

Flood risk assessment data



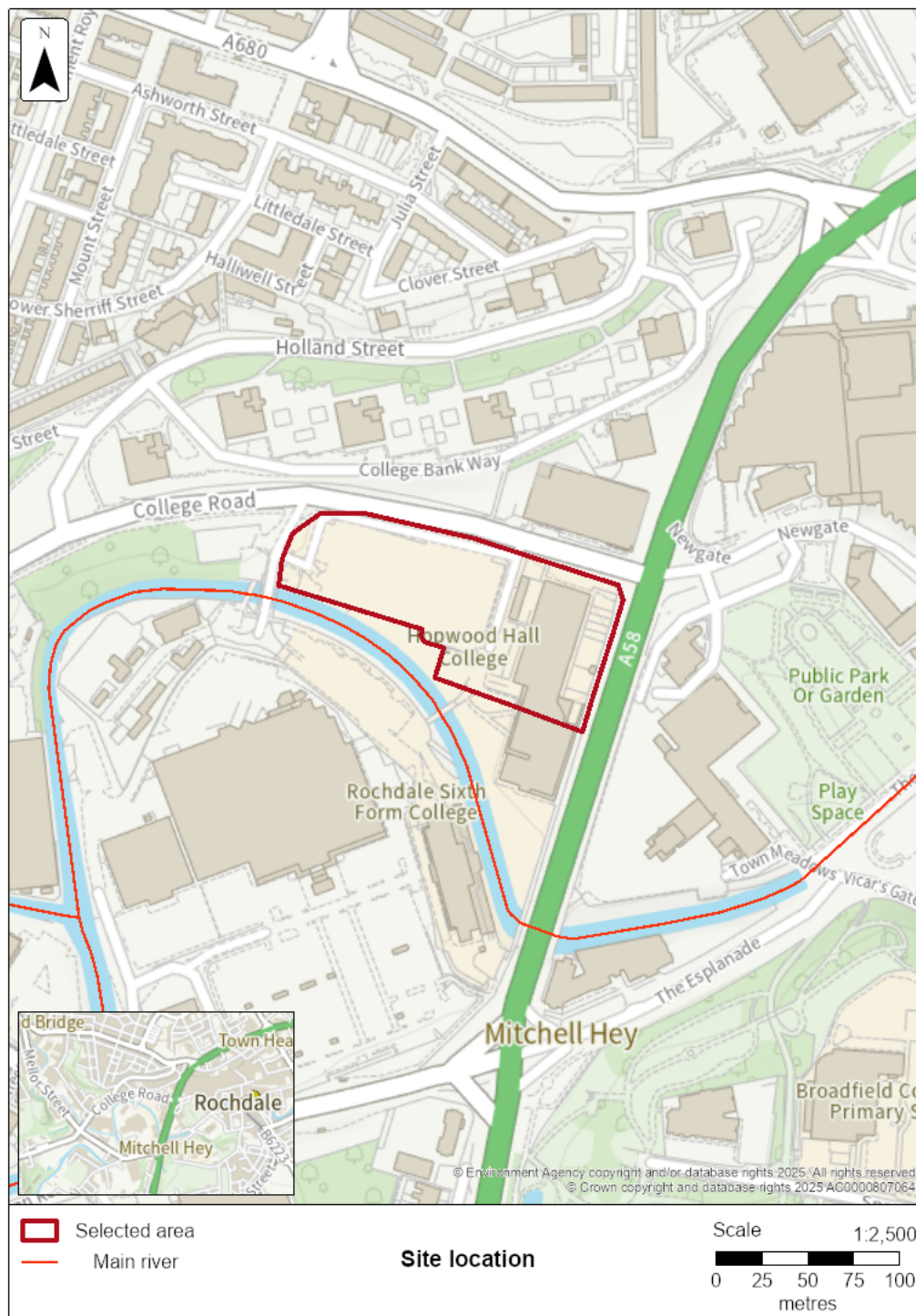
Location of site: 389295 / 413385 (shown as easting and northing coordinates)

Document created on: 23 July 2025

This information was previously known as a product 4.

Customer reference number: XVD21DCX8GNH

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
- 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

When using the surface water map on the [check your long term flood risk service](#) the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- [reservoir flood risk](#)
- groundwater flood risk - you could use the [British Geological Survey groundwater flooding data](#), [groundwater: current status and flood risk](#) and the guide on [mining and groundwater constraints for development](#) - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Rochdale District.

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

About the models used

Model name: Rochdale and Littleborough 2013

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

Date: 1 June 2013

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 3.

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

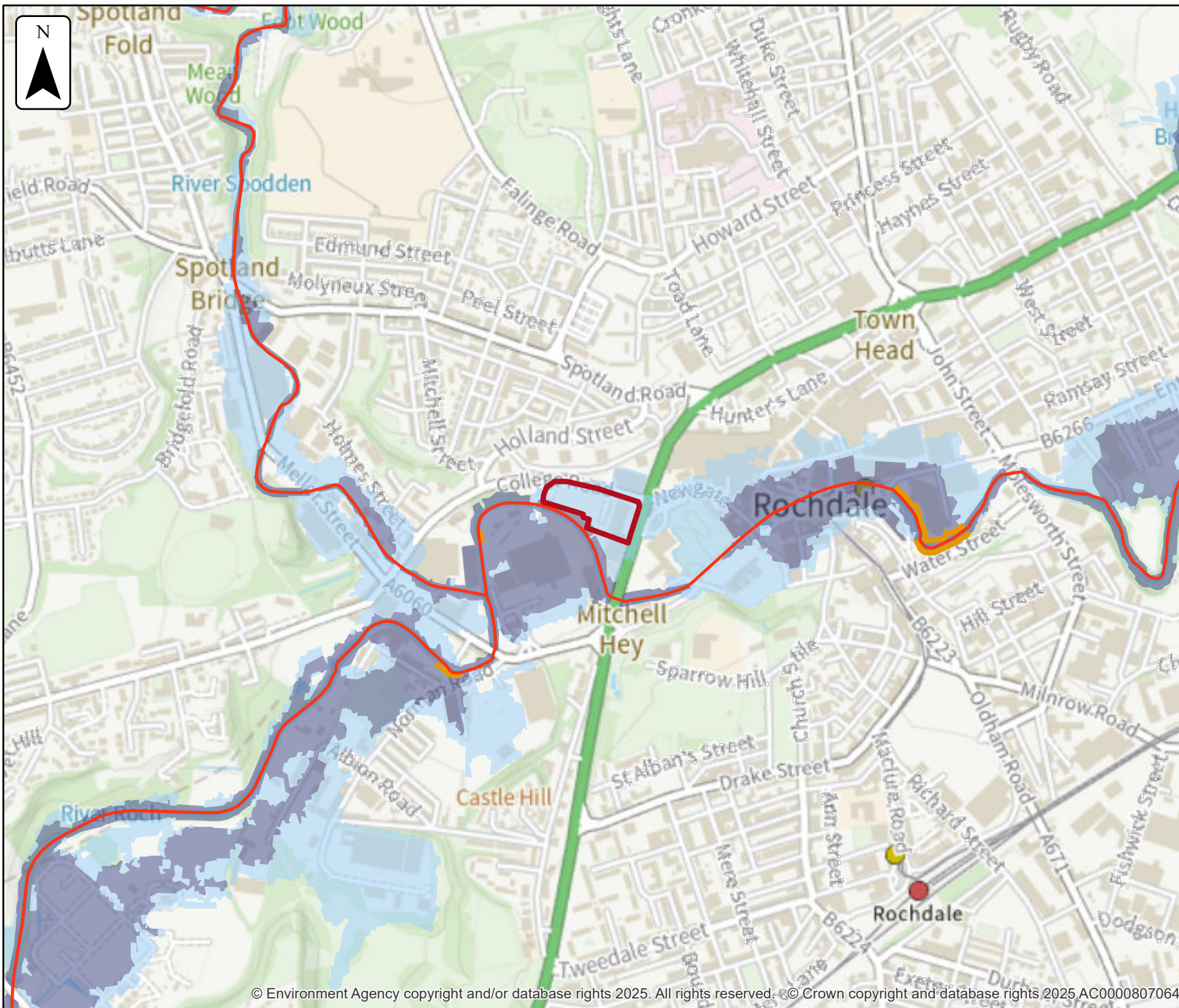
- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

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

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

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

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



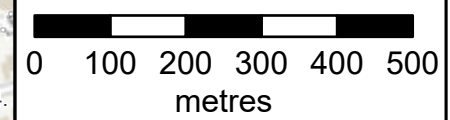
Flood map for planning

Location (easting/northing)
389295/413385

Scale
1:10,000

Created
23 Jul 2025

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



Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

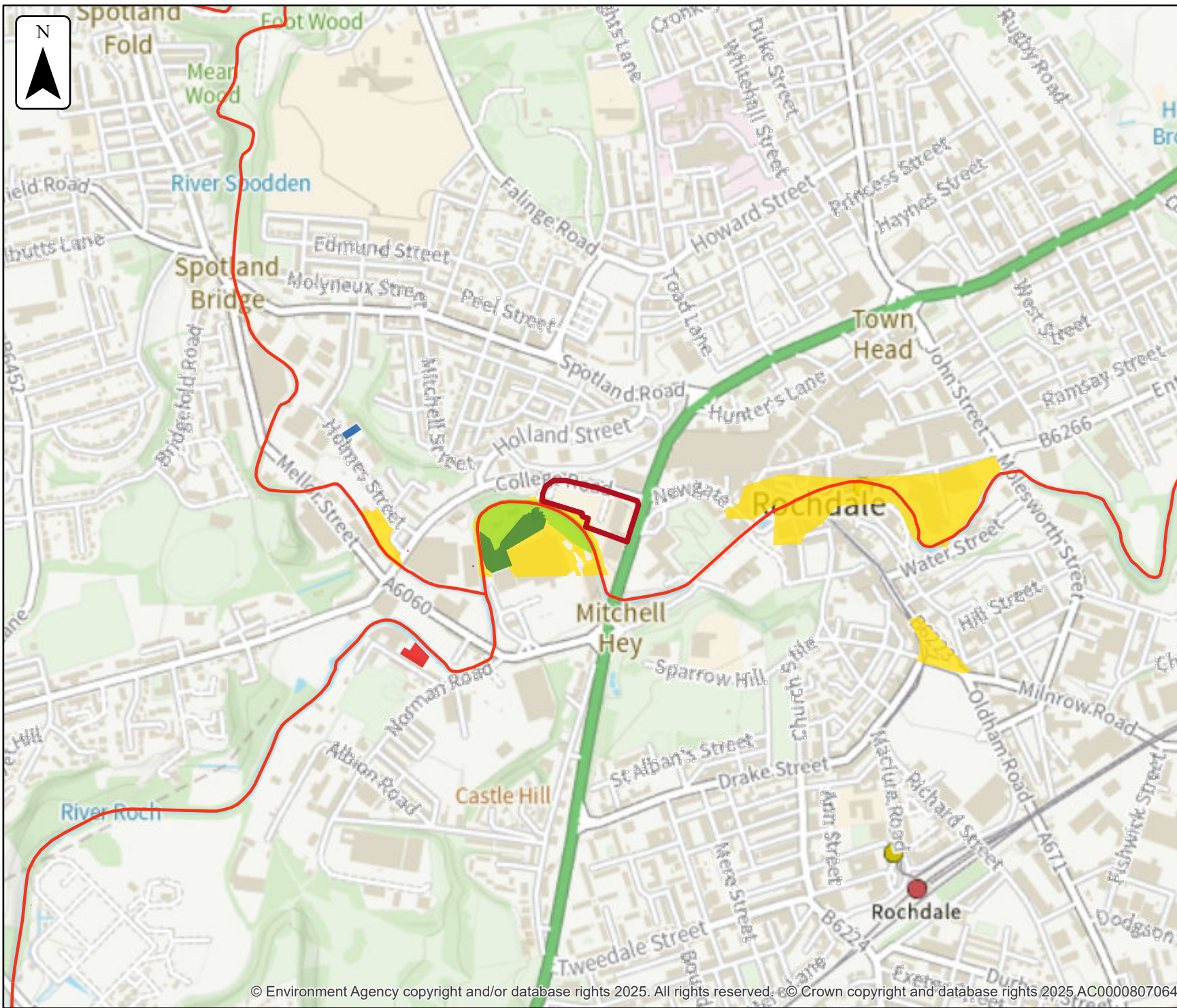
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

Get flood information from other organisations

Contact Rochdale District Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



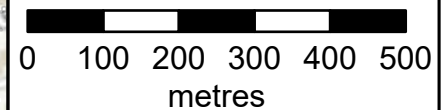
Past floods

Location (easting/northing)
389295/413385

Scale
1:10,000

Created
23 Jul 2025

- Selected area
- Main river
- Date of flood event
 - July, 2019
 - March, 2019
 - December, 2015
 - January, 2008
 - June, 2001
 - January, 1995
 - December, 1991
 - October, 1980



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
28 July 2019	31 July 2019	main river	channel capacity exceeded (no raised defences)	No
16 March 2019	16 March 2019	unknown	unknown	No
26 December 2015	26 December 2015	main river	channel capacity exceeded (no raised defences)	Yes
21 January 2008	22 January 2008	main river	unknown	No
15 June 2001	16 June 2001	unknown	other	No
28 January 1995	29 January 1995	unknown	channel capacity exceeded (no raised defences)	No
21 December 1991	22 December 1991	unknown	channel capacity exceeded (no raised defences)	No
23 October 1980	24 October 1980	unknown	channel capacity exceeded (no raised defences)	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.

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



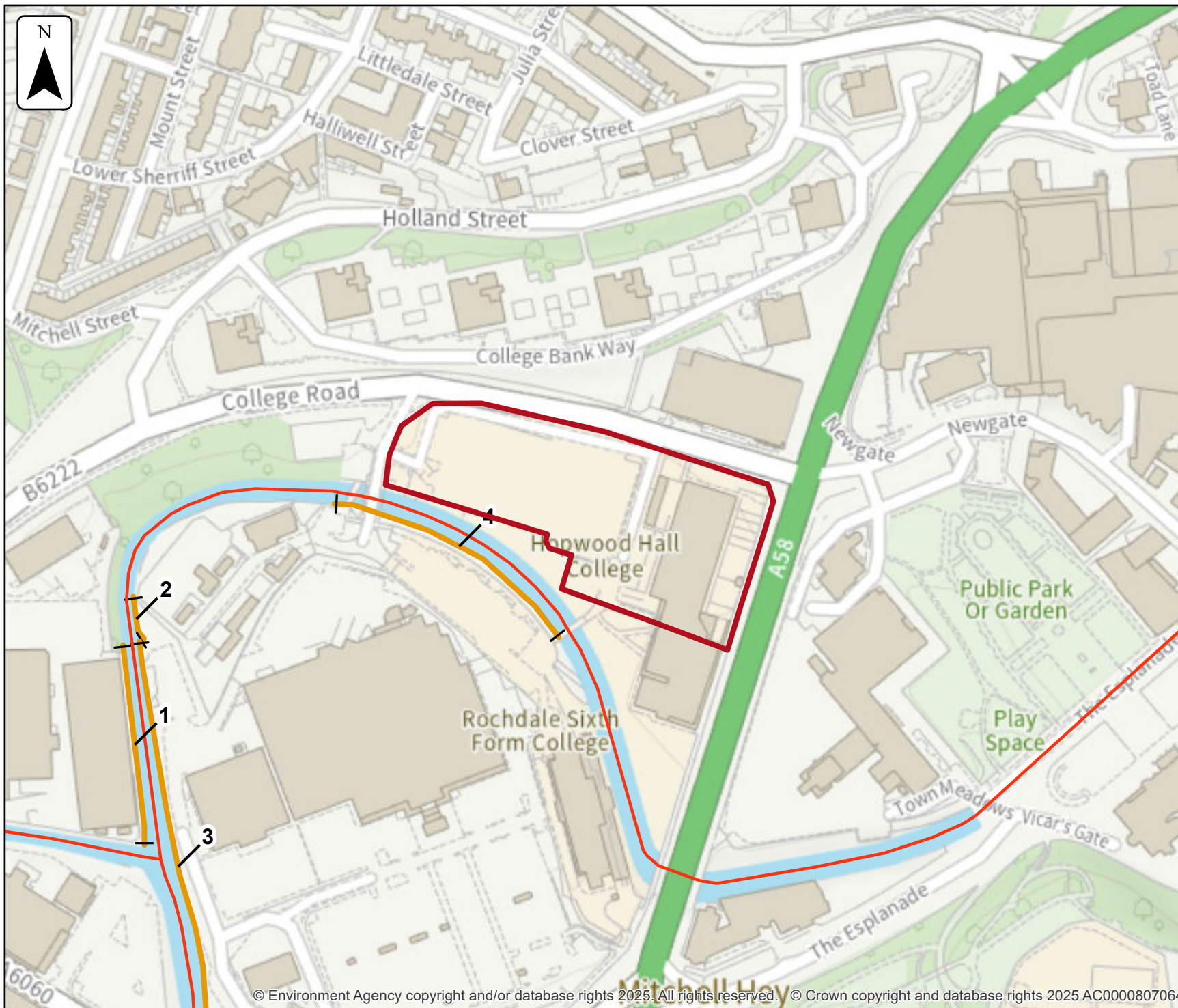
Flood defences

Location (easting/northing)
389295/413385

Scale
1:2,500

Created
23 Jul 2025

-  Selected area
-  Main river
-  Flood defence



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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	63750	Engineered High Ground	100	Fair	116.62	116.23	
2	104221	Wall	100	Good	117.10	117.40	
3	69326	Engineered High Ground	100	Fair	117.07	119.17	
4	69327	Engineered High Ground	5		116.41	117.59	

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

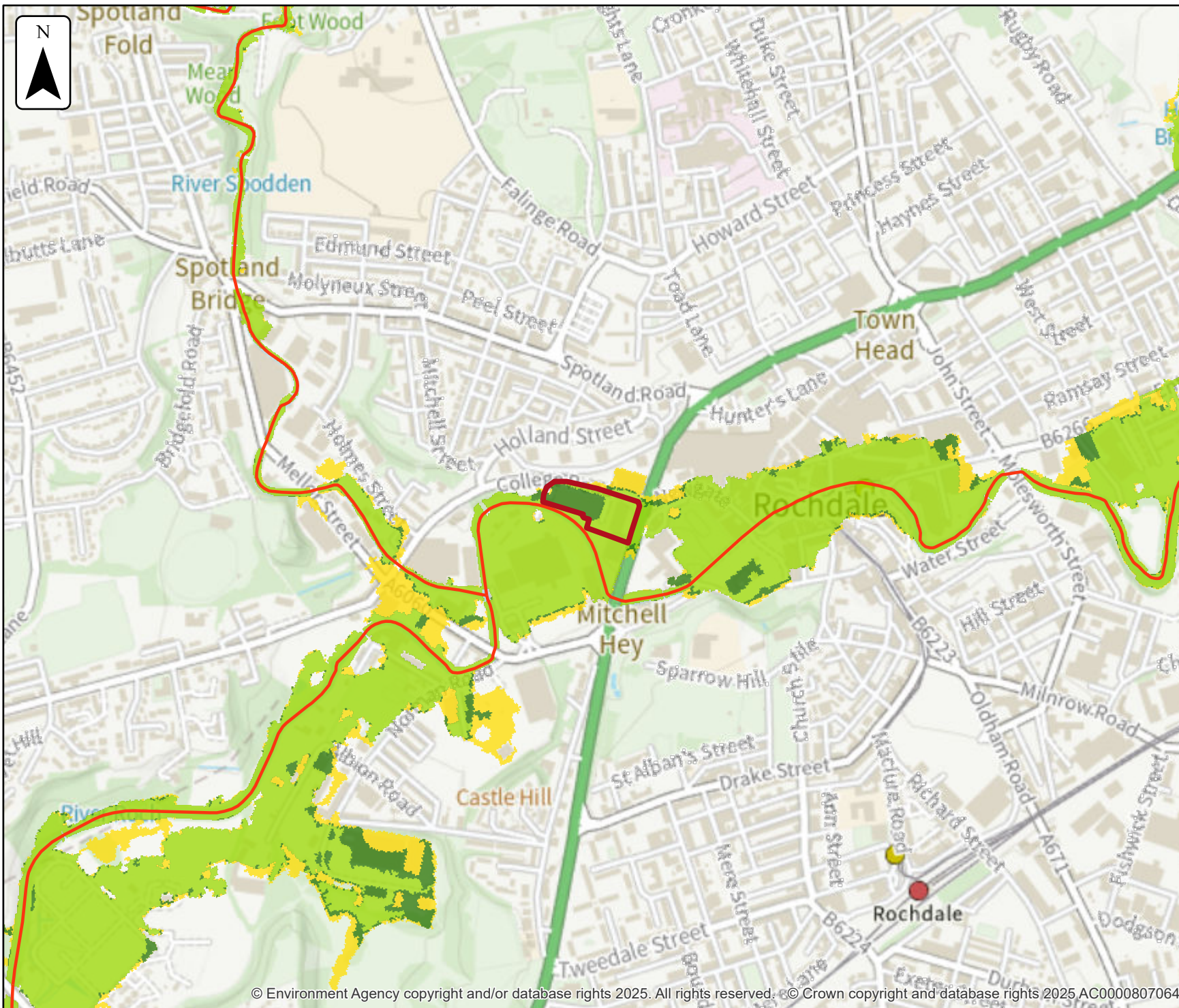
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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



Defences removed climate change modelled fluvial extent

Location (easting/northing)
389295/413385

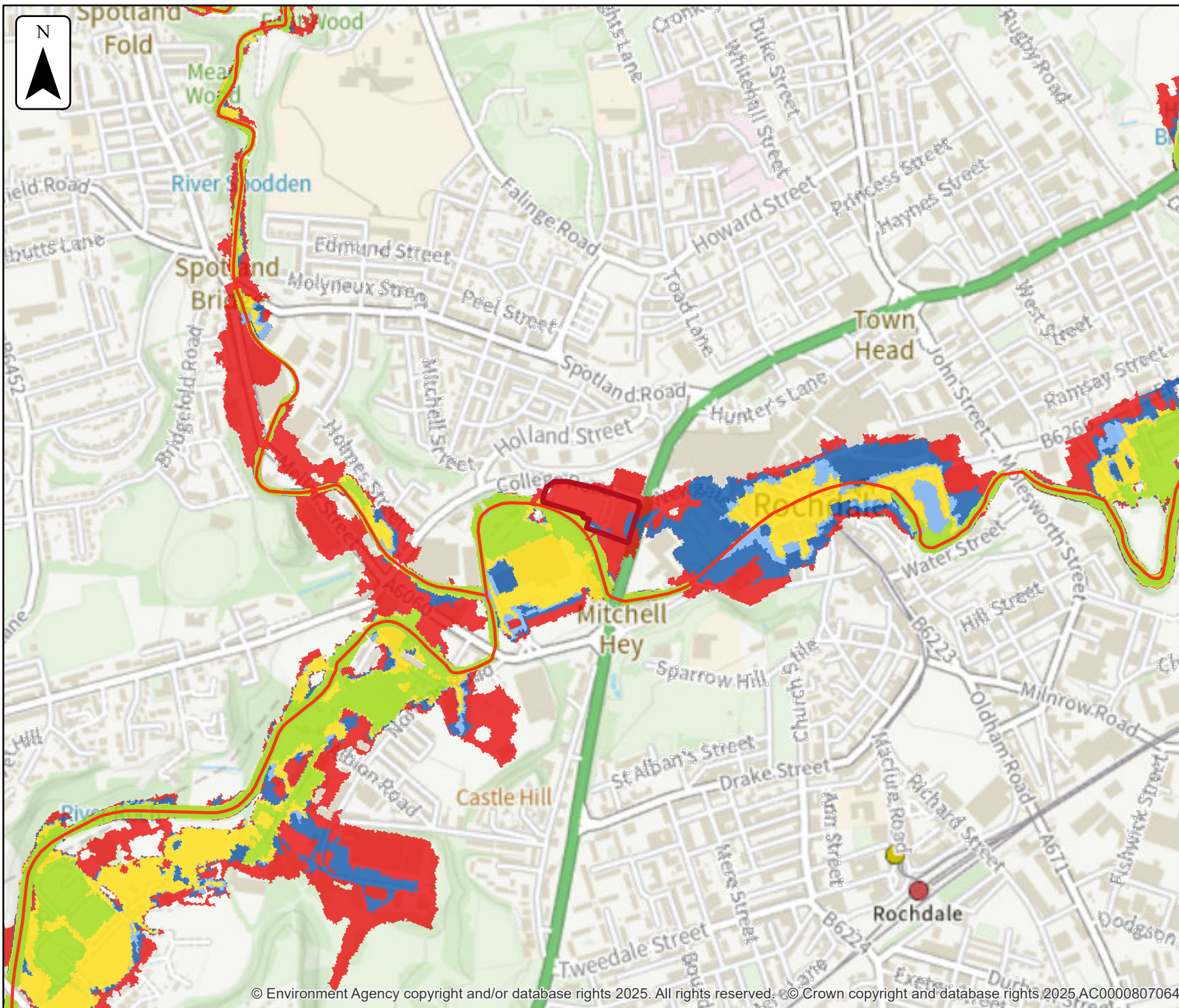
Scale Created
1:10,000 23 Jul 2025

Model name
**Rochdale and
Littleborough 2013**

- Selected area
- Main river
- Modelled flood extent
 - 1% AEP (+20%)
 - 1% AEP (+35%)
 - 1% AEP (+70%)

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





Defences removed modelled fluvial extent

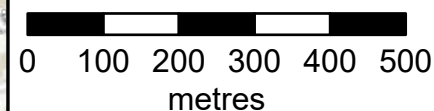
Location (easting/northing)
389295/413385

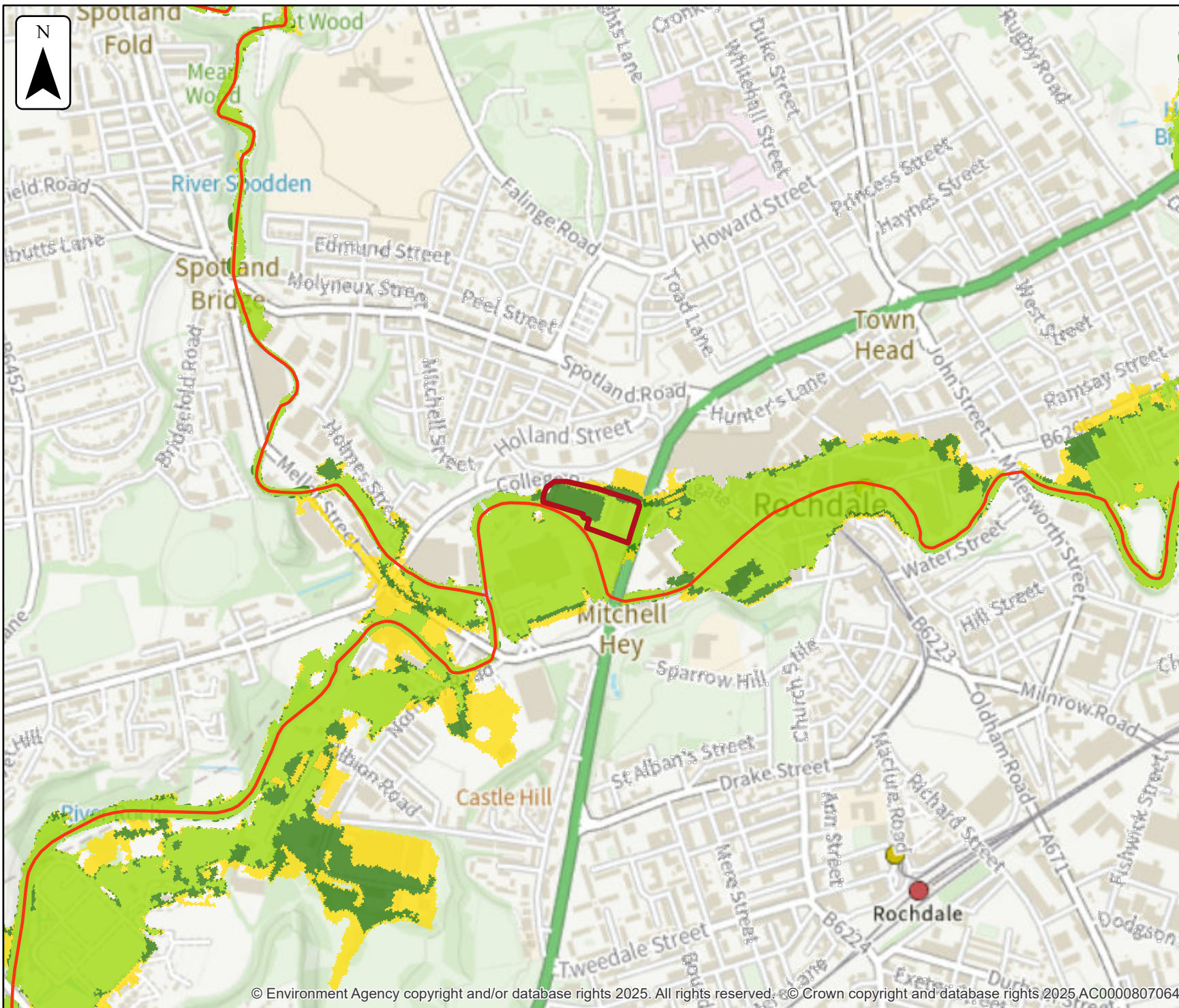
Scale Created
1:10,000 23 Jul 2025

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Main river
- Modelled flood extent
 -  5% 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)
389295/413385

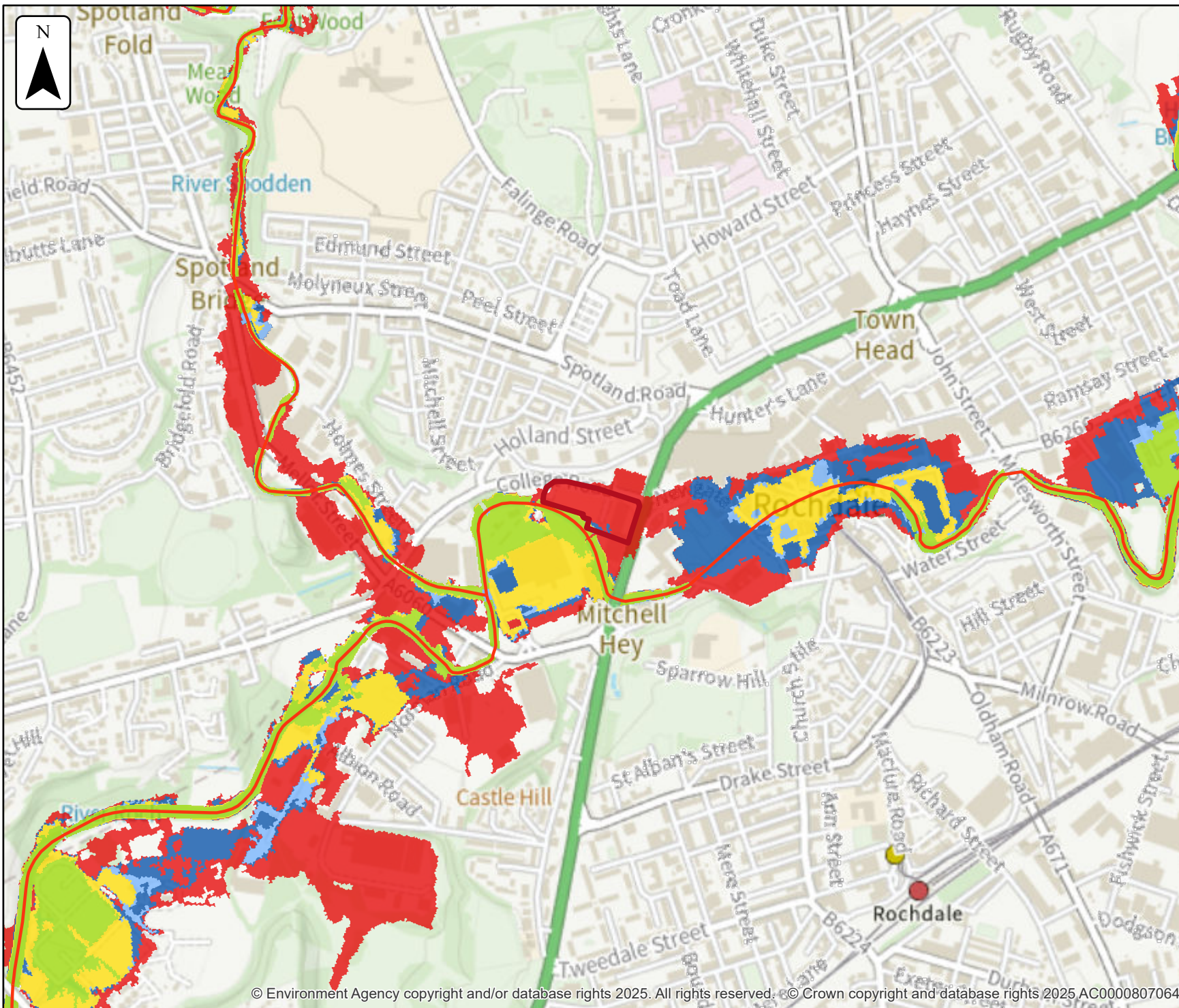
Scale Created
1:10,000 23 Jul 2025

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP (+20%)
 -  1% AEP (+35%)
 -  1% AEP (+70%)

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





Defended modelled fluvial extent

Location (easting/northing)
389295/413385

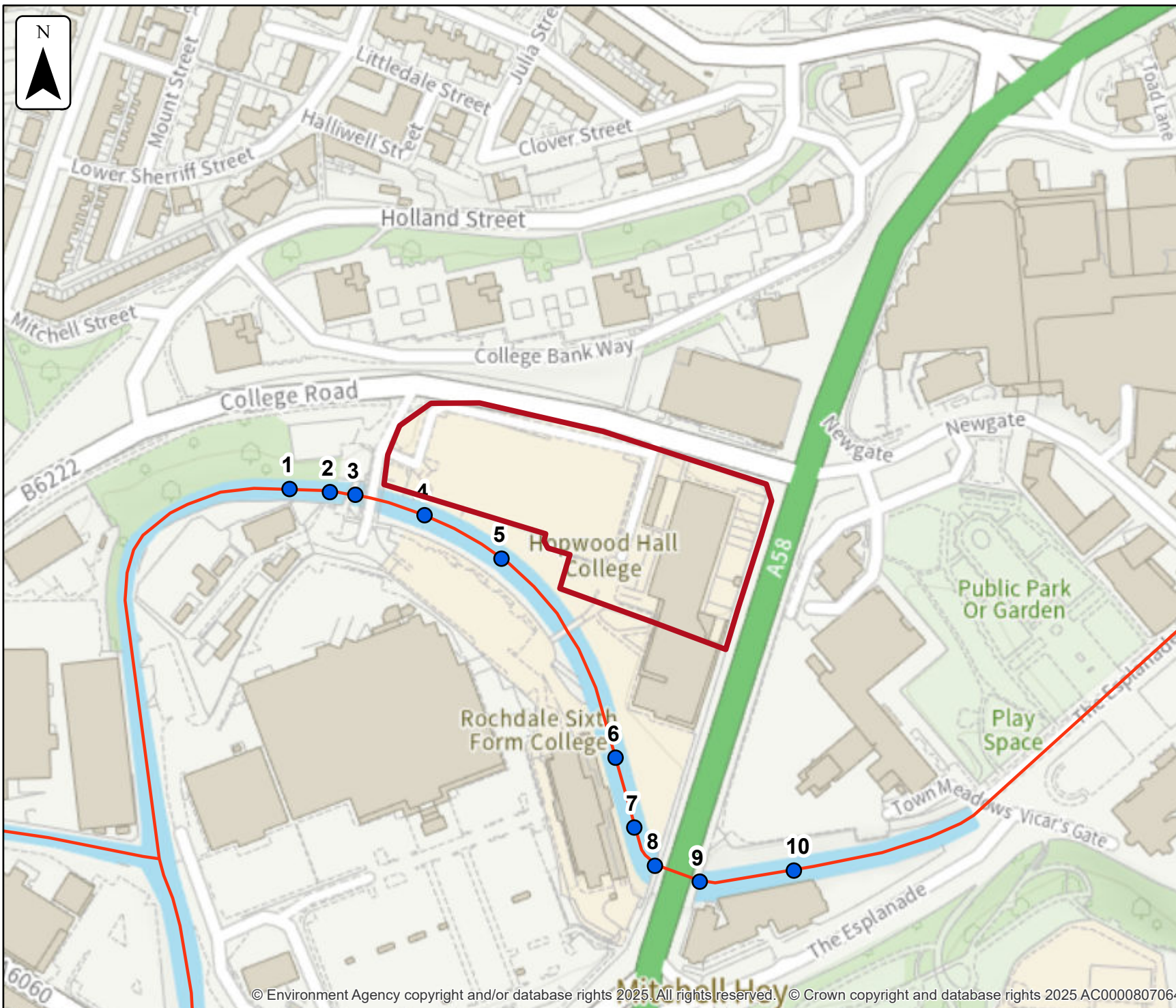
Scale Created
1:10,000 23 Jul 2025

Model name
Rochdale and Littleborough 2013

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

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





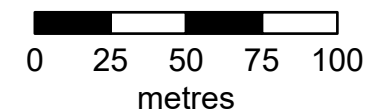
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
389295/413385

Scale Created
1:2,500 23 Jul 2025

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

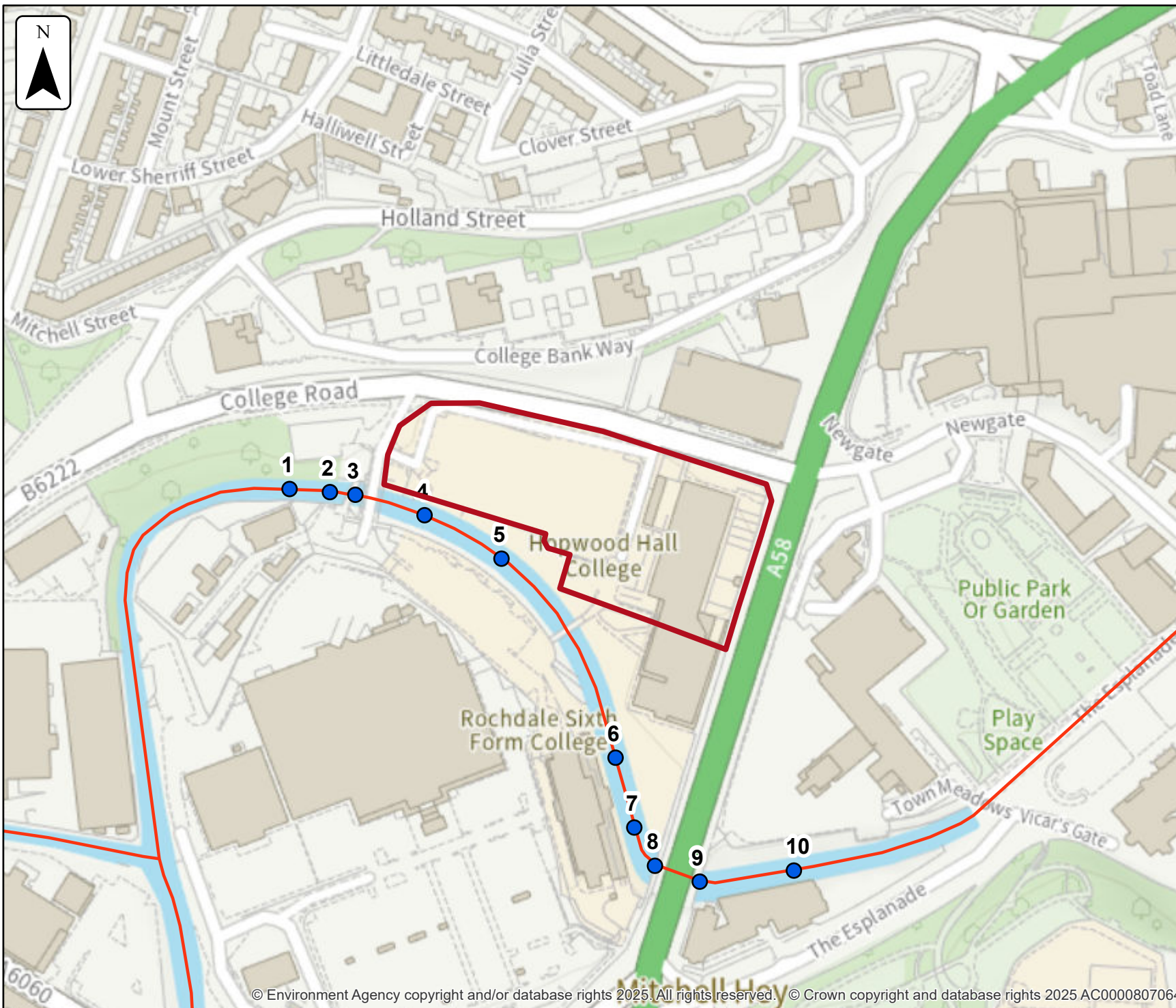
Defences removed climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+20%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1674011	389146	413395	118.53	118.73	119.16	59.14	54.94	55.11
2	1673900	389165	413393	118.53	118.73	119.16	60.54	54.42	54.06
3	1673886	389178	413392	118.82	118.98	119.33	60.54	54.42	54.06
4	1674171	389211	413382	118.85	119.01	119.35	57.39	50.34	49.60
5	1673835	389248	413361	118.85	119.01	119.35	56.93	51.86	51.31
6	1674601	389304	413265	118.70	118.81	119.14	96.95	99.95	104.78
7	1674006	389313	413231	118.79	118.91	119.26	92.43	93.32	94.86
8	1674314	389323	413212	118.89	118.99	119.29	95.49	98.76	105.42
9	1674635	389345	413205	119.07	119.18	119.48	95.49	98.77	105.44
10	1674704	389390	413210	119.05	119.15	119.46	95.51	98.79	105.47

Data in this table comes from the Rochdale and Littleborough 2013 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.



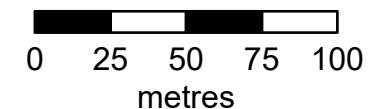
Defences removed modelled fluvial node locations

Location (easting/northing)
389295/413385

Scale Created
1:2,500 23 Jul 2025

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	5% AEP	3.33% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level
1	1674011	389146	413395	117.44	117.53	117.87	117.97	118.29	119.22
2	1673900	389165	413393	117.52	117.61	117.93	118.04	118.35	119.22
3	1673886	389178	413392	117.70	117.84	118.24	118.37	118.68	119.37
4	1674171	389211	413382	117.83	117.96	118.32	118.44	118.72	119.39
5	1673835	389248	413361	117.86	117.99	118.32	118.44	118.72	119.38
6	1674601	389304	413265	117.99	118.12	118.38	118.46	118.63	119.20
7	1674006	389313	413231	118.04	118.17	118.42	118.51	118.70	119.30
8	1674314	389323	413212	118.10	118.23	118.50	118.60	118.80	119.33
9	1674635	389345	413205	118.20	118.33	118.62	118.73	118.98	119.52
10	1674704	389390	413210	118.20	118.33	118.61	118.72	118.95	119.49

Data in this table comes from the Rochdale and Littleborough 2013 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

Label	Modelled location ID	Easting	Northing	5% AEP	3.33% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow
1	1674011	389146	413395	57.55	59.08	59.16	59.07	59.13	54.59
2	1673900	389165	413393	58.31	60.26	60.51	60.45	60.54	54.66
3	1673886	389178	413392	58.31	60.26	60.51	60.45	60.54	54.66
4	1674171	389211	413382	56.31	57.24	57.34	57.32	57.43	50.86
5	1673835	389248	413361	55.84	56.91	56.96	57.0	57.04	52.47
6	1674601	389304	413265	57.82	61.18	71.65	77.54	92.22	104.43
7	1674006	389313	413231	57.82	61.19	71.60	77.26	89.75	95.02
8	1674314	389323	413212	57.81	61.18	71.66	77.44	91.40	104.36
9	1674635	389345	413205	57.81	61.18	71.66	77.44	91.40	104.40
10	1674704	389390	413210	57.81	61.18	71.66	77.44	91.40	104.43

Data in this table comes from the Rochdale and Littleborough 2013 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.