

Flood risk assessment data

Location of site: 393709 / 417196 (shown as easting and northing coordinates)

Document created on: 18 August 2022

This information was previously known as a product 4.

Customer reference number: GMMC269973SW

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)
- areas benefiting from defences
- historic flooding
- flood defences and attributes
- 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: Rochdale and Littleborough 2013

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

Date: 1 June 2013

This model contains 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

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

Areas benefiting from defences

This map shows the areas benefiting from defences for 2 possible events:

- fluvial (river flooding) event that has a 1% annual exceedance probability (AEP), this means a 1% chance of occurring in any one year
- tidal or coastal event that has a 0.5% annual exceedance probability (AEP), this means a 0.5% chance of occurring in any one year

[Download the GIS dataset for areas benefiting from defences](#)



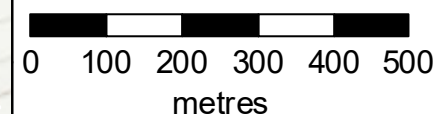
Flood map for planning

Location (easting/northing)
393709/417196

Scale
1:10,000

Created
18 Aug 2022

-  Selected area
-  Main river
-  Flood defence
-  Areas benefiting from flood defence
-  Flood zone 3
-  Flood zone 2



Historic flooding

This map is an indicative outline of areas that have previously flooded. Remember that:

- our records are incomplete, so the information here is based on the best available data
- it is possible not all properties within this area will have flooded
- other flooding may have occurred that we do not have records for
- flooding can come from a range of different sources - we can only supply flood risk data relating to flooding from rivers or the sea

You can also contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

[Download recorded flood outlines in GIS format](#)



Historic flood map

Location (easting/northing)
393709/417196

Scale
1:10,000

Created
18 Aug 2022

 Selected area

 Main river

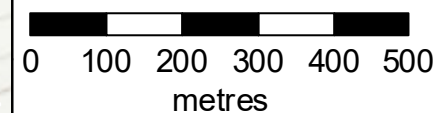
Date of flood event

 July, 2019

 December, 2015

 February, 2002

 October, 1998



Historic flood event data

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
21 November 2016	21 November 2016	other	obstruction/blockage - culvert	No
8 February 2002	9 February 2002	main river	channel capacity exceeded (no raised defences)	No
23 October 1998	24 October 1998	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.

Flood Defence Map



1:4,000



Legend

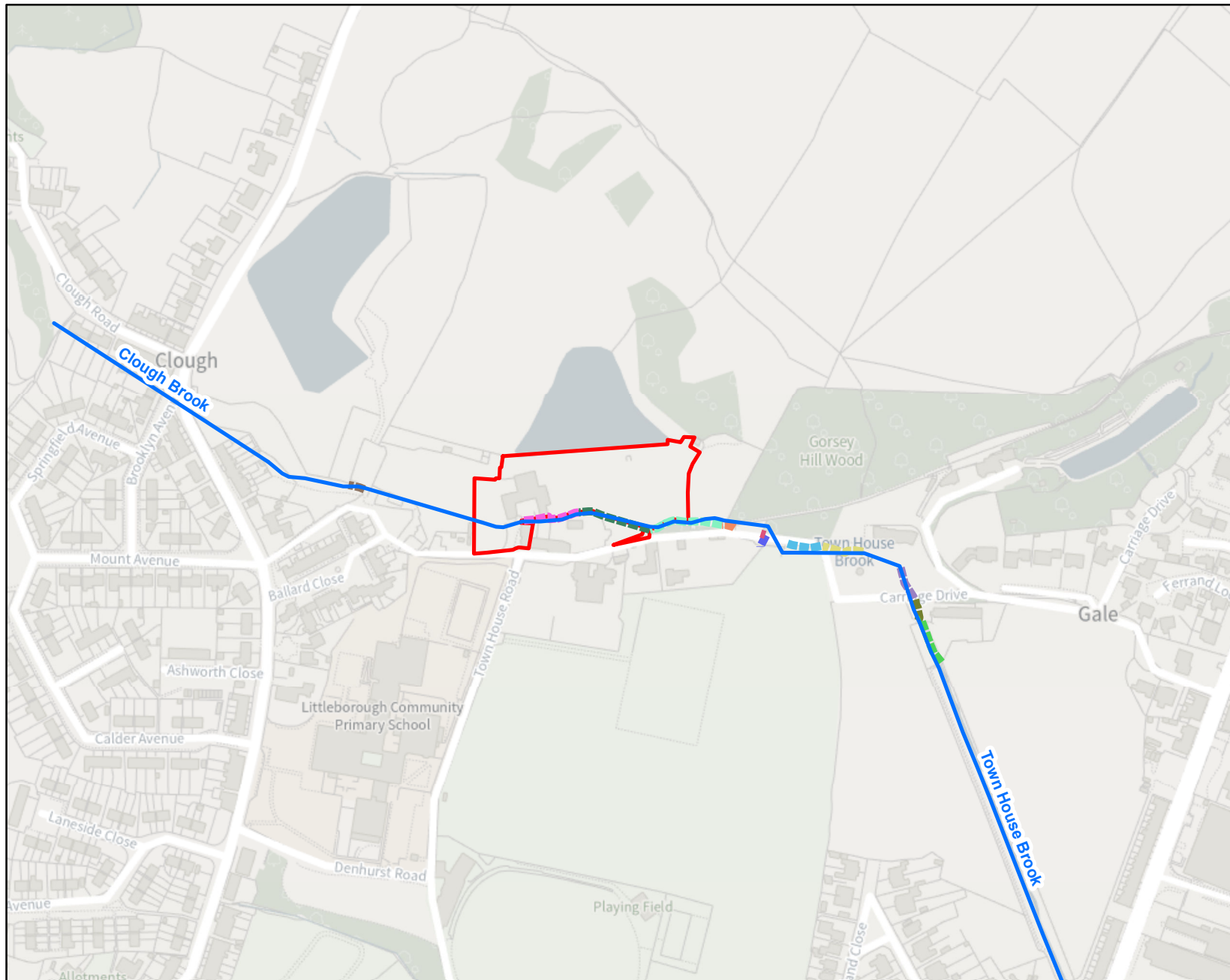
 Site Location

 Main River

Defences

Asset ID

-  100054
-  100428
-  101114
-  101498
-  101499
-  101501
-  101901
-  101903
-  181163
-  34481
-  48772
-  99170



Flood Defences

Start Date	Asset Type	Asset ID	Standard of Protection	Upstream Actual Crest Level (m aod)	Downstream Actual Crest Level (m aod)
01/01/2005	Wall	101903	100	154.35	154.39
01/01/2005	Engineered High Ground	48772	100	154.27	153.82
01/01/2005	Engineered High Ground	100054	100	151.80	153.77
01/01/2005	Embankment	34481	100	154.51	154.51
01/01/2005	Engineered High Ground	99170	100	154.45	153.85
01/01/2005	Engineered High Ground	101114	100	162.06	163.20
01/01/2005	Engineered High Ground	101499	100	155.07	155.67
01/01/2005	Engineered High Ground	101501	100	155.67	157.84
01/01/2005	Wall	101901	100	153.65	153.76
01/01/2005	Engineered High Ground	100428	100	150.56	151.80
01/01/2005	Engineered High Ground	101498	100	153.82	155.07
01/01/2005	Engineered High Ground	181163	100	148.90	150.56

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

Climate change

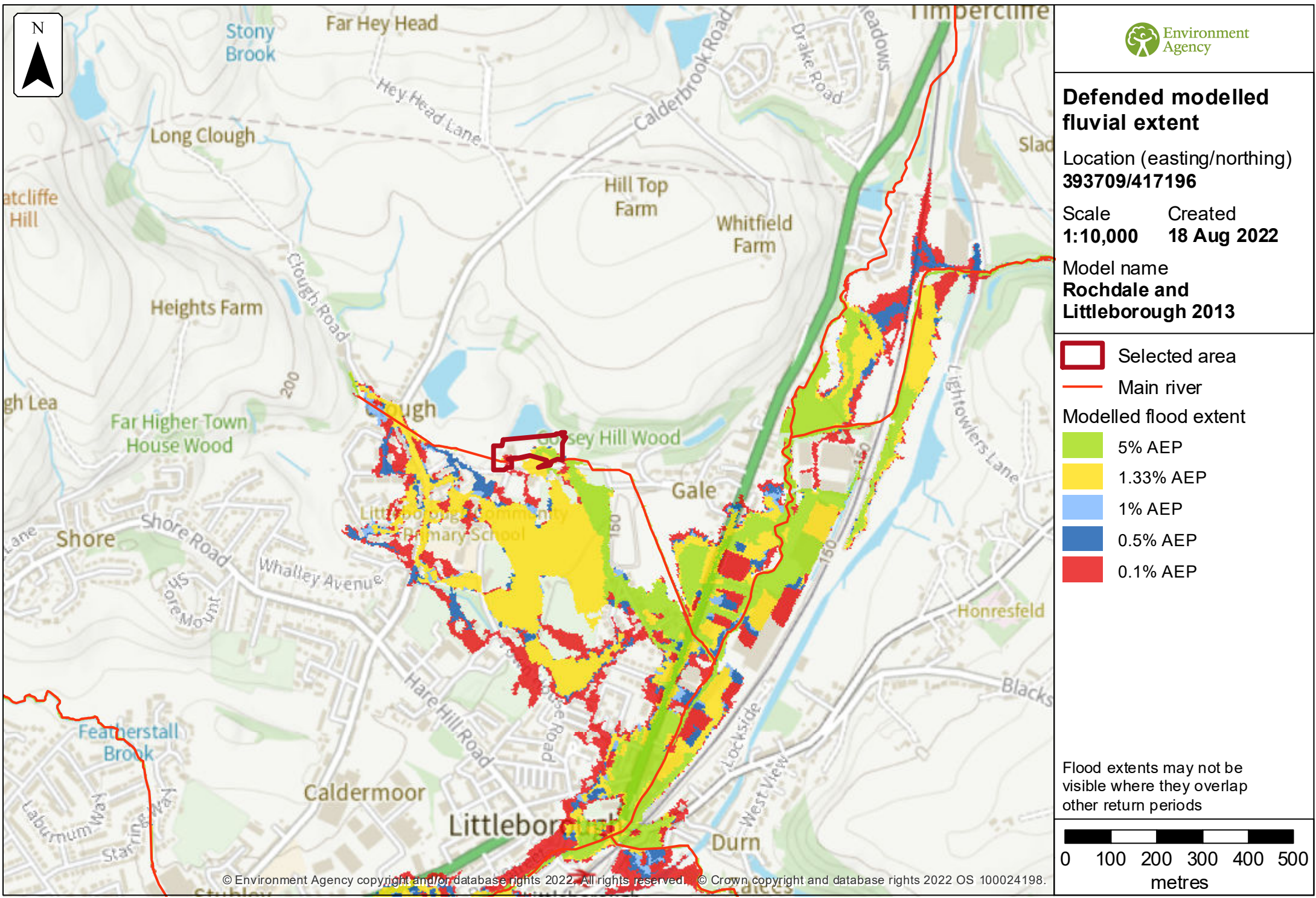
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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

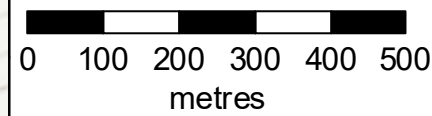
Location (easting/northing)
393709/417196

Scale Created
1:10,000 18 Aug 2022

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 modelled fluvial extent

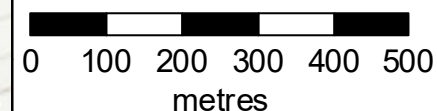
Location (easting/northing)
393709/417196

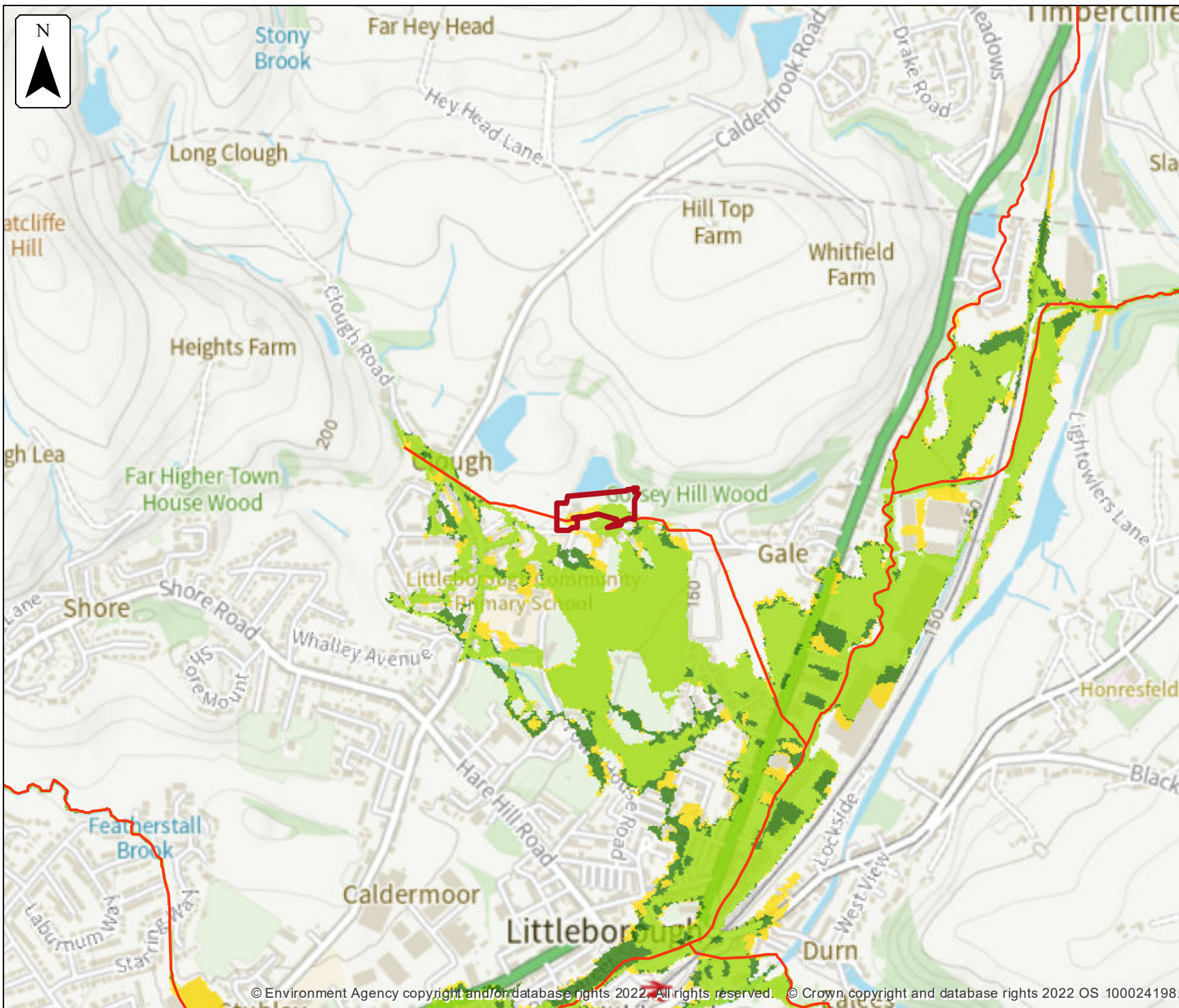
Scale Created
1:10,000 18 Aug 2022

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

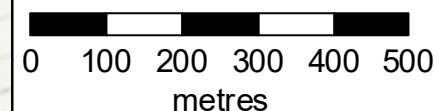
Location (easting/northing)
393709/417196

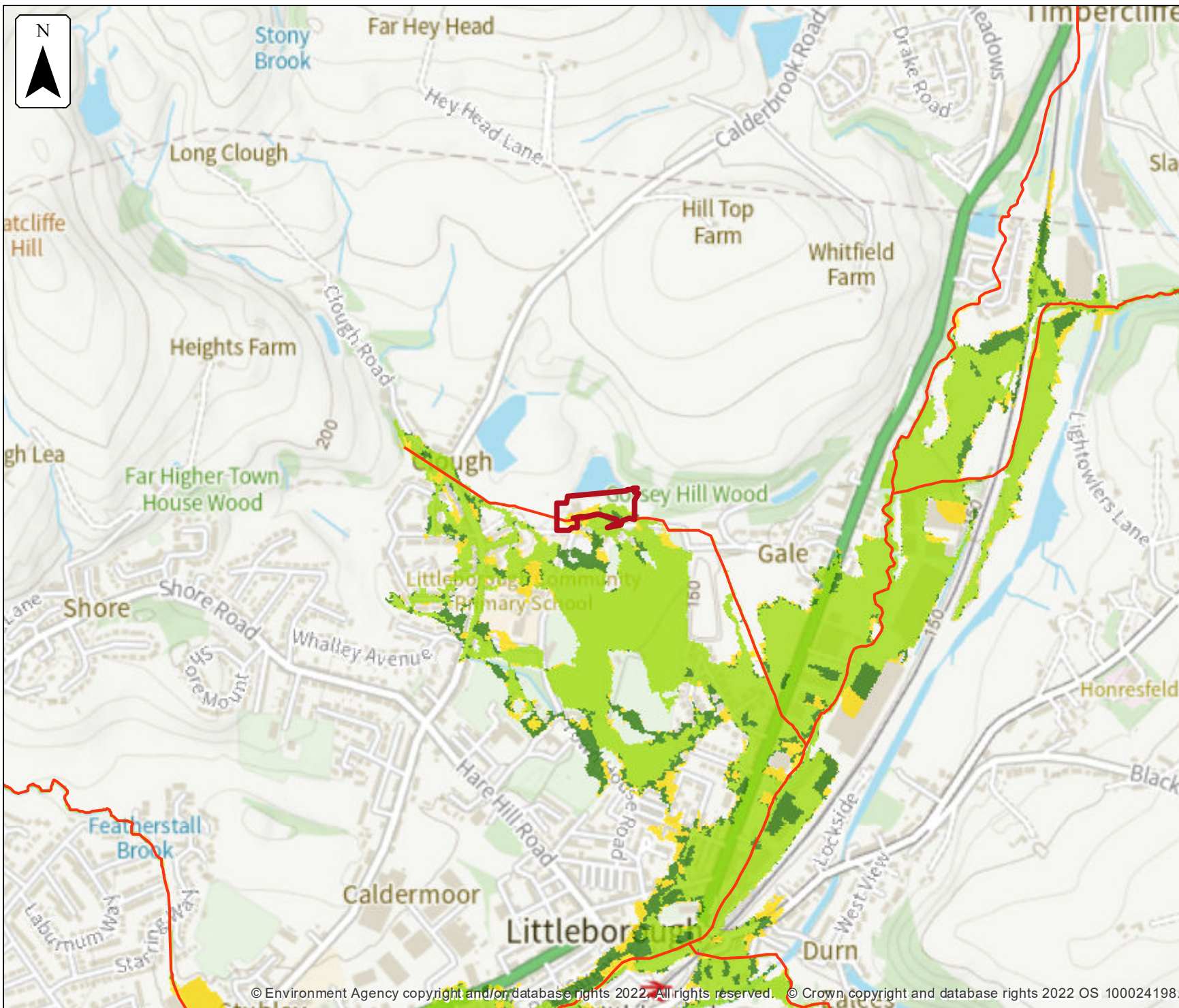
Scale Created
1:10,000 18 Aug 2022

Model name
**Rochdale and
Littleborough 2013**

- Selected area
- Main river
- Modelled flood extent
 - 1.0% AEP (+20%)
 - 1.0% AEP (+35%)
 - 1.0% AEP (+70%)

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





Defences removed climate change modelled fluvial extent

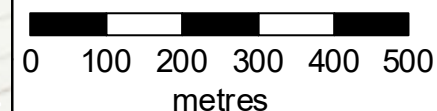
Location (easting/northing)
393709/417196

Scale Created
1:10,000 18 Aug 2022

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Main river
- Modelled flood extent
 -  1.0% AEP (+20%)
 -  1.0% AEP (+35%)
 -  1.0% AEP (+70%)

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





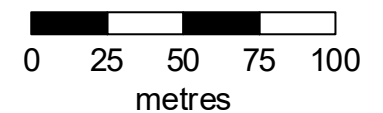
Defended modelled fluvial node locations

Location (easting/northing)
393709/417196

Scale Created
1:2,500 18 Aug 2022

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	3212	393639	417174	158.02	2.35			158.24	3.06	158.26	3.14	158.30	3.27	158.42	3.73
2	46651	393655	417171	157.85	2.35			158.11	3.06	158.14	3.14	158.19	3.27	158.39	3.73
3	253383	393666	417174	157.05	2.35			157.13	3.06	157.14	3.14	157.15	3.27	157.19	3.73
4	250847	393681	417175	156.73	2.35			156.82	3.06	156.83	3.14	156.84	3.27	156.88	3.73
5	92934	393693	417176	156.68	2.46			156.77	3.22	156.77	3.31	156.77	3.46	156.78	4.0
6	156149	393706	417179	156.69	2.46			156.79	3.22	156.79	3.31	156.80	3.46	156.81	4.0
7	327744	393722	417178	156.70	2.33			156.82	2.34	156.83	2.35	156.84	2.36	156.86	2.37
8	206152	393756	417168	155.34	2.33			155.44	2.34	155.45	2.35	155.46	2.36	155.50	2.37

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.



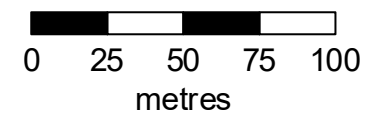
Defences removed modelled fluvial node locations

Location (easting/northing)
393709/417196

Scale Created
1:2,500 18 Aug 2022

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		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	3212	393639	417174	158.02	2.35			158.24	3.06	158.26	3.14	158.30	3.27	158.42	3.73
2	46651	393655	417171	157.85	2.35			158.11	3.06	158.14	3.14	158.19	3.27	158.39	3.73
3	253383	393666	417174	157.04	2.35			157.12	3.06	157.13	3.14	157.14	3.27	157.19	3.73
4	250847	393681	417175	156.72	2.35			156.79	3.06	156.80	3.14	156.81	3.27	156.86	3.73
5	92934	393693	417176	156.65	2.46			156.69	3.12	156.69	3.21	156.70	3.34	156.72	3.88
6	156149	393706	417179	156.67	2.38			156.73	2.89	156.73	2.97	156.74	3.09	156.78	3.47
7	327744	393722	417178	156.68	2.33			156.75	2.34	156.76	2.34	156.77	2.34	156.82	2.35
8	206152	393756	417168	155.32	2.33			155.40	2.34	155.41	2.34	155.42	2.34	155.46	2.35

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.

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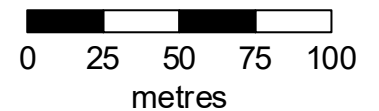
Defended climate change modelled fluvial node locations

Location (easting/northing)
393709/417196

Scale Created
1:2,500 18 Aug 2022

Model name
**Rochdale and
Littleborough 2013**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)		1.0% AEP (+35%)		1.0% AEP (+70%)	
				Level	Flow	Level	Flow	Level	Flow
1	3212	393639	417174	158.30	3.28	158.36	3.52	158.47	3.96
2	46651	393655	417171	158.20	3.28	158.29	3.52	158.47	3.91
3	253383	393666	417174	157.15	3.28	157.17	3.52	157.21	3.91
4	250847	393681	417175	156.84	3.28	156.87	3.52	156.90	3.91
5	92934	393693	417176	156.77	3.47	156.78	3.74	156.79	4.20
6	156149	393706	417179	156.80	3.47	156.81	3.74	156.82	4.20
7	327744	393722	417178	156.84	2.35	156.86	2.36	156.88	2.37
8	206152	393756	417168	155.46	2.35	155.47	2.36	155.50	2.37

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.



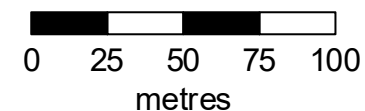
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
393709/417196

Scale Created
1:2,500 18 Aug 2022

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	1.0% AEP (+20%)		1.0% AEP (+35%)		1.0% AEP (+70%)	
				Level	Flow	Level	Flow	Level	Flow
1	3212	393639	417174	158.30	3.28	158.36	3.52	158.47	3.96
2	46651	393655	417171	158.19	3.28	158.29	3.52	158.47	3.91
3	253383	393666	417174	157.14	3.28	157.17	3.52	157.20	3.91
4	250847	393681	417175	156.81	3.28	156.84	3.52	156.87	3.91
5	92934	393693	417176	156.70	3.34	156.72	3.61	156.72	4.10
6	156149	393706	417179	156.74	3.09	156.77	3.23	156.79	3.65
7	327744	393722	417178	156.77	2.34	156.81	2.34	156.84	2.34
8	206152	393756	417168	155.42	2.34	155.42	2.34	155.46	2.34

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.

Strategic flood risk assessments

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

This should give you information about:

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

About this data

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

Flood risk activity permits

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

[Find out more about flood risk activity permits](#)

Help and advice

Contact the Greater Manchester Merseyside and Cheshire Environment Agency team at inforequests.gmmc@environment-agency.gov.uk for:

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