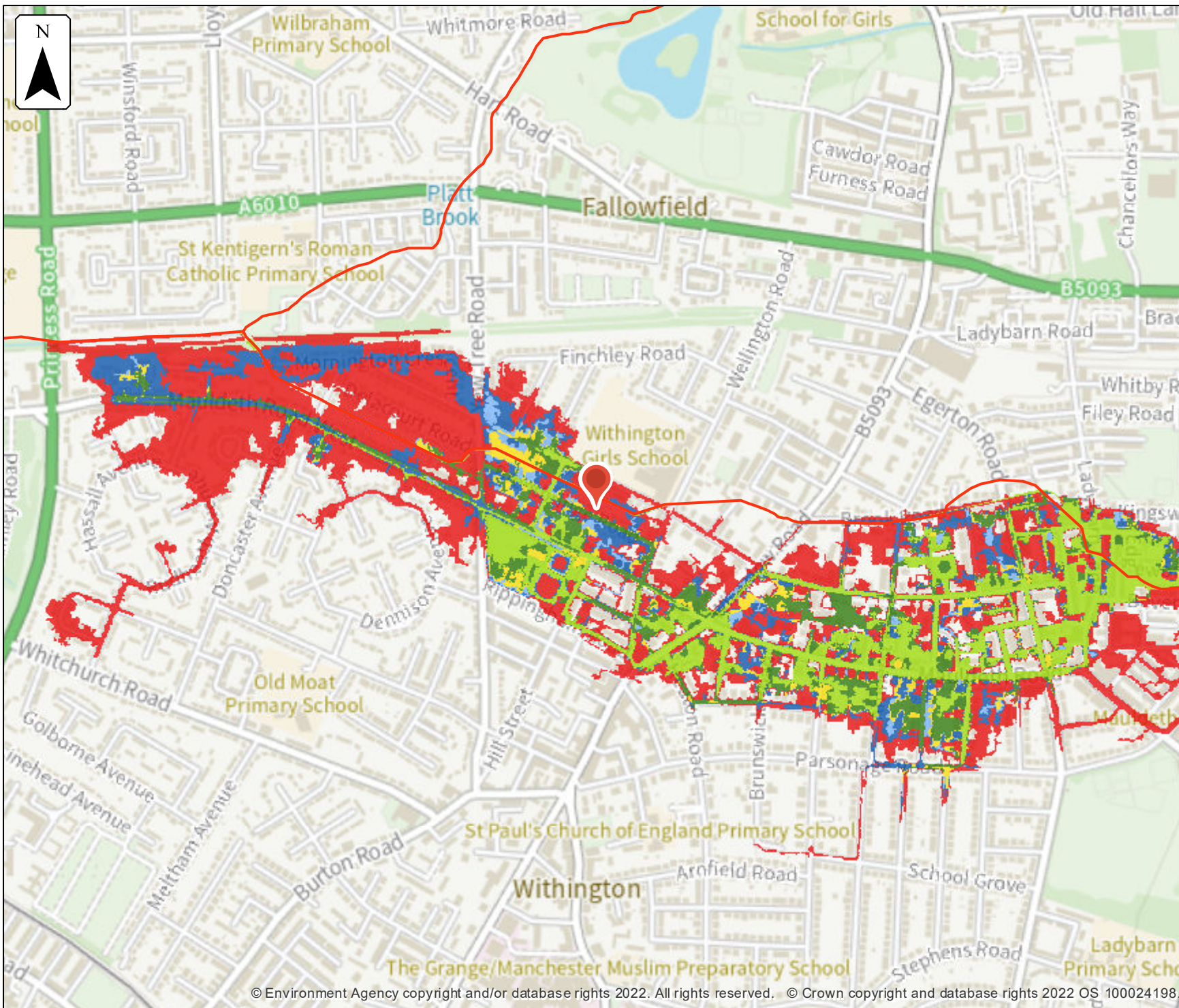
This section provides details of different scenarios we have modelled and includes the following (where available):

- 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

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences



Defended modelled fluvial extent

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 2022

Model name
Cringle Brook

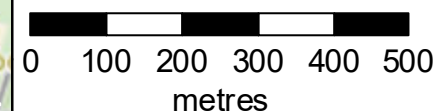
 Selected location

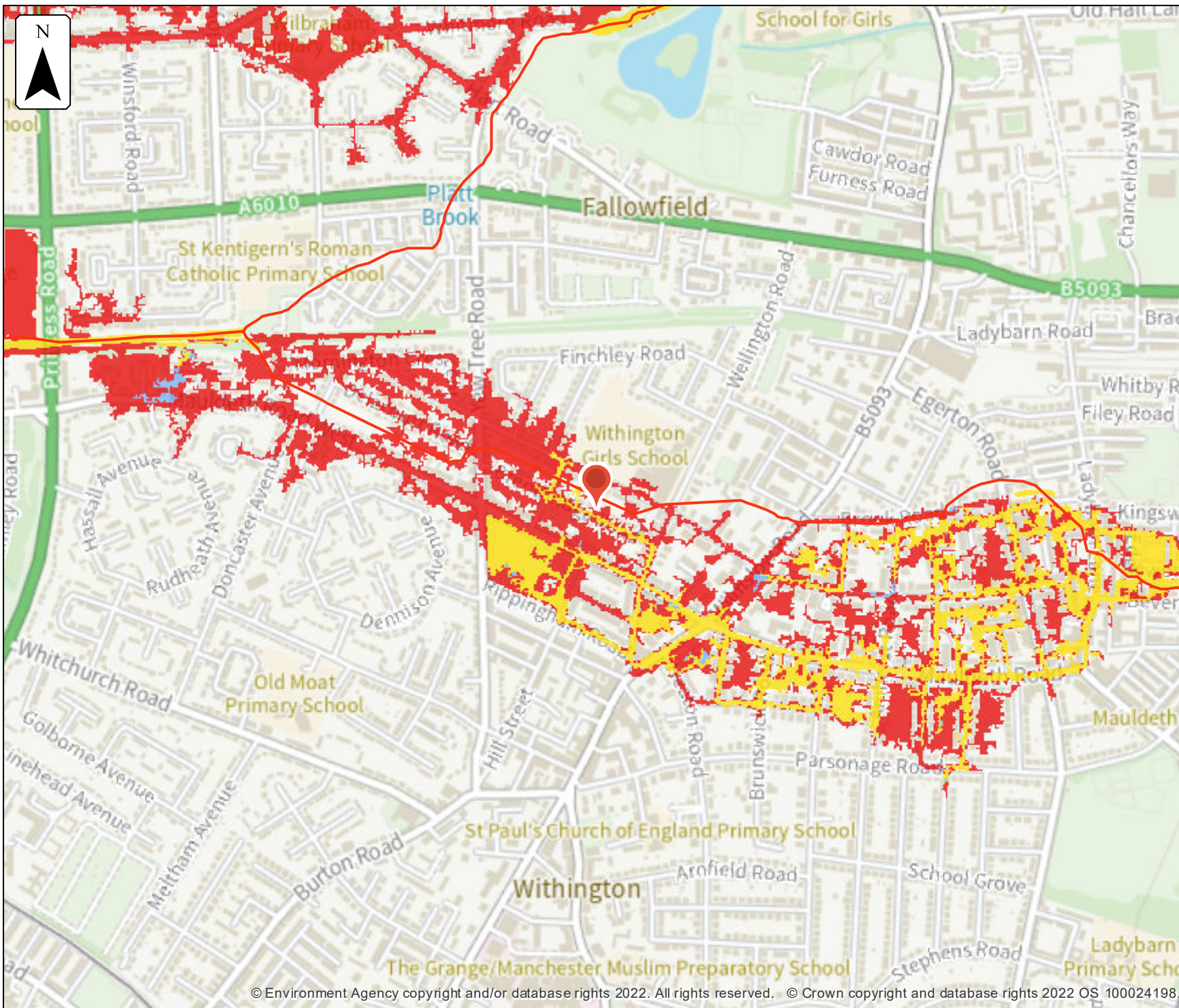
 Main river

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 modelled fluvial extent

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 2022

Model name
CHOP 2012 D

 Selected location

 Main river

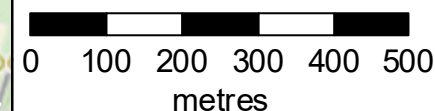
Modelled flood extent

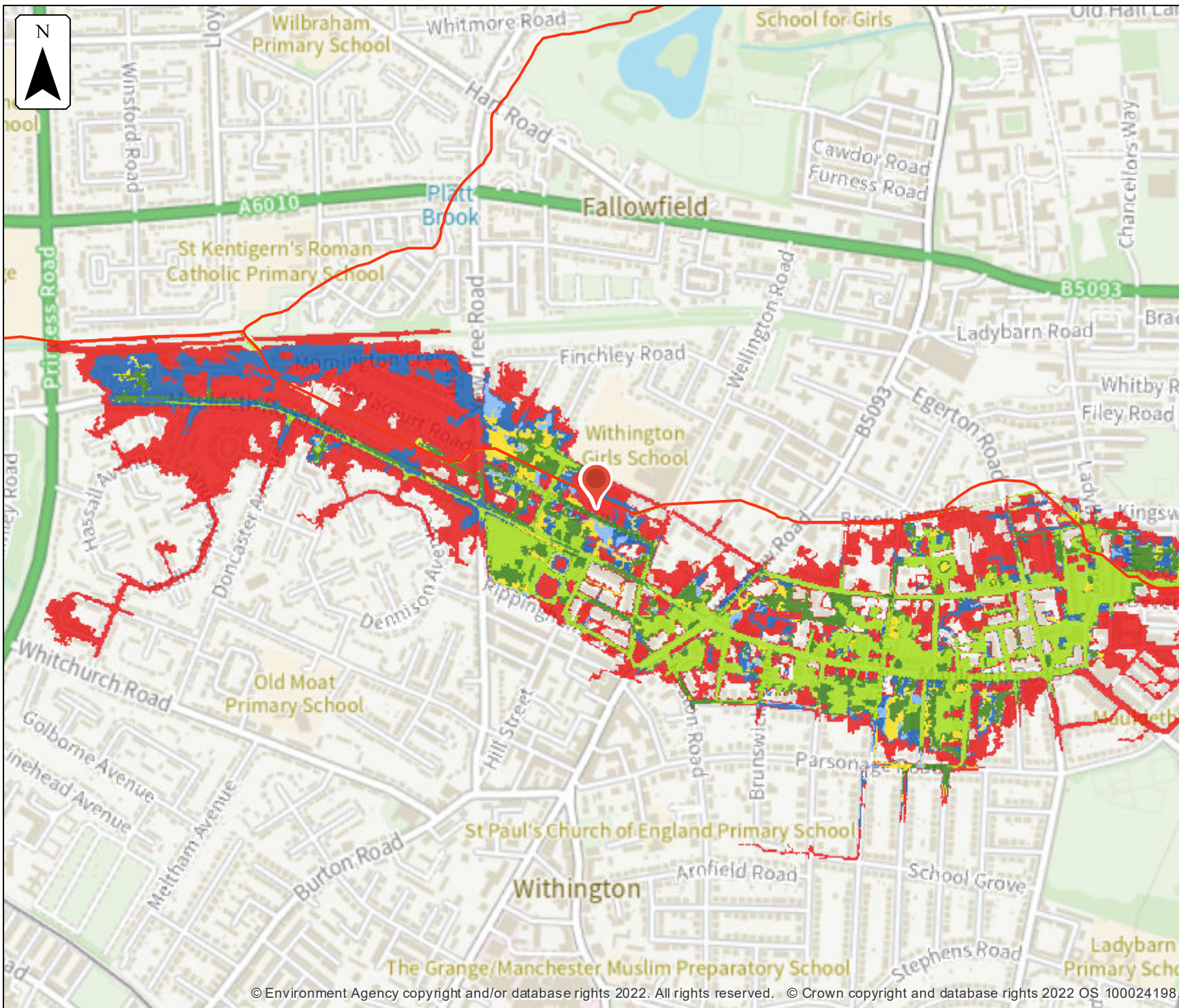
 1.33% AEP

 1% AEP

 0.1% AEP

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





No defences exist modelled fluvial extent

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 2022

Model name
Cringle Brook

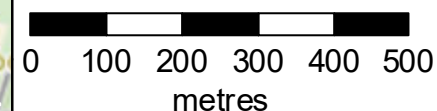
 Selected location

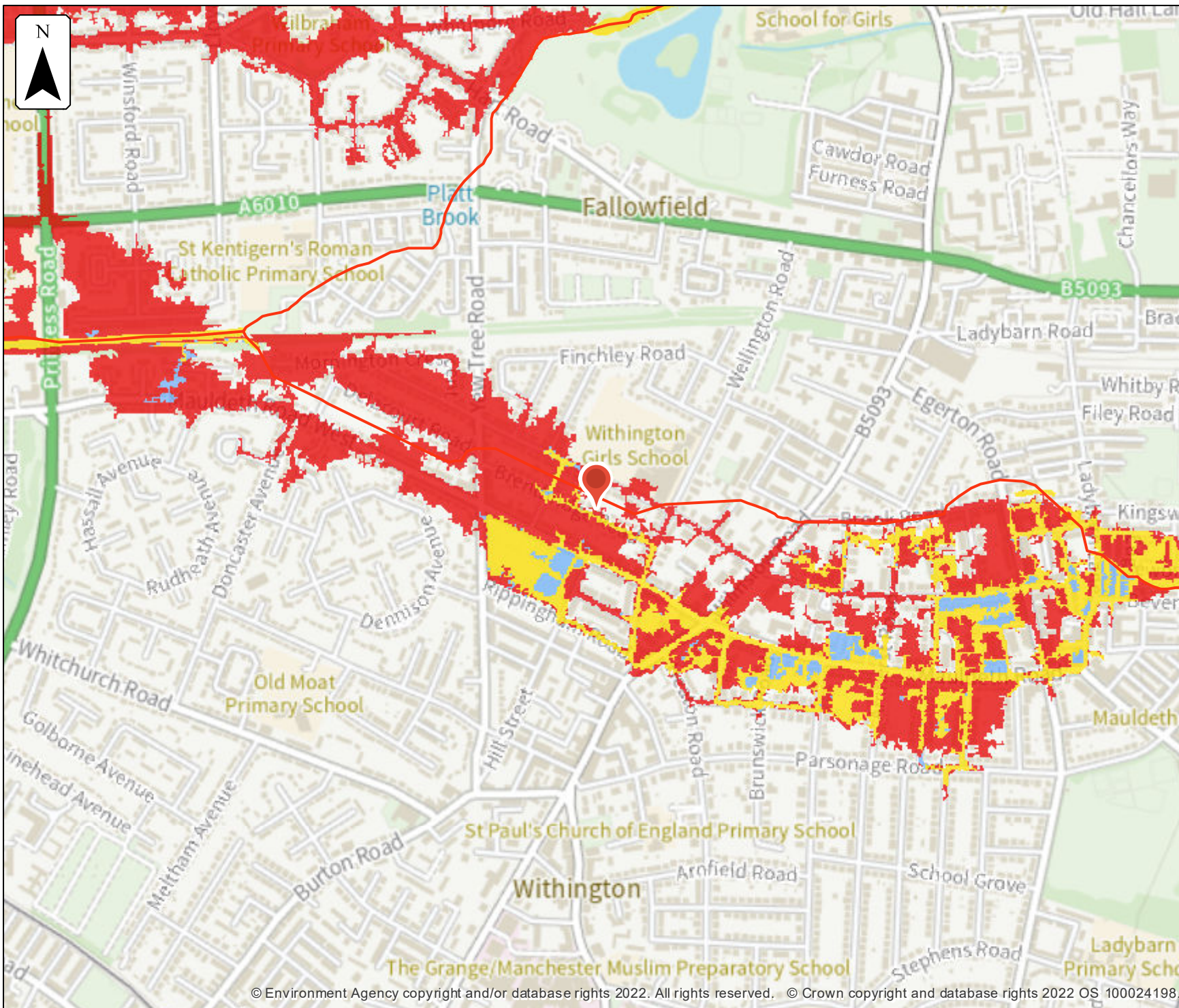
 Main river

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





No defences exist modelled fluvial extent

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 2022

Model name
CHOP 2012 U

 Selected location

 Main river

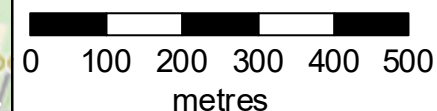
Modelled flood extent

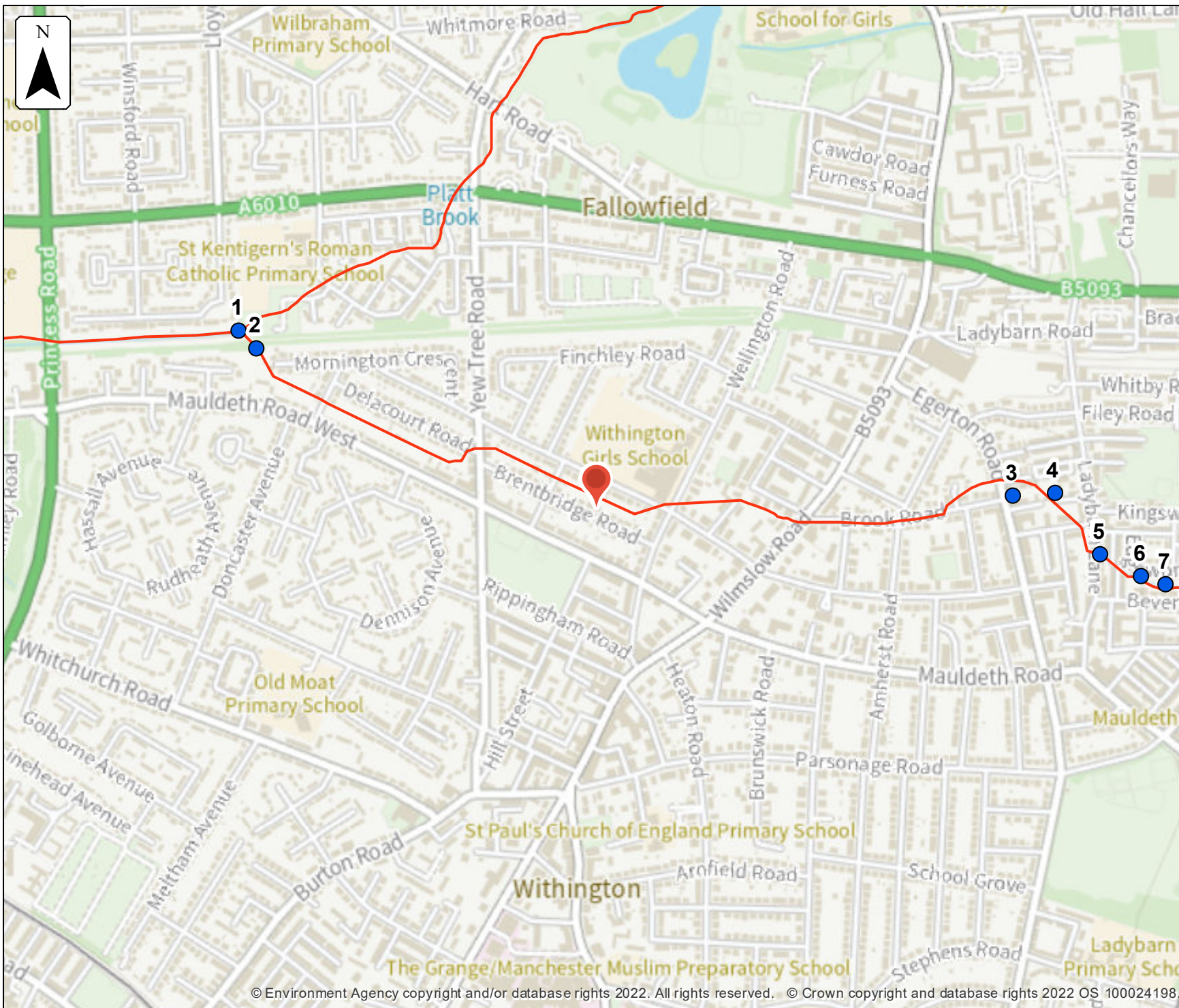
 1.33% AEP

 1% AEP

 0.1% AEP

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





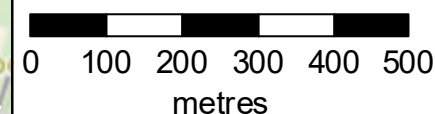
Defended modelled fluvial node locations

Location (easting/northing)
384940/393511

Scale Created **5 July 2022**
1:10,000

Model name
Cringle Brook

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

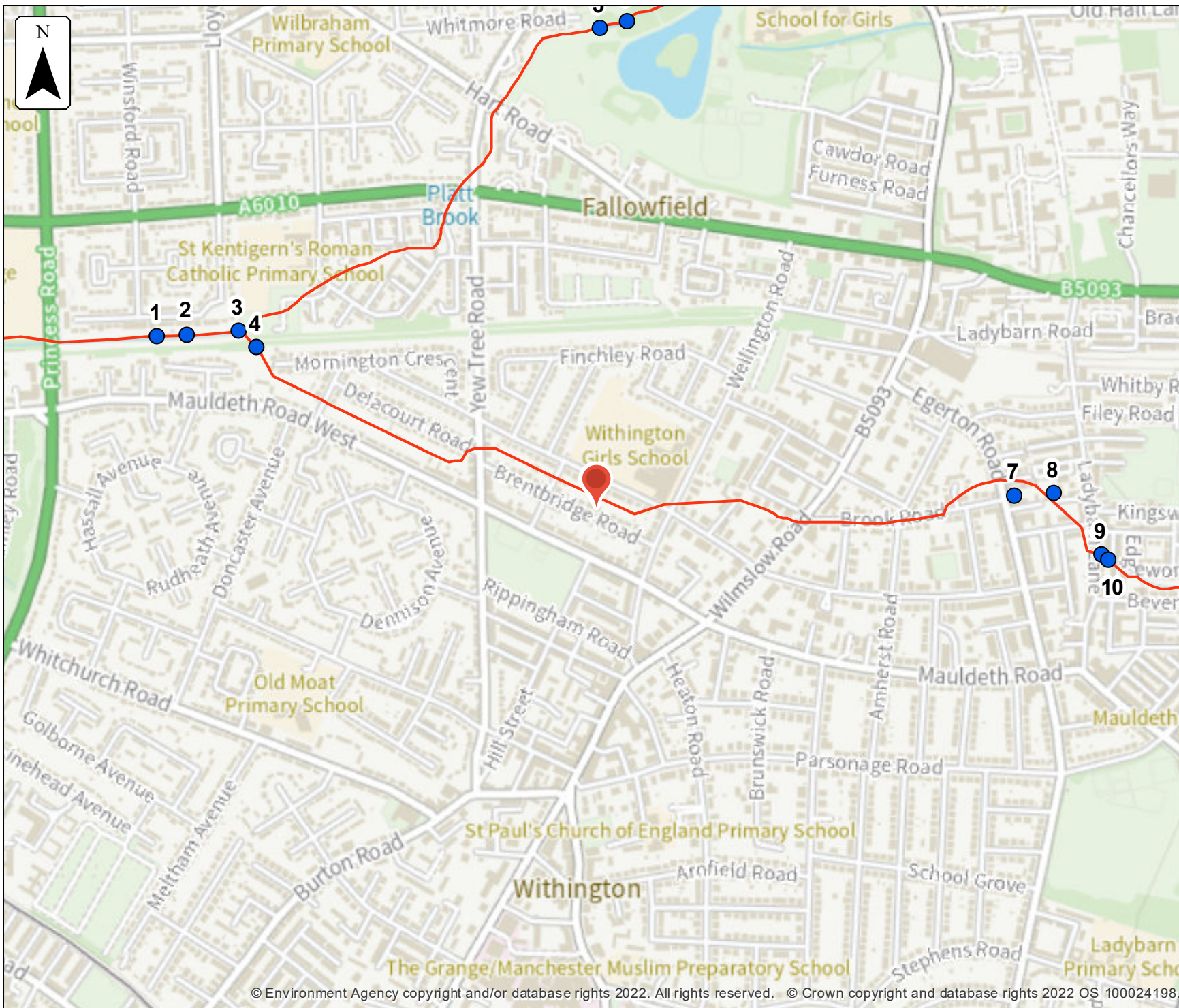
Defended

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	945183	384245	393853	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.85	4.24
2	945243	384280	393818	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.89	3.98
3	945253	385749	393534	38.45	4.37	38.47	4.40	38.47	4.41	38.47	4.42	38.48	4.43	38.56	4.46
4	945200	385830	393538	38.53	4.38	38.55	4.40	38.55	4.41	38.56	4.42	38.56	4.44	38.64	4.48
5	945195	385920	393419	39.33	4.39	39.35	4.40	39.35	4.41	39.36	4.42	39.37	4.44	39.43	4.48
6	945247	385999	393377	39.76	5.04	39.80	5.61	39.81	5.84	39.81	5.97	39.83	6.43	39.89	9.67
7	945208	386046	393360	39.78	5.07	39.83	5.53	39.85	5.72	39.86	5.82	39.89	6.19	40.08	8.56

Data in this table comes from the Cringle Brook 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.



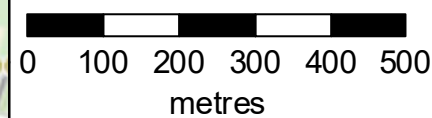
Defended modelled fluvial node locations

Location (easting/northing)
384940/393511

Scale Created **5 July 2022**
1:10,000

Model name
CHOP 2012 D

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

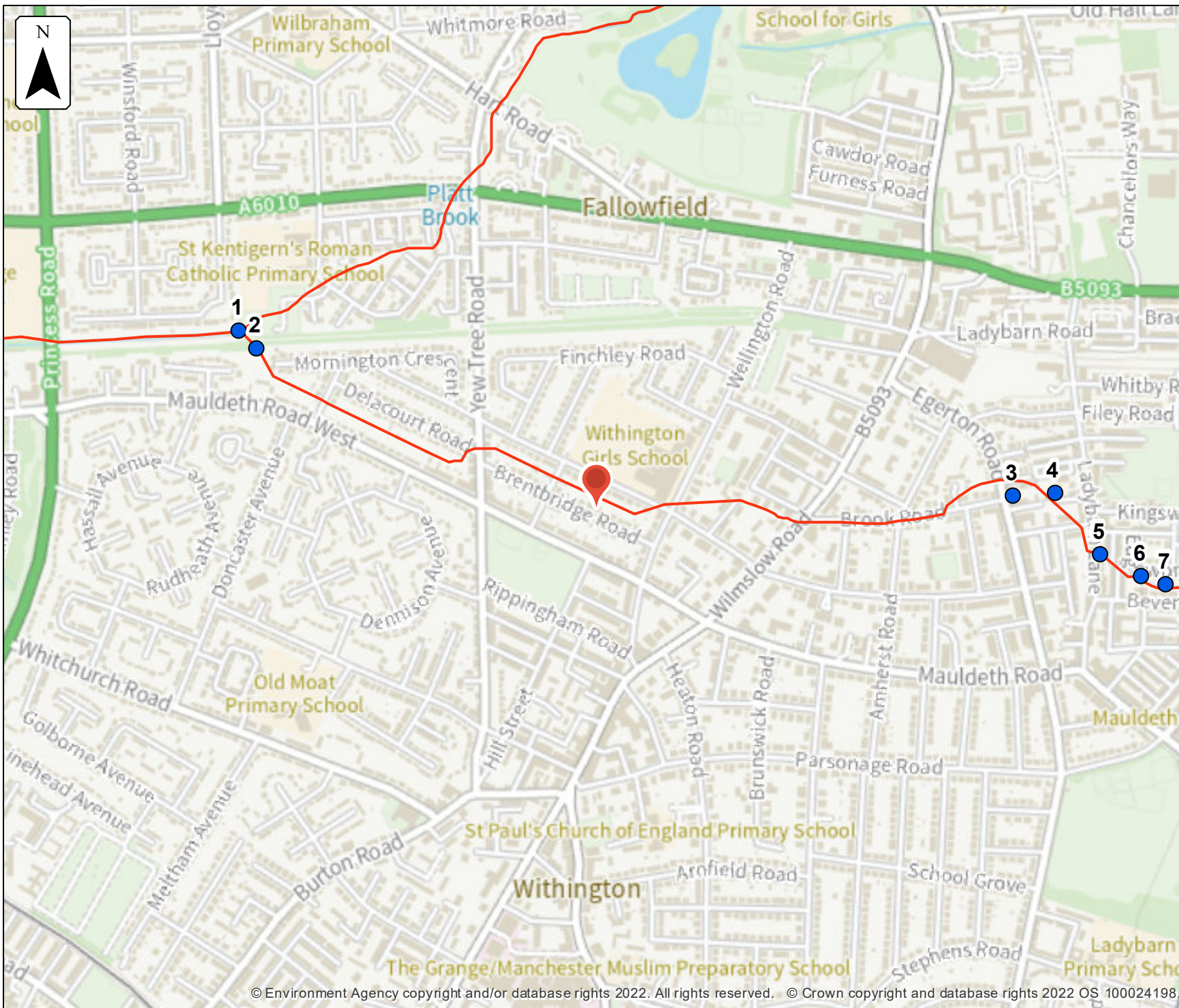
Defended

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	253114	384088	393842					31.57	17.03	31.61	17.77			32.0	24.56
2	276506	384146	393846					31.68	17.03	31.72	17.77			32.09	24.57
3	69311	384246	393852					31.81	16.87	31.85	17.63			32.20	24.19
4	67249	384281	393822					31.84	3.73	31.88	3.73			32.20	3.70
5	209231	384947	394442					33.72	10.69	33.77	11.23			36.06	16.57
6	100614	385001	394454					33.91	10.69	33.96	11.23			36.12	16.59
7	268045	385751	393534					38.22	3.92	38.22	3.94			38.39	3.97
8	156927	385830	393538					38.27	3.94	38.27	3.95			38.45	3.98
9	2477	385921	393419					39.60	3.94	39.60	3.95			39.76	3.98
10	214955	385935	393407					39.66	3.95	39.66	3.95			39.81	3.98

Data in this table comes from the CHOP 2012 D 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.



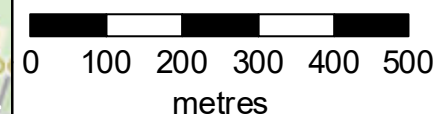
No defences exist modelled fluvial node locations

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 **2022**

Model name
Cringle Brook

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

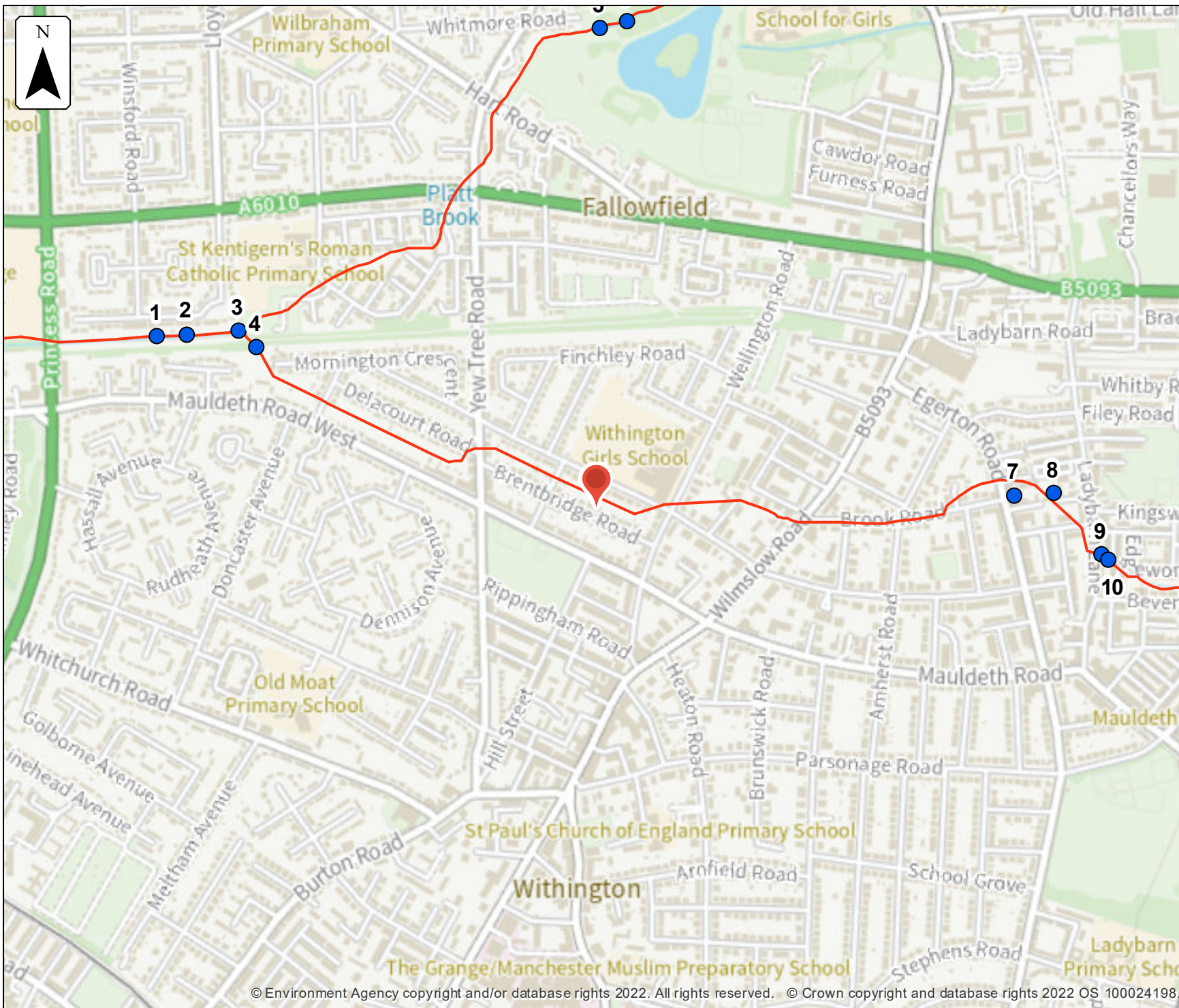
No defences exist

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
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2	945243	384280	393818	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.85	3.96	31.89	3.98
3	945253	385749	393534	38.45	4.37	38.47	4.40	38.47	4.41	38.47	4.42	38.48	4.43	38.56	4.46
4	945200	385830	393538	38.53	4.38	38.55	4.40	38.55	4.41	38.56	4.42	38.56	4.44	38.64	4.48
5	945195	385920	393419	39.33	4.39	39.35	4.40	39.35	4.41	39.36	4.42	39.37	4.44	39.43	4.48
6	945247	385999	393377	39.76	5.04	39.80	5.61	39.81	5.84	39.81	5.97	39.83	6.43	39.89	9.67
7	945208	386046	393360	39.78	5.07	39.83	5.53	39.85	5.72	39.86	5.82	39.89	6.19	40.08	8.56

Data in this table comes from the Cringle Brook 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.



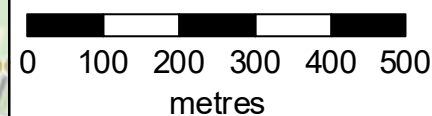
No defences exist modelled fluvial node locations

Location (easting/northing)
384940/393511

Scale Created **5 July**
1:10,000 **2022**

Model name
CHOP 2012 U

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

No defences exist

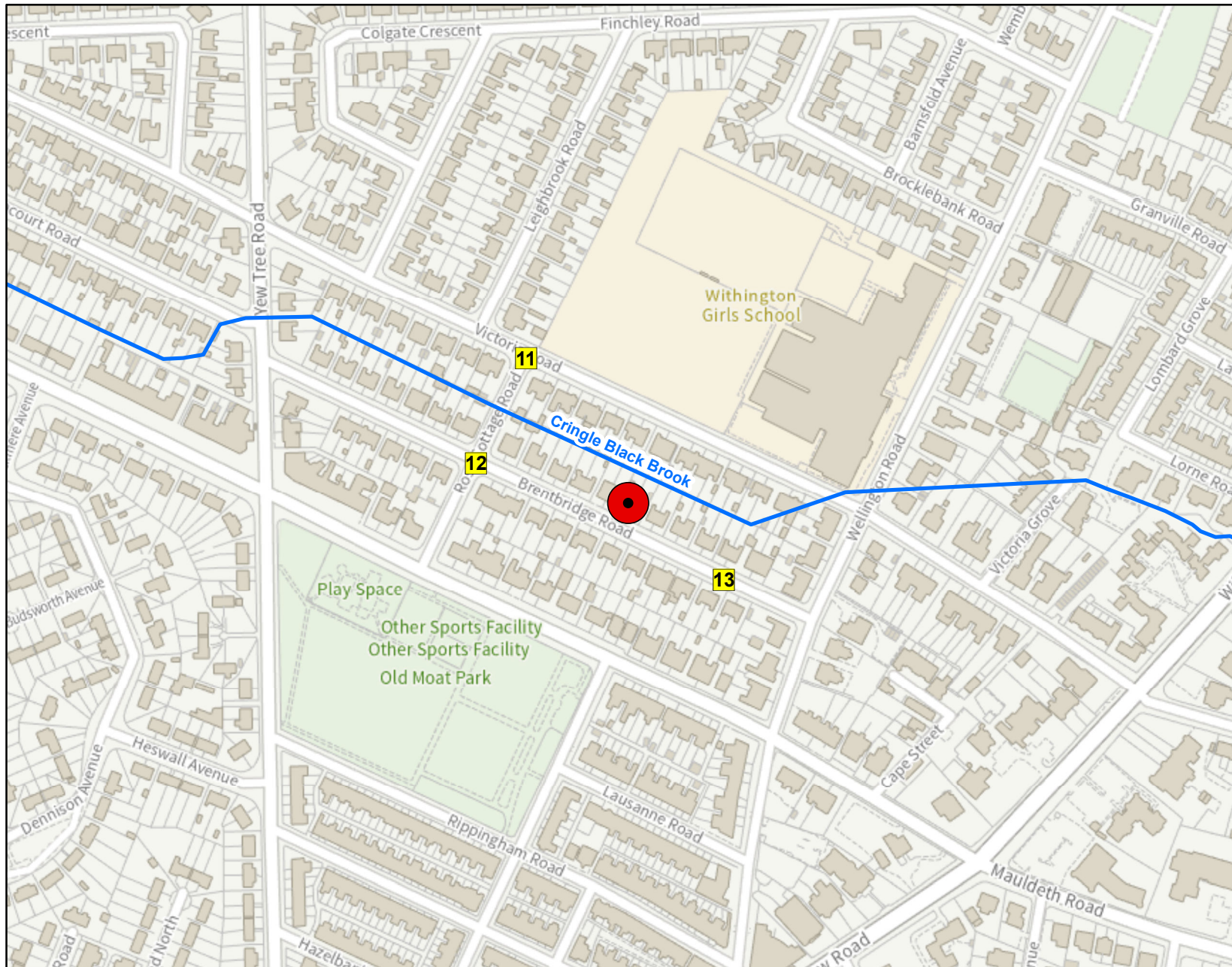
Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
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2	276506	384146	393846					31.67	17.01	31.71	17.73			32.01	24.47
3	69311	384246	393852					31.81	16.85	31.84	17.59			32.13	24.07
4	67249	384281	393822					31.84	3.70	31.88	3.69			32.14	3.66
5	209231	384947	394442					33.72	10.69	33.77	11.23			35.69	18.75
6	100614	385001	394454					33.91	10.69	33.96	11.23			35.79	18.75
7	268045	385751	393534					38.04	3.82	38.04	3.83			38.24	3.84
8	156927	385830	393538					38.08	3.83	38.08	3.83			38.29	3.85
9	2477	385921	393419					39.38	3.83	39.38	3.83			39.45	3.85
10	214955	385935	393407					39.46	3.93	39.46	3.94			39.51	4.21

Data in this table comes from the CHOP 2012 U 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.

2D Model measurement map - Cringle Brook 2017



1:3,500



Legend

-  Selected location
-  2D measurement
-  Main River

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Map Reference	Model Node Reference	Data	Undefended				Defended			
			1 % AEP (1 in 100 year) + 30% Increase flow	1 % AEP (1 in 100 year) + 35% Increase flow	1 % AEP (1 in 100 year) + 70% Increase flow	0.1 % AEP (1 in 1000 year) + 30% Increase flow	1 % AEP (1 in 100 year) + 30% Increase flow	1 % AEP (1 in 100 year) + 35% Increase flow	1 % AEP (1 in 100 year) + 70% Increase flow	0.1 % AEP (1 in 1000 year) + 30% Increase flow
3	945253	Modelled Water Level (m aodN)	38.49	38.50	38.53	38.61	38.49	38.50	38.53	38.61
		Modelled Flow (cumecs)	4.44	4.44	4.44	4.49	4.44	4.44	4.44	4.49
5	945195	Modelled Water Level (m aodN)	39.37	39.38	39.39	39.46	39.37	39.38	39.39	39.46
		Modelled Flow (cumecs)	4.44	4.44	4.49	4.51	4.44	4.44	4.49	4.51
7	945208	Modelled Water Level (m aodN)	39.91	39.91	39.95	40.16	39.91	39.91	39.95	40.16
		Modelled Flow (cumecs)	6.42	6.52	7.26	9.24	6.42	6.52	7.26	9.24
11	2D measure	Modelled Water Level (m aodN)	34.06	34.08	34.13	34.27	34.05	34.07	34.12	34.28
12	2D measure	Modelled Water Level (m aodN)	34.13	34.13	34.17	34.32	34.12	34.13	34.17	34.33
13	2D measure	Modelled Water Level (m aodN)	34.70	34.71	34.71	34.79	34.69	34.69	34.71	34.79

Model data taken from Cringle Brook 2017

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

Notes: *Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

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 for:

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