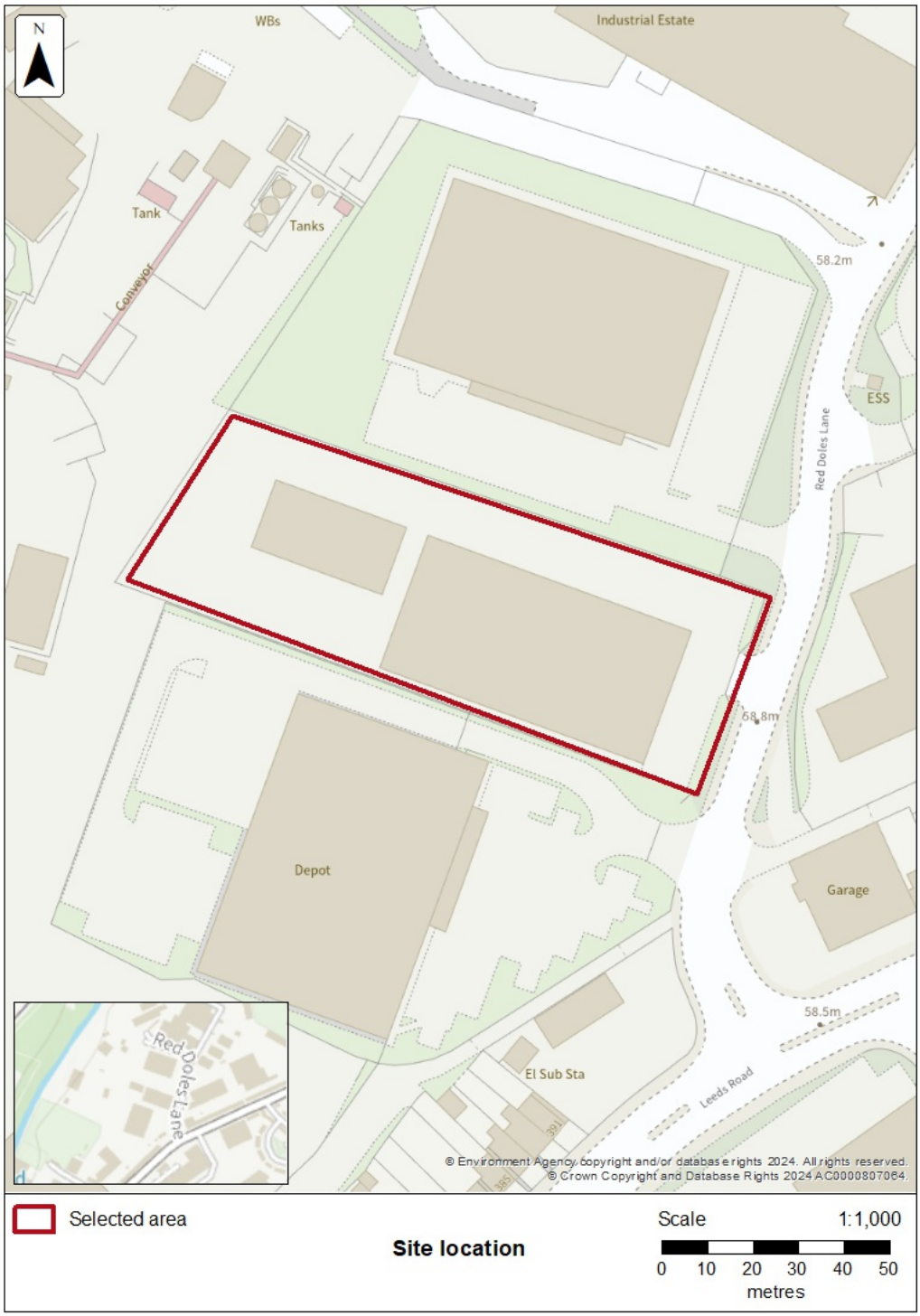
Flood risk assessment data

Location of site: 415373 / 418138 (shown as easting and northing coordinates)
Document created on: 21 November 2024
This information was previously known as a product 4.
Customer reference number: NMKN7U2HN52U

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

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

Surface water and other sources of flooding

Use the long term flood risk service to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

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

Your Lead Local Flood Authority is Kirklees District.

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

About the models used

Model name: 2007 Fenay Beck
Scenario(s): Defences removed fluvial
Date: 1 August 2007

Model name: 2011 Huddersfield Study - Allison Dike and Blackhouse Dike
Scenario(s): No defences exist fluvial, no defences exist climate change fluvial
Date: 31 March 2011

Model name: 2011 Huddersfield Study - Grimescar Beck / Clayton Dike
Scenario(s): No defences exist fluvial, no defences exist climate change fluvial
Date: 31 March 2011

Model name: 2019 Colne Model
Scenario(s): Defended fluvial, defences removed fluvial, defences removed climate change fluvial
Date: 1 August 2019

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 occuring 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

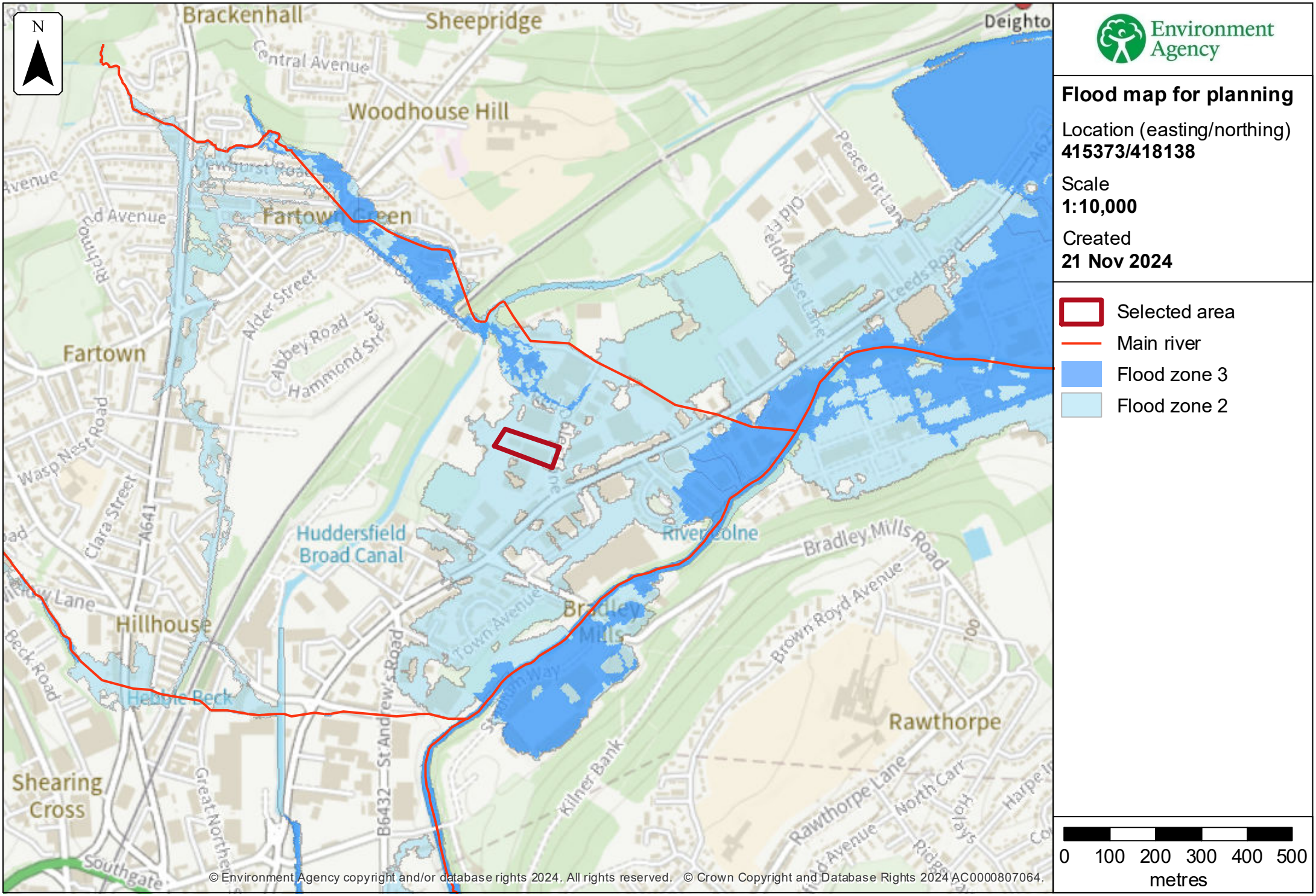
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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.



Environment Agency

Flood map for planning

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

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

0 100 200 300 400 500
metres

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

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

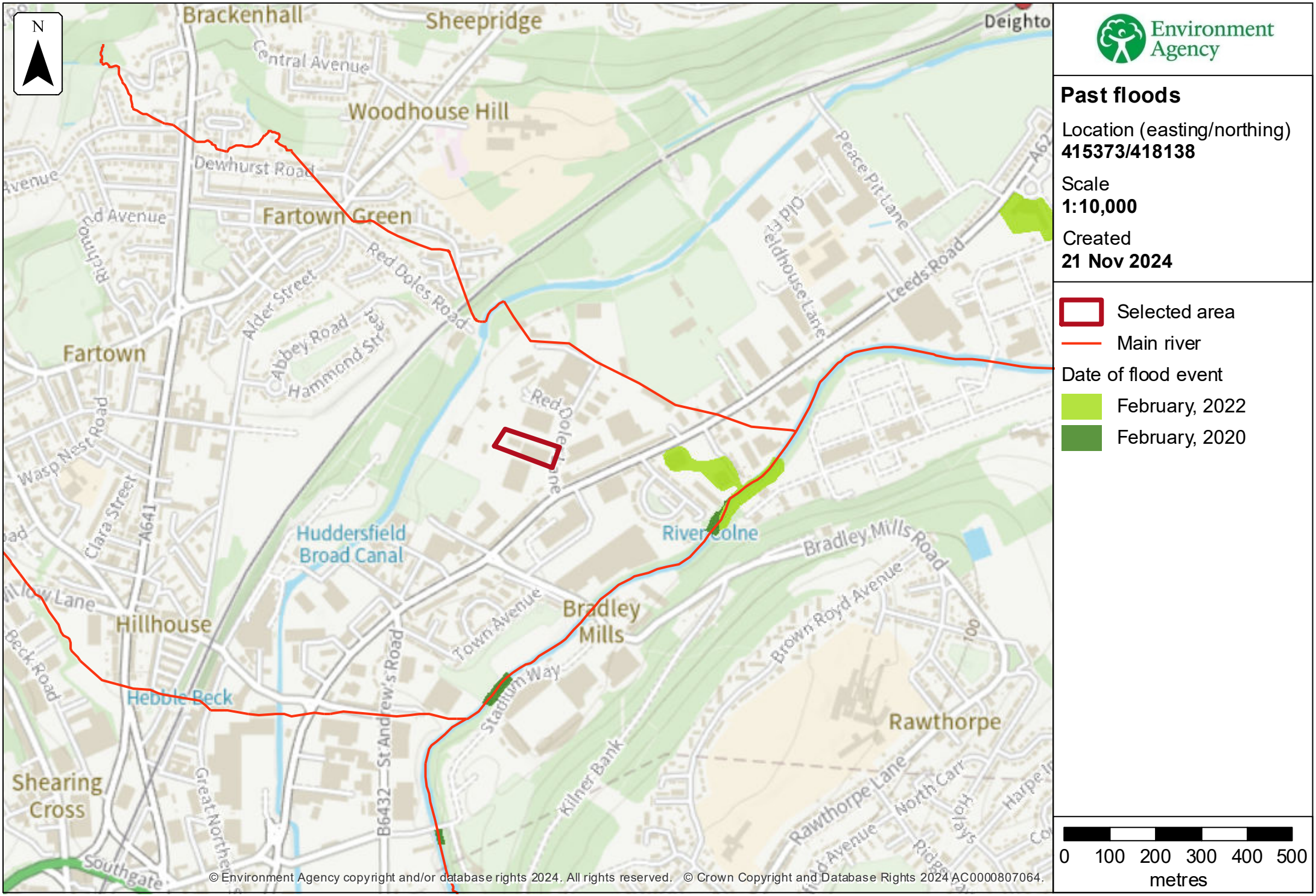
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

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



Environment Agency

Past floods

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Selected area

Main river

Date of flood event

February, 2022

February, 2020

0 100 200 300 400 500
metres

Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
20 February 2022	28 March 2022	main river	channel capacity exceeded (no raised defences)	No
15 February 2020	19 March 2020	main river	channel capacity exceeded (no raised defences)	No

Flood defences and attributes

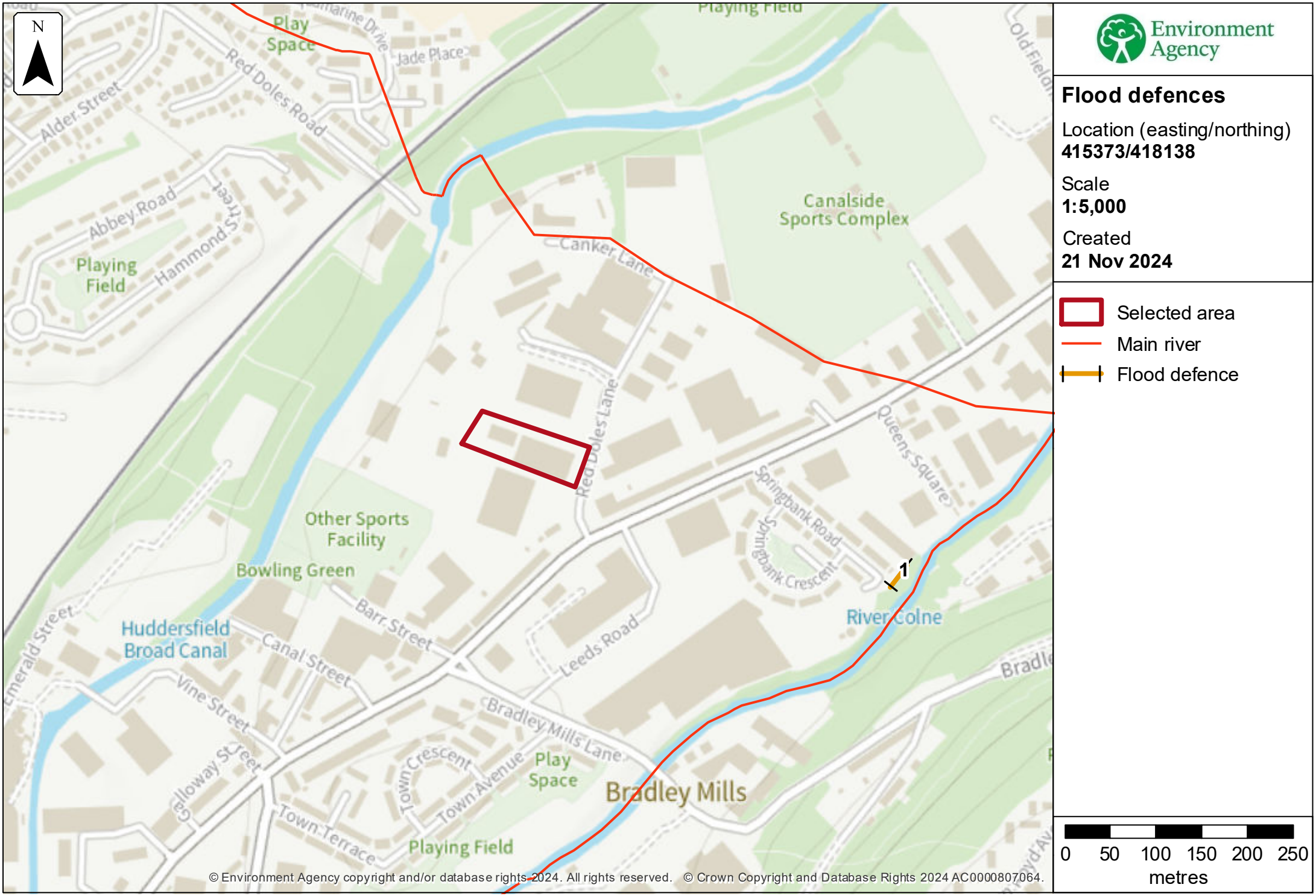
The flood defences map shows the location of the flood defences present.

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



Environment Agency

Flood defences

Location (easting/northing)
415373/418138

Scale
1:5,000

Created
21 Nov 2024

Selected area
Main river
Flood defence

0 50 100 150 200 250
metres

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	183943	Wall			56.97	57.34	

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

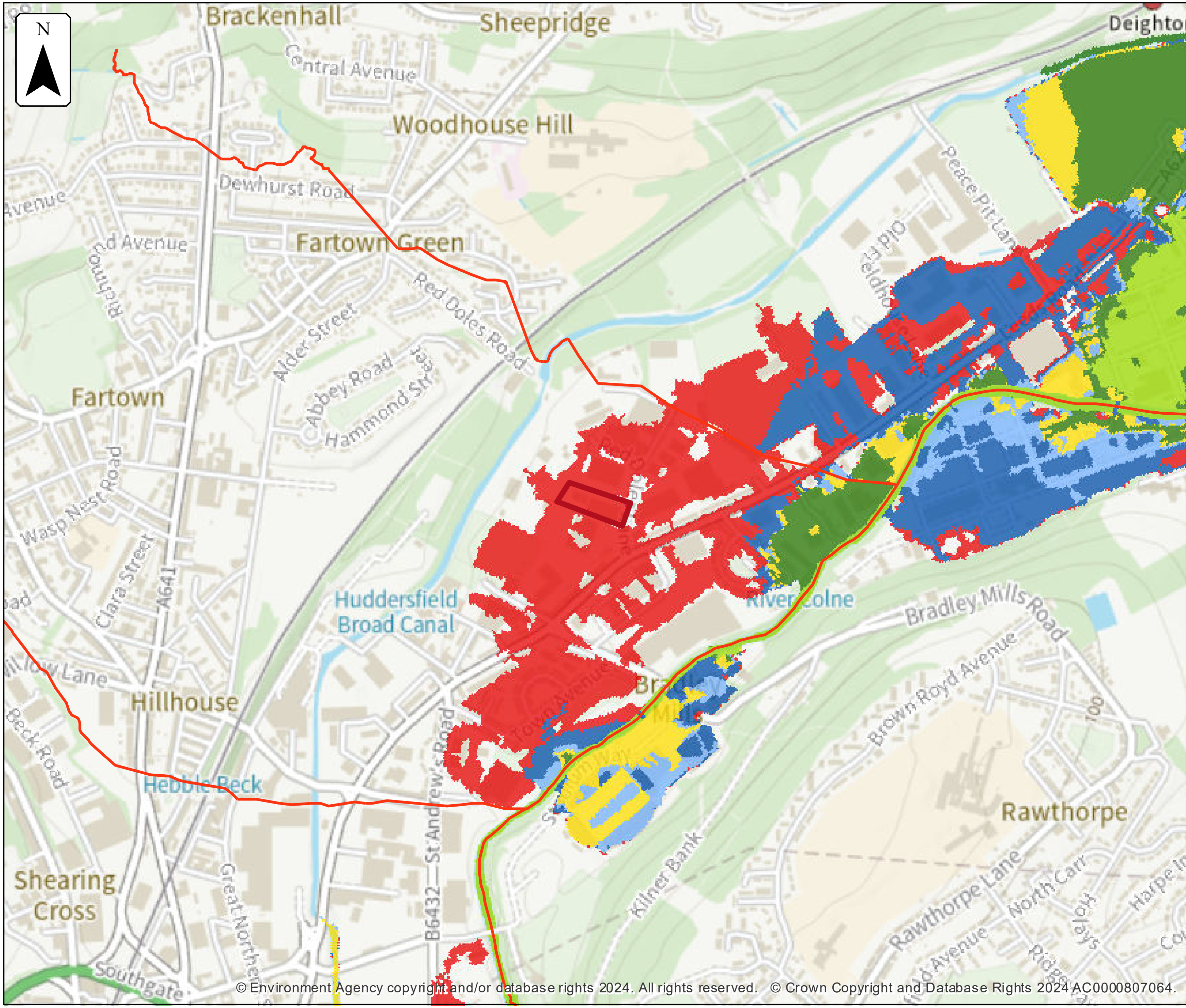
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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
- 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



Environment Agency

Defended modelled fluvial extent

Location (easting/northing)
415373/418138

Scale **1:10,000**

Created **21 Nov 2024**

Model name
2019 Colne Model

Selected area

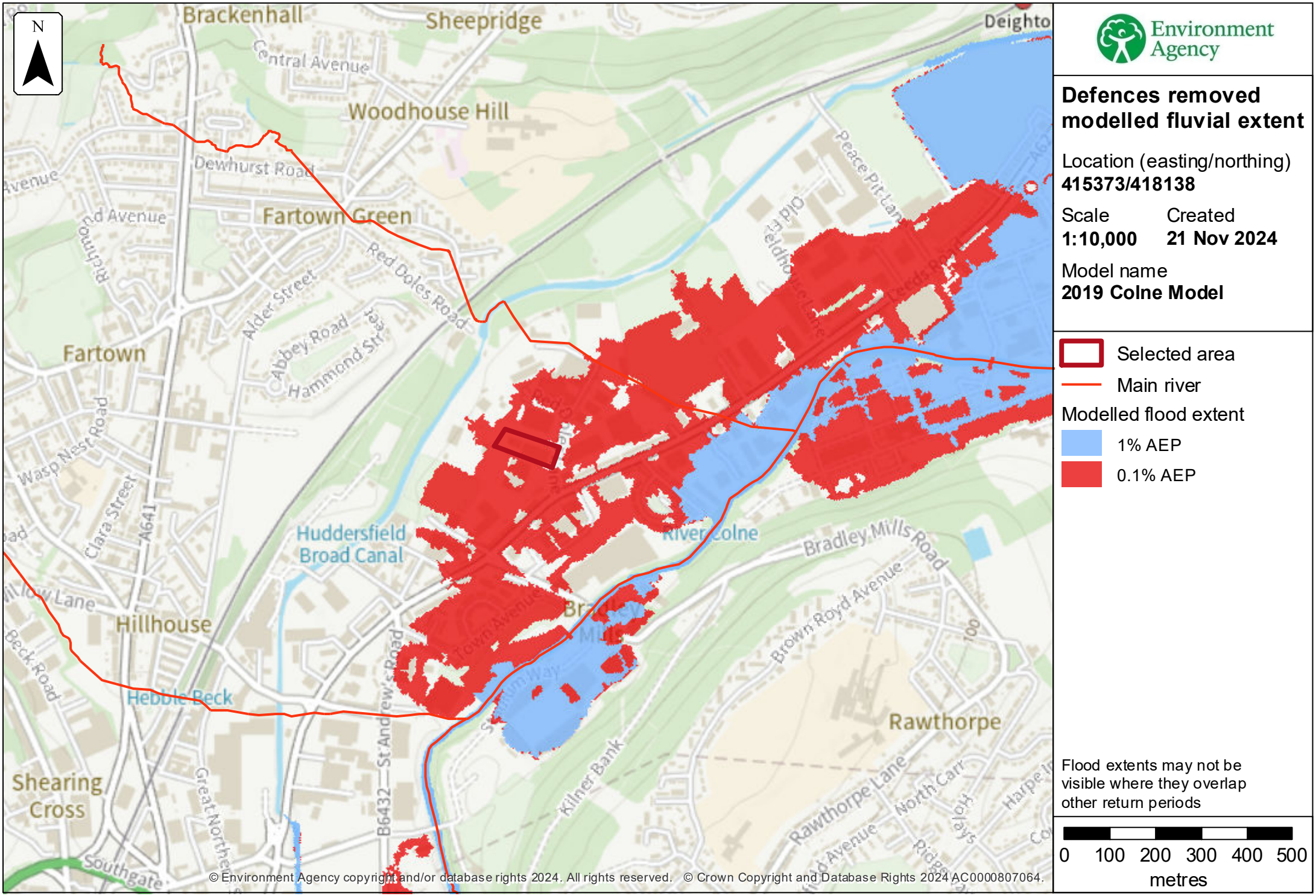
Main river

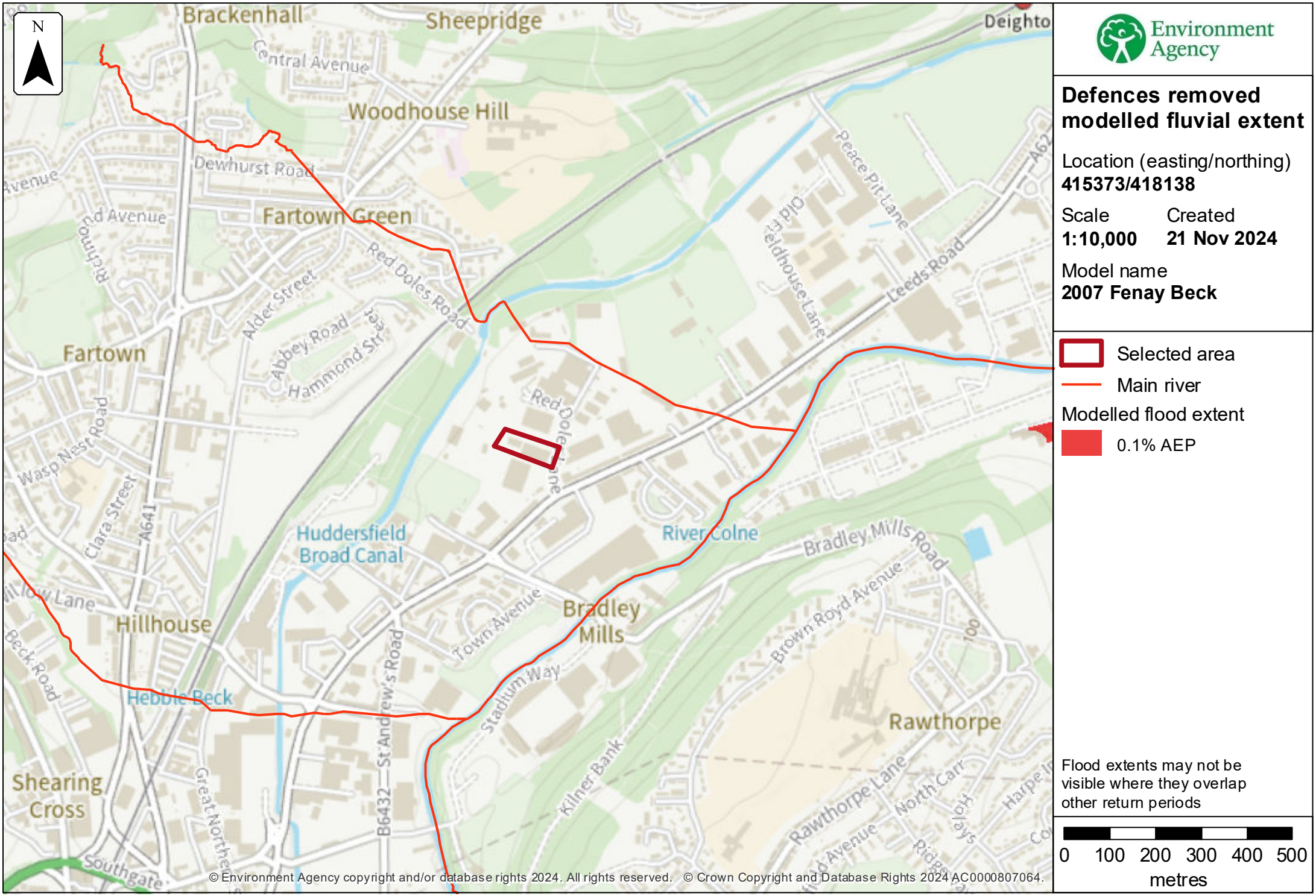
Modelled flood extent

- 5% AEP
- 2% AEP
- 1.33% AEP
- 1% AEP
- 0.5% AEP
- 0.1% AEP

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

0 100 200 300 400 500
metres


N
Brackenhall
Sheepridge
Central Avenue
Woodhouse Hill
Dewhurst Road
Fartown Green
Red Doles Road
Alder Street
Abbey Road
Hammond Street
Fartown
Wasp Nest Road
Clara Street
A641
Huddersfield Broad Canal
River Colne
Bradley Mills Road
Brown Royd Avenue
Hillhouse
Hebble Beck
Beck Road
Rawthorpe
Rawthorpe Lane
Kilner Bank
B6432 St Andrew's Road
Shearing Cross
Southgate
Environment Agency
Defences removed modelled fluvial extent
Location (easting/northing)
415373/418138
Scale
1:10,000
Created
21 Nov 2024
Model name
2019 Colne Model
Selected area
Main river
Modelled flood extent
1% AEP
0.1% AEP
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown Copyright and Database Rights 2024 AC0000807064.



Environment Agency

Defences removed modelled fluvial extent

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Model name
2007 Fenay Beck

Selected area

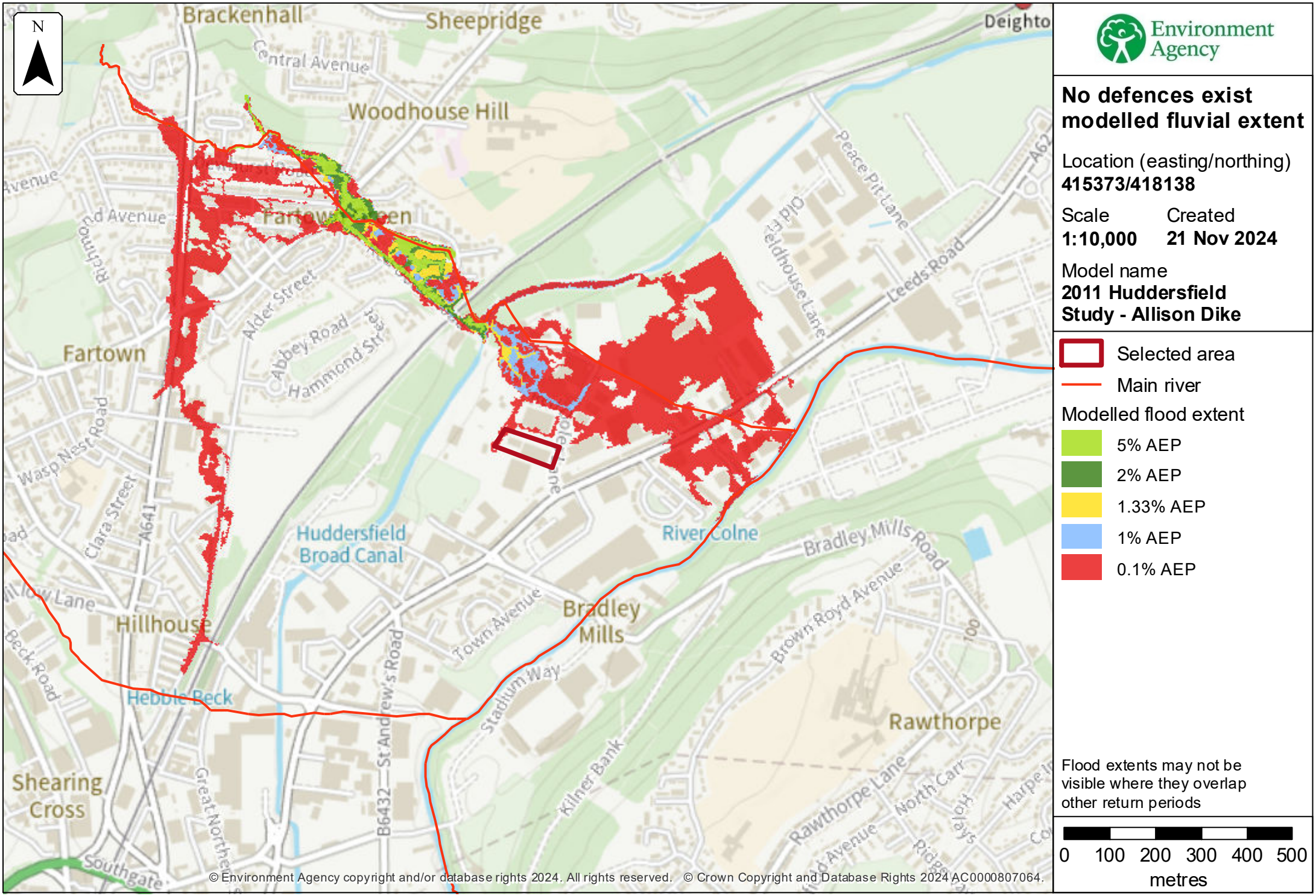
Main river

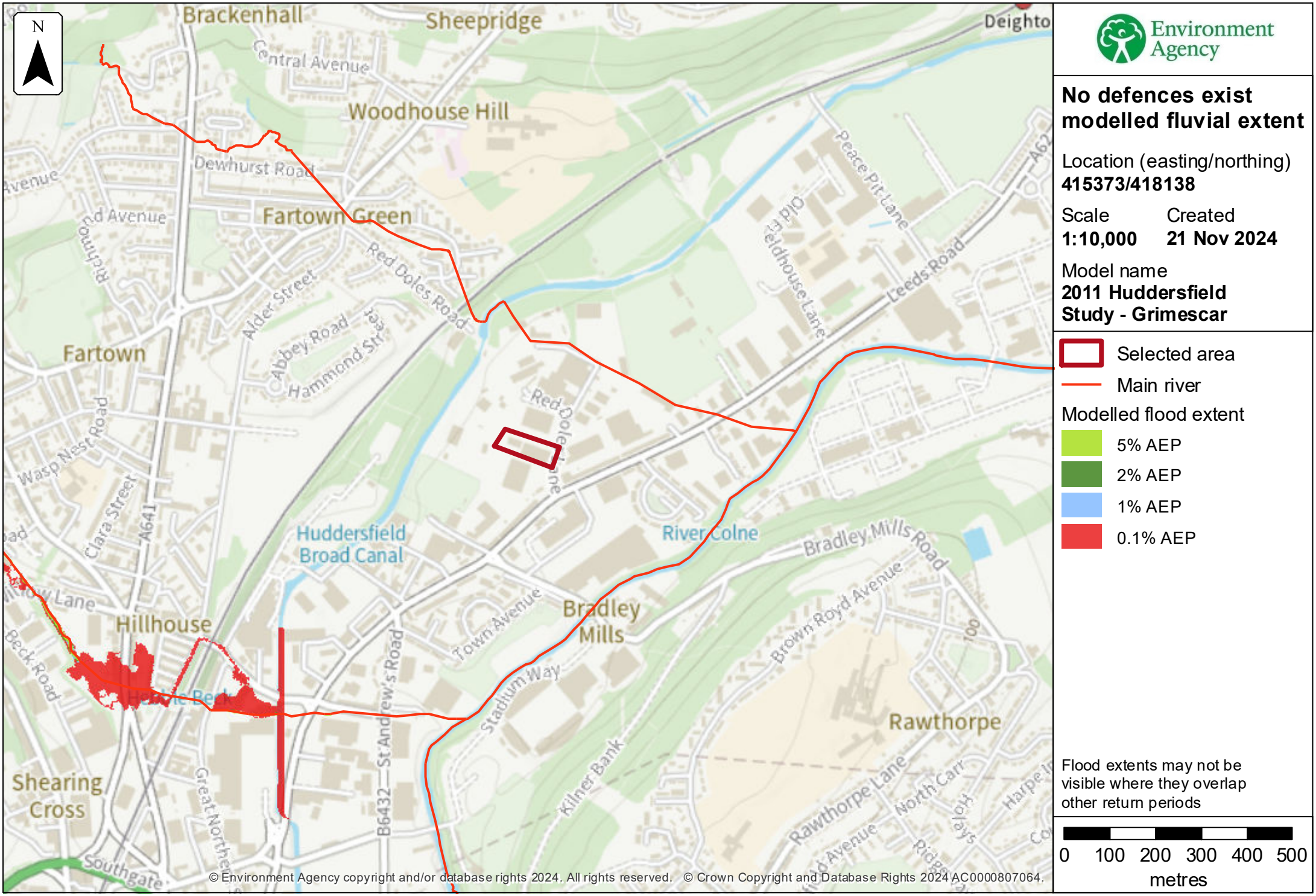
Modelled flood extent

0.1% AEP

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

0 100 200 300 400 500
metres


N
Brackenhall
Sheepridge
Central Avenue
Woodhouse Hill
Fartown
Abbey Road
Hammond Street
Alder Street
Wasp Nest Road
Clara Street
A641
Huddersfield Broad Canal
River Colne
Bradley Mills
Bradley Mills Road
Brown Royd Avenue
Town Avenue
Stadium Way
Hillhouse
Hebble Beck
Beck Road
Shearing Cross
Great Northern
B6432
St Andrew's Road
Kilner Bank
Rawthorpe
Rawthorpe Lane
North Carr
Southgate
Peace Pit Lane
Old Fieldhouse Lane
Leeds Road
A62
Environment Agency
No defences exist modelled fluvial extent
Location (easting/northing)
415373/418138
Scale
1:10,000
Created
21 Nov 2024
Model name
2011 Huddersfield Study - Allison Dike
Selected area
Main river
Modelled flood extent
5% AEP
2% AEP
1.33% AEP
1% AEP
0.1% AEP
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown Copyright and Database Rights 2024 AC0000807064.



Environment Agency

No defences exist modelled fluvial extent

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Grimescar

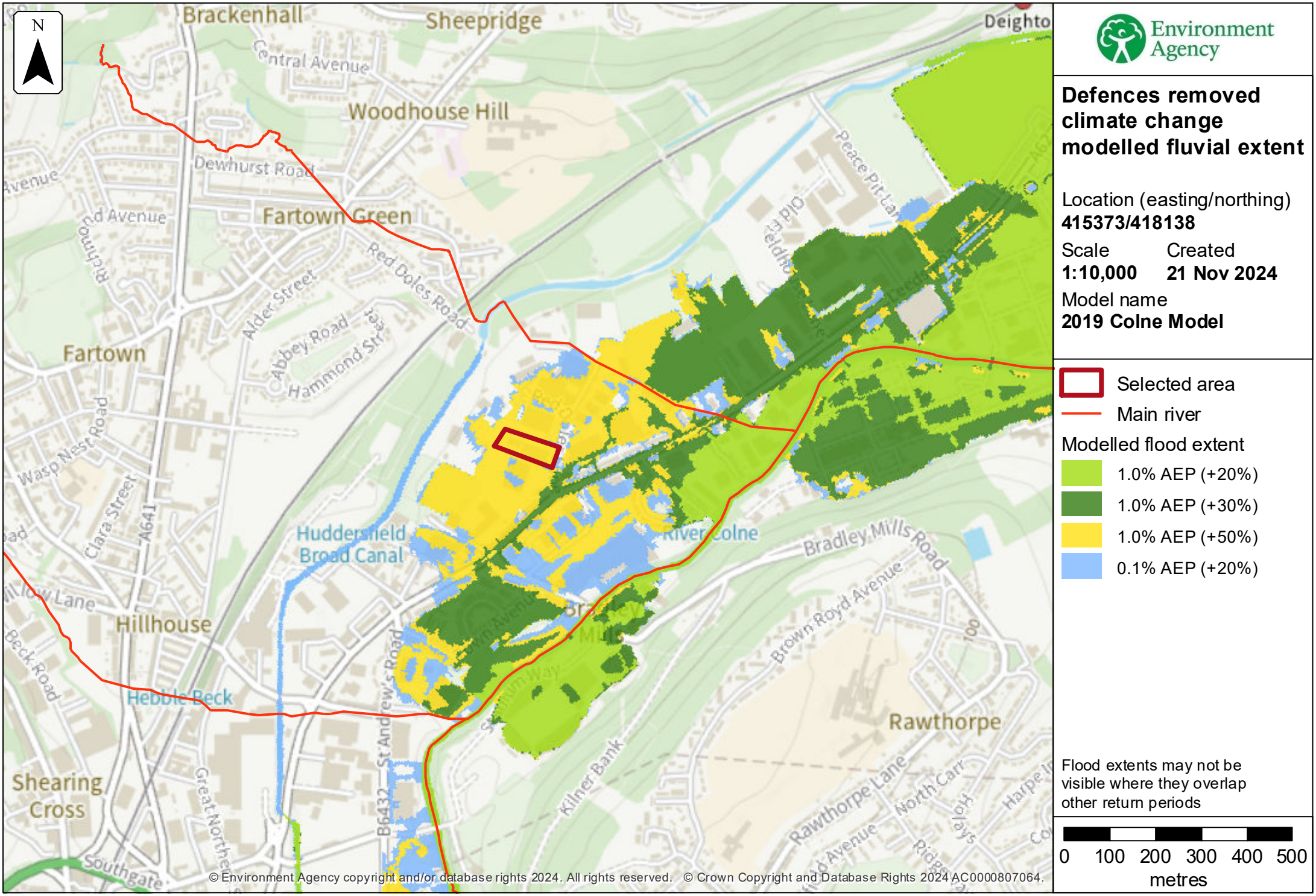
- Selected area
- Main river

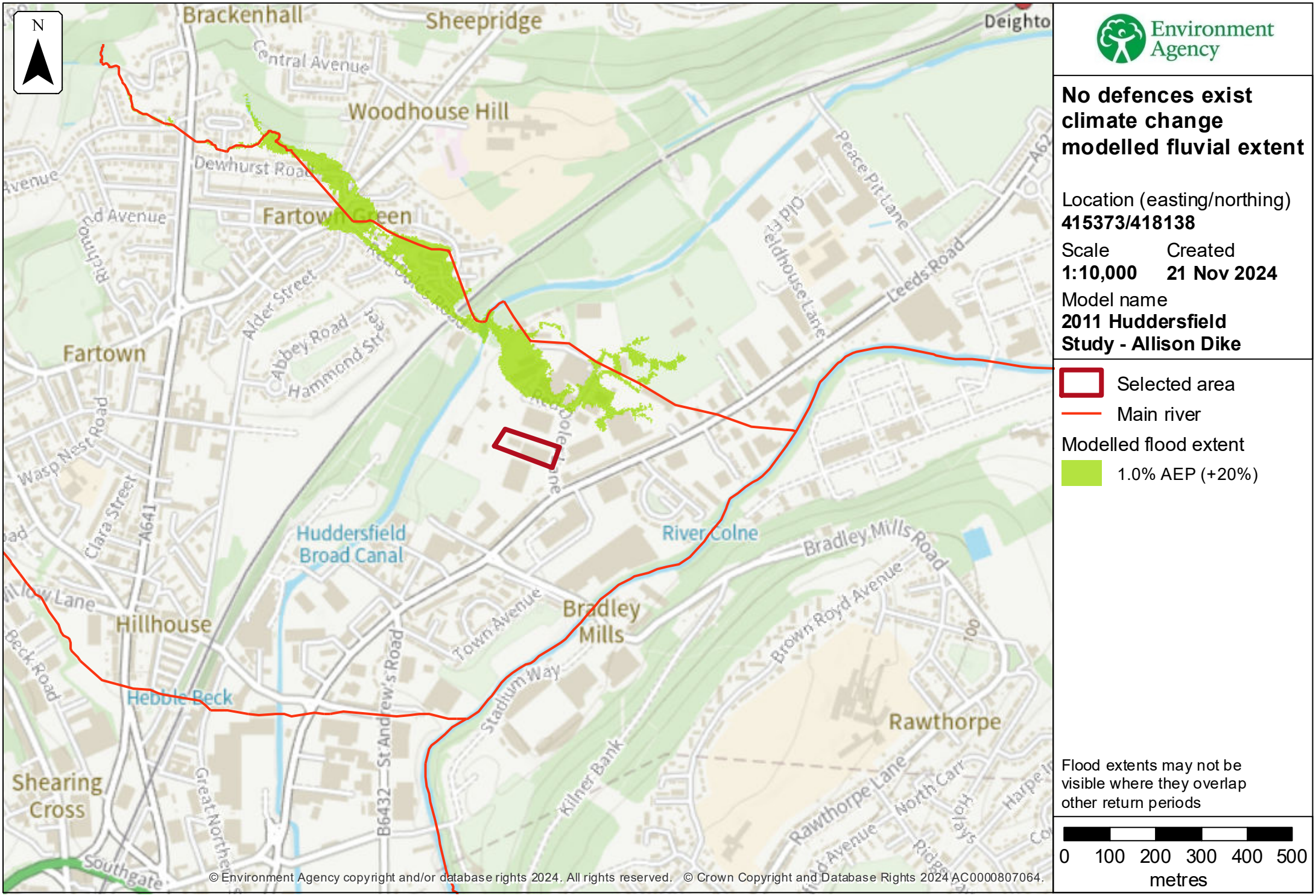
Modelled flood extent

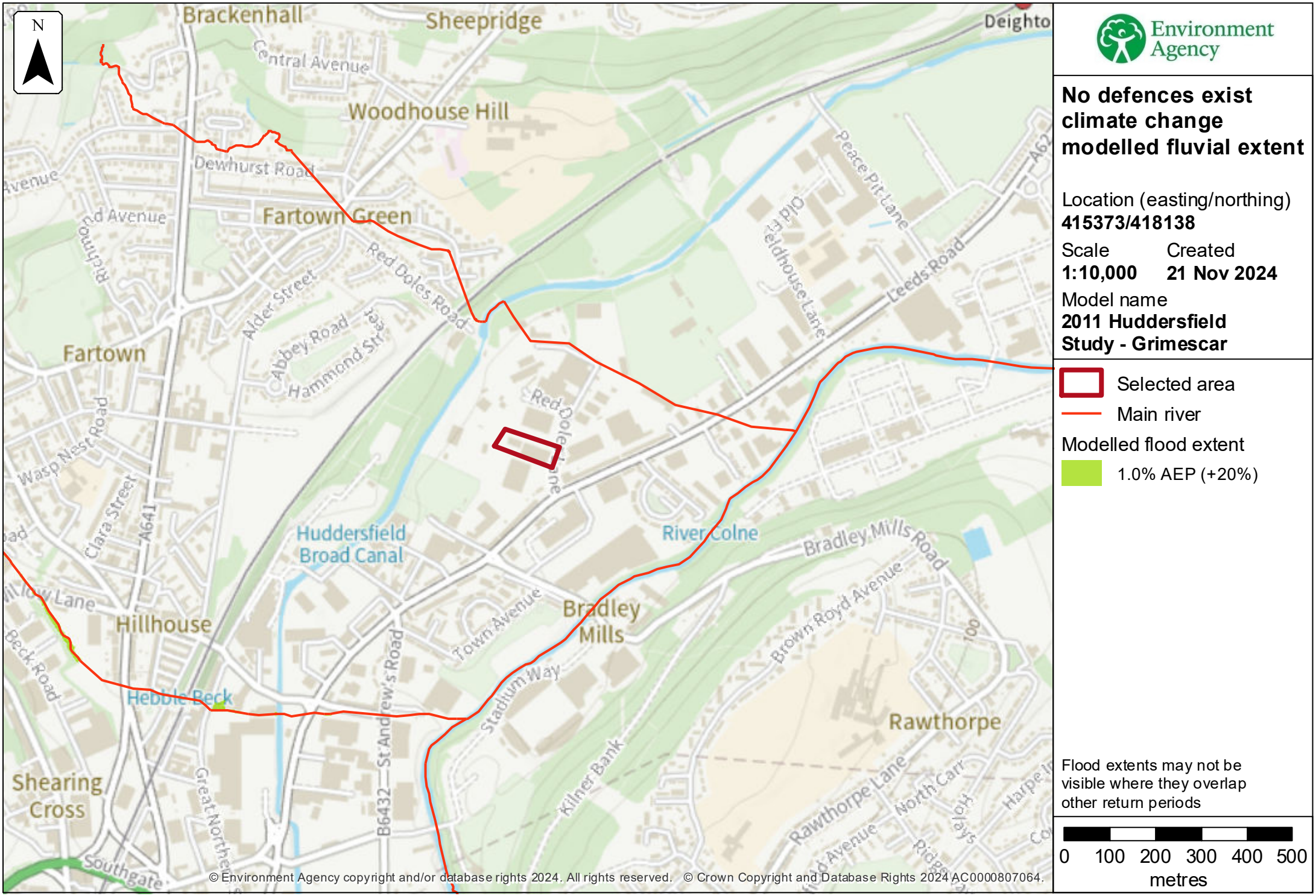
- 5% AEP
- 2% AEP
- 1% AEP
- 0.1% AEP

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

0 100 200 300 400 500
metres


N
Brackenhall
Sheepridge
Central Avenue
Woodhouse Hill
Dewhurst Road
Fartown Green
Red Doles Road
Alder Street
Abbey Road
Hammond Street
Fartown
Wasp Nest Road
Clara Street
A641
Huddersfield Broad Canal
River Colne
Bradley Mills Road
Brown Royd Avenue
Hillhouse
Beck Road
Hebble Beck
St Andrew's Road
B6432
Kilner Bank
Rawthorpe
Rawthorpe Lane
North Carr
Shearing Cross
Great Northern
Southgate
Environment Agency
Defences removed climate change modelled fluvial extent
Location (easting/northing)
415373/418138
Scale
1:10,000
Created
21 Nov 2024
Model name
2019 Colne Model
Selected area
Main river
Modelled flood extent
1.0% AEP (+20%)
1.0% AEP (+30%)
1.0% AEP (+50%)
0.1% AEP (+20%)
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown Copyright and Database Rights 2024 AC0000807064.





Environment Agency

No defences exist climate change modelled fluvial extent

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Grimescar

Selected area

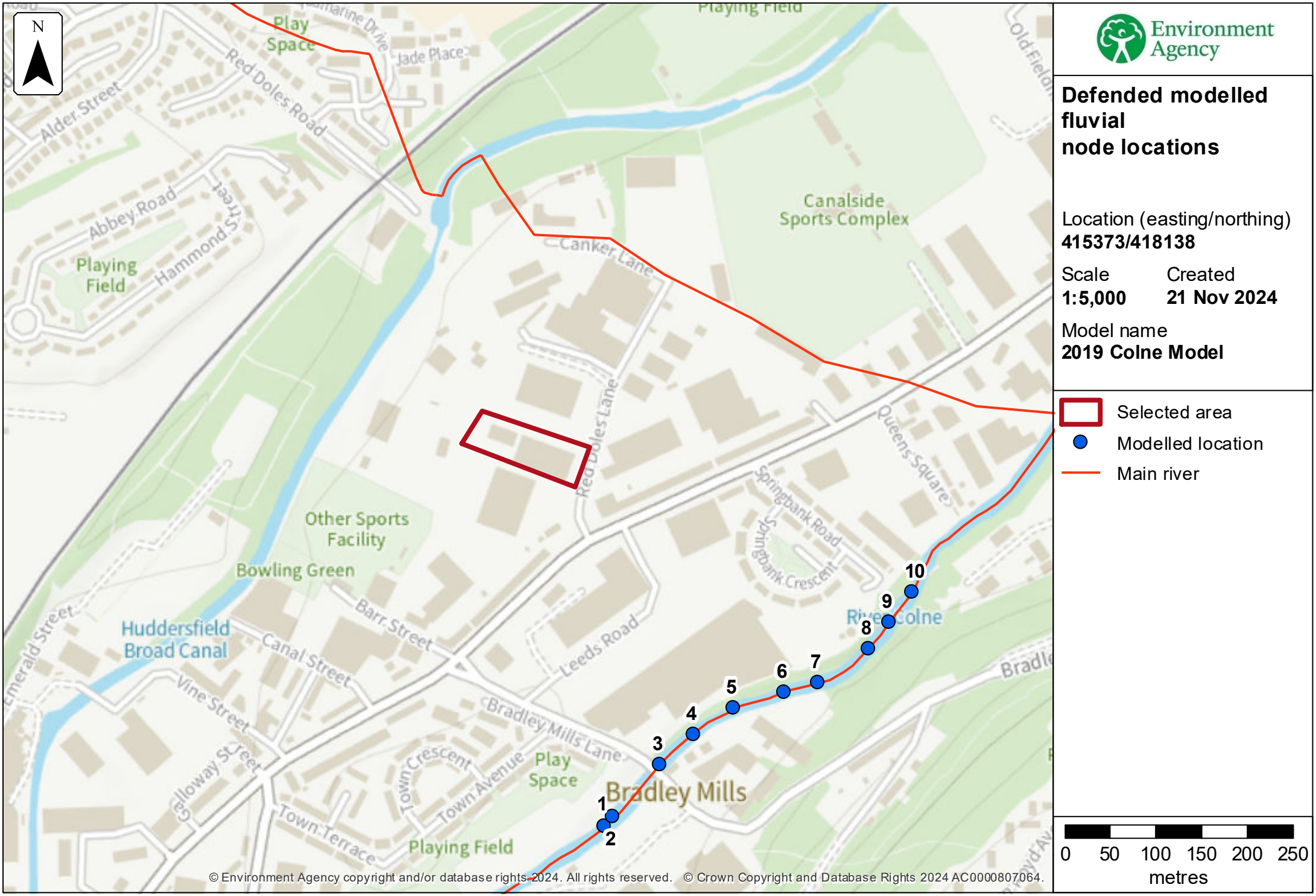
Main river

Modelled flood extent

1.0% AEP (+20%)

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

0 100 200 300 400 500
metres



Environment Agency

Defended modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:5,000

Created
21 Nov 2024

Model name
2019 Colne Model

- Selected area
- Modelled location
- Main river

0 50 100 150 200 250
metres

Modelled node locations data

Defended

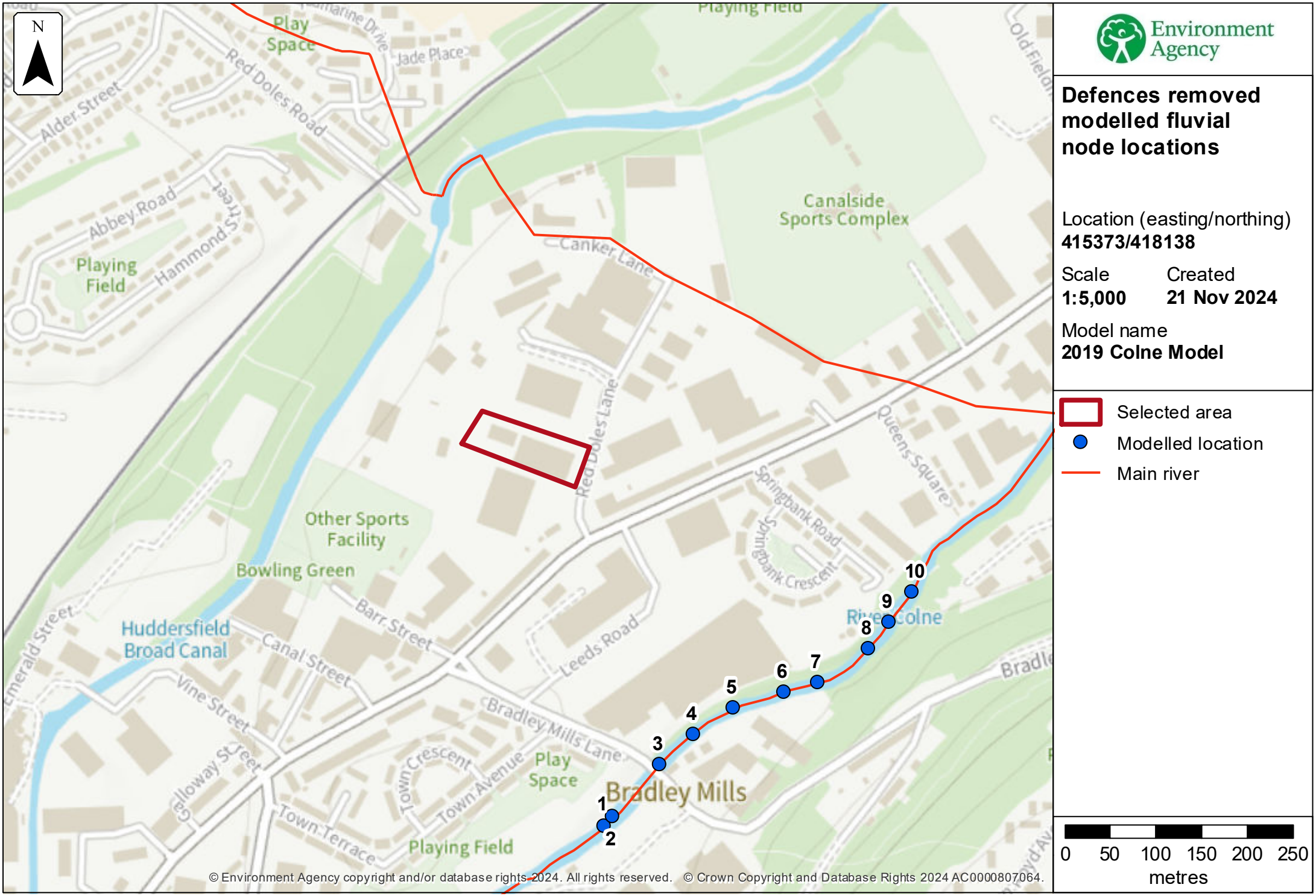
Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
1	1197951	415456	417724	56.73	56.98	57.44	57.53	57.64	57.71	57.94	58.12	58.27	59.21	59.64
2	1198269	415466	417734	56.73	56.98	57.44	57.53	57.64	57.71	57.94	58.12	58.27	59.01	59.49
3	1198238	415517	417791	56.59	56.83	57.25	57.34	57.44	57.50	57.69	57.83	57.95	58.24	58.67
4	1198004	415553	417824	56.42	56.65	57.07	57.16	57.26	57.32	57.51	57.65	57.76	58.06	58.45
5	1198025	415598	417852	56.24	56.46	56.87	56.96	57.05	57.12	57.30	57.42	57.53	57.84	58.22
6	1198155	415653	417871	56.11	56.33	56.72	56.80	56.90	56.96	57.13	57.26	57.36	57.61	57.88
7	1198127	415691	417881	56.04	56.25	56.64	56.73	56.82	56.88	57.05	57.17	57.27	57.51	57.76
8	1198091	415746	417918	55.89	56.10	56.48	56.57	56.67	56.72	56.89	57.0	57.09	57.32	57.53
9	1198000	415769	417947	55.81	56.02	56.40	56.49	56.59	56.64	56.80	56.92	57.0	57.22	57.40
10	1197883	415793	417980	55.63	55.85	56.23	56.33	56.43	56.48	56.66	56.77	56.85	57.07	57.23

Data in this table comes from the 2019 Colne Model model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.

Defended

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1197951	415456	417724	65.55	77.51	101.42	106.78	113.37	117.81	131.69	142.72	151.88	183.38	183.74
2	1198269	415466	417734	65.55	77.51	101.42	106.78	113.37	117.81	131.69	142.72	151.88	183.38	183.74
3	1198238	415517	417791	65.54	77.50	101.42	106.77	113.36	117.80	131.69	142.72	152.49	170.46	179.01
4	1198004	415553	417824	65.54	77.50	101.41	106.77	113.36	117.80	131.68	142.71	152.49	172.12	197.38
5	1198025	415598	417852	65.54	77.50	101.41	106.77	113.36	117.79	131.68	142.71	152.49	172.87	199.99
6	1198155	415653	417871	65.54	77.50	101.41	106.76	113.35	117.78	131.68	142.71	152.47	179.02	217.71
7	1198127	415691	417881	65.54	77.50	101.40	106.76	113.35	117.78	131.68	142.71	152.47	179.02	217.66
8	1198091	415746	417918	65.54	77.50	101.40	106.75	113.34	117.78	131.66	142.70	152.47	179.01	217.61
9	1198000	415769	417947	65.54	77.49	101.40	106.75	113.34	117.77	131.66	142.70	152.47	179.02	217.59
10	1197883	415793	417980	65.54	77.49	101.40	106.70	112.99	117.14	129.92	139.88	149.13	172.74	208.46

Data in this table comes from the 2019 Colne Model model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

Defences removed modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:5,000

Created
21 Nov 2024

Model name
2019 Colne Model

- Selected area
- Modelled location
- Main river

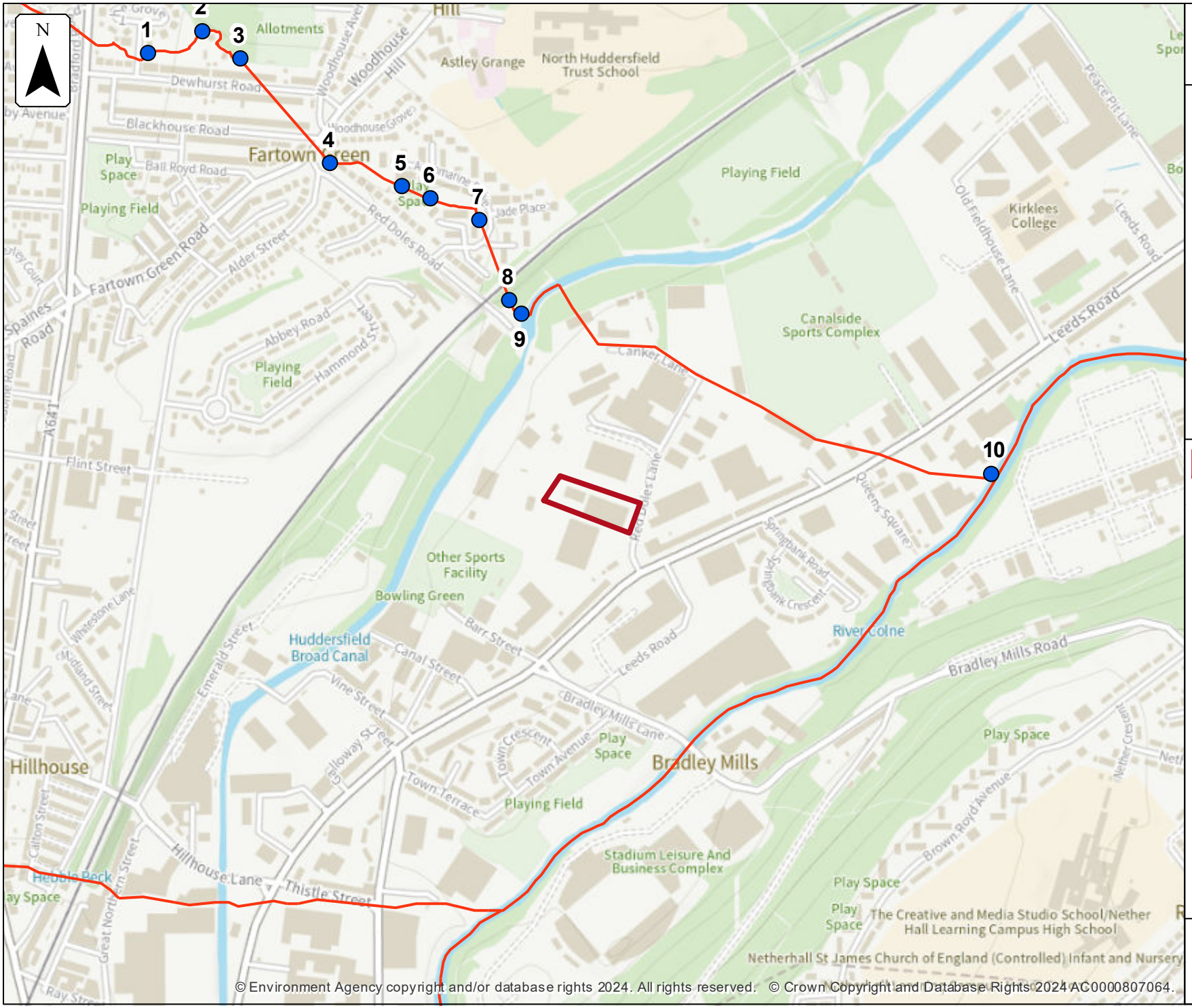
0 50 100 150 200 250
metres

Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	10% AEP	3.33% AEP	1% AEP	0.1% AEP	10% AEP	3.33% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Level	Flow	Flow	Flow	Flow
1	1197951	415456	417724	57.44	57.71	58.27	59.64	101.42	117.78	151.87	184.08
2	1198269	415466	417734	57.44	57.71	58.27	59.49	101.42	117.78	151.87	184.08
3	1198238	415517	417791	57.25	57.50	57.95	58.67	101.42	117.78	152.47	179.0
4	1198004	415553	417824	57.07	57.32	57.76	58.45	101.41	117.77	152.47	197.44
5	1198025	415598	417852	56.87	57.11	57.53	58.22	101.41	117.77	152.47	200.04
6	1198155	415653	417871	56.72	56.96	57.36	57.88	101.41	117.76	152.46	217.78
7	1198127	415691	417881	56.64	56.88	57.27	57.76	101.40	117.76	152.46	217.72
8	1198091	415746	417918	56.48	56.72	57.09	57.53	101.40	117.75	152.46	217.69
9	1198000	415769	417947	56.40	56.64	57.0	57.40	101.40	117.75	152.45	217.66
10	1197883	415793	417980	56.23	56.48	56.85	57.23	101.40	117.12	149.11	208.52

Data in this table comes from the 2019 Colne Model model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

No defences exist modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:7,500

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Allison Dike

- Selected area
- Modelled location
- Main river

0 100 200 300
metres

Modelled node locations data

No defences exist

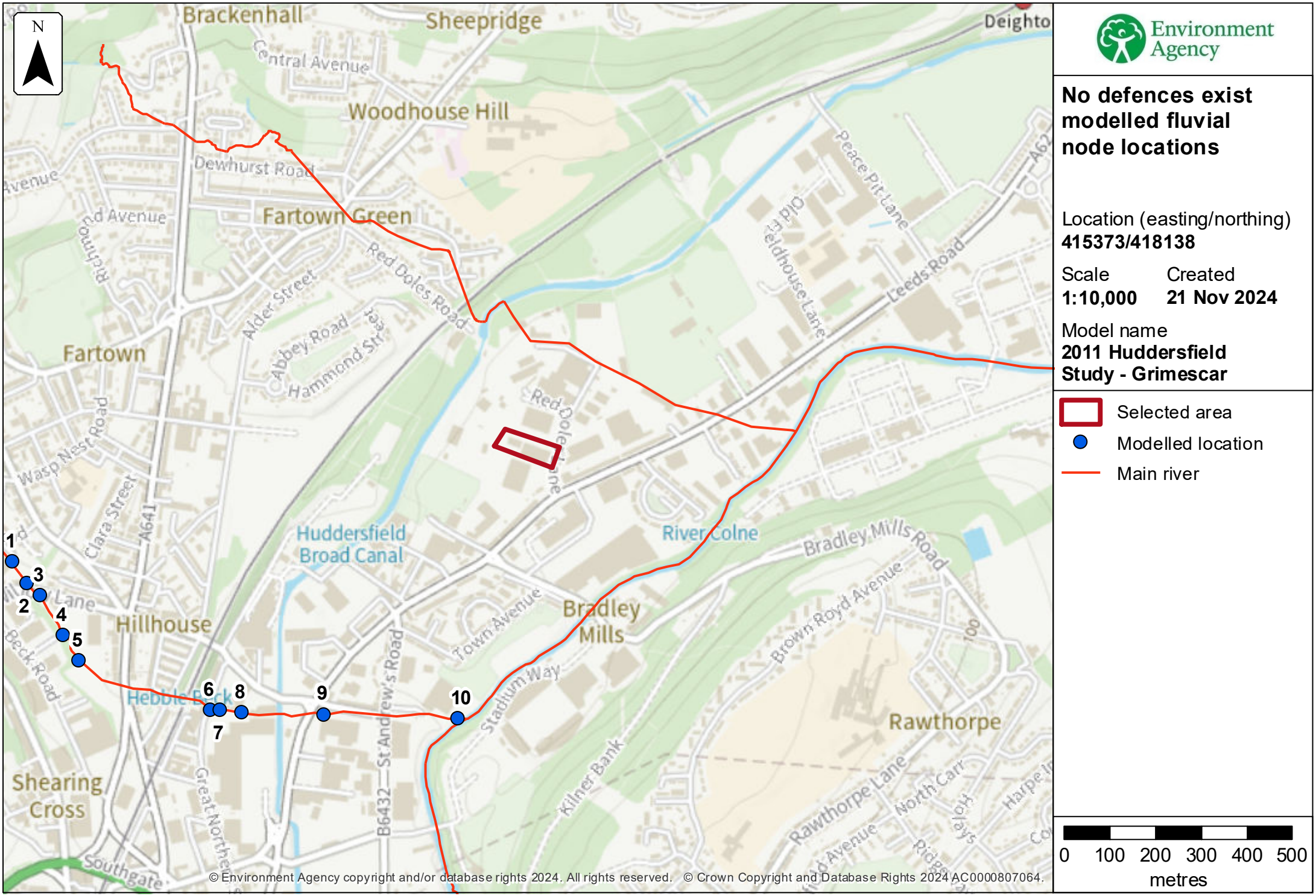
Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level	Level
1	315757	414722	418796	80.69	80.74	80.77	80.80	80.81	80.85	80.89	80.92	80.99
2	203411	414802	418829	77.62	77.69	77.75	77.82	77.84	77.91	77.97	78.02	78.08
3	185994	414856	418788	75.56	75.92	76.27	76.62	76.66	76.76	76.82	76.85	76.88
4	104756	414988	418635	70.35	70.48	70.57	70.63	70.63	70.64	70.66	70.67	70.61
5	166445	415094	418601	68.21	68.85	68.99	69.06	69.08	69.14	69.20	69.24	69.07
6	208178	415134	418584	66.41	66.58	67.15	67.60	67.81	68.62	68.90	69.02	67.48
7	165616	415205	418552	65.20	66.06	67.08	67.57	67.79	68.62	68.90	69.02	67.42
8	221867	415249	418435	61.63	61.78	61.83	61.85	61.86	62.01	61.99	62.08	61.85
9	280133	415268	418415	60.10	60.29	60.36	60.40	60.44	60.52	60.60	60.73	60.39
10	46654	415953	418182	52.25	52.33	52.36	52.37	52.38	52.42	52.44	52.50	52.35

Data in this table comes from the 2011 Huddersfield Study - Allison Dike and Blackhouse Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.

No defences exist

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	315757	414722	418796	0.75	1.03	1.27	1.57	1.67	2.05	2.48	2.83	3.52
2	203411	414802	418829	1.59	2.19	2.72	3.35	3.58	4.39	5.23	5.91	6.59
3	185994	414856	418788	1.65	2.27	2.82	3.20	3.21	3.23	3.25	3.25	3.58
4	104756	414988	418635	1.65	2.28	2.82	3.20	3.21	3.23	3.25	3.25	3.03
5	166445	415094	418601	1.75	2.39	2.50	2.51	2.53	2.54	2.53	2.53	2.51
6	208178	415134	418584	1.75	2.39	2.50	2.51	2.53	2.54	2.53	2.53	2.51
7	165616	415205	418552	1.97	2.62	2.88	3.0	3.07	3.23	3.27	3.27	2.96
8	221867	415249	418435	1.97	2.62	2.88	3.0	3.07	3.23	3.27	3.27	2.96
9	280133	415268	418415	1.97	2.62	2.88	3.0	3.15	3.46	3.72	4.33	2.96
10	46654	415953	418182	1.97	2.62	2.88	3.0	3.09	3.44	3.72	4.32	2.87

Data in this table comes from the 2011 Huddersfield Study - Allison Dike and Blackhouse Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

No defences exist modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Grimescar

- Selected area
- Modelled location
- Main river

0 100 200 300 400 500
metres

Modelled node locations data

No defences exist

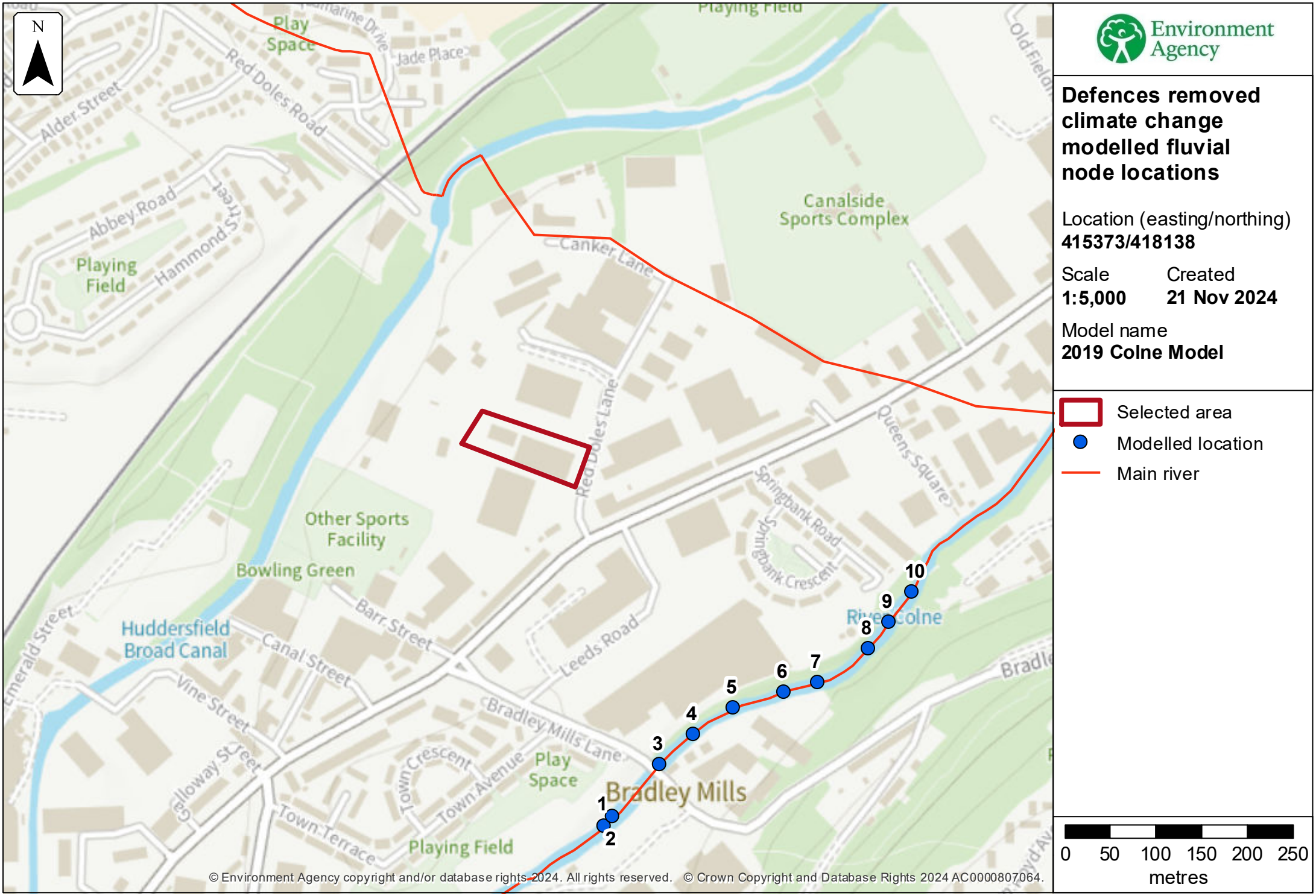
Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level	Level
1	41474	414242	417887	74.52	74.66	74.76	74.86	74.89	75.01	75.11	75.18	75.98
2	16839	414273	417841	73.34	73.48	73.59	73.69	73.73	73.87	73.99	74.06	74.86
3	274578	414304	417813	72.71	72.81	72.89	72.97	72.99	73.08	73.14	73.19	73.85
4	219397	414353	417727	71.22	71.37	71.50	71.64	71.69	71.89	72.07	72.18	73.09
5	74312	414389	417672	71.01	71.23	71.40	71.56	71.62	71.85	72.03	72.15	73.08
6	305262	414678	417563	65.99	66.19	66.34	66.48	66.54	66.74	66.84	66.89	67.09
7	342710	414698	417564	65.74	65.94	66.08	66.23	66.28	66.48	66.57	66.62	66.85
8	273833	414745	417558	65.26	65.45	65.59	65.73	65.78	65.96	66.05	66.09	66.31
9	21742	414925	417553	61.81	62.01	62.17	62.32	62.38	62.55	62.59	62.61	62.74
10	344834	415218	417545	58.61	58.61	58.61	58.61	58.61	59.08	59.08	59.28	59.28

Data in this table comes from the 2011 Huddersfield Study - Grimescar Beck / Clayton Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.

No defences exist

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	41474	414242	417887	1.80	2.29	2.70	3.19	3.37	4.18	4.76	5.16	6.26
2	16839	414273	417841	1.80	2.29	2.70	3.19	3.37	4.17	4.76	5.15	6.26
3	274578	414304	417813	1.95	2.49	2.95	3.51	3.70	4.60	5.05	5.32	5.88
4	219397	414353	417727	1.95	2.49	2.95	3.51	3.70	4.60	5.05	5.32	5.88
5	74312	414389	417672	2.33	3.01	3.60	4.30	4.55	5.68	6.46	7.08	10.93
6	305262	414678	417563	2.32	3.01	3.59	4.29	4.54	5.67	6.46	7.07	10.97
7	342710	414698	417564	2.32	3.01	3.59	4.29	4.54	5.67	6.46	7.07	10.97
8	273833	414745	417558	2.71	3.54	4.25	5.10	5.41	6.78	7.73	8.49	15.39
9	21742	414925	417553	2.71	3.54	4.25	5.10	5.41	6.78	7.73	8.49	15.39
10	344834	415218	417545	2.71	3.54	4.26	5.06	5.37	6.78	7.73	8.53	11.75

Data in this table comes from the 2011 Huddersfield Study - Grimescar Beck / Clayton Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

Defences removed climate change modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:5,000

Created
21 Nov 2024

Model name
2019 Colne Model

- Selected area
- Modelled location
- Main river

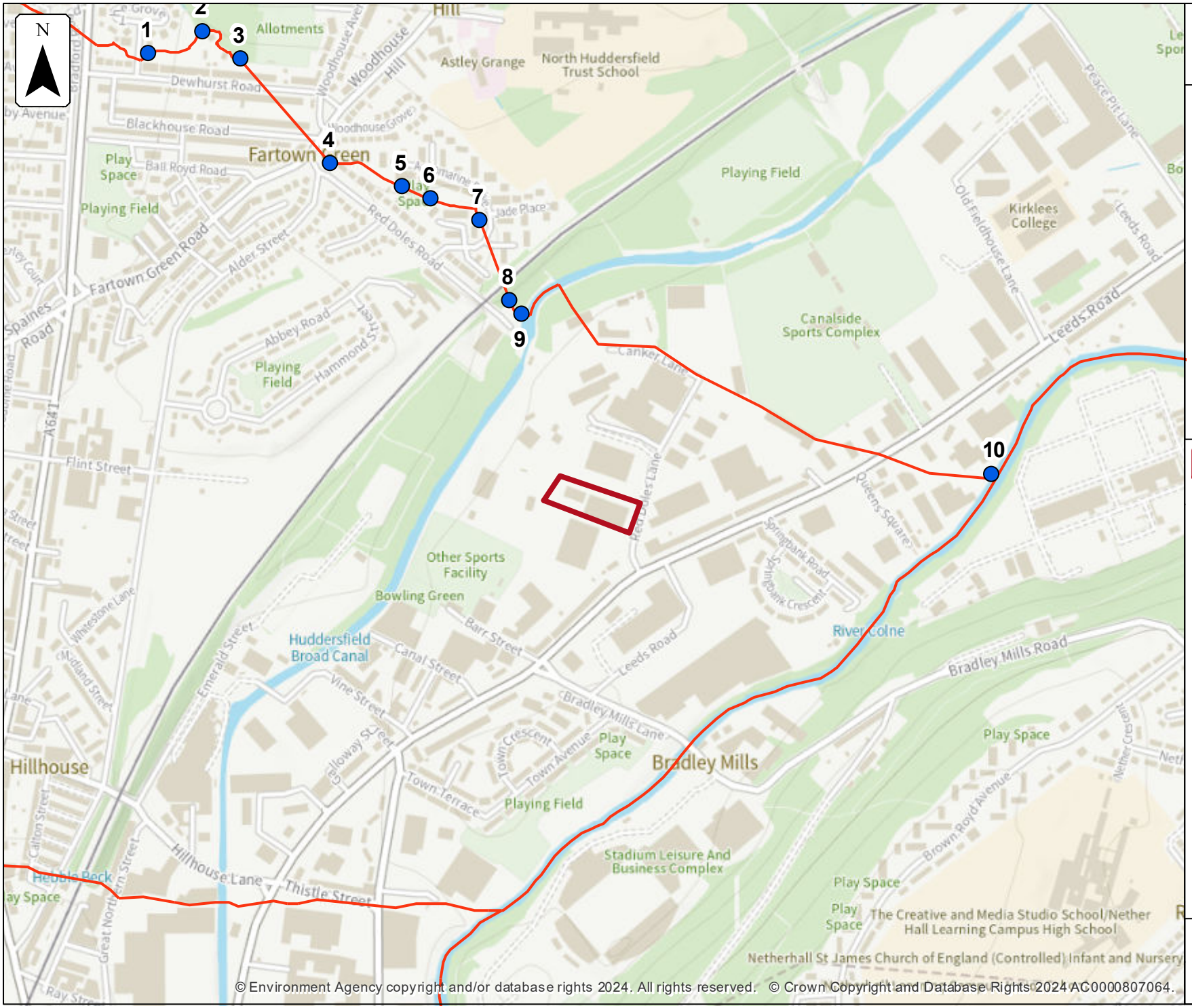
0 50 100 150 200 250
metres

Modelled node locations data

Defences removed climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)
				Level	Level	Level	Level	Flow	Flow	Flow	Flow
1	1197951	415456	417724	59.27	59.42	59.62	59.91	183.75	183.68	185.0	184.83
2	1198269	415466	417734	59.07	59.24	59.47	59.79	183.75	183.68	185.0	184.83
3	1198238	415517	417791	58.29	58.42	58.65	59.06	172.03	176.28	179.0	179.44
4	1198004	415553	417824	58.11	58.23	58.43	58.79	174.82	183.51	196.34	216.72
5	1198025	415598	417852	57.88	58.0	58.20	58.58	175.84	185.28	198.85	222.49
6	1198155	415653	417871	57.63	57.72	57.86	58.12	183.01	195.45	215.73	252.97
7	1198127	415691	417881	57.54	57.62	57.75	57.99	183.01	195.44	215.72	252.99
8	1198091	415746	417918	57.34	57.41	57.52	57.73	183.01	195.44	215.71	252.85
9	1198000	415769	417947	57.24	57.30	57.39	57.58	183.01	195.43	215.70	252.78
10	1197883	415793	417980	57.09	57.14	57.22	57.40	176.44	187.95	206.72	240.0

Data in this table comes from the 2019 Colne Model model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

No defences exist climate change modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:7,500

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Allison Dike

- Selected area
- Modelled location
- Main river

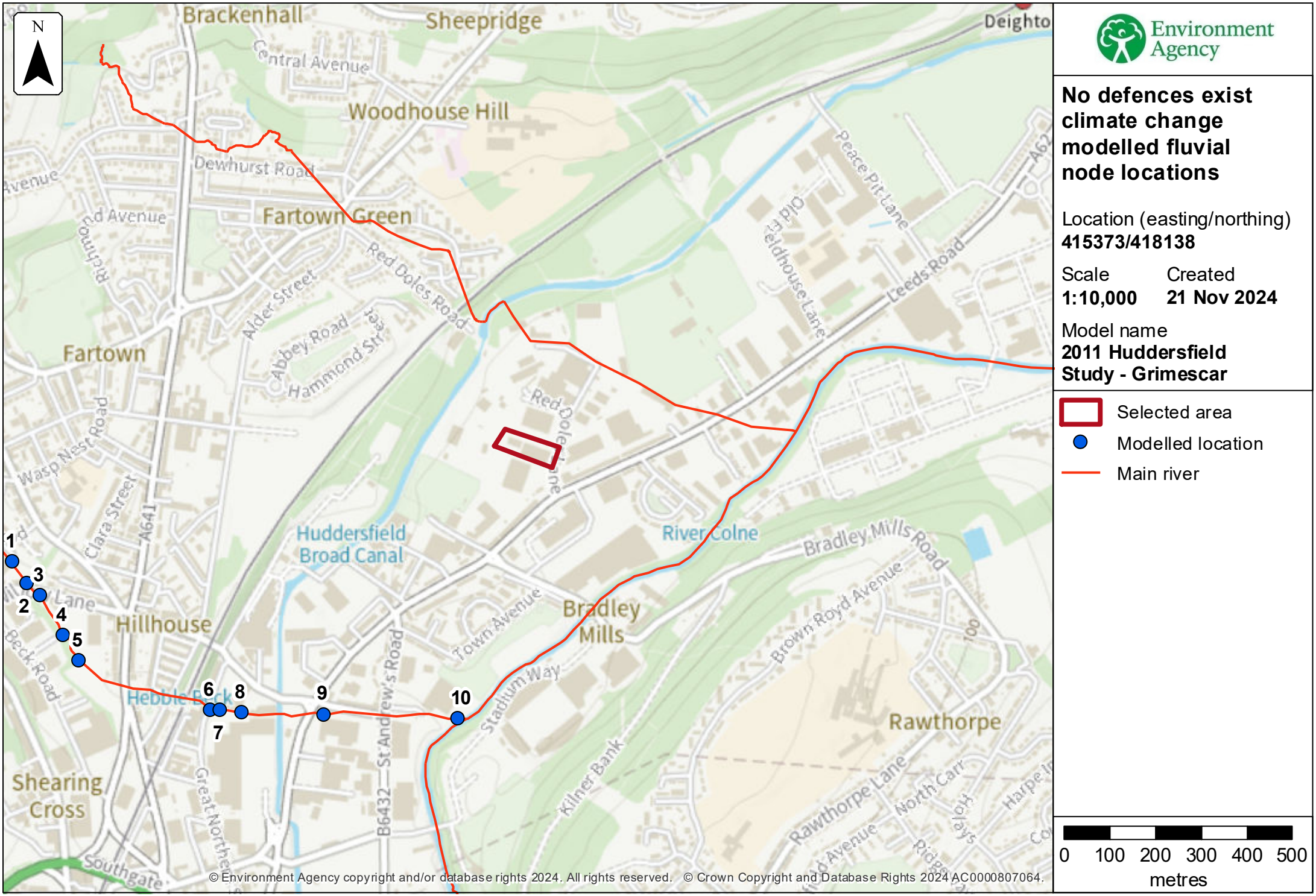
0 100 200 300
metres

Modelled node locations data

No defences exist climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)	1% AEP (+20%)
				Level	Flow
1	315757	414722	418796	80.97	3.38
2	203411	414802	418829	78.09	6.96
3	185994	414856	418788	76.92	3.27
4	104756	414988	418635	70.71	3.27
5	166445	415094	418601	69.30	2.53
6	208178	415134	418584	69.16	2.53
7	165616	415205	418552	69.15	3.27
8	221867	415249	418435	62.23	3.27
9	280133	415268	418415	61.12	5.48
10	46654	415953	418182	52.61	5.47

Data in this table comes from the 2011 Huddersfield Study - Allison Dike and Blackhouse Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

No defences exist climate change modelled fluvial node locations

Location (easting/northing)
415373/418138

Scale
1:10,000

Created
21 Nov 2024

Model name
2011 Huddersfield Study - Grimescar

Selected area

Modelled location

Main river

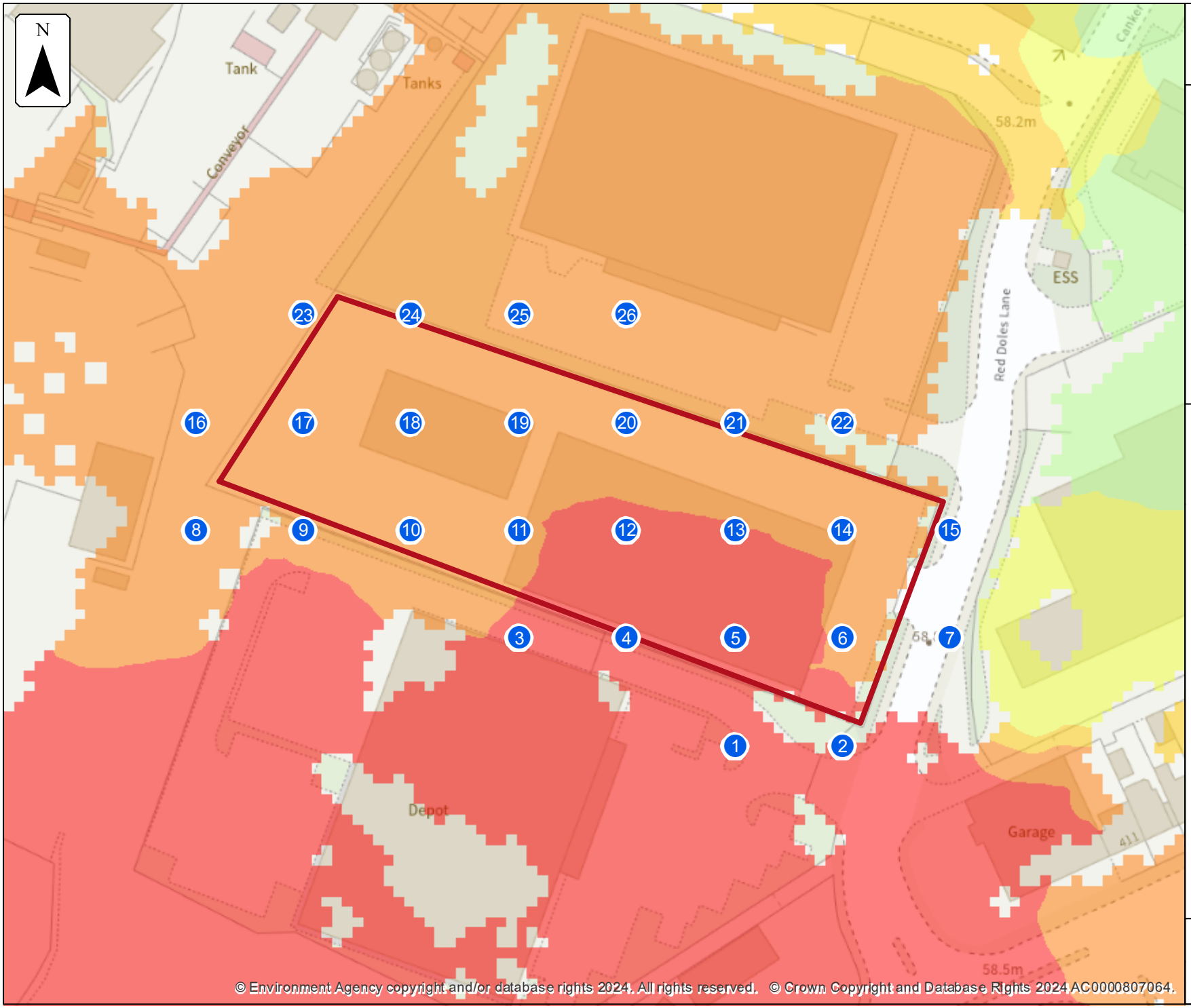
0 100 200 300 400 500
metres

Modelled node locations data

No defences exist climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)	1% AEP (+20%)
				Level	Flow
1	41474	414242	417887	75.29	5.59
2	16839	414273	417841	74.20	5.58
3	274578	414304	417813	73.45	5.55
4	219397	414353	417727	72.40	5.55
5	74312	414389	417672	72.37	8.22
6	305262	414678	417563	67.01	8.21
7	342710	414698	417564	66.74	8.21
8	273833	414745	417558	66.20	9.92
9	21742	414925	417553	62.67	9.92
10	344834	415218	417545	59.28	9.95

Data in this table comes from the 2011 Huddersfield Study - Grimescar Beck / Clayton Dike model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

Defended modelled fluvial extent and height

Location (easting/northing)
415373/418138

Scale
1:1,000

Created
21 Nov 2024

Model name
2019 Colne Model

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 57.0
- 57.0 - 57.25
- 57.25 - 57.5
- 57.5 - 57.75
- 57.75 - 58.0
- 58.0 - 58.25
- 58.25 - 58.5
- 58.5 - 58.75
- 58.75 - 59.0

This map shows the 0.1% AEP height data

0 10 20 30 40
metres

Sample point data

Defended

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
1	415400	418091	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.24
2	415421	418091	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.01
3	415358	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.15
4	415379	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.31
5	415400	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.26
6	415421	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.04
7	415442	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	415295	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.46
9	415316	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.17
10	415337	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.34
11	415358	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.04
12	415379	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.16
13	415400	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.18
14	415421	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.06
15	415442	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	415295	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.42

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
17	415316	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.35
18	415337	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.17
19	415358	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.13
20	415379	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.14
21	415400	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.21
22	415421	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.21
23	415316	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.36
24	415337	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.33
25	415358	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.36
26	415379	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.55
Max value in selected area:			Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	0.46

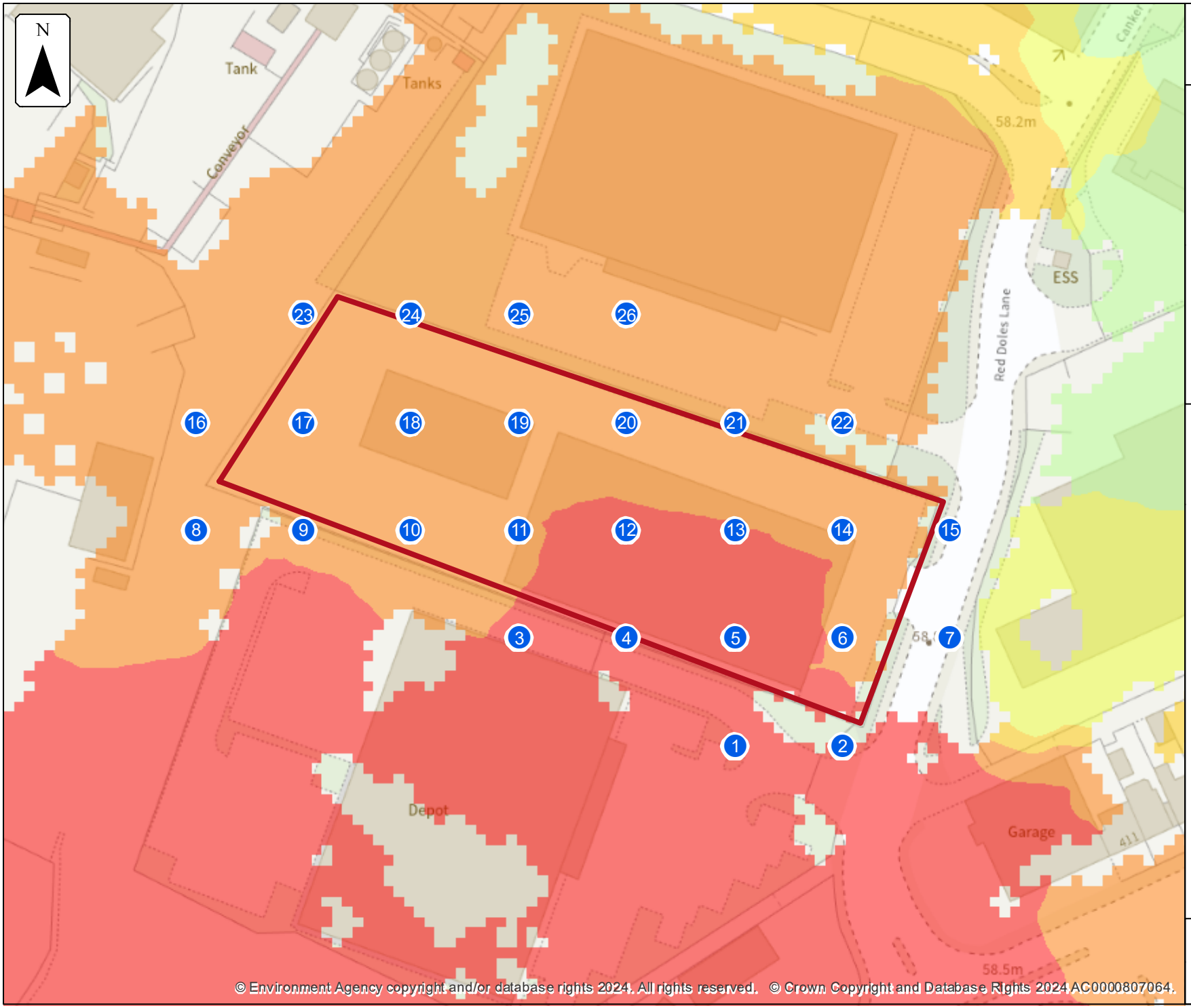
Data in this table comes from the 2019 Colne Model model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defended

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
1	415400	418091	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.86
2	415421	418091	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.84
3	415358	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.77
4	415379	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.82
5	415400	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.82
6	415421	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.74
7	415442	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	415295	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.70
9	415316	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.70
10	415337	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.71
11	415358	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.71
12	415379	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.77
13	415400	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.76
14	415421	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.66
15	415442	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	415295	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.69
17	415316	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.69
18	415337	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.67

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	4% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
19	415358	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.65
20	415379	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.65
21	415400	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.65
22	415421	418154	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.64
23	415316	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.68
24	415337	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.66
25	415358	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.66
26	415379	418175	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	58.65
Max value in selected area:			Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	Could not determine	58.85

Data in this table comes from the 2019 Colne Model model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Environment Agency

Defences removed modelled fluvial extent and height

Location (easting/northing)
415373/418138

Scale
1:1,000

Created
21 Nov 2024

Model name
2019 Colne Model

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 57.0
- 57.0 - 57.25
- 57.25 - 57.5
- 57.5 - 57.75
- 57.75 - 58.0
- 58.0 - 58.25
- 58.25 - 58.5
- 58.5 - 58.75
- 58.75 - 59.0

This map shows the 0.1% AEP height data

0 10 20 30 40
metres

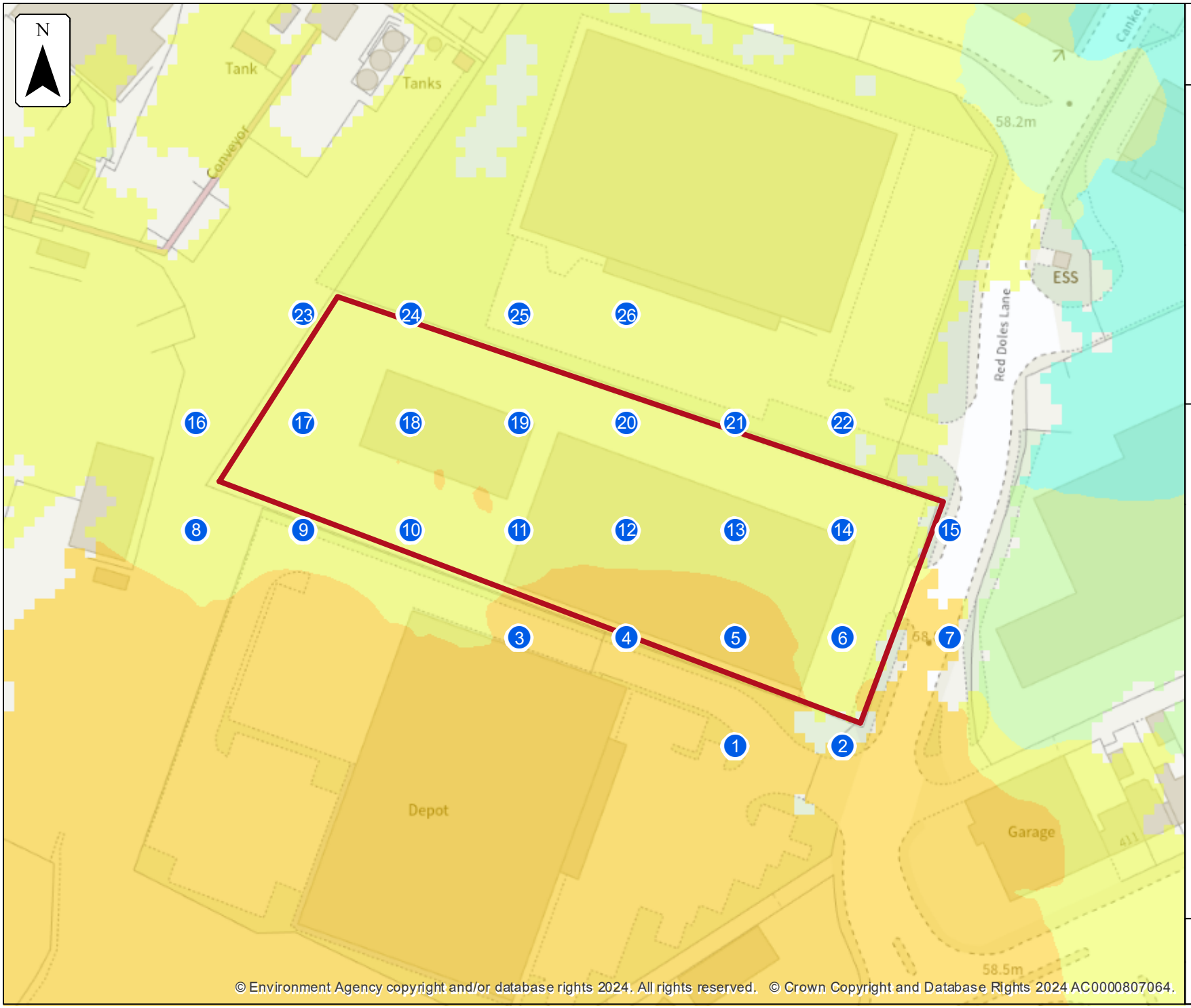
Sample point data

Defences removed

Label	Easting	Northing	10% AEP	3.33% AEP	1% AEP	0.1% AEP	10% AEP	3.33% AEP	1% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Height	Height	Height	Height
1	415400	418091	NoData	NoData	NoData	0.24	NoData	NoData	NoData	58.86
2	415421	418091	NoData	NoData	NoData	0.01	NoData	NoData	NoData	58.84
3	415358	418112	NoData	NoData	NoData	0.15	NoData	NoData	NoData	58.77
4	415379	418112	NoData	NoData	NoData	0.31	NoData	NoData	NoData	58.82
5	415400	418112	NoData	NoData	NoData	0.26	NoData	NoData	NoData	58.82
6	415421	418112	NoData	NoData	NoData	0.04	NoData	NoData	NoData	58.74
7	415442	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	415295	418133	NoData	NoData	NoData	0.46	NoData	NoData	NoData	58.70
9	415316	418133	NoData	NoData	NoData	0.17	NoData	NoData	NoData	58.70
10	415337	418133	NoData	NoData	NoData	0.34	NoData	NoData	NoData	58.71
11	415358	418133	NoData	NoData	NoData	0.04	NoData	NoData	NoData	58.71
12	415379	418133	NoData	NoData	NoData	0.16	NoData	NoData	NoData	58.77
13	415400	418133	NoData	NoData	NoData	0.18	NoData	NoData	NoData	58.76
14	415421	418133	NoData	NoData	NoData	0.06	NoData	NoData	NoData	58.66
15	415442	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	415295	418154	NoData	NoData	NoData	0.42	NoData	NoData	NoData	58.69

Label	Easting	Northing	10% AEP	3.33% AEP	1% AEP	0.1% AEP	10% AEP	3.33% AEP	1% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Height	Height	Height	Height
17	415316	418154	NoData	NoData	NoData	0.35	NoData	NoData	NoData	58.69
18	415337	418154	NoData	NoData	NoData	0.17	NoData	NoData	NoData	58.67
19	415358	418154	NoData	NoData	NoData	0.13	NoData	NoData	NoData	58.65
20	415379	418154	NoData	NoData	NoData	0.14	NoData	NoData	NoData	58.65
21	415400	418154	NoData	NoData	NoData	0.21	NoData	NoData	NoData	58.65
22	415421	418154	NoData	NoData	NoData	0.21	NoData	NoData	NoData	58.64
23	415316	418175	NoData	NoData	NoData	0.36	NoData	NoData	NoData	58.68
24	415337	418175	NoData	NoData	NoData	0.33	NoData	NoData	NoData	58.66
25	415358	418175	NoData	NoData	NoData	0.36	NoData	NoData	NoData	58.66
26	415379	418175	NoData	NoData	NoData	0.55	NoData	NoData	NoData	58.65
Max value in selected area:			Could not determine	Could not determine	Could not determine	0.46	Could not determine	Could not determine	Could not determine	58.85

Data in this table comes from the 2019 Colne Model model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Environment Agency

Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
415373/418138

Scale
1:1,000

Created
21 Nov 2024

Model name
2019 Colne Model

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 57.0
- 57.0 - 57.375
- 57.375 - 57.75
- 57.75 - 58.125
- 58.125 - 58.5
- 58.5 - 58.875
- 58.875 - 59.25
- 59.25 - 59.625
- 59.625 - 60.0

This map shows the 0.1% AEP +20% height data

0 10 20 30 40
metres

Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)
			Depth	Depth	Depth	Depth	Height	Height	Height	Height
1	415400	418091	NoData	NoData	0.24	0.36	NoData	NoData	58.86	58.98
2	415421	418091	NoData	NoData	0.01	0.11	NoData	NoData	58.84	58.96
3	415358	418112	NoData	NoData	0.14	0.26	NoData	NoData	58.76	58.88
4	415379	418112	NoData	NoData	0.31	0.43	NoData	NoData	58.81	58.93
5	415400	418112	NoData	NoData	0.26	0.35	NoData	NoData	58.81	58.91
6	415421	418112	NoData	NoData	0.04	0.13	NoData	NoData	58.73	58.83
7	415442	418112	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	415295	418133	NoData	NoData	0.45	0.63	NoData	NoData	58.69	58.86
9	415316	418133	NoData	NoData	0.16	0.33	NoData	NoData	58.69	58.85
10	415337	418133	NoData	NoData	0.33	0.49	NoData	NoData	58.70	58.87
11	415358	418133	NoData	NoData	0.03	0.19	NoData	NoData	58.71	58.86
12	415379	418133	NoData	NoData	0.15	0.24	NoData	NoData	58.76	58.85
13	415400	418133	NoData	NoData	0.17	0.25	NoData	NoData	58.76	58.83
14	415421	418133	NoData	NoData	0.06	0.16	NoData	NoData	58.66	58.76
15	415442	418133	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	415295	418154	NoData	NoData	0.41	0.57	NoData	NoData	58.68	58.85

Label	Easting	Northing	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)	1% AEP (+20%)	1% AEP (+30%)	1% AEP (+50%)	0.1% AEP (+20%)
			Depth	Depth	Depth	Depth	Height	Height	Height	Height
17	415316	418154	NoData	NoData	0.34	0.50	NoData	NoData	58.68	58.84
18	415337	418154	NoData	NoData	0.16	0.30	NoData	NoData	58.66	58.80
19	415358	418154	NoData	NoData	0.12	0.25	NoData	NoData	58.64	58.77
20	415379	418154	NoData	NoData	0.13	0.27	NoData	NoData	58.64	58.78
21	415400	418154	NoData	NoData	0.20	0.32	NoData	NoData	58.64	58.77
22	415421	418154	NoData	NoData	0.20	0.31	NoData	NoData	58.63	58.75
23	415316	418175	NoData	NoData	0.35	0.51	NoData	NoData	58.67	58.83
24	415337	418175	NoData	NoData	0.32	0.47	NoData	NoData	58.65	58.80
25	415358	418175	NoData	NoData	0.35	0.49	NoData	NoData	58.65	58.79
26	415379	418175	NoData	NoData	0.54	0.68	NoData	NoData	58.64	58.78
Max value in selected area:			Could not determine	Could not determine	0.45	0.62	Could not determine	Could not determine	58.85	58.98

Data in this table comes from the 2019 Colne Model model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is Kirklees District.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

Find out more about flood risk activity permits

Help and advice

Contact the 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