

Flood risk assessment data

Location of site: 423776 / 420425 (shown as easting and northing coordinates)

Document created on: 11 April 2024

This information was previously known as a product 4.

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
- 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

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

About the models used

Model name: 2009 FIM River Spen

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

Date: 1 March 2009

Model name: 2011 River Calder - Calder

Scenario(s): Defences removed fluvial, defences removed climate change fluvial

Date: 31 March 2011

Model name: 2015 Batley Beck Mapping Study

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

Date: 30 November 2015

Model name: 2015 Calder and Canals - downstream of Sowerby Bridge

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

Date: 31 March 2014

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

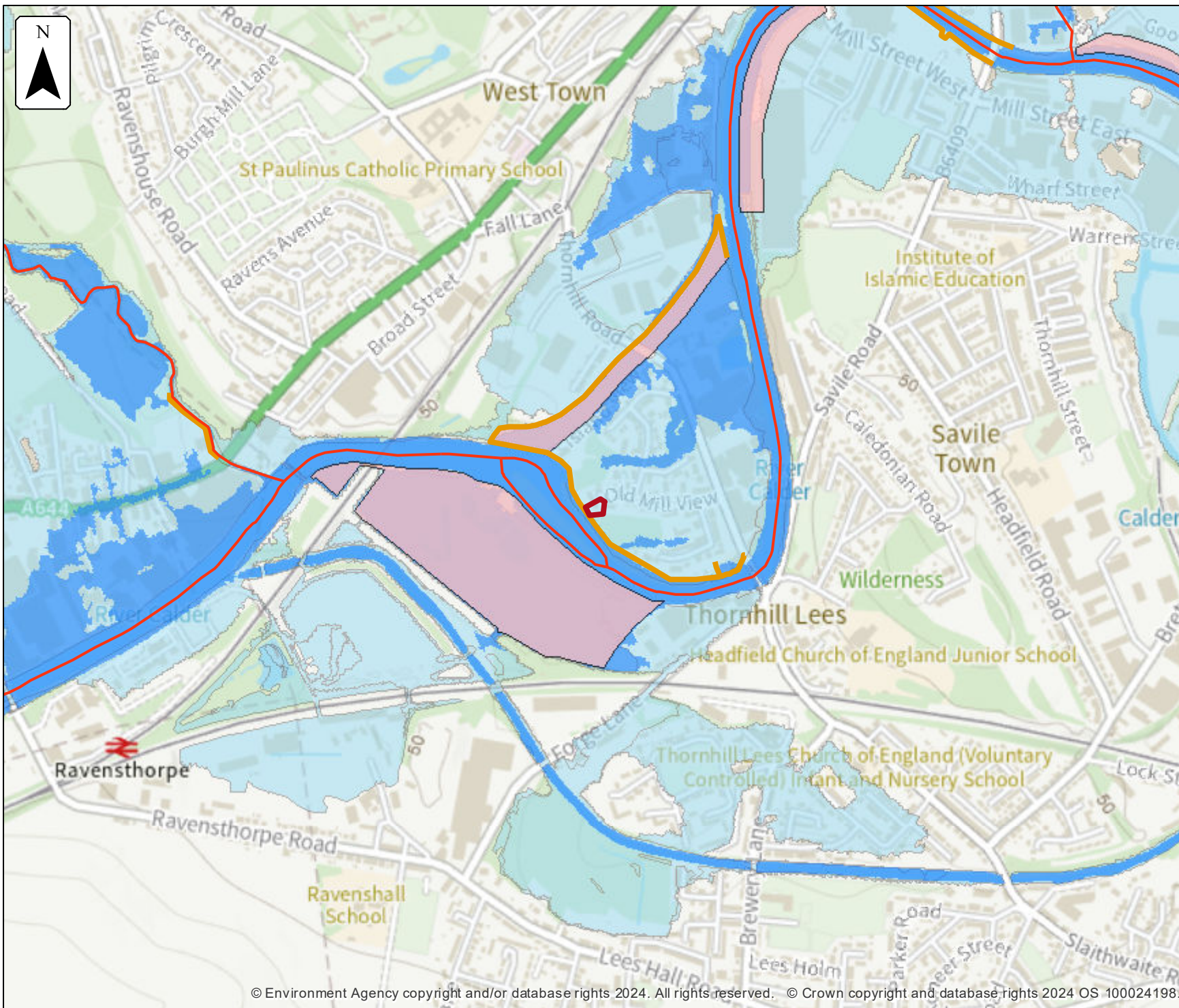
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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.



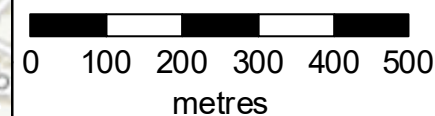
Flood map for planning

Location (easting/northing)
423776/420425

Scale
1:10,000

Created
11 Apr 2024

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



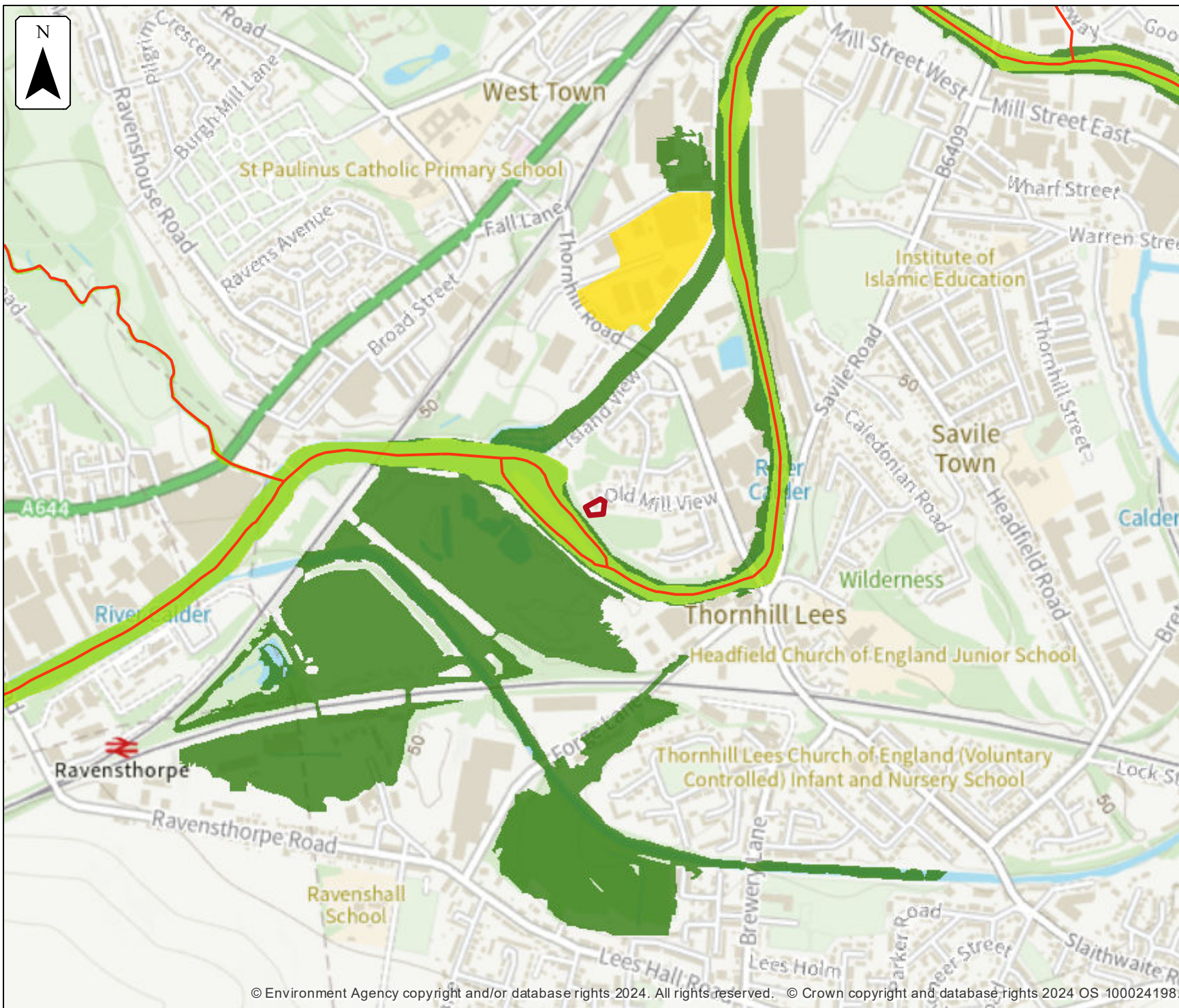
Historic flooding

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](#)



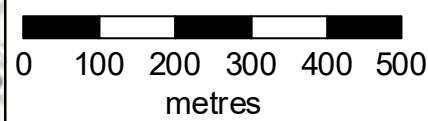
Historic flood map

Location (easting/northing)
423776/420425

Scale
1:10,000

Created
11 Apr 2024

-  Selected area
-  Main river
- Date of flood event
 -  February, 2020
 -  December, 2015
 -  February, 2002



Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
8 February 2020	19 March 2020	main river	channel capacity exceeded (no raised defences)	No
25 December 2015	29 December 2015	main river	channel capacity exceeded (no raised defences)	No
10 February 2002	13 February 2002	main river	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)
423776/420425

Scale
1:2,500

Created
11 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	28240	Embankment	50	Good	37.11	36.70	
2	28241	Embankment	50	Good	37.10	34.58	
3	390193	Embankment					
4	51909	Embankment	50		39.80	40.30	
5	150301	Wall	50		39.72	39.88	
6	330913	Wall			39.75	39.75	

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

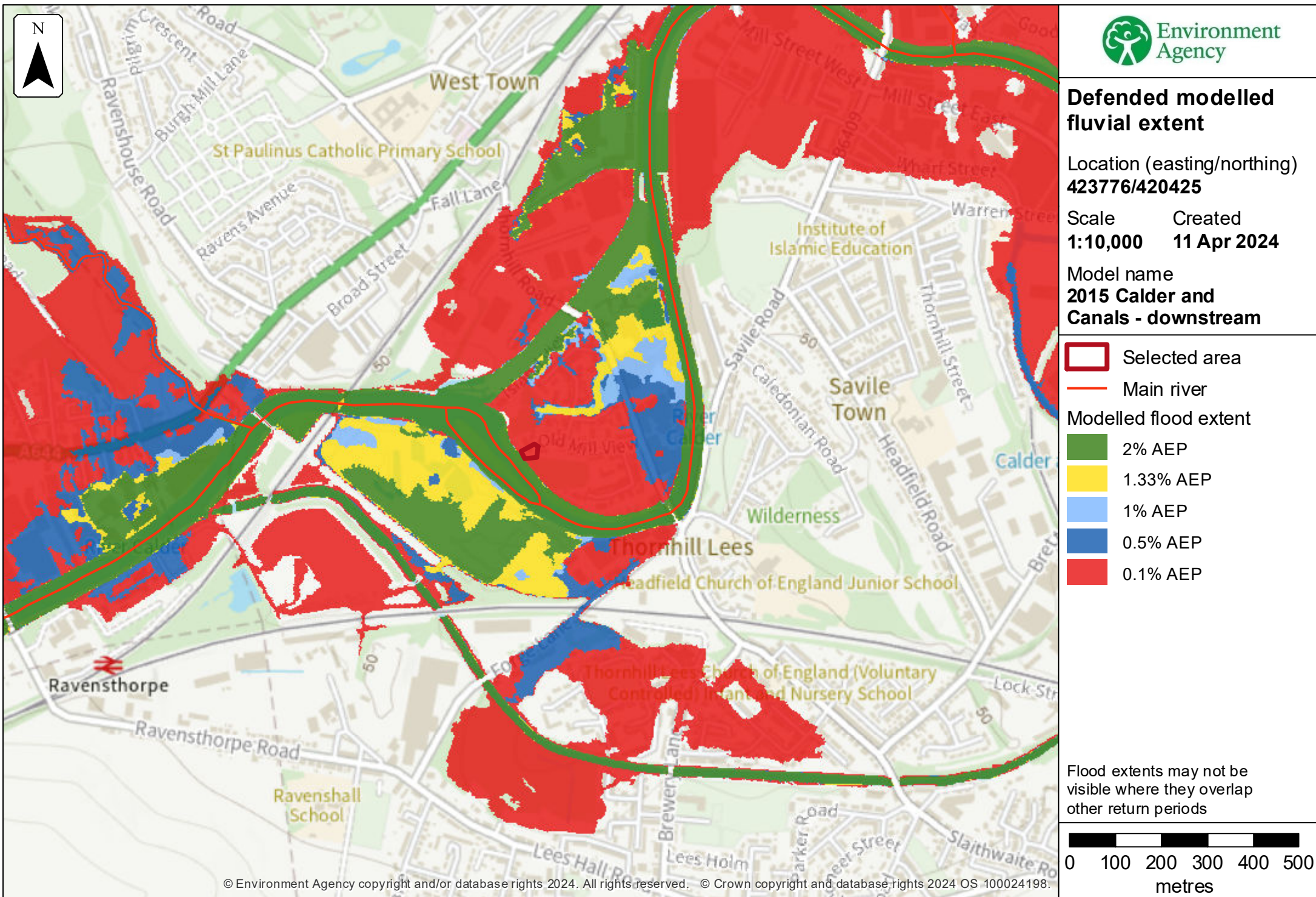
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

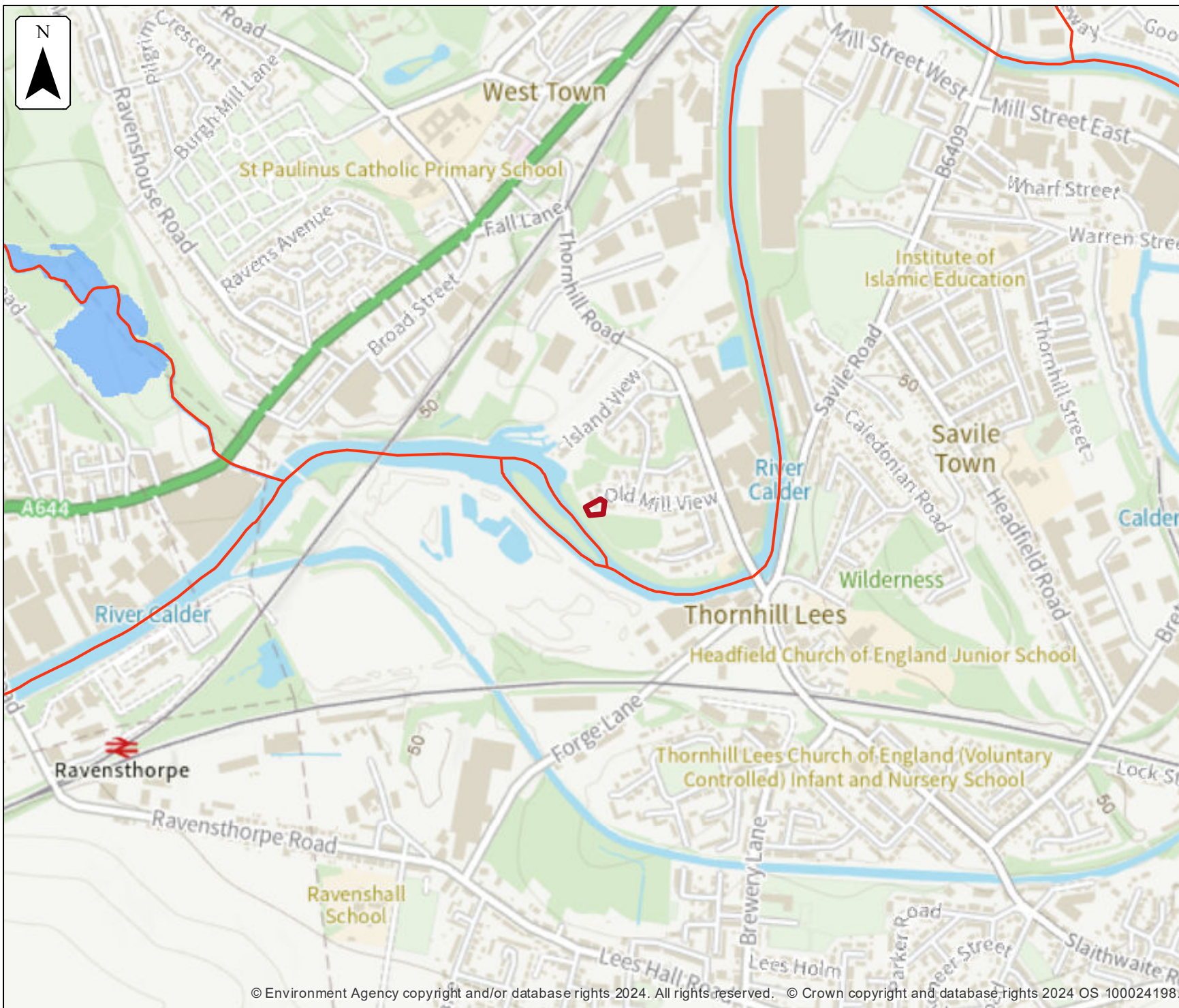
The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

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

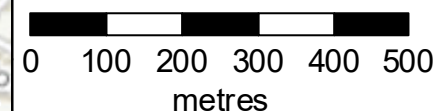
Location (easting/northing)
423776/420425

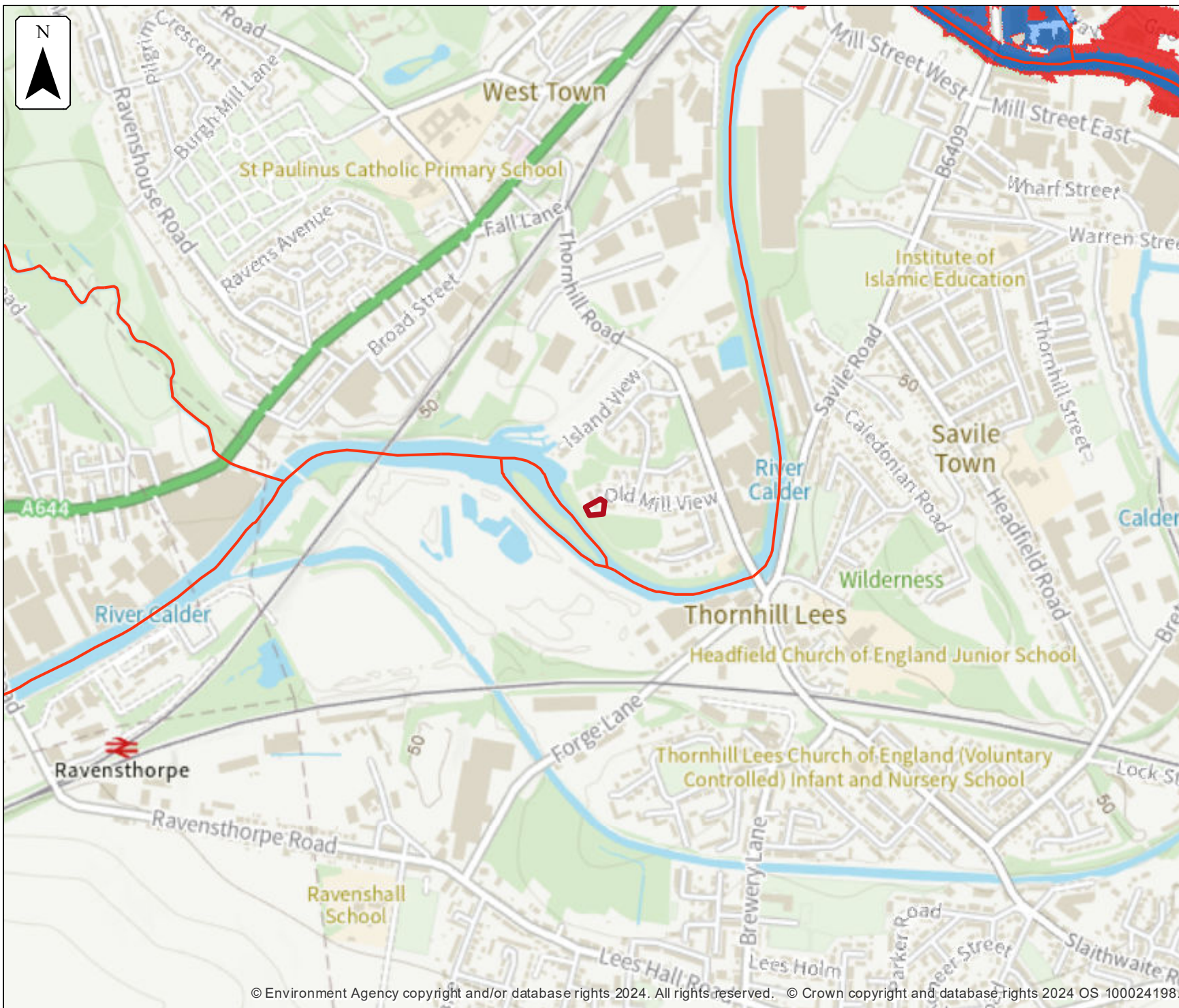
Scale Created
1:10,000 11 Apr 2024

Model name
2009 FIM River Spen

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP

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





Defended modelled fluvial extent

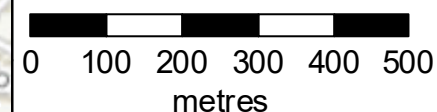
Location (easting/northing)
423776/420425

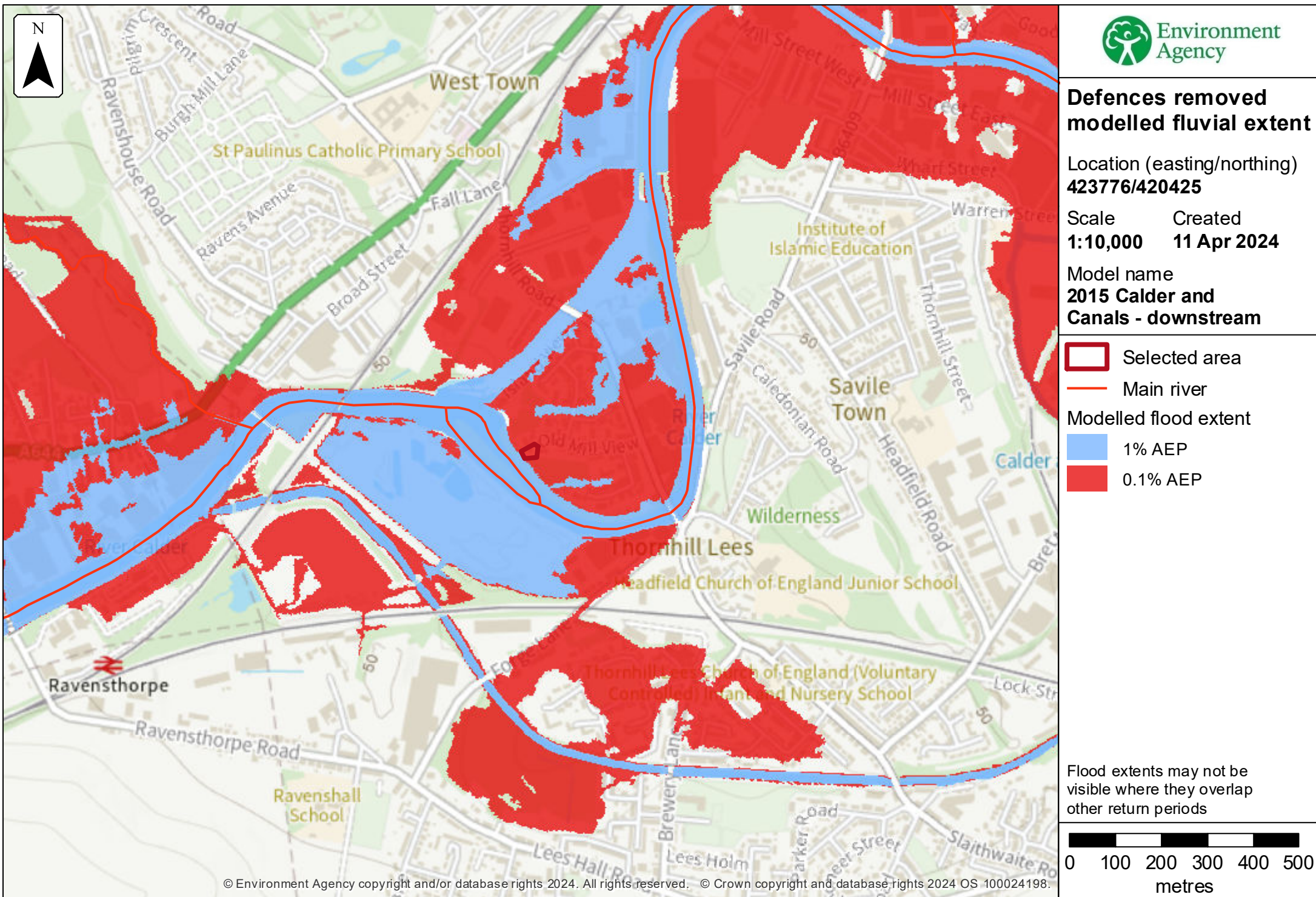
Scale Created
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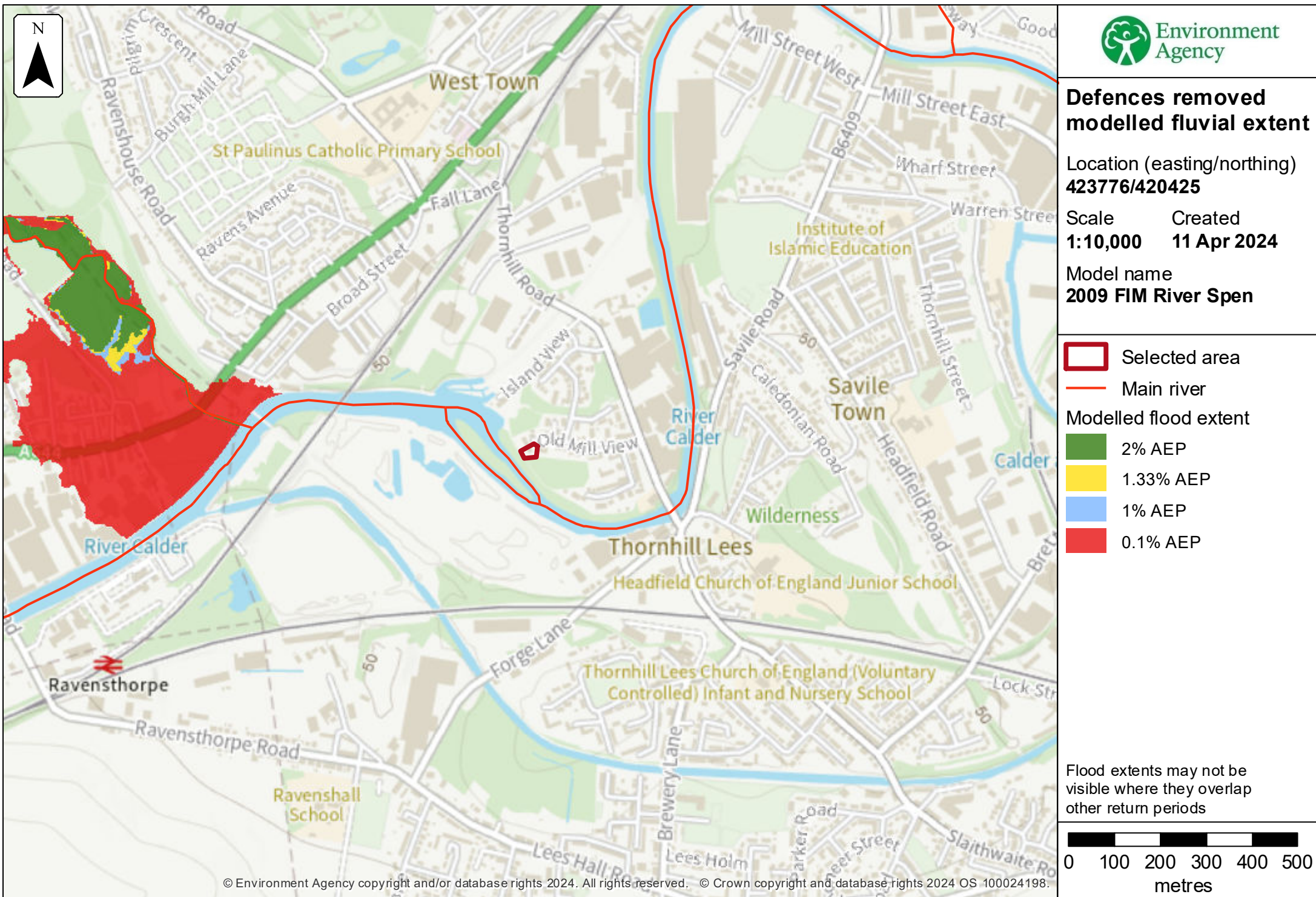
Model name
**2015 Batley Beck
Mapping Study**

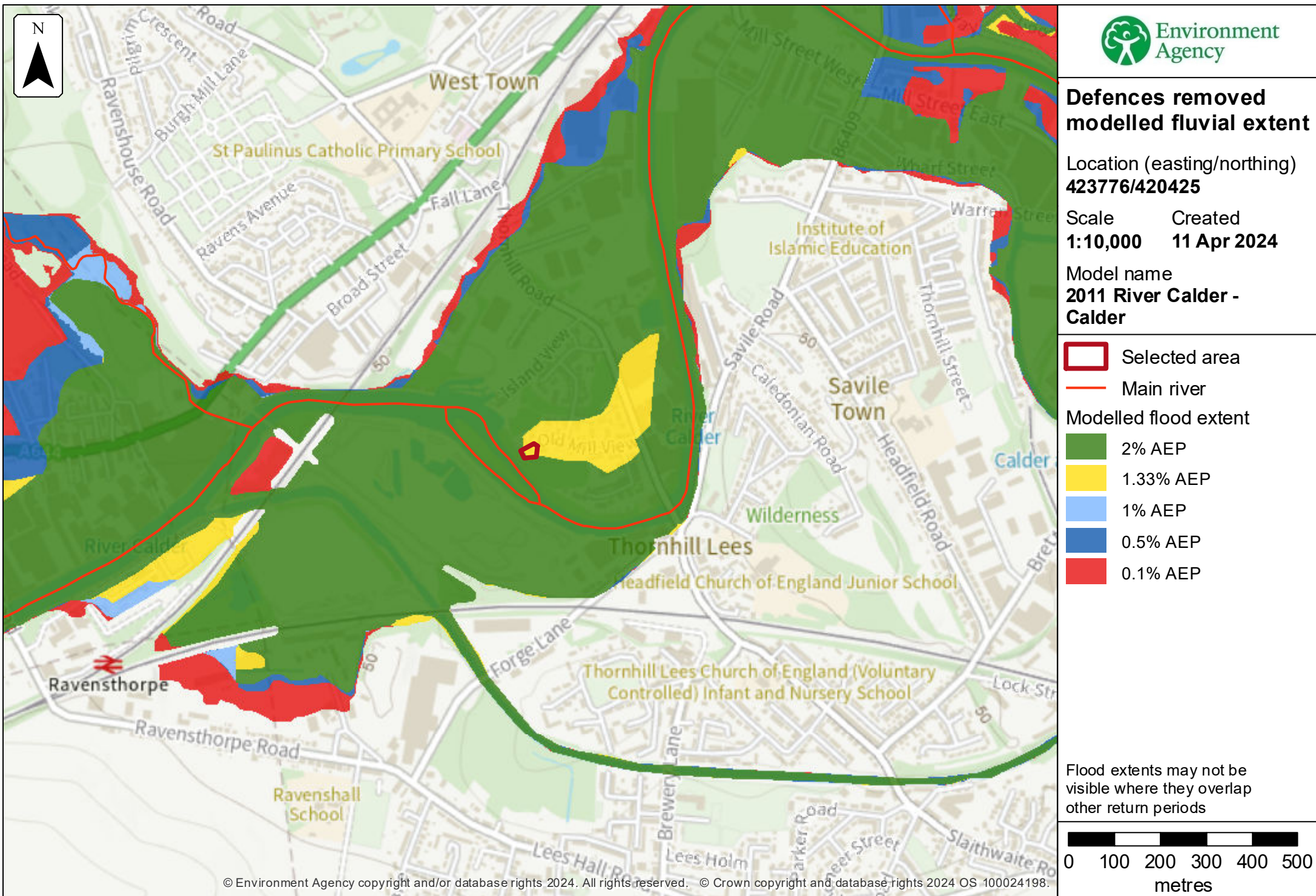
-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP
 -  0.5% AEP
 -  0.1% AEP

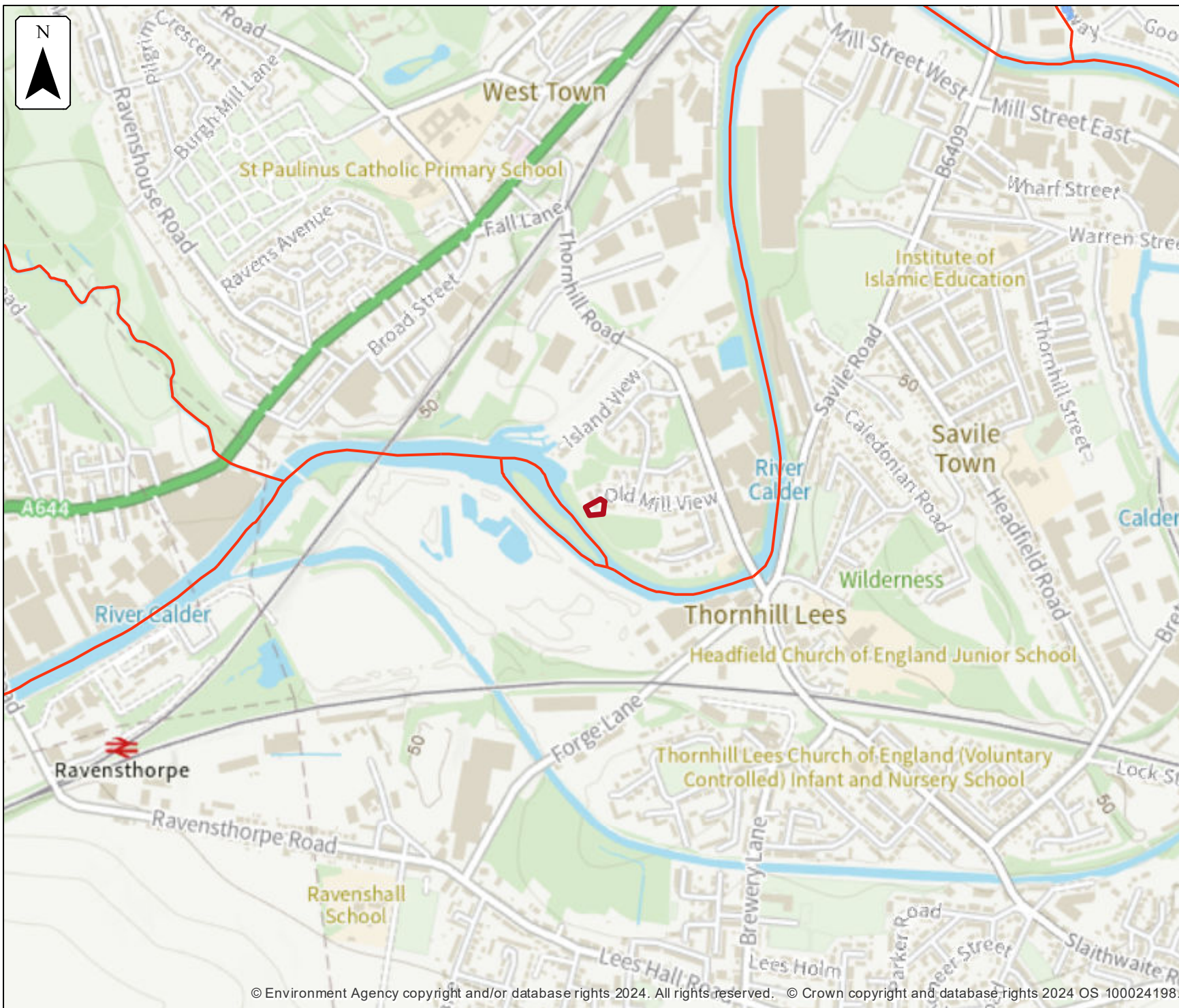
Flood extents may not be
visible where they overlap
other return periods











Defences removed modelled fluvial extent

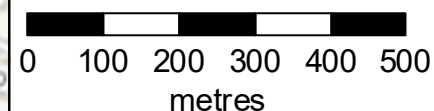
Location (easting/northing)
423776/420425

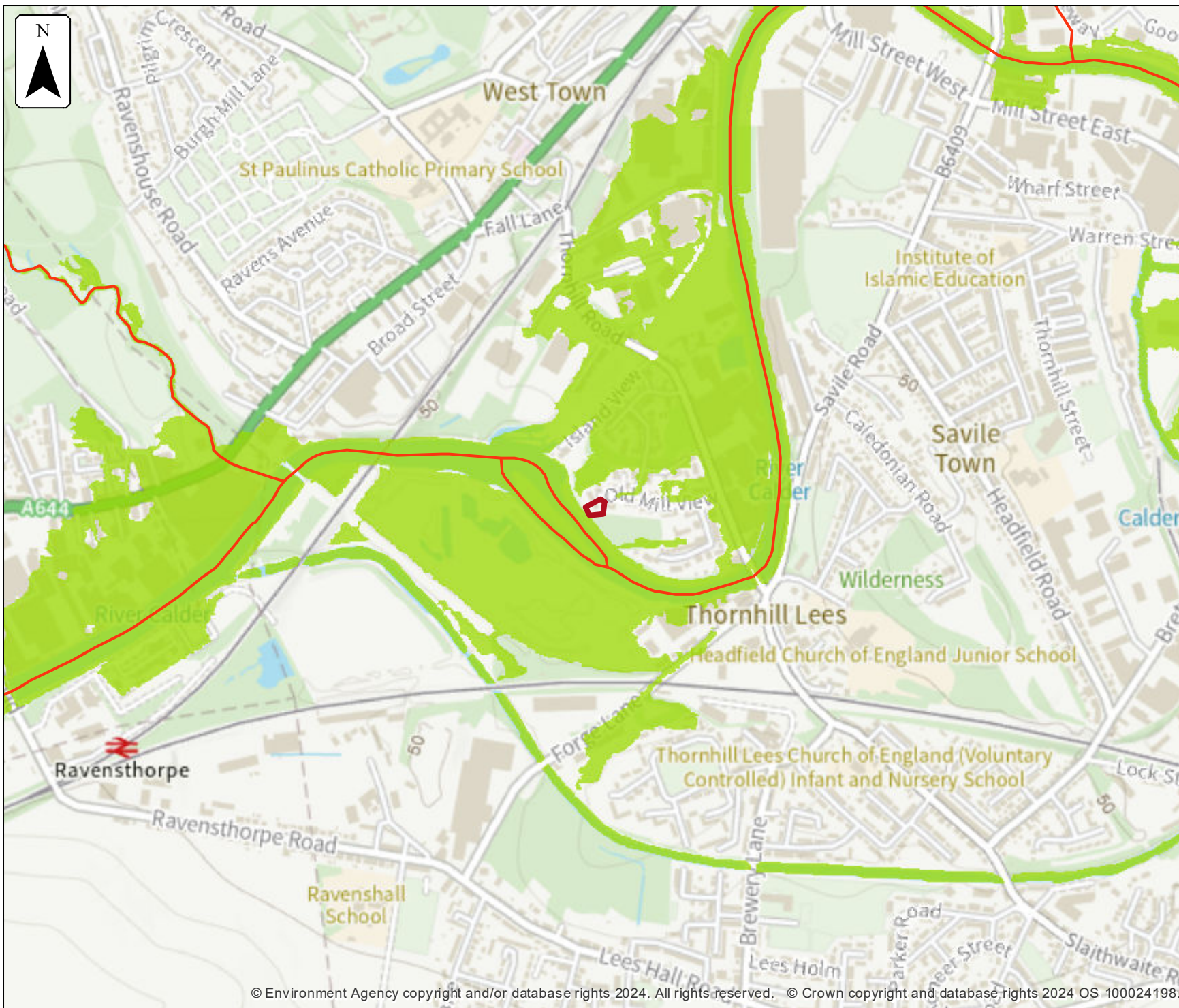
Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP

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





Defended climate change modelled fluvial extent

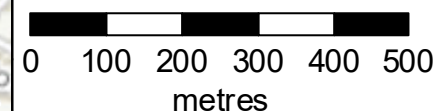
Location (easting/northing)
423776/420425

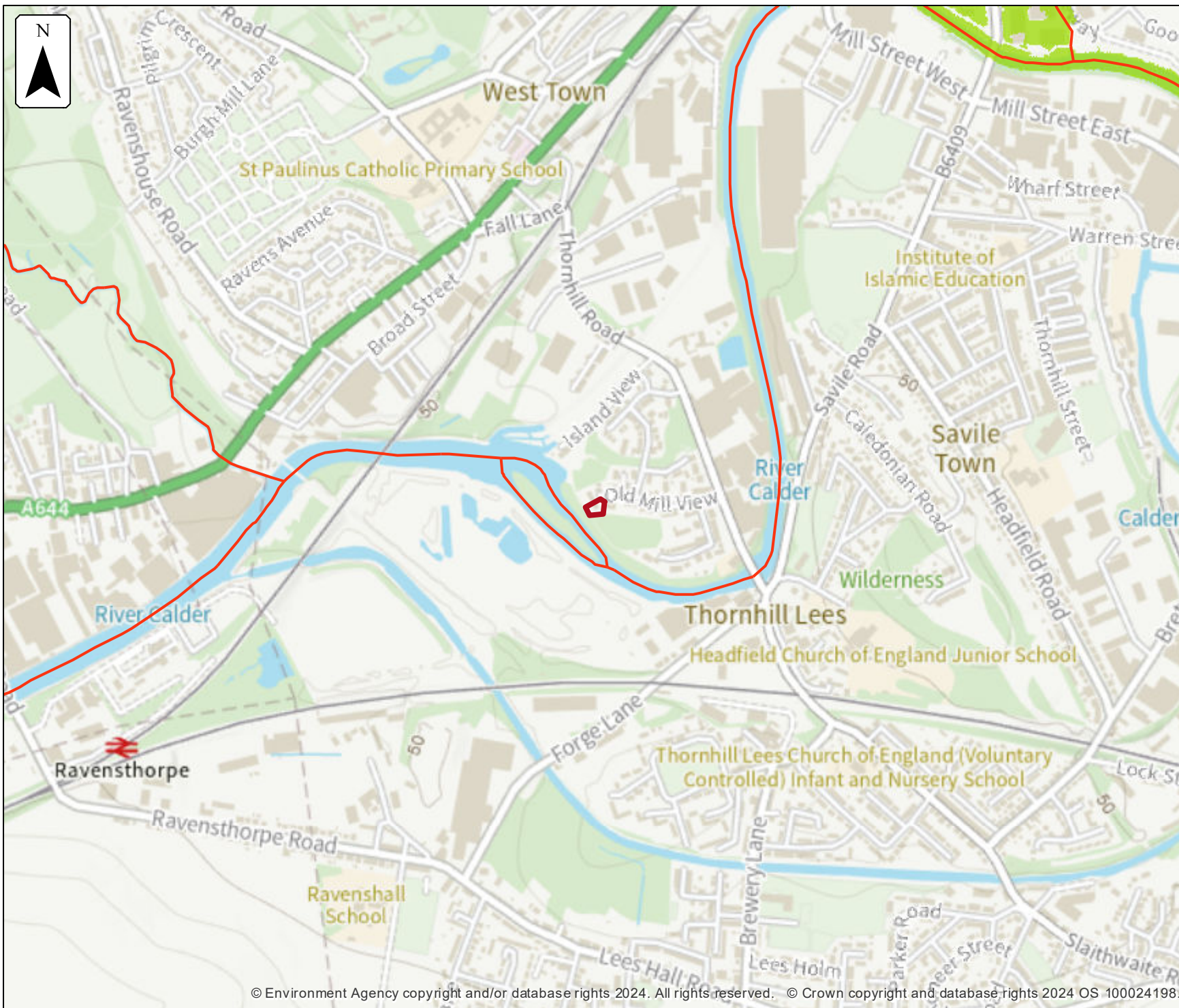
Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Calder and
Canals - downstream**

-  Selected area
-  Main river
- Modelled flood extent
 -  1.0% AEP (+20%)

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





Defended climate change modelled fluvial extent

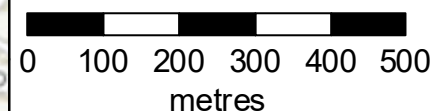
Location (easting/northing)
423776/420425

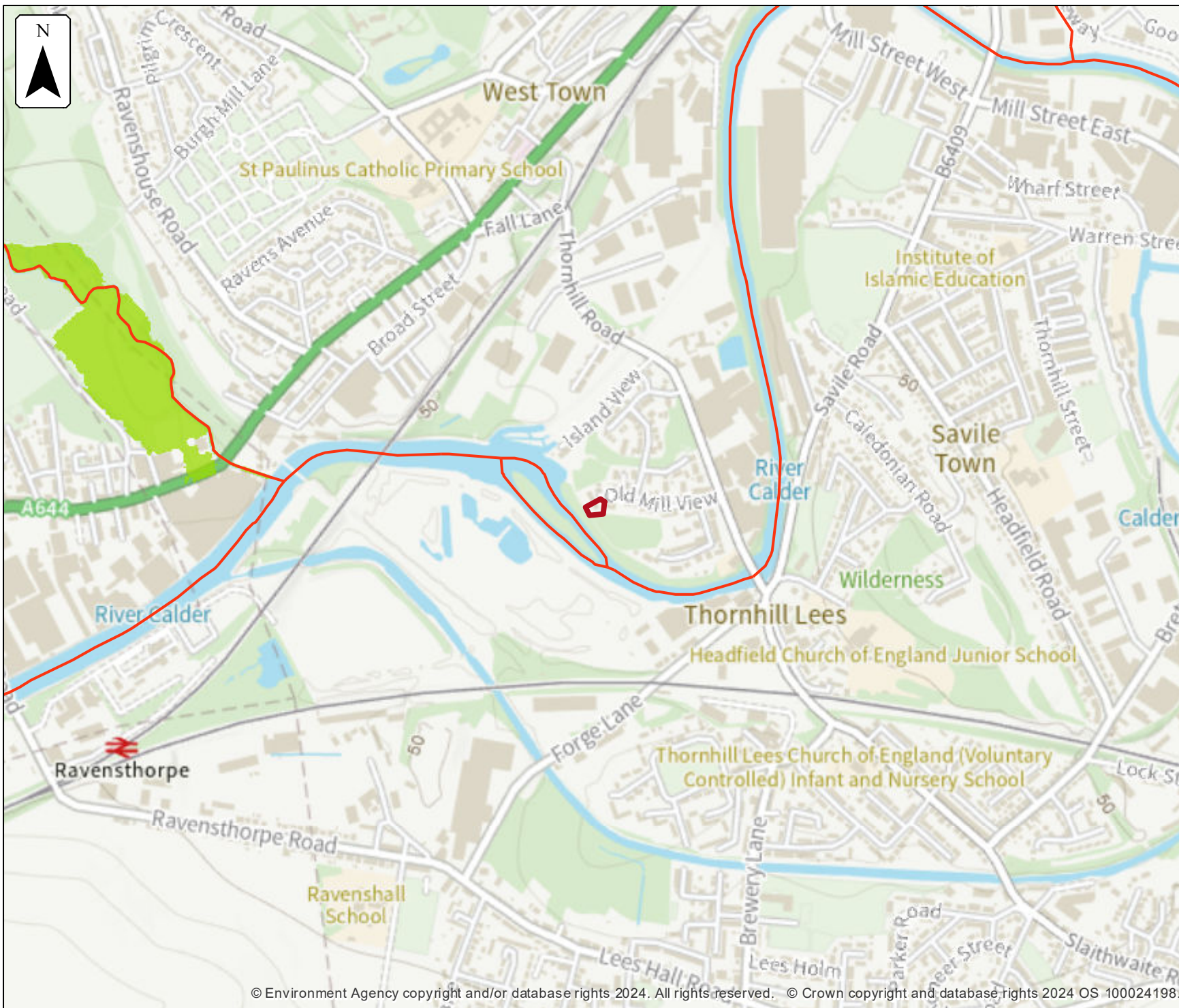
Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

-  Selected area
-  Main river
- Modelled flood extent
 -  1.0% AEP (+20%)

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





Defences removed climate change modelled fluvial extent

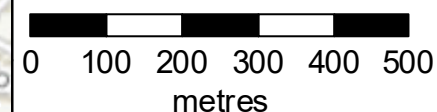
Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
2009 FIM River Spen

-  Selected area
-  Main river
- Modelled flood extent
 -  1.0% AEP (+20%)

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





Defences removed climate change modelled fluvial extent

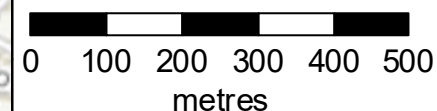
Location (easting/northing)
423776/420425

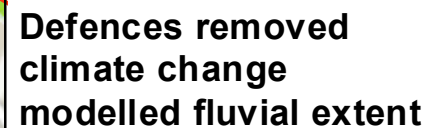
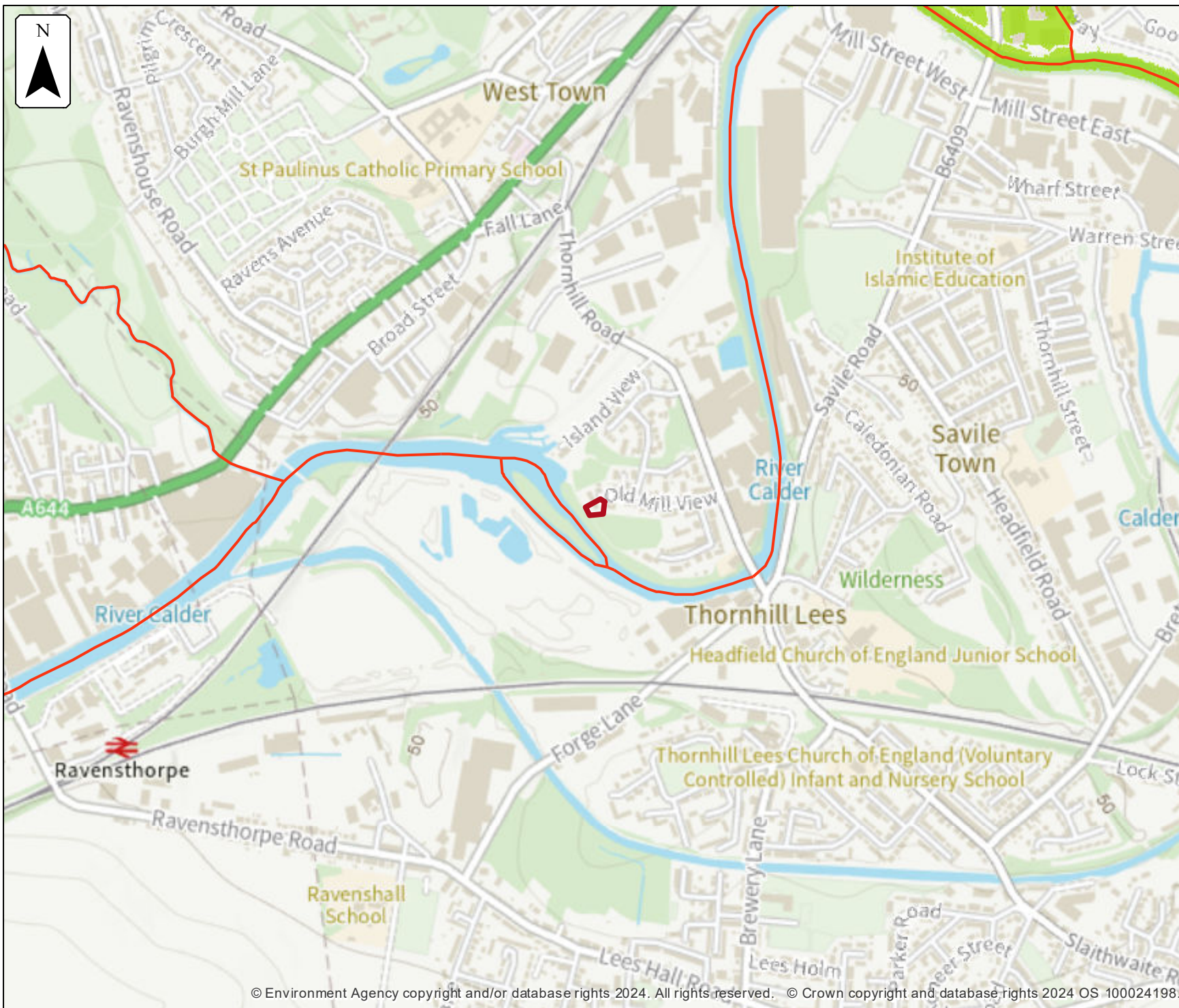
Scale Created
1:10,000 11 Apr 2024

Model name
**2011 River Calder -
Calder**

-  Selected area
-  Main river
- Modelled flood extent
 -  1.0% AEP (+20%)

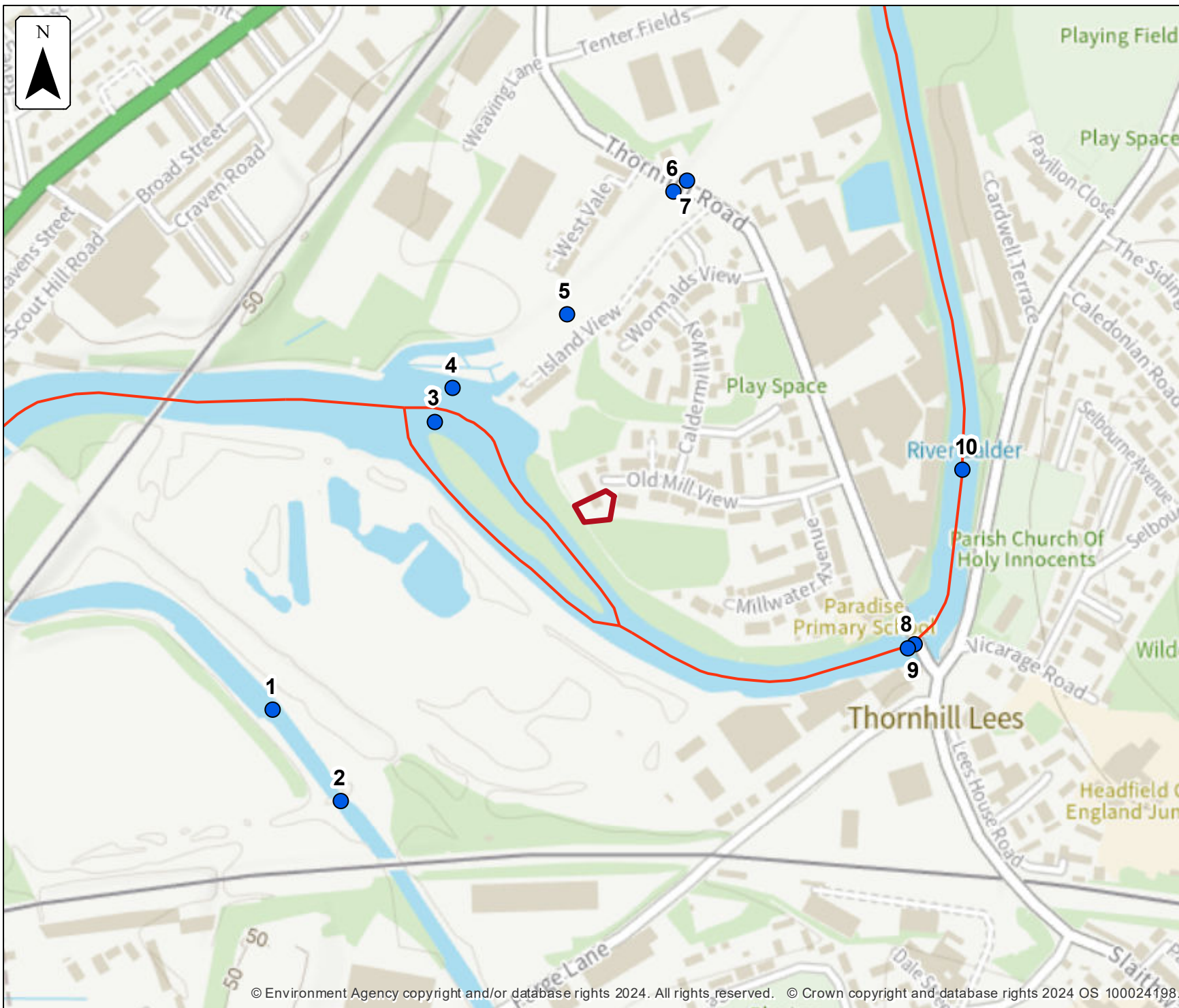
Flood extents may not be
visible where they overlap
other return periods





Scale	Created
1:10,000	11 Apr 2024

 Selected area
 Main river
 Modelled flood extent
 1.0% AEP (+20%)



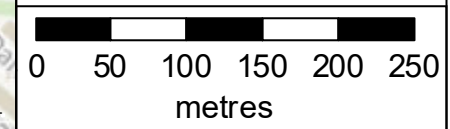
Defended modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:5,000 11 Apr 2024

Model name
2015 Calder and Canals - downstream

- Selected area
- Modelled location
- Main river

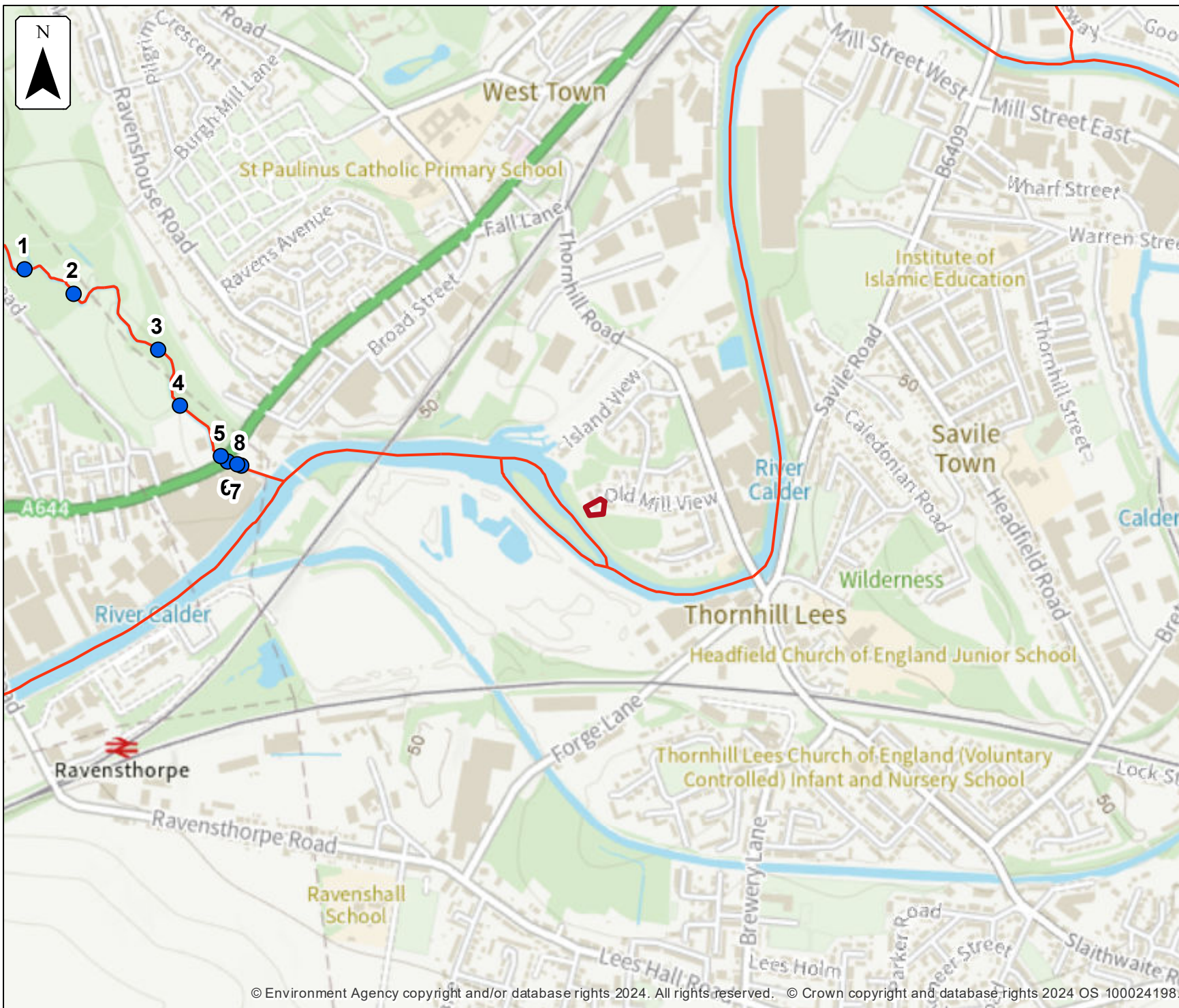


Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	4% 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	1130097	423464	420228	38.0	1.96	38.0	2.02	38.01	2.04	38.0	2.06	38.14	2.10	39.89	14.57
2	1130105	423530	420140	38.0	1.95	38.0	2.0	38.01	2.03	38.0	2.05	38.14	2.38	39.86	18.41
3	1130101	423621	420509	38.99	419.15	39.19	464.74	39.27	488.11	39.38	491.20	39.52	534.06	40.72	719.38
4	1129925	423638	420541	38.95	120.78	39.15	145.44	39.23	157.44	39.36	142.17	39.49	199.04	40.70	315.49
5	1129711	423748	420613	38.86	120.75	39.04	145.49	39.11	157.34	39.28	142.10	39.33	199.84	40.70	307.35
6	1129695	423852	420731	38.84	120.69	39.02	145.38	39.09	157.47	39.25	142.06	39.28	198.85	40.56	272.65
7	1129694	423866	420742	38.80	120.69	38.96	145.38	39.01	157.47	39.18	142.06	39.14	198.85	40.24	272.65
8	1130033	424079	420289	38.45	298.29	38.73	318.67	38.83	324.12	38.95	344.21	39.19	343.97	40.51	425.84
9	1129677	424087	420292	38.29	298.41	38.56	318.80	38.66	324.28	38.76	344.47	39.01	344.14	40.14	426.11
10	1129626	424132	420462	38.04	298.20	38.32	318.60	38.43	325.38	38.51	344.36	38.80	344.19	39.96	425.45

Data in this table comes from the 2015 Calder and Canals - downstream of Sowerby Bridge 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.



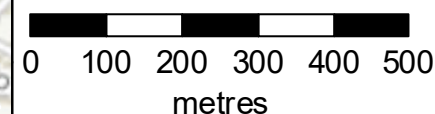
Defended modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
2009 FIM River Spen

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

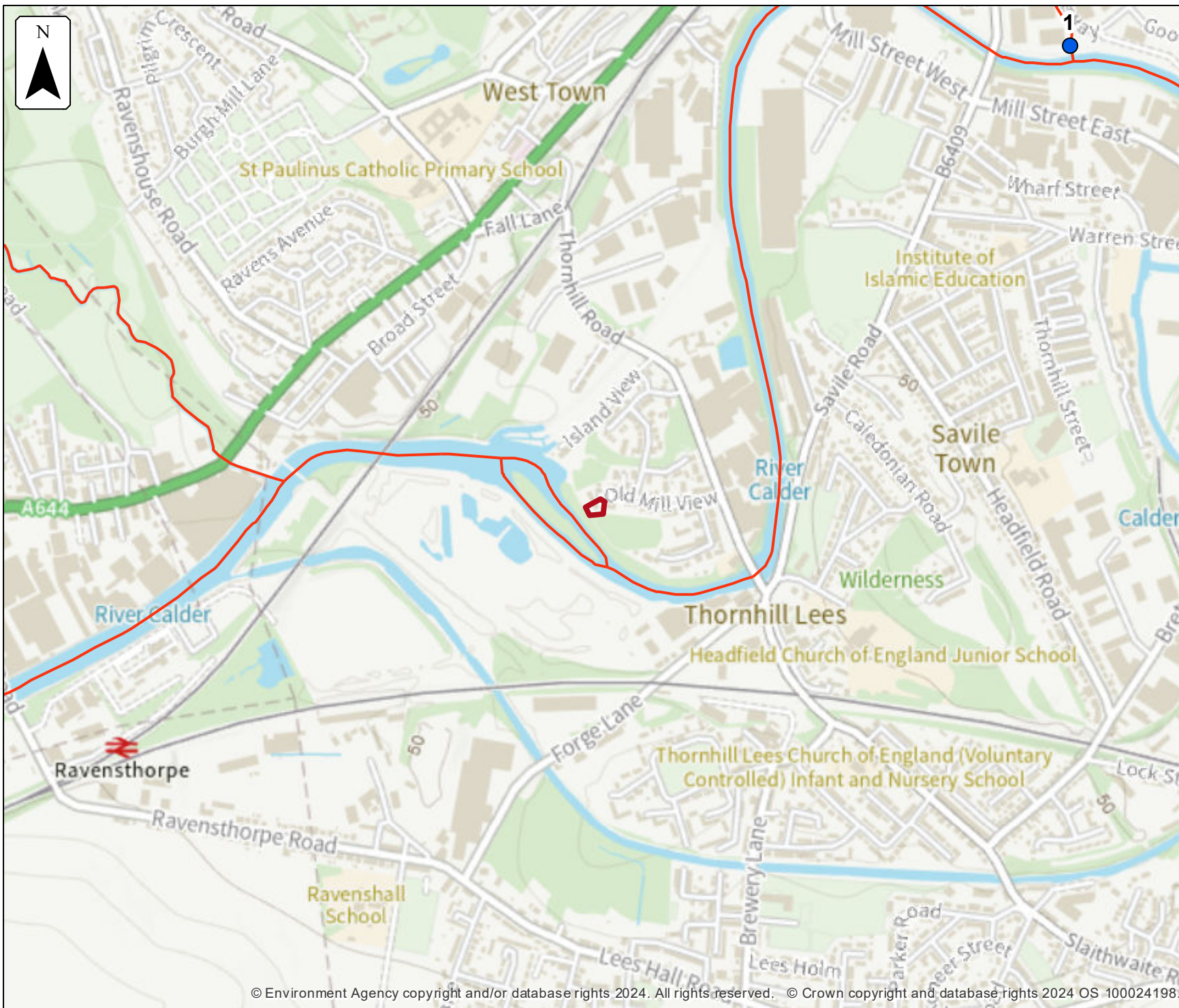
Defended

Label	Modelled location ID	Easting	Northing	4% 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	150045	422669	420886							40.77	29.62				
2	122601	422764	420840							40.71	24.73				
3	290394	422927	420732							40.22	31.36				
4	330549	422970	420622							39.99	32.53				
5	320251	423050	420525							39.45	32.52				
6	43913	423063	420514							39.45	32.52				
7	335911	423082	420508							39.27	32.52				
8	96087	423088	420505							39.27	32.52				

Data in this table comes from the 2009 FIM River Spen 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.



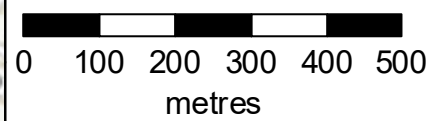
**Defended modelled
fluvial
node locations**

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

-  Selected area
-  Modelled location
-  Main river



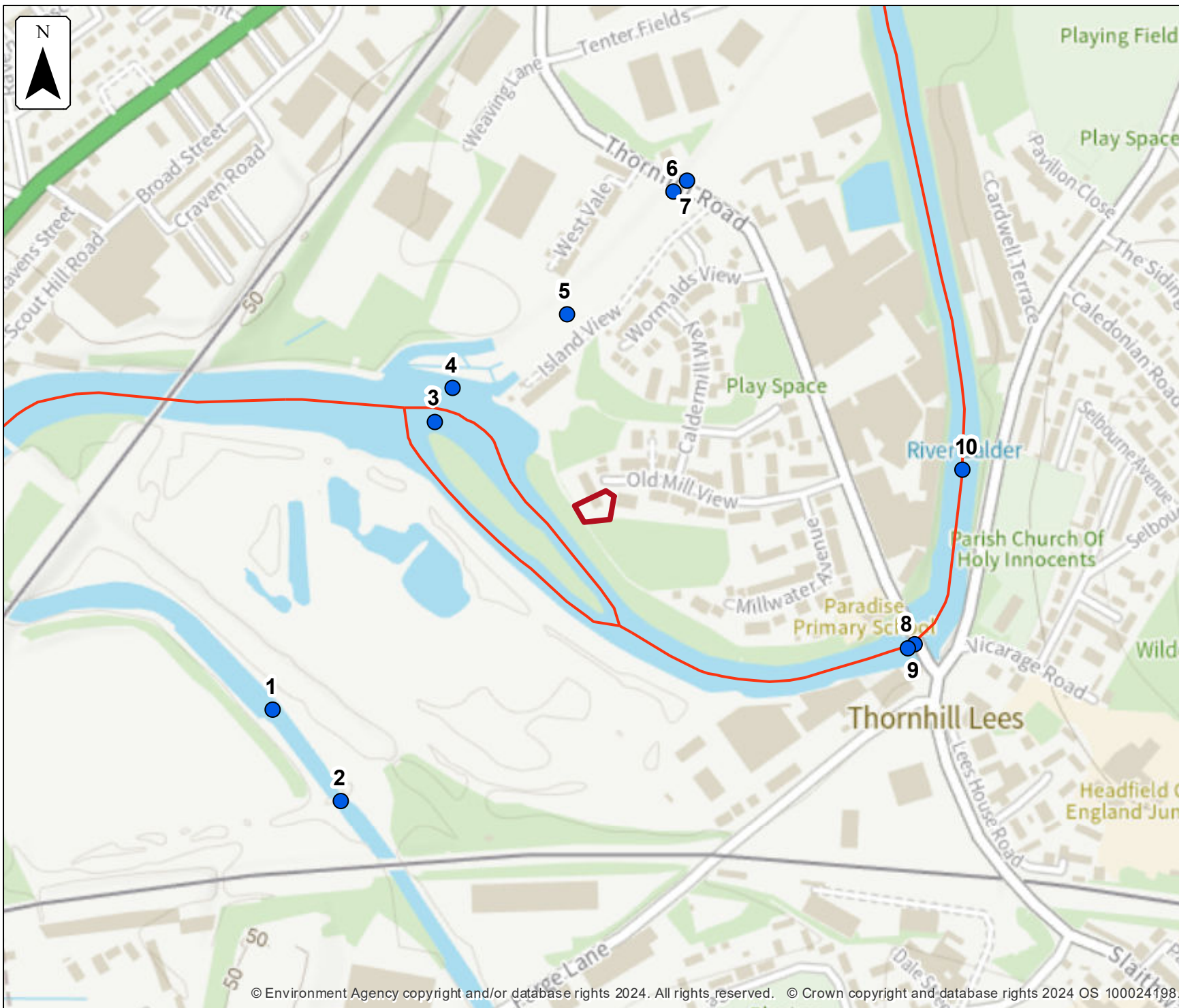
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Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	4% 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	977831	424697	421321			36.27	25.87	36.64	26.51	36.79	26.59	36.79	27.02	36.97	28.18

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



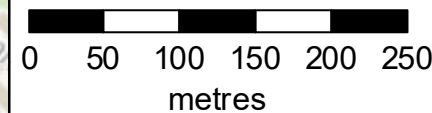
Defences removed modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:5,000 11 Apr 2024

Model name
**2015 Calder and
Canals - downstream**

-  Selected area
-  Modelled location
-  Main river

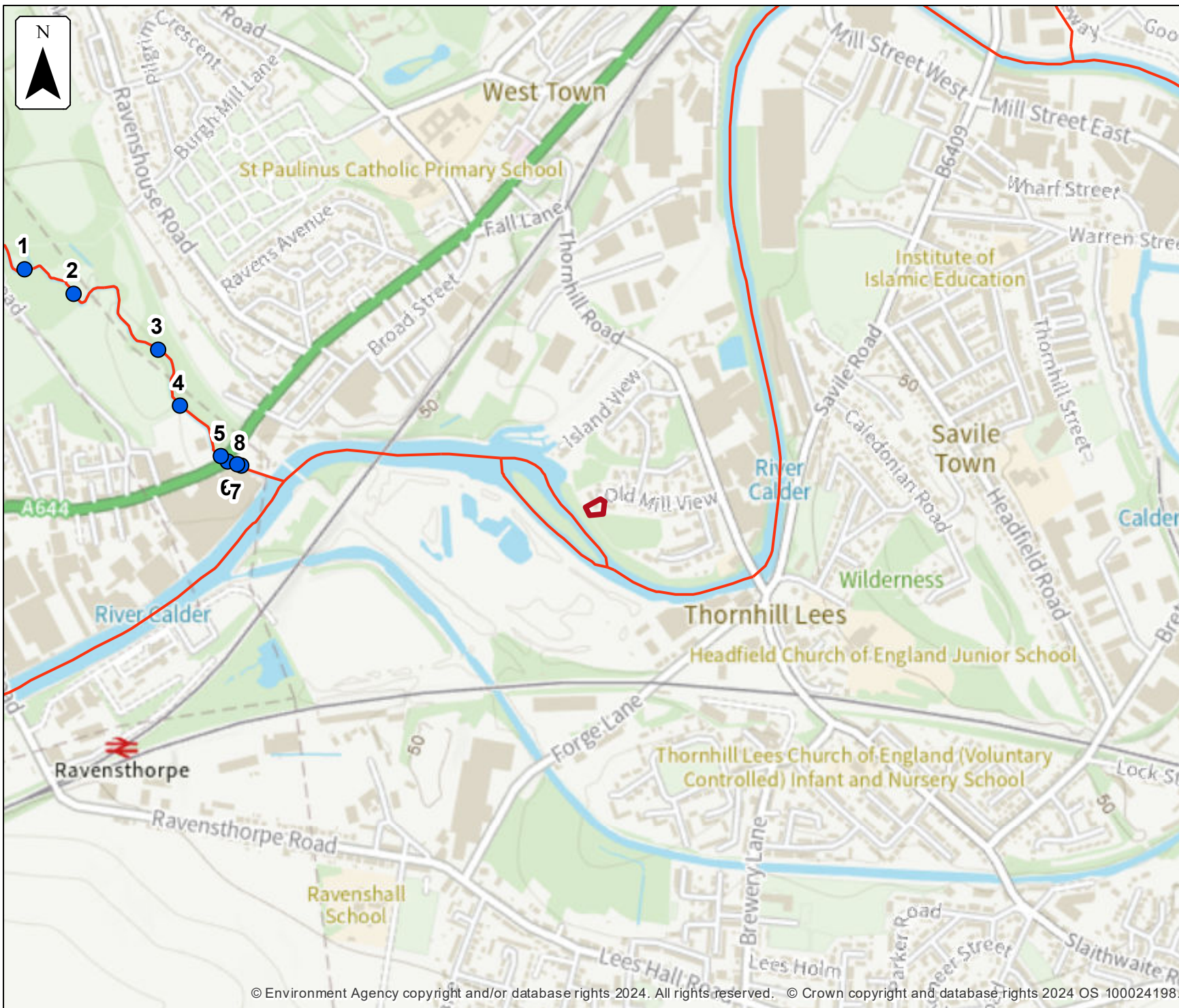


Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	4% 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	1130097	423464	420228	38.0	1.90	38.0	1.97	38.0	2.0	38.0	2.06	38.04	2.07	39.91	14.95
2	1130105	423530	420140	38.0	1.89	38.0	1.95	38.0	1.99	38.0	2.05	38.04	2.06	39.88	18.84
3	1130101	423621	420509	38.76	384.88	38.95	425.74	39.06	449.01	39.28	492.44	39.29	505.99	40.73	722.06
4	1129925	423638	420541	38.66	99.36	38.90	110.93	39.02	116.85	39.25	159.46	39.27	129.64	40.71	316.37
5	1129711	423748	420613	38.60	98.99	38.83	110.78	38.95	116.72	39.12	159.41	39.19	128.95	40.71	308.26
6	1129695	423852	420731	38.58	98.94	38.81	110.62	38.93	116.73	39.09	159.30	39.17	129.03	40.57	273.80
7	1129694	423866	420742	38.55	98.94	38.78	110.62	38.89	116.73	39.02	159.30	39.12	129.03	40.25	273.80
8	1130033	424079	420289	38.16	285.52	38.42	314.84	38.56	332.80	38.85	325.61	38.83	367.64	40.52	422.83
9	1129677	424087	420292	38.09	285.63	38.36	314.98	38.52	332.94	38.68	325.88	38.81	367.81	40.16	423.10
10	1129626	424132	420462	37.82	285.45	38.10	314.33	38.25	332.89	38.45	325.72	38.53	367.56	39.98	426.11

Data in this table comes from the 2015 Calder and Canals - downstream of Sowerby Bridge 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.



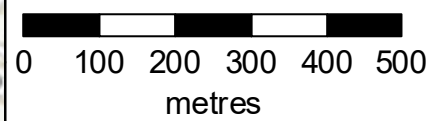
**Defences removed
modelled fluvial
node locations**

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
2009 FIM River Spen

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

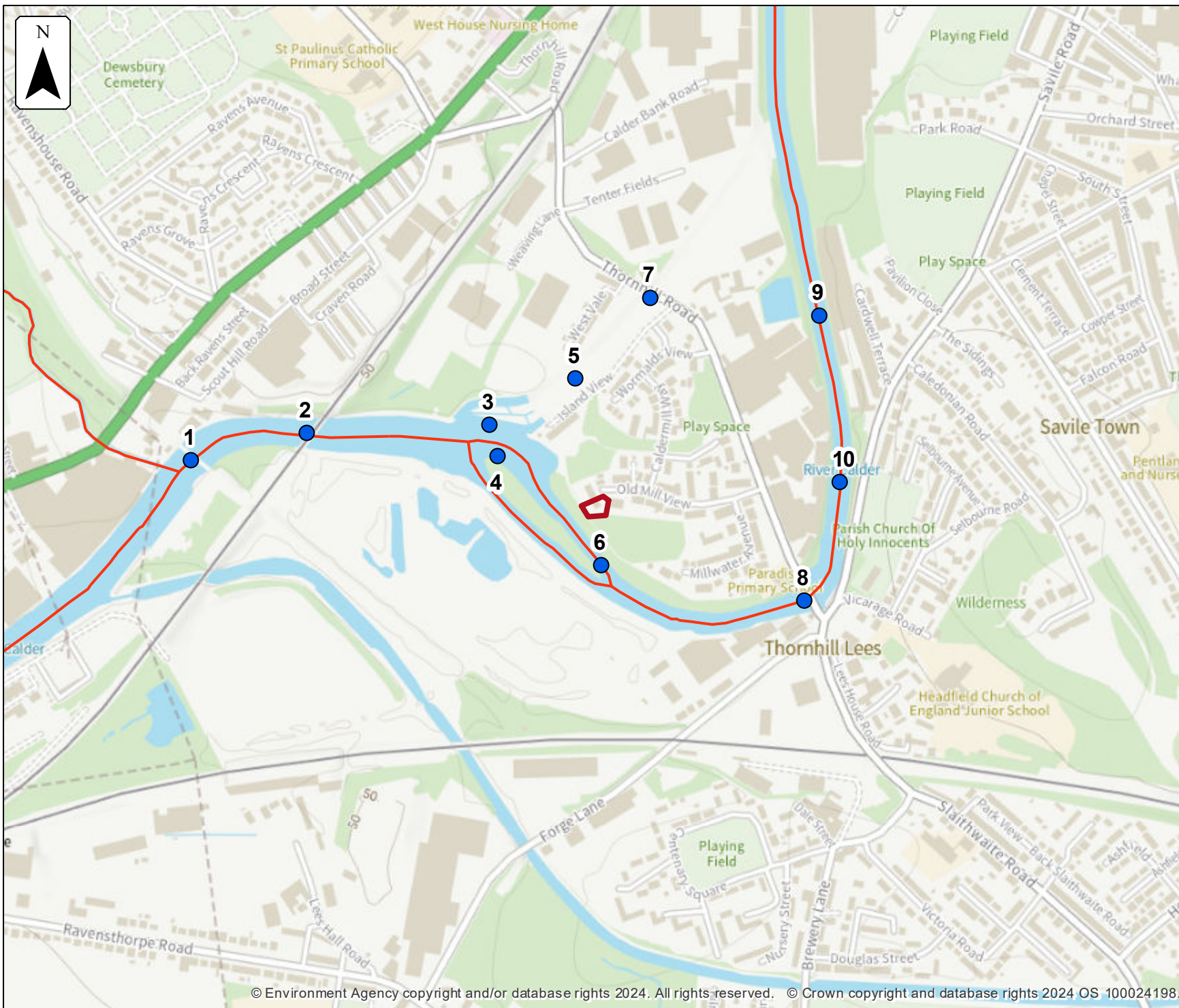
Defences removed

Label	Modelled location ID	Easting	Northing	4% 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	150045	422669	420886	40.71	27.81	40.79	30.61	40.83	32.29	40.87	33.64			41.54	70.65
2	122601	422764	420840	40.64	23.34	40.73	25.55	40.78	26.97	40.82	28.13			41.52	60.22
3	290394	422927	420732	40.08	29.64	40.24	31.52	40.32	32.57	40.39	33.25			41.24	54.69
4	330549	422970	420622	39.87	30.02	40.01	32.85	40.09	34.56	40.15	35.80			41.21	51.33
5	320251	423050	420525	39.36	30.02	39.47	32.85	39.53	34.56	39.59	35.79			41.14	52.21
6	43913	423063	420514	39.36	30.02	39.47	32.85	39.53	34.56	39.59	35.79			40.58	52.21
7	335911	423082	420508	39.18	30.02	39.28	32.85	39.34	34.56	39.40	35.79			39.98	52.60
8	96087	423088	420505	39.18	30.02	39.28	32.85	39.34	34.56	39.40	35.79			39.98	52.60

Data in this table comes from the 2009 FIM River Spen 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.



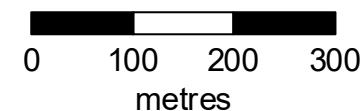
Defences removed modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:7,500 11 Apr 2024

Model name
**2011 River Calder -
Calder**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

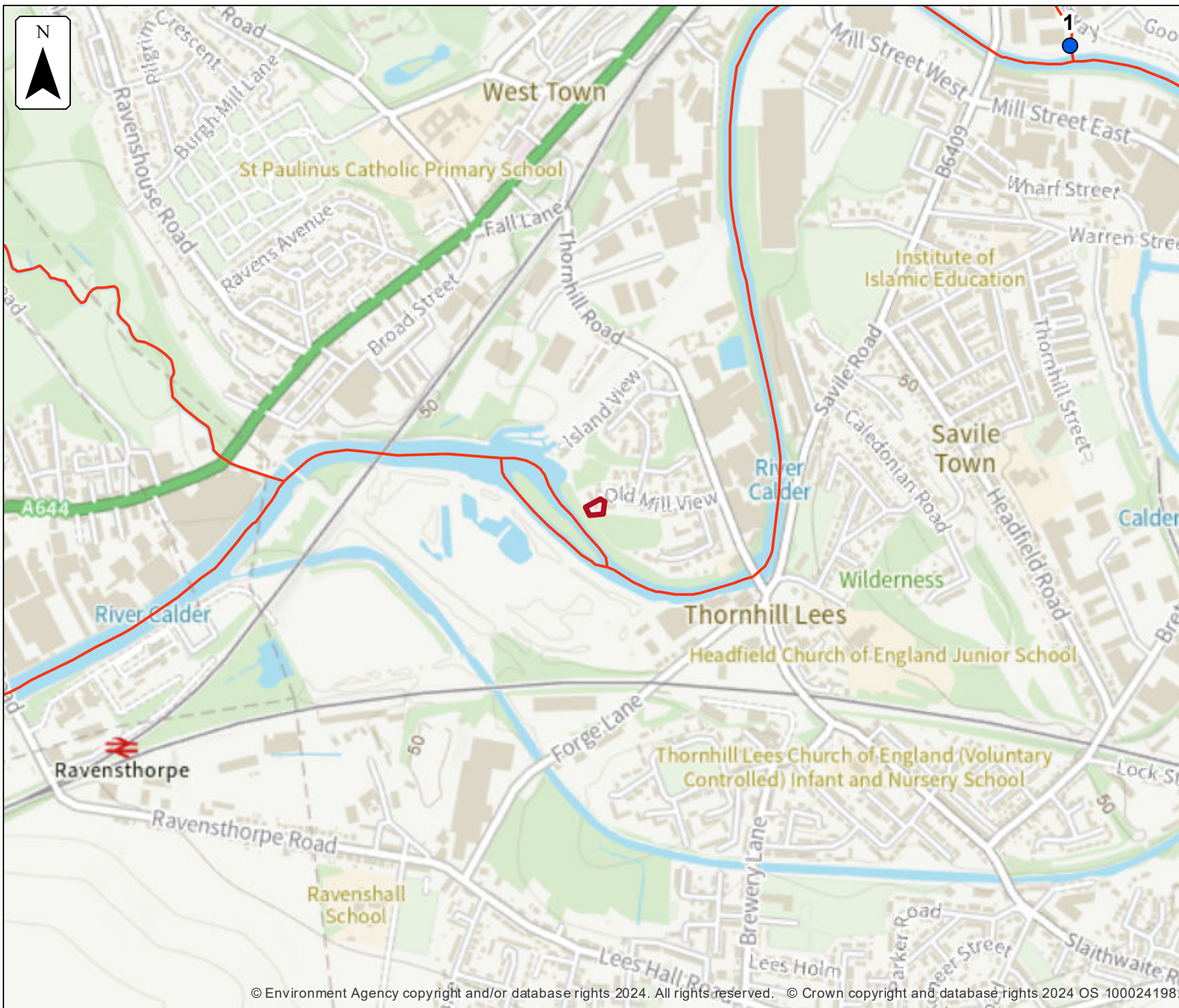
Defences removed

Label	Modelled location ID	Easting	Northing	4% 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	30304	423188	420494	39.67	374.77	39.86	408.33	39.98	430.44	40.08	447.49	40.37	496.15	41.98	795.22
2	8148	423356	420534	39.33	384.19	39.48	417.63	39.57	440.02	39.65	457.15	39.86	504.78	41.07	808.01
3	3069	423622	420544	38.65	70.76	38.72	88.46	38.77	100.72	38.83	103.85	39.0	113.50	39.98	180.09
4	61827	423633	420500	38.65	314.09	38.72	329.62	38.77	339.85	38.83	353.23	39.0	391.17	39.98	638.09
5	300146	423748	420613	38.01	70.55	38.38	88.26	38.62	100.25	38.69	103.75	38.88	113.39	39.95	177.25
6	101235	423784	420341	38.14	313.28	38.26	329.07	38.33	339.11	38.40	352.45	38.60	390.36	39.50	635.33
7	346781	423856	420730	37.99	70.47	38.37	88.19	38.60	100.10	38.68	103.71	38.87	113.35	39.87	174.77
8	71600	424079	420289	37.98	311.49	38.12	327.74	38.20	337.61	38.29	350.90	38.52	388.38	39.55	634.86
9	56457	424103	420703	37.57	310.89	37.74	327.25	37.84	337.18	37.92	350.55	38.17	387.53	39.32	644.10
10	169494	424133	420462	37.71	311.25	37.87	327.55	37.96	337.44	38.05	350.75	38.30	387.92	39.44	634.16

Data in this table comes from the 2011 River Calder - Calder 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.



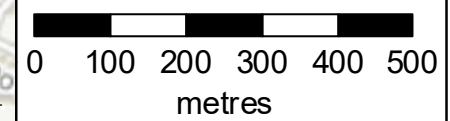
Defences removed modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

-  Selected area
-  Modelled location
-  Main river

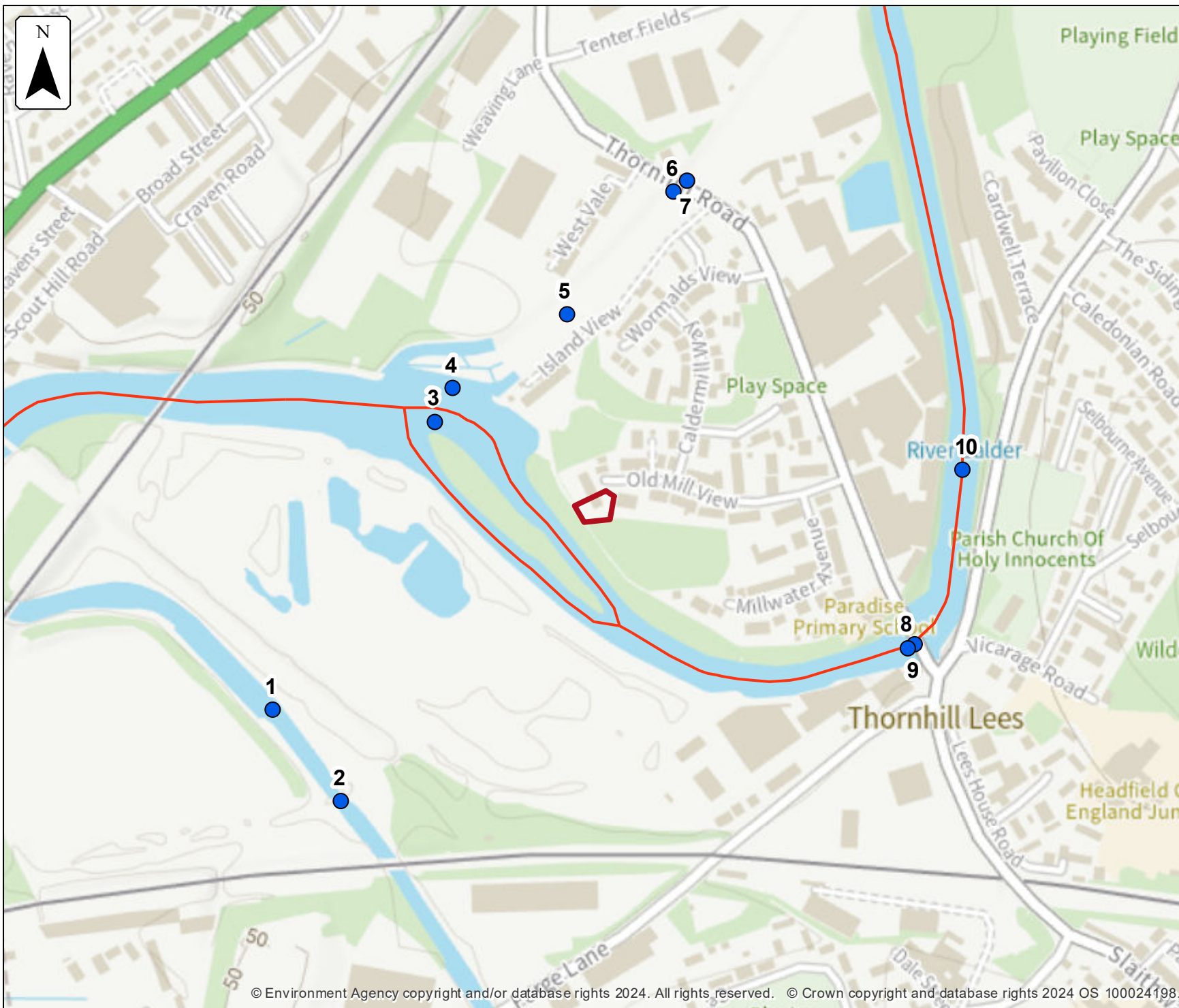


Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	4% 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	977831	424697	421321			36.27	25.54	36.64	26.48	36.79	26.56				

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



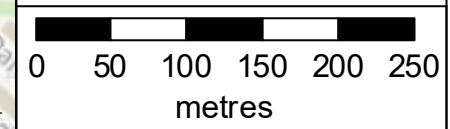
Defended climate change modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:5,000 11 Apr 2024

Model name
2015 Calder and Canals - downstream

- Selected area
- Modelled location
- Main river

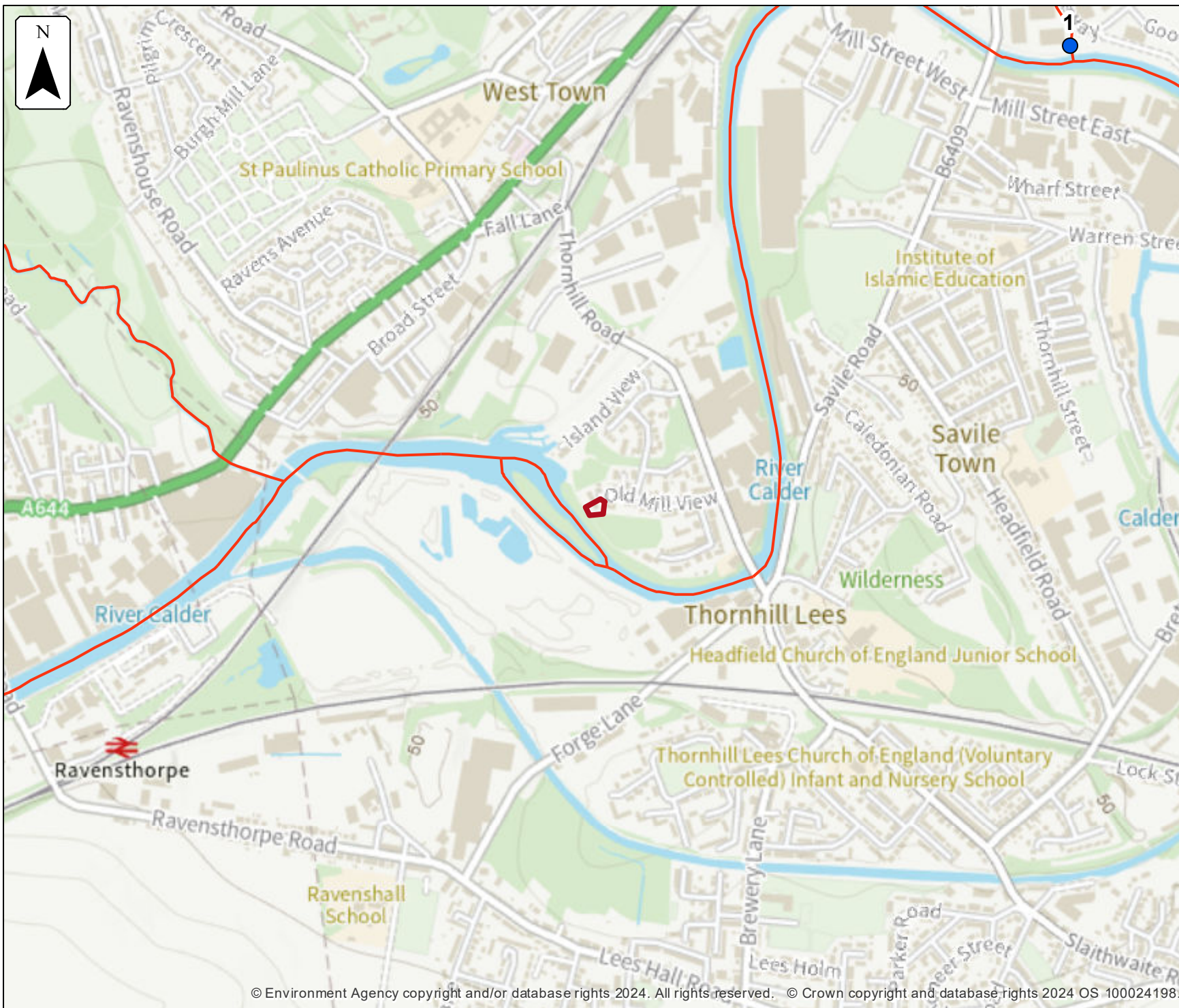


Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)	
				Level	Flow
1	1130097	423464	420228	38.74	2.17
2	1130105	423530	420140	38.73	3.84
3	1130101	423621	420509	39.67	549.74
4	1129925	423638	420541	39.63	226.87
5	1129711	423748	420613	39.46	226.85
6	1129695	423852	420731	39.39	225.37
7	1129694	423866	420742	39.20	225.37
8	1130033	424079	420289	39.38	351.33
9	1129677	424087	420292	39.19	351.67
10	1129626	424132	420462	38.99	351.15

Data in this table comes from the 2015 Calder and Canals - downstream of Sowerby Bridge 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.



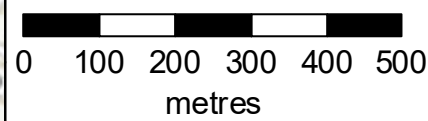
**Defended
climate change
modelled fluvial
node locations**

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

- Selected area
- Modelled location
- Main river



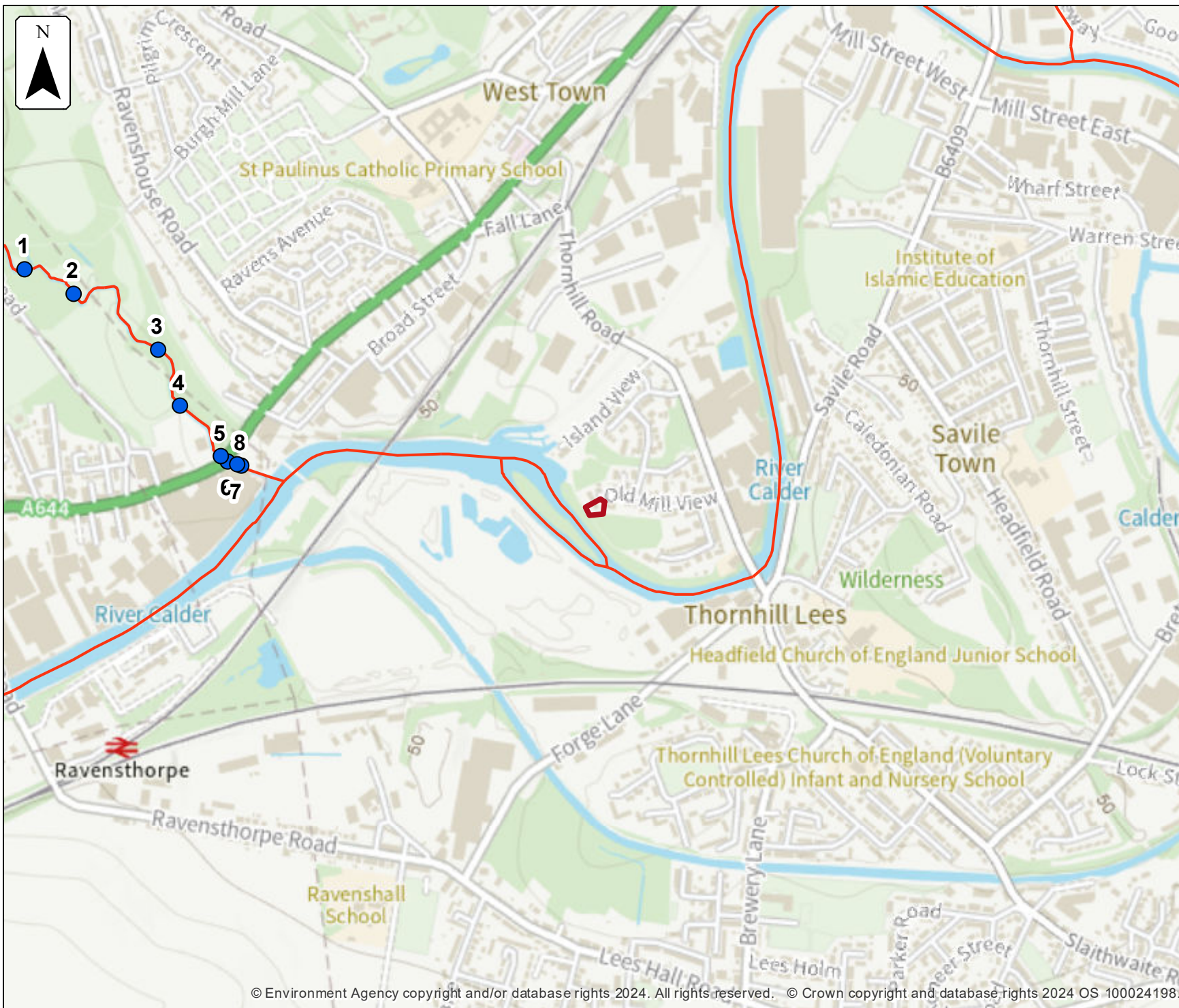
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Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)	
				Level	Flow
1	977831	424697	421321	36.79	27.04

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



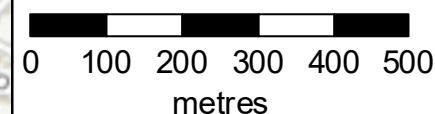
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
2009 FIM River Spen

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

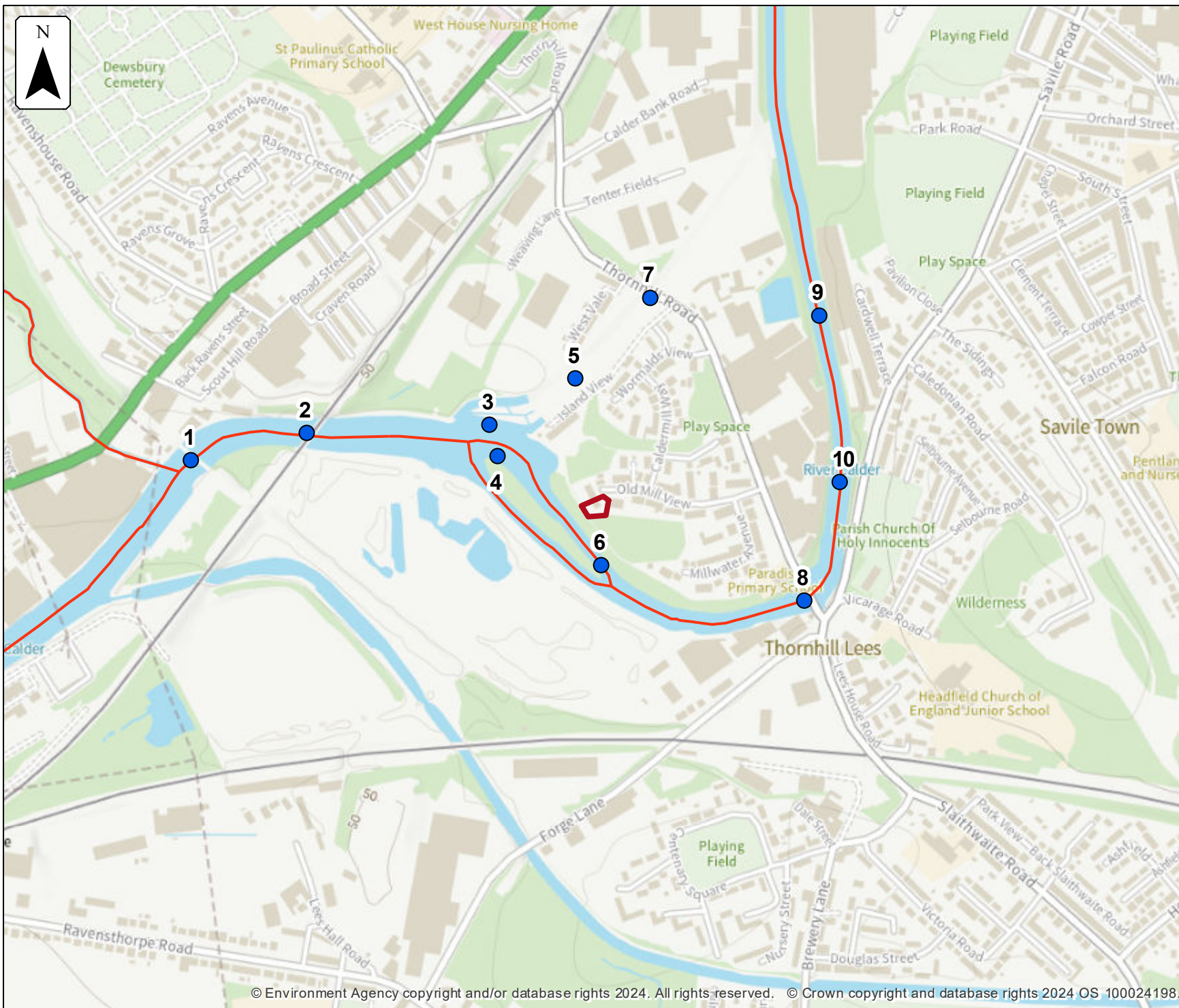
Defences removed climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)	
				Level	Flow
1	150045	422669	420886	41.01	40.64
2	122601	422764	420840	40.98	34.37
3	290394	422927	420732	40.71	36.0
4	330549	422970	420622	40.45	42.64
5	320251	423050	420525	39.84	42.66
6	43913	423063	420514	39.79	42.66
7	335911	423082	420508	39.56	42.65
8	96087	423088	420505	39.56	42.65

Data in this table comes from the 2009 FIM River Spen 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.



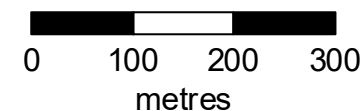
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
423776/420425

Scale Created
1:7,500 11 Apr 2024

Model name
**2011 River Calder -
Calder**

-  Selected area
-  Modelled location
-  Main river



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Modelled node locations data

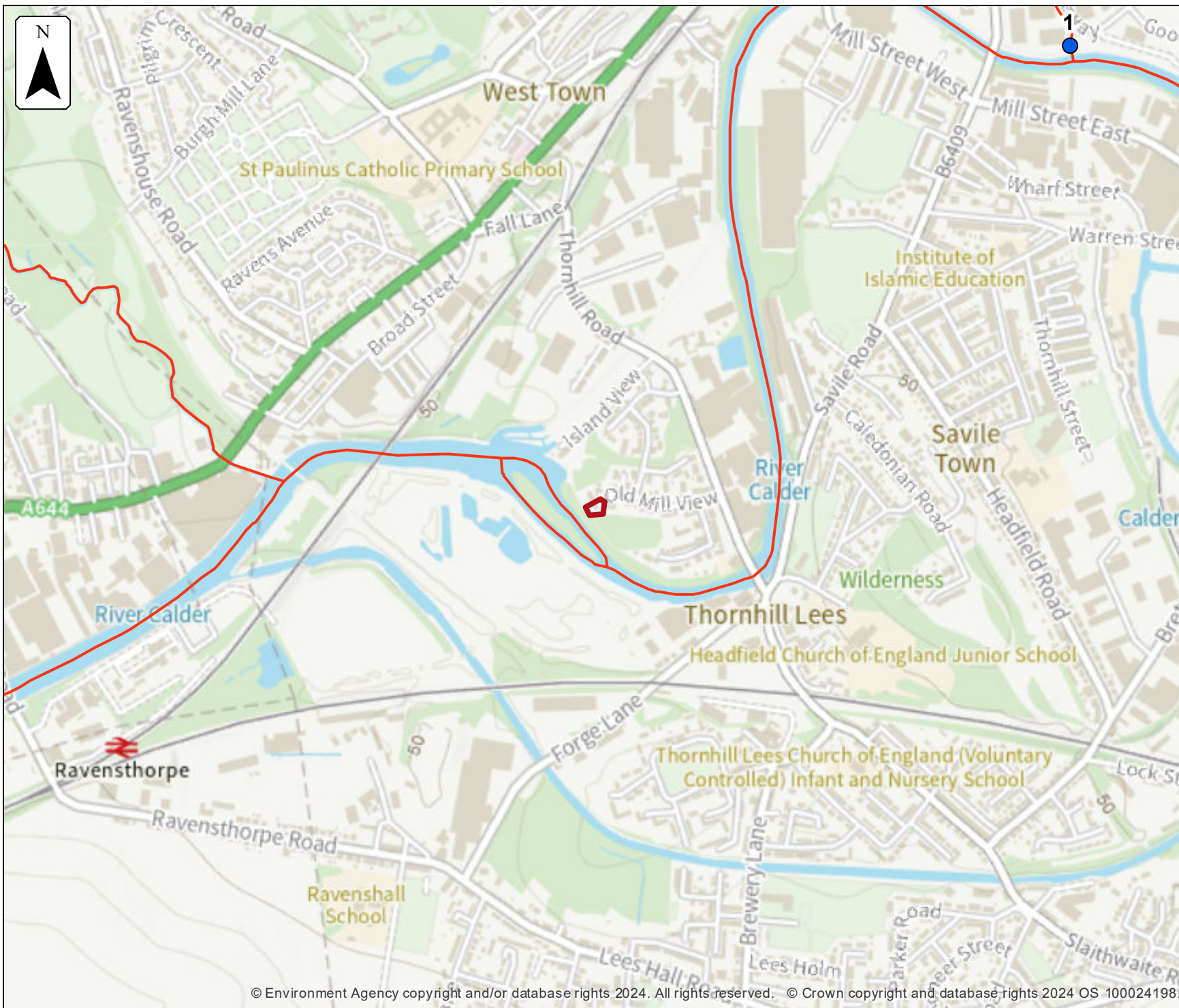
Defences removed climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)	
				Level	Flow
1	30304	423188	420494	40.56	529.91
2	8148	423356	420534	40.01	539.07
3	3069	423622	420544	39.11	119.84
4	61827	423633	420500	39.11	419.11
5	300146	423748	420613	39.01	119.69
6	101235	423784	420341	38.72	418.0
7	346781	423856	420730	38.99	119.64
8	71600	424079	420289	38.66	415.23
9	56457	424103	420703	38.33	414.42
10	169494	424133	420462	38.45	414.77

Data in this table comes from the 2011 River Calder - Calder 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.



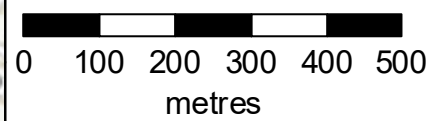
**Defences removed
climate change
modelled fluvial
node locations**

Location (easting/northing)
423776/420425

Scale Created
1:10,000 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defences removed climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)	
				Level	Flow
1	977831	424697	421321	36.79	27.12

Data in this table comes from the 2015 Batley Beck Mapping Study 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 extent and height

Location (easting/northing)
423776/420425

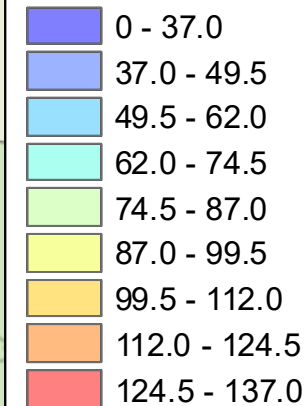
Scale Created
1:500 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

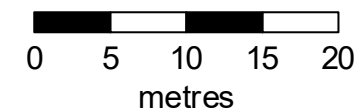
 Selected area

 Main river

Modelled 2D grid
Water level in mAOD



This map shows the
0.1% AEP height data



Sample point data

Defended

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	423759	420406							NoData	NoData	NoData	NoData	NoData	NoData
2	423768	420406							NoData	NoData	NoData	NoData	NoData	NoData
3	423777	420406							NoData	NoData	NoData	NoData	NoData	NoData
4	423786	420406							NoData	NoData	NoData	NoData	NoData	NoData
5	423759	420415							NoData	NoData	NoData	NoData	NoData	NoData
6	423768	420415							NoData	NoData	NoData	NoData	NoData	NoData
7	423777	420415							NoData	NoData	NoData	NoData	NoData	NoData
8	423786	420415							NoData	NoData	NoData	NoData	NoData	NoData
9	423795	420415							NoData	NoData	NoData	NoData	NoData	NoData
10	423750	420424							NoData	NoData	NoData	NoData	NoData	NoData
11	423759	420424							NoData	NoData	NoData	NoData	NoData	NoData
12	423768	420424							NoData	NoData	NoData	NoData	NoData	NoData
13	423777	420424							NoData	NoData	NoData	NoData	NoData	NoData
14	423786	420424							NoData	NoData	NoData	NoData	NoData	NoData
15	423795	420424							NoData	NoData	NoData	NoData	NoData	NoData
16	423750	420433							NoData	NoData	NoData	NoData	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	423759	420433							NoData	NoData	NoData	NoData	NoData	NoData
18	423768	420433							NoData	NoData	NoData	NoData	NoData	NoData
19	423777	420433							NoData	NoData	NoData	NoData	NoData	NoData
20	423786	420433							NoData	NoData	NoData	NoData	NoData	NoData
21	423795	420433							NoData	NoData	NoData	NoData	NoData	NoData
22	423768	420442							NoData	NoData	NoData	NoData	NoData	NoData
23	423777	420442							NoData	NoData	NoData	NoData	NoData	NoData
24	423786	420442							NoData	NoData	NoData	NoData	NoData	NoData
25	423795	420442							NoData	NoData	NoData	NoData	NoData	NoData
26	423786	420451							NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



Defences removed modelled fluvial extent and height

Location (easting/northing)
423776/420425

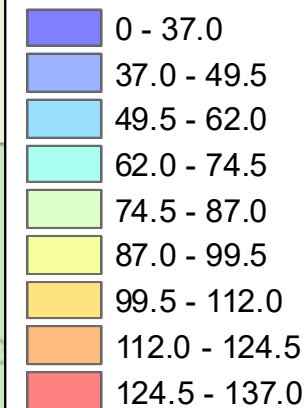
Scale Created
1:500 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

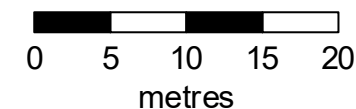
 Selected area

 Main river

Modelled 2D grid
Water level in mAOD



This map shows the
1.0% AEP height data



Sample point data

Defences removed

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	423759	420406							NoData	NoData				
2	423768	420406							NoData	NoData				
3	423777	420406							NoData	NoData				
4	423786	420406							NoData	NoData				
5	423759	420415							NoData	NoData				
6	423768	420415							NoData	NoData				
7	423777	420415							NoData	NoData				
8	423786	420415							NoData	NoData				
9	423795	420415							NoData	NoData				
10	423750	420424							NoData	NoData				
11	423759	420424							NoData	NoData				
12	423768	420424							NoData	NoData				
13	423777	420424							NoData	NoData				
14	423786	420424							NoData	NoData				
15	423795	420424							NoData	NoData				
16	423750	420433							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	423759	420433							NoData	NoData				
18	423768	420433							NoData	NoData				
19	423777	420433							NoData	NoData				
20	423786	420433							NoData	NoData				
21	423795	420433							NoData	NoData				
22	423768	420442							NoData	NoData				
23	423777	420442							NoData	NoData				
24	423786	420442							NoData	NoData				
25	423795	420442							NoData	NoData				
26	423786	420451							NoData	NoData				

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



Defended climate change modelled fluvial extent and height

Location (easting/northing)
423776/420425

Scale Created
1:500 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

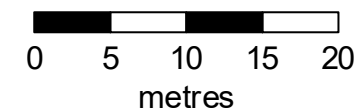
 Selected area

 Main river

Modelled 2D grid
Water level in mAOD

-  0 - 33.0
-  33.0 - 46.0
-  46.0 - 59.0
-  59.0 - 72.0
-  72.0 - 85.0
-  85.0 - 98.0
-  98.0 - 111.0
-  111.0 - 124.0
-  124.0 - 137.0

This map shows the
1.0% AEP +20% height data



Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+20%)	
			Depth	Height
1	423759	420406	NoData	NoData
2	423768	420406	NoData	NoData
3	423777	420406	NoData	NoData
4	423786	420406	NoData	NoData
5	423759	420415	NoData	NoData
6	423768	420415	NoData	NoData
7	423777	420415	NoData	NoData
8	423786	420415	NoData	NoData
9	423795	420415	NoData	NoData
10	423750	420424	NoData	NoData
11	423759	420424	NoData	NoData
12	423768	420424	NoData	NoData
13	423777	420424	NoData	NoData
14	423786	420424	NoData	NoData
15	423795	420424	NoData	NoData
16	423750	420433	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)	
			Depth	Height
17	423759	420433	NoData	NoData
18	423768	420433	NoData	NoData
19	423777	420433	NoData	NoData
20	423786	420433	NoData	NoData
21	423795	420433	NoData	NoData
22	423768	420442	NoData	NoData
23	423777	420442	NoData	NoData
24	423786	420442	NoData	NoData
25	423795	420442	NoData	NoData
26	423786	420451	NoData	NoData

Data in this table comes from the 2015 Batley Beck Mapping Study 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.



Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
423776/420425

Scale Created
1:500 11 Apr 2024

Model name
**2015 Batley Beck
Mapping Study**

 Selected area

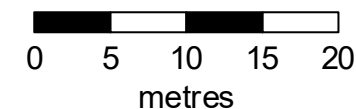
 Main river

Modelled 2D grid

Water level in mAOD

-  0 - 33.0
-  33.0 - 46.0
-  46.0 - 59.0
-  59.0 - 72.0
-  72.0 - 85.0
-  85.0 - 98.0
-  98.0 - 111.0
-  111.0 - 124.0
-  124.0 - 137.0

This map shows the
1.0% AEP +20% height data



Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+20%)	
			Depth	Height
1	423759	420406	NoData	NoData
2	423768	420406	NoData	NoData
3	423777	420406	NoData	NoData
4	423786	420406	NoData	NoData
5	423759	420415	NoData	NoData
6	423768	420415	NoData	NoData
7	423777	420415	NoData	NoData
8	423786	420415	NoData	NoData
9	423795	420415	NoData	NoData
10	423750	420424	NoData	NoData
11	423759	420424	NoData	NoData
12	423768	420424	NoData	NoData
13	423777	420424	NoData	NoData
14	423786	420424	NoData	NoData
15	423795	420424	NoData	NoData
16	423750	420433	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)	
			Depth	Height
17	423759	420433	NoData	NoData
18	423768	420433	NoData	NoData
19	423777	420433	NoData	NoData
20	423786	420433	NoData	NoData
21	423795	420433	NoData	NoData
22	423768	420442	NoData	NoData
23	423777	420442	NoData	NoData
24	423786	420442	NoData	NoData
25	423795	420442	NoData	NoData
26	423786	420451	NoData	NoData

Data in this table comes from the 2015 Batley Beck Mapping Study 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 Yorkshire Environment Agency team at neyorkshire@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