

Flood risk assessment data

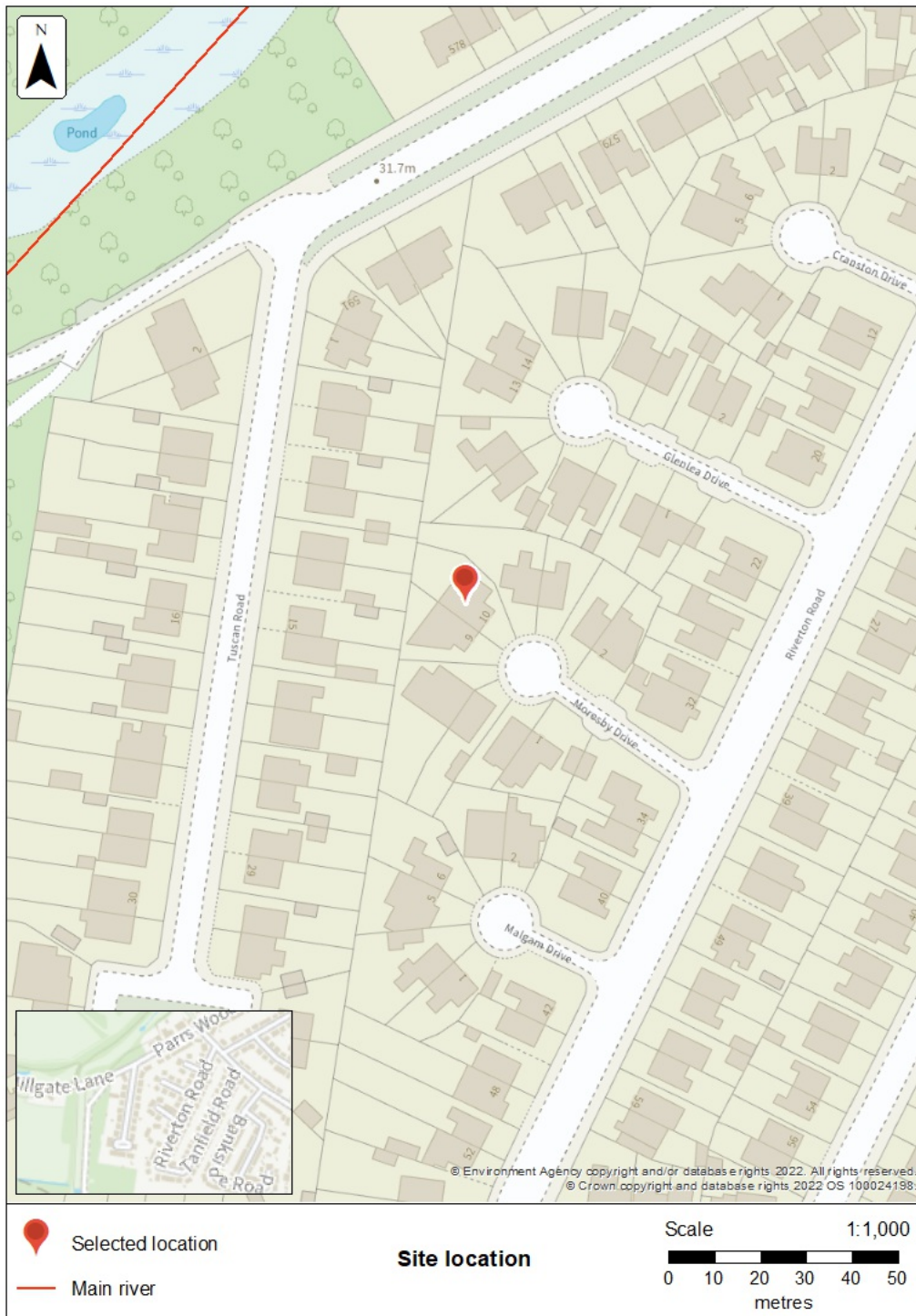
Location of site: 384593 / 389614 (shown as easting and northing coordinates)

Document created on: 21 November 2022

This information was previously known as a product 4.

Customer reference number: 49F6CYMDK77N

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
- 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

Not included in this document

This document does not include a Flood Defence Breach Hazard Map.

As your location benefits from flood defences, you need to request a Flood Defence Breach Hazard Map and information about the level of flood protection offered at your location from the Greater Manchester Merseyside and Cheshire Environment Agency team at inforequests.gmmc@environment-agency.gov.uk. This information will only be available if modelling has been carried out for breach scenarios.

Include a site location map in your request.

Information that's unavailable

This document **does not** contain:

- historic flooding

We do not have historic flooding data for this location.

Please note that:

- 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 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.

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: Upper Mersey 2017

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

Date: 14 April 2022

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occurring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 2.

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

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

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

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

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

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

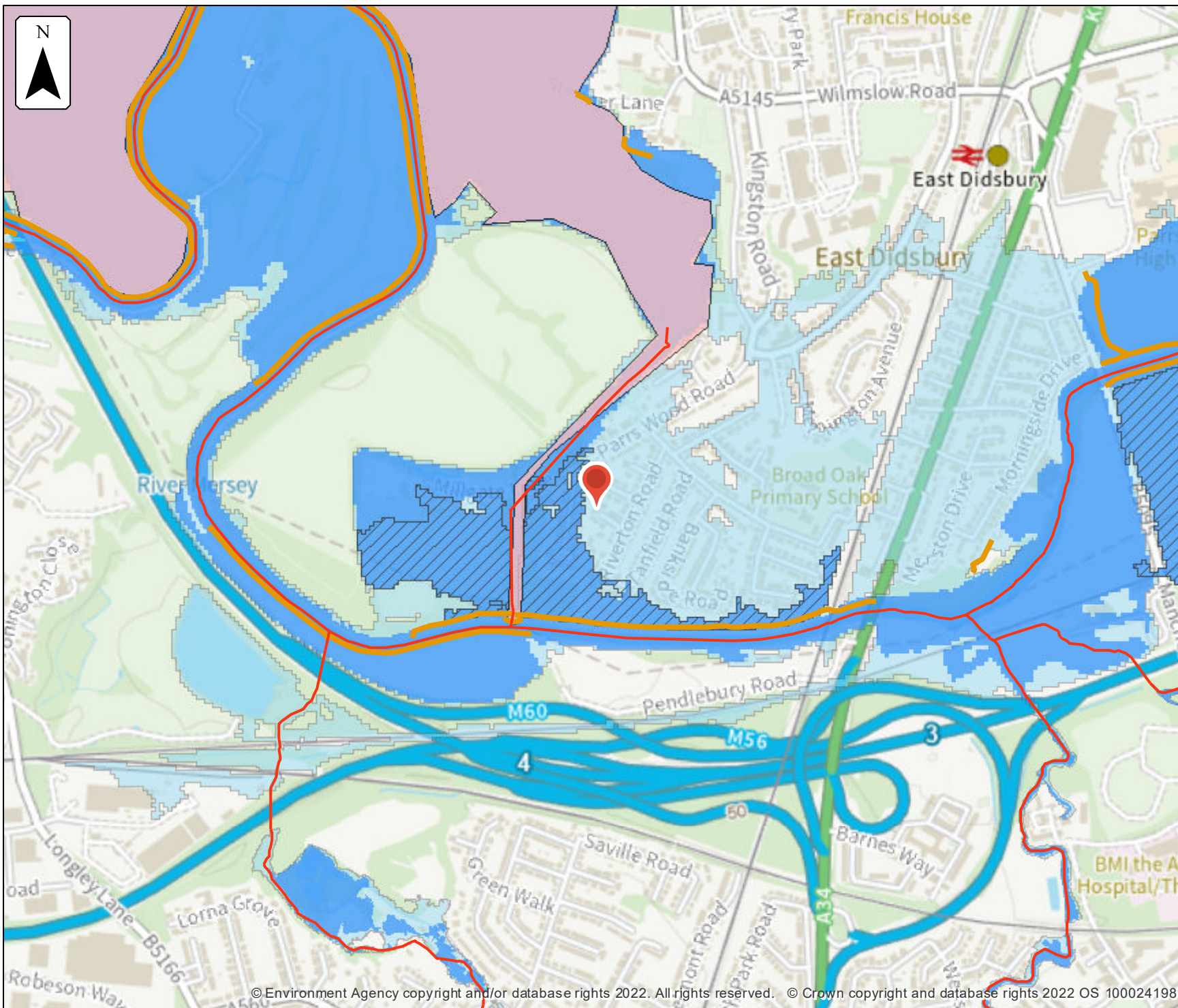
This data is updated on a quarterly basis as better data becomes available.

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](#)



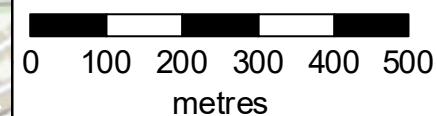
Flood map for planning

Location (easting/northing)
384593/389614

Scale
1:10,000

Created
21 Nov 2022

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



Flood defences and attributes

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

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.



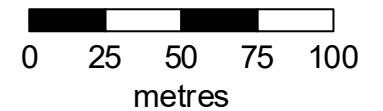
Flood defences

Location (easting/northing)
384593/389614

Scale
1:2,500

Created
21 Nov 2022

-  Selected location
-  Main river
-  Flood defence



Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	58974	Embankment	100		32.82	32.85	
2	144885	Embankment	75		33.17	33.17	
3	144886	Engineered High Ground	75		33.17	31.30	
4	144887	Engineered High Ground	75		30.67	31.30	
5	146508	Spillway	100		32.81	32.81	
6	146503	Embankment	75		33.17	33.17	
7	146504	Engineered High Ground	75		33.17	31.25	
8	144888	Engineered High Ground	75		32.70	30.67	
9	183314	Engineered High Ground	75		30.63	31.25	
10	173224	Embankment	75		30.92	30.73	
11	173225	Engineered High Ground	75		30.52	30.34	
12	71380	Engineered High Ground	75		29.63	30.52	
13	144889	Engineered High Ground	75		30.33	32.70	
14	146505	Engineered High Ground	75		29.22	29.63	
15	144890	Engineered High Ground	75		30.49	30.33	
16	146506	Engineered High Ground	75		30.40	29.22	
17	122331	Embankment	50	Fair	32.93	34.03	

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

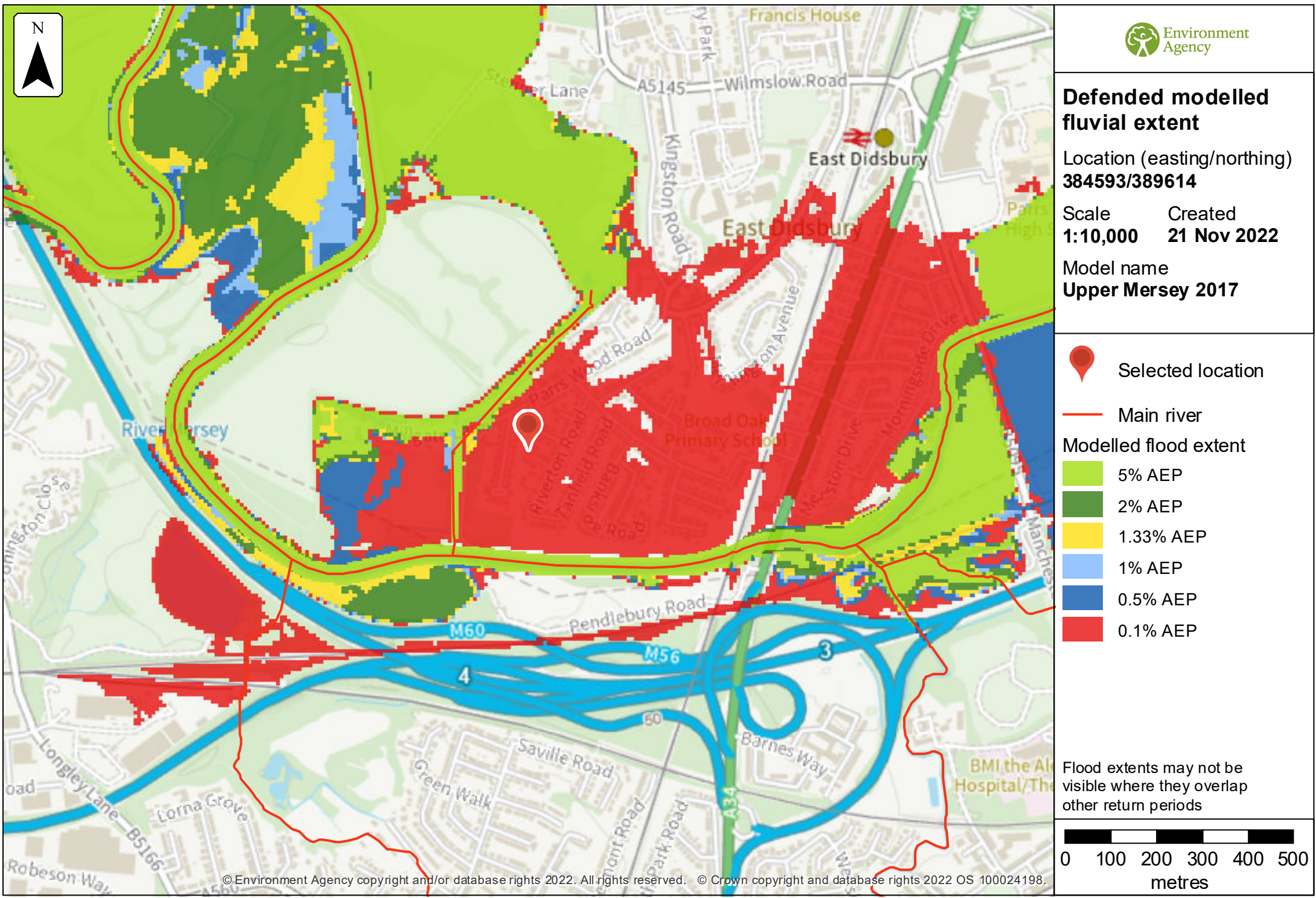
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

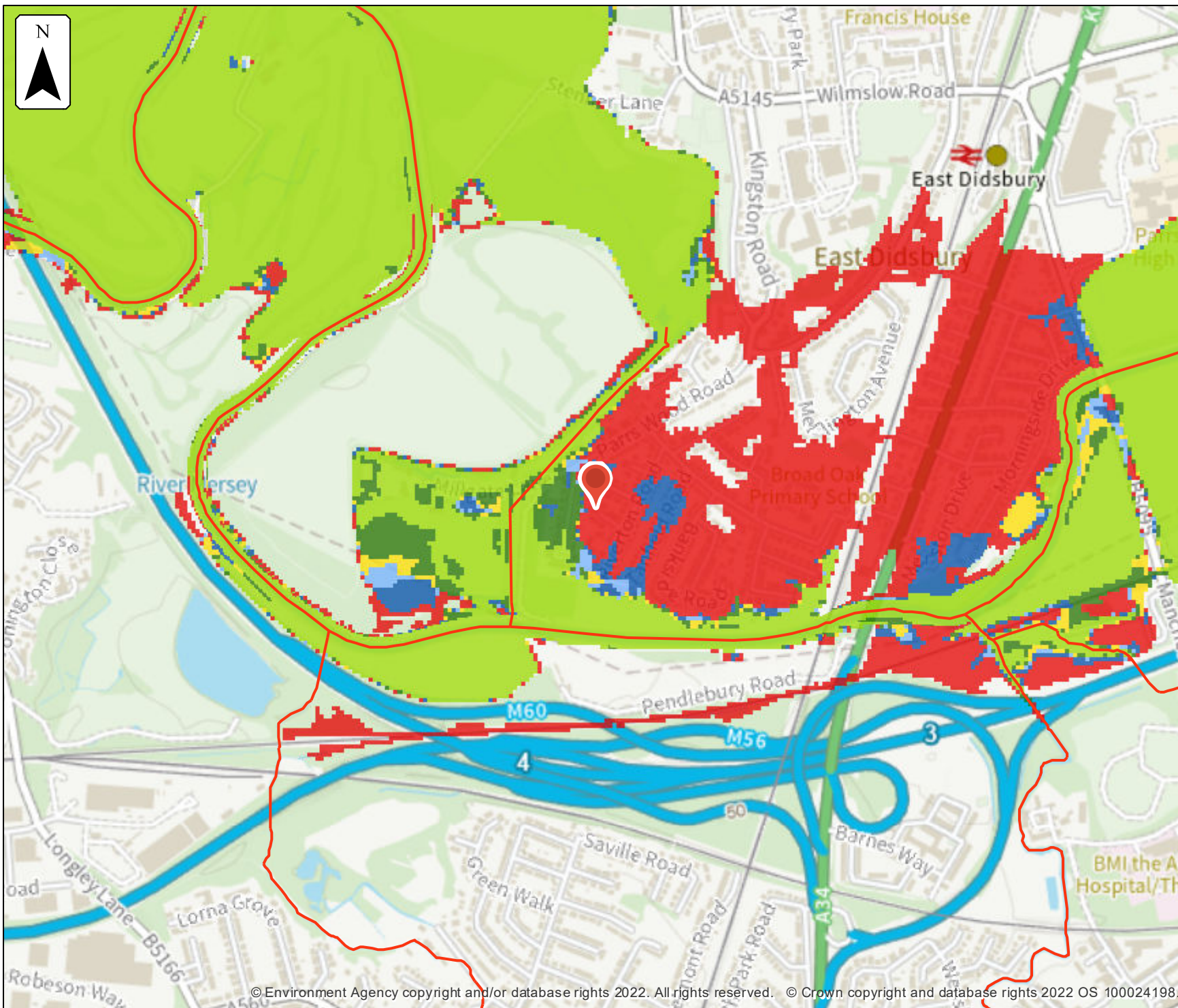
The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

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
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change





Defences removed modelled fluvial extent

Location (easting/northing)
384593/389614

Scale Created
1:10,000 21 Nov 2022

Model name
Upper Mersey 2017

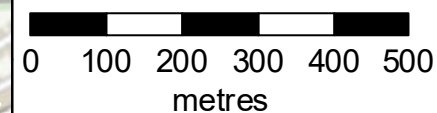
 Selected location

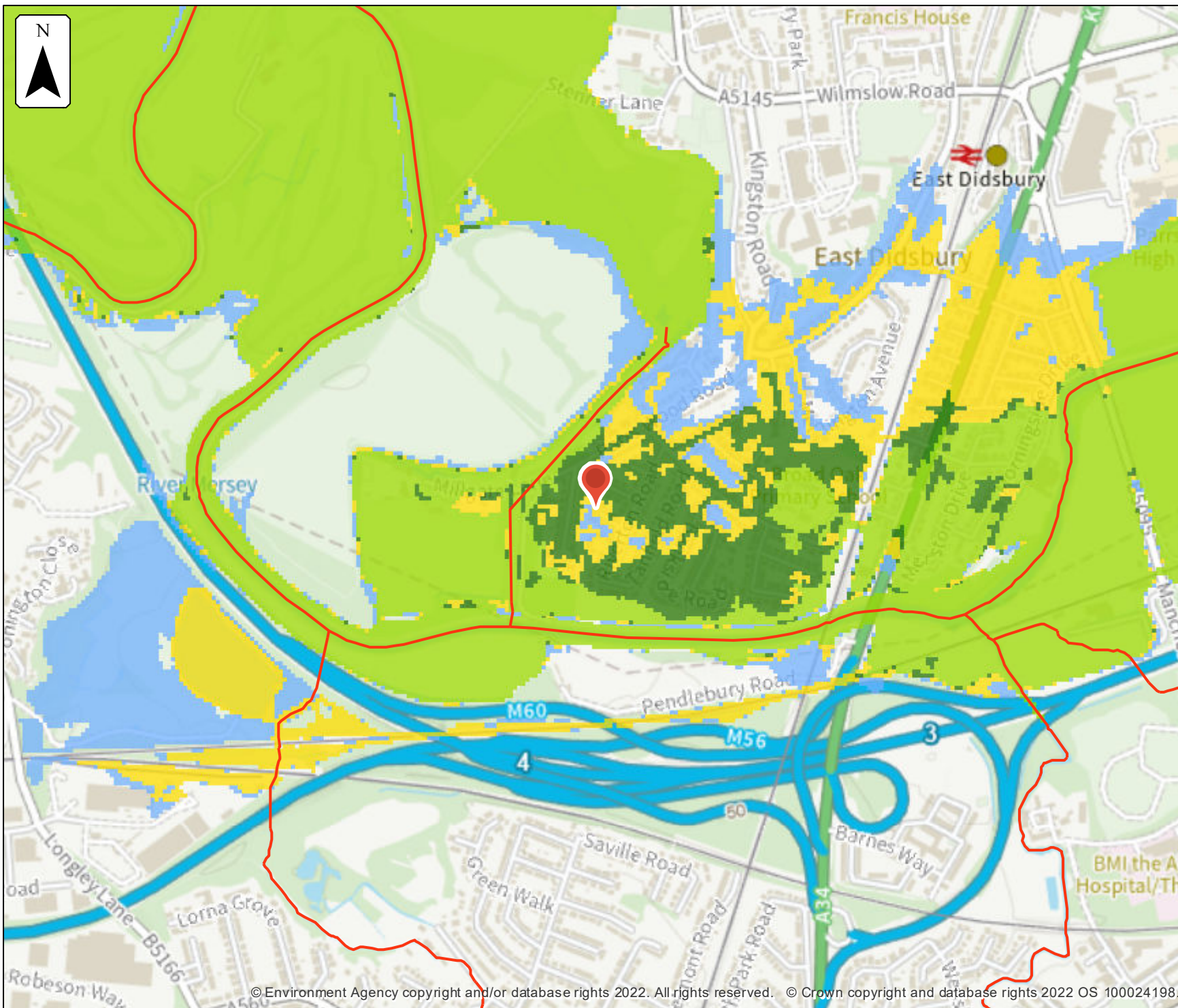
 Main river

Modelled flood extent

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

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





Defended climate change modelled fluvial extent

Location (easting/northing)
384593/389614

Scale Created
1:10,000 21 Nov 2022

Model name
Upper Mersey 2017

 Selected location

 Main river

Modelled flood extent

 1.0% AEP (+30%)

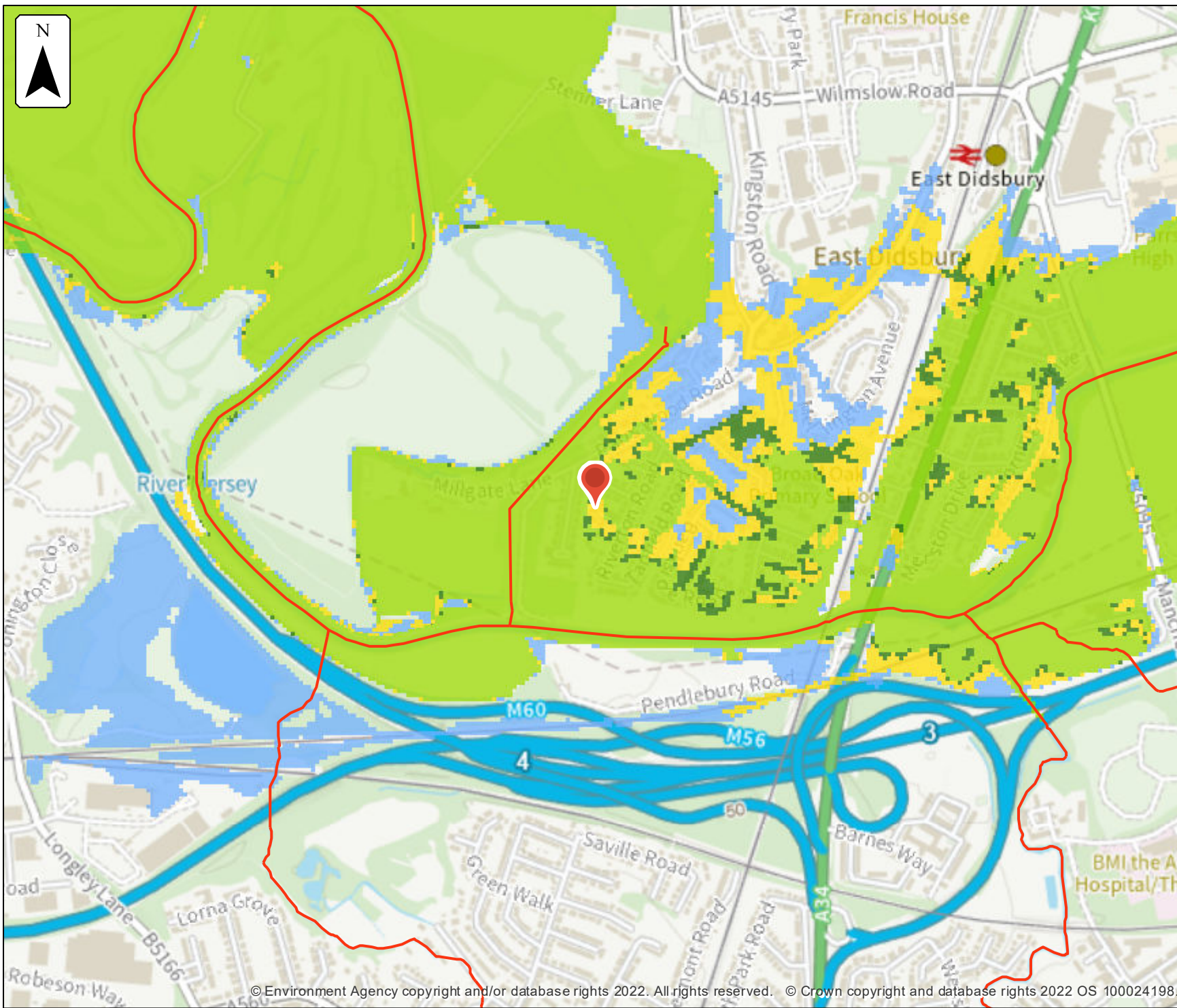
 1.0% AEP (+35%)

 1.0% AEP (+70%)

 0.1% AEP (+30%)

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


0 100 200 300 400 500
metres



Defences removed climate change modelled fluvial extent

Location (easting/northing)
384593/389614

Scale Created
1:10,000 21 Nov 2022

Model name
Upper Mersey 2017

 Selected location

 Main river

Modelled flood extent

 1.0% AEP (+30%)

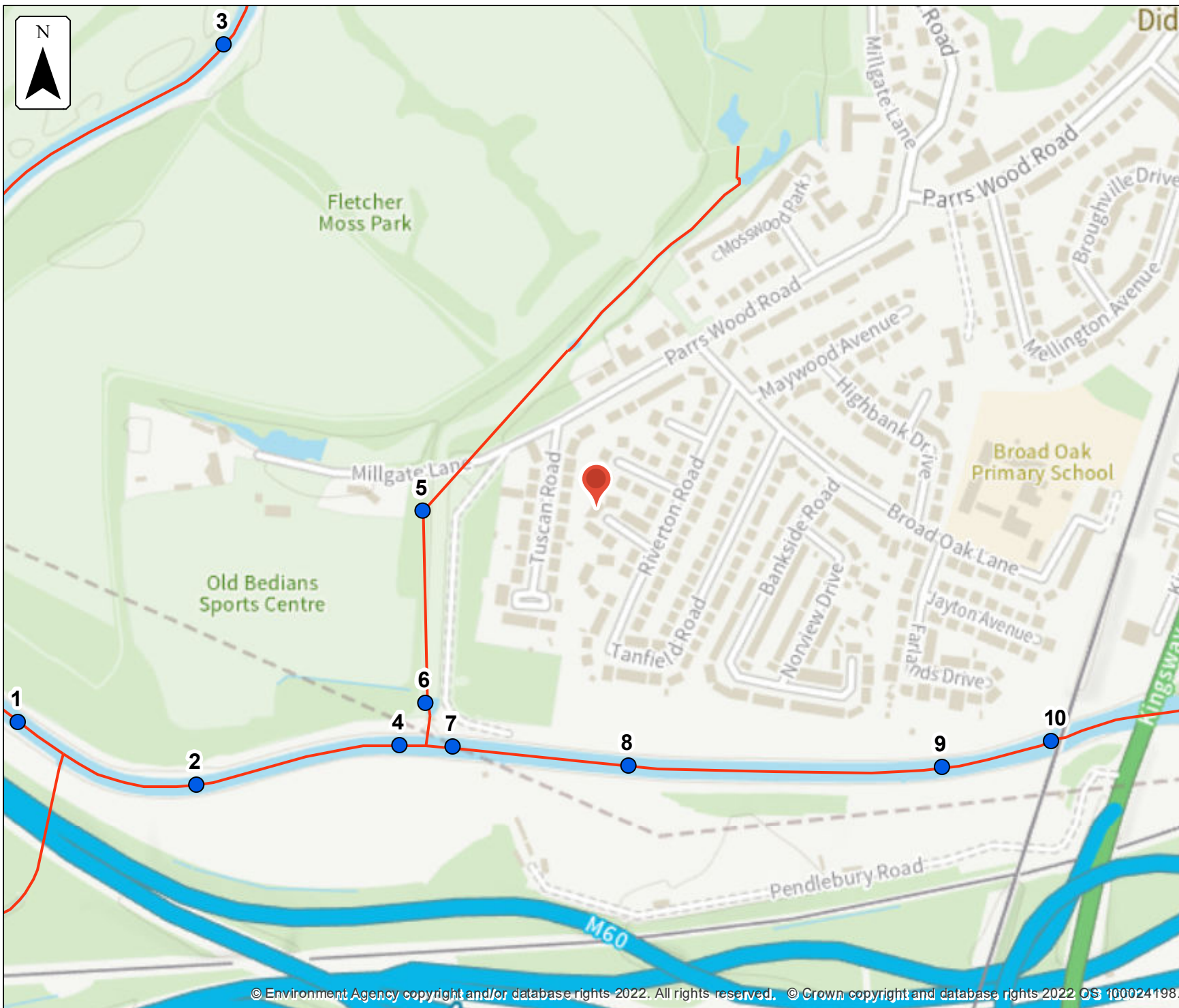
 1.0% AEP (+35%)

 1.0% AEP (+70%)

 0.1% AEP (+30%)

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


0 100 200 300 400 500
metres



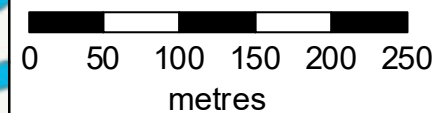
Defended modelled fluvial node locations

Location (easting/northing)
384593/389614

Scale Created
1:5,000 21 Nov 2022

Model name
Upper Mersey 2017

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

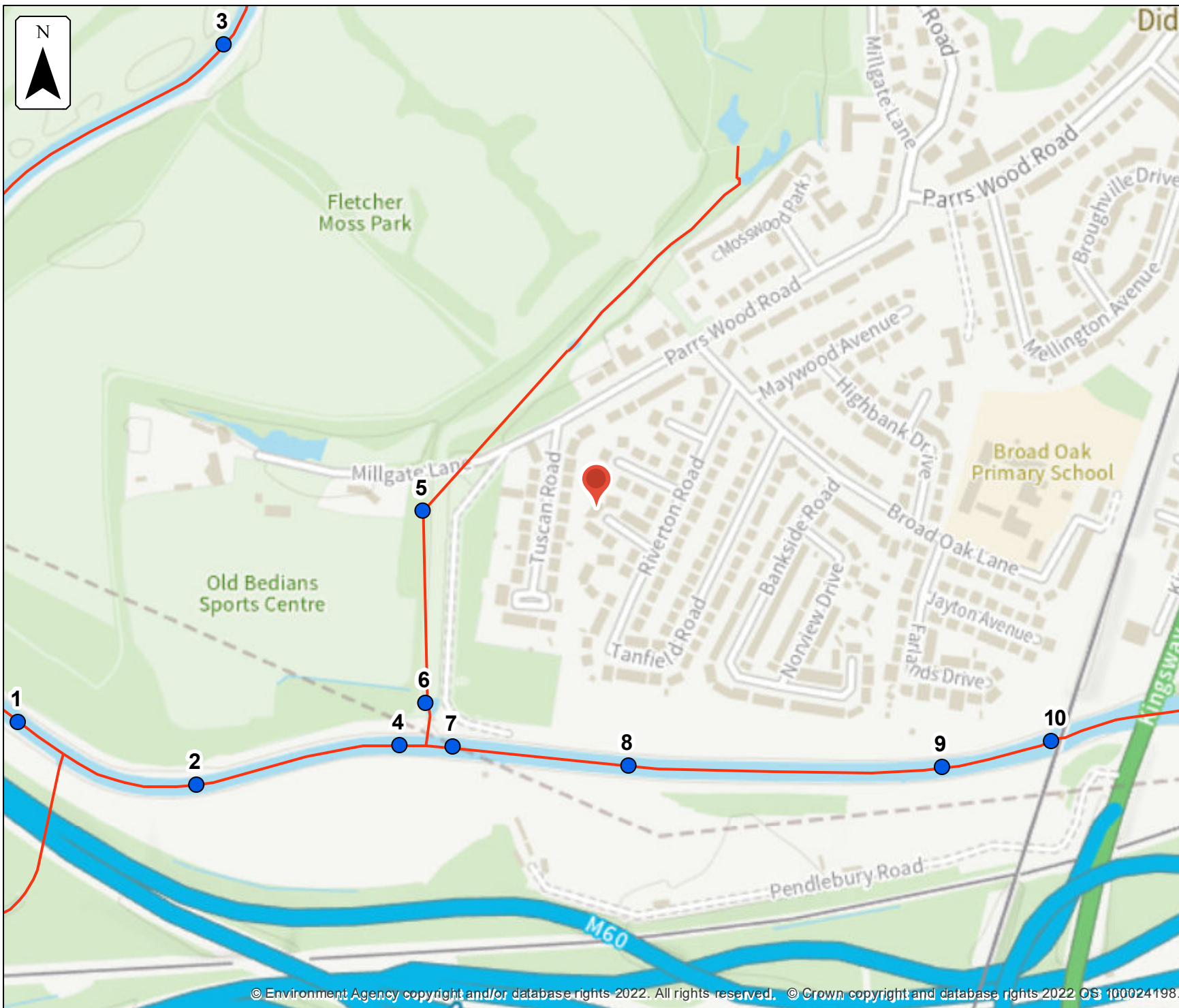
Defended

Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1290570	384032	389405	31.98	283.87	32.27	331.33	32.35	347.80	32.41	361.11	32.68	381.88	33.26	493.66
2	1290517	384205	389344	32.13	282.43	32.43	332.28	32.52	350.19	32.57	363.46	32.84	389.60	33.43	501.32
3	1290541	384232	390062	31.12	284.52	31.28	333.85	31.31	348.91	31.33	358.54	31.40	393.69	31.54	499.52
4	1290767	384402	389383	32.33	283.71	32.64	333.27	32.73	351.61	32.79	367.25	32.98	408.39	33.43	576.64
5	1290645	384425	389610	28.15	1.96	28.66	11.05	29.34	16.04	29.42	12.12	29.49	12.20	29.92	12.90
6	1290586	384427	389424	28.20	0.50	28.68	0.50	29.35	0.50	29.43	0.50	29.50	0.50	29.92	0.50
7	1290662	384454	389381	32.33	310.98	32.64	362.53	32.73	381.46	32.79	397.44	32.98	423.22	33.43	576.64
8	1290572	384624	389363	32.49	309.74	32.81	362.47	32.90	382.56	32.96	397.46	33.13	422.90	33.53	611.61
9	1290830	384929	389361	32.73	311.04	33.06	362.59	33.17	381.35	33.24	397.52	33.38	423.07	33.94	611.88
10	1290644	385035	389387	32.85	310.09	33.19	362.45	33.29	382.71	33.37	397.20	33.52	421.92	34.23	586.99

Data in this table comes from the Upper Mersey 2017 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.



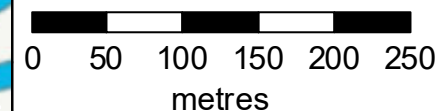
Defences removed modelled fluvial node locations

Location (easting/northing)
384593/389614

Scale Created
1:5,000 21 Nov 2022

Model name
Upper Mersey 2017

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

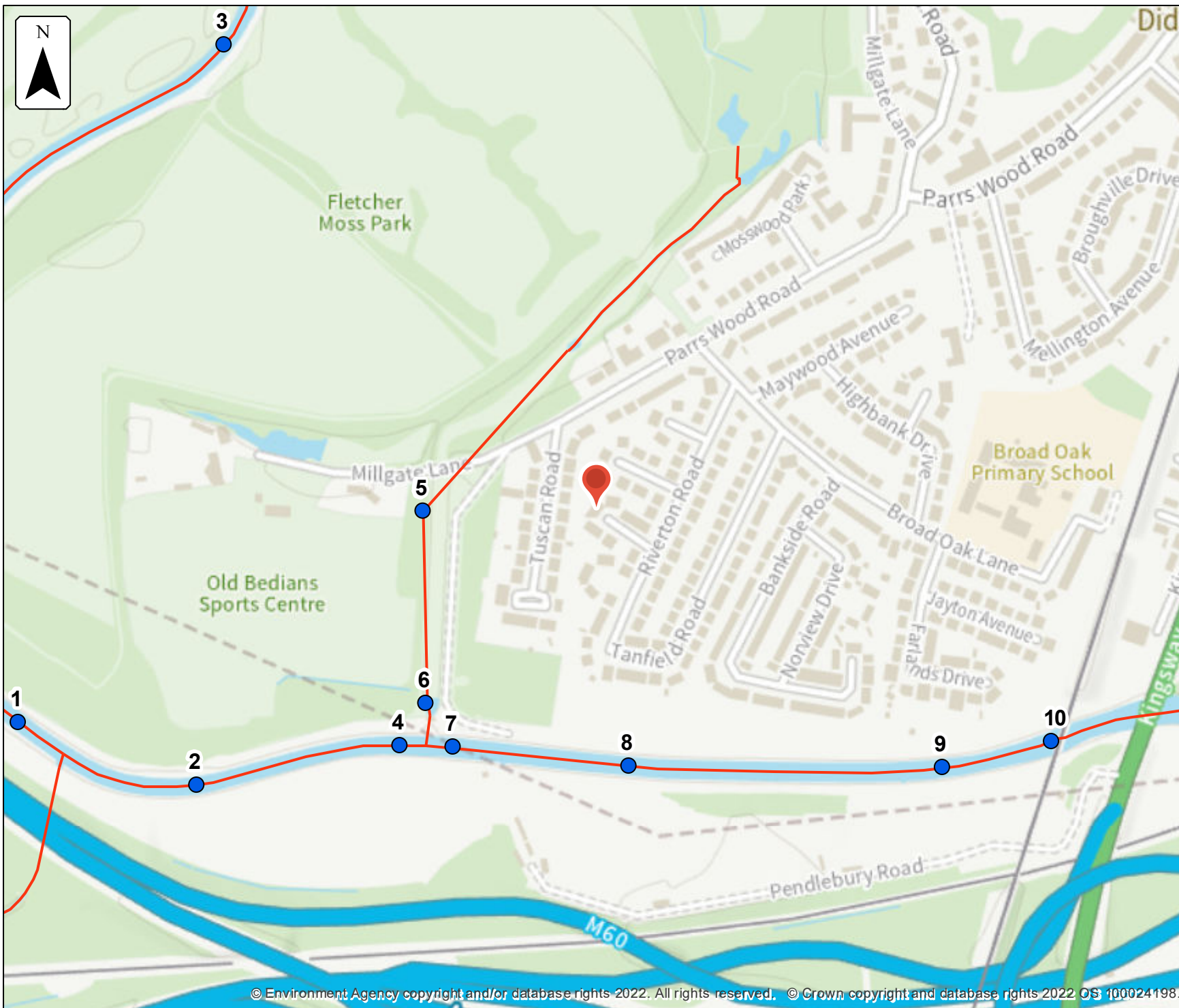
Defences removed

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	1290570	384032	389405	31.31	255.22	31.51	274.20	31.61	282.40	31.65	293.33	31.80	312.64	32.53	412.60
2	1290517	384205	389344	31.61	233.40	31.80	251.95	31.88	262.78	31.94	270.52	32.08	294.02	32.74	414.02
3	1290541	384232	390062	29.53	195.16	29.65	206.72	29.70	213.48	29.73	219.20	29.83	234.83	30.19	322.43
4	1290767	384402	389383	31.81	241.33	31.95	273.72	32.01	293.26	32.05	305.86	32.16	338.62	32.76	483.94
5	1290645	384425	389610	27.29	5.45	27.65	6.99	27.81	7.51	27.92	7.84	28.23	8.56	29.40	10.76
6	1290586	384427	389424	27.33	0.50	27.67	0.50	27.82	0.50	27.93	0.50	28.23	0.50	29.40	0.50
7	1290662	384454	389381	31.81	241.33	31.95	273.72	32.01	293.26	32.05	305.86	32.16	338.62	32.76	483.94
8	1290572	384624	389363	31.84	274.86	31.96	315.90	32.03	334.46	32.06	349.86	32.16	389.98	32.78	540.08
9	1290830	384929	389361	32.10	299.93	32.25	346.30	32.32	368.75	32.37	385.86	32.50	431.33	33.08	605.67
10	1290644	385035	389387	32.29	300.28	32.46	348.20	32.54	371.64	32.60	389.64	32.74	436.68	33.35	618.73

Data in this table comes from the Upper Mersey 2017 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.



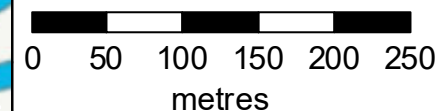
Defended climate change modelled fluvial node locations

Location (easting/northing)
384593/389614

Scale Created
1:5,000 21 Nov 2022

Model name
Upper Mersey 2017

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

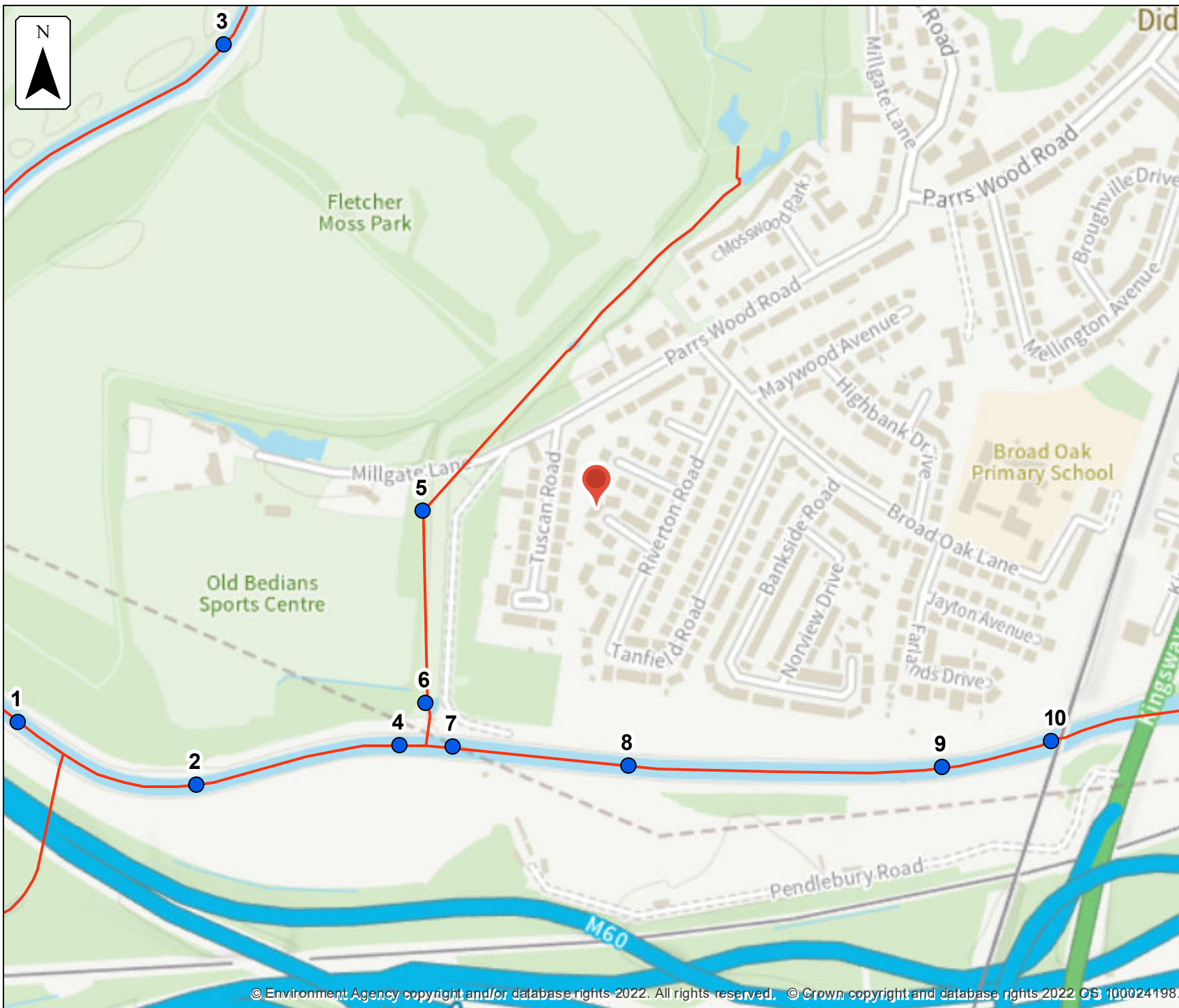
Defended climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+30%)		1.0% AEP (+35%)		1.0% AEP (+70%)		0.1% AEP (+30%)	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1290570	384032	389405	32.95	432.11	33.0	441.02	33.23	479.24	33.55	554.67
2	1290517	384205	389344	33.16	420.03	33.20	432.13	33.39	485.35	33.62	597.32
3	1290541	384232	390062	31.47	441.21	31.48	452.0	31.53	490.21	31.67	553.50
4	1290767	384402	389383	33.19	477.18	33.23	493.36	33.40	557.24	33.61	689.95
5	1290645	384425	389610	29.70	12.30	29.74	12.32	29.89	12.62	30.21	13.40
6	1290586	384427	389424	29.71	0.50	29.74	0.50	29.89	0.50	30.21	0.50
7	1290662	384454	389381	33.19	477.18	33.23	493.36	33.40	557.24	33.61	689.95
8	1290572	384624	389363	33.34	488.72	33.37	508.09	33.49	589.21	33.69	738.06
9	1290830	384929	389361	33.65	488.38	33.69	508.38	33.89	589.73	34.21	744.02
10	1290644	385035	389387	33.84	478.45	33.90	495.11	34.16	566.0	34.58	708.62

Data in this table comes from the Upper Mersey 2017 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.



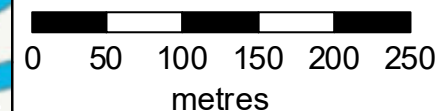
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
384593/389614

Scale Created
1:5,000 21 Nov 2022

Model name
Upper Mersey 2017

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

Defences removed climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+30%)		1.0% AEP (+35%)		1.0% AEP (+70%)		0.1% AEP (+30%)	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1290570	384032	389405	32.03	341.59	32.07	357.01	32.46	402.05	33.10	495.84
2	1290517	384205	389344	32.28	330.47	32.35	340.71	32.67	401.09	33.27	506.50
3	1290541	384232	390062	29.95	260.48	29.98	268.01	30.15	312.02	30.69	444.24
4	1290767	384402	389383	32.33	387.75	32.39	400.88	32.70	469.65	33.28	586.05
5	1290645	384425	389610	28.72	9.38	28.82	9.54	29.32	10.39	29.89	12.41
6	1290586	384427	389424	28.72	0.50	28.82	0.50	29.32	0.50	29.90	0.50
7	1290662	384454	389381	32.33	387.75	32.39	400.88	32.70	469.65	33.28	586.05
8	1290572	384624	389363	32.33	443.71	32.39	456.89	32.71	525.88	33.30	644.09
9	1290830	384929	389361	32.67	494.96	32.73	510.96	33.02	589.49	33.52	729.39
10	1290644	385035	389387	32.93	504.58	32.98	521.49	33.28	602.82	33.75	753.99

Data in this table comes from the Upper Mersey 2017 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)
384593/389614

Scale Created
1:2,500 21 Nov 2022

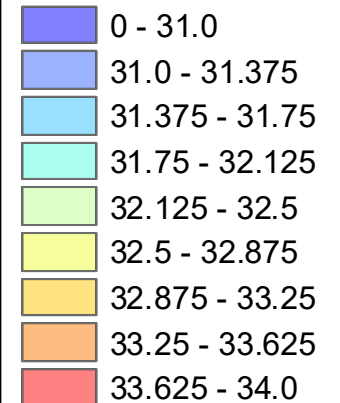
Model name
Upper Mersey 2017



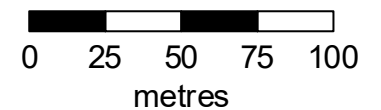
Selected location

— 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	384543	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.37	32.16
2	384568	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0	32.19
3	384593	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.05	32.28
4	384618	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.02	32.37
5	384643	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.23	32.38
6	384543	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.46	32.14
7	384568	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	32.14
8	384593	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.02	32.35
9	384618	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.26	32.38
10	384643	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.23	32.38
11	384543	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.46	32.13
12	384568	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.33	32.13
13	384593	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.07	32.30
14	384618	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.23	32.36
15	384643	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.37	32.38
16	384543	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.41	32.12

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	384568	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.26	32.13
18	384593	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.56	32.15
19	384618	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.35	32.32
20	384643	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.37	32.35
21	384543	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.41	32.09
22	384568	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.40	32.11
23	384593	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.43	32.14
24	384618	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.30	32.28
25	384643	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.47	32.34

Data in this table comes from the Upper Mersey 2017 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)
384593/389614

Scale Created
1:2,500 21 Nov 2022

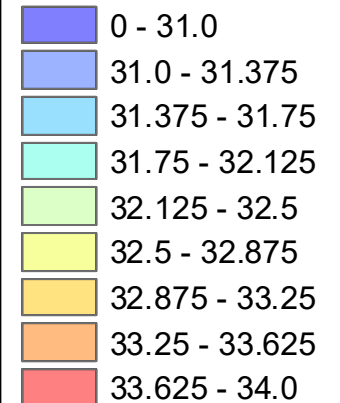
Model name
Upper Mersey 2017



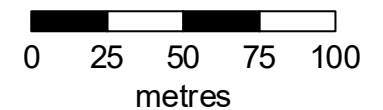
Selected location

— Main river

Modelled 2D grid
Water level in mAOD



This map shows the
0.1% 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	384543	389564	NoData	NoData	0.04	31.83	0.06	31.84	0.08	31.86	0.12	31.90	0.90	32.69
2	384568	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.42	32.69
3	384593	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.46	32.69
4	384618	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.32	32.68
5	384643	389564	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.54	32.68
6	384543	389589	NoData	NoData	0.09	31.76	0.10	31.78	0.11	31.79	0.15	31.83	0.99	32.67
7	384568	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.62	32.67
8	384593	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.27	32.67
9	384618	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.55	32.66
10	384643	389589	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.51	32.67
11	384543	389614	NoData	NoData	0.06	31.73	0.07	31.74	0.09	31.76	0.12	31.79	0.99	32.66
12	384568	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.85	32.65
13	384593	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.42	32.65
14	384618	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.52	32.65
15	384643	389614	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.64	32.65
16	384543	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.05	31.75	0.94	32.64

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	384568	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.76	32.63
18	384593	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	1.04	32.63
19	384618	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.67	32.64
20	384643	389639	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.66	32.64
21	384543	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.03	31.67	0.94	32.62
22	384568	389664	NoData	NoData	NoData	NoData	0	31.61	0	31.65	0.04	31.75	0.90	32.62
23	384593	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.90	32.61
24	384618	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.64	32.63
25	384643	389664	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.76	32.63

Data in this table comes from the Upper Mersey 2017 model.

Height values are shown in mAOD, and depth values are shown in metres.

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Defended climate change modelled fluvial extent and height

Location (easting/northing)
384593/389614

Scale Created
1:2,500 21 Nov 2022

Model name
Upper Mersey 2017

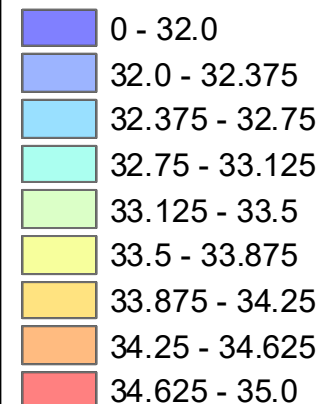


Selected location

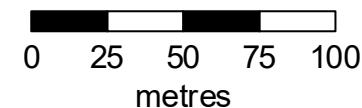
— Main river

Modelled 2D grid

Water level in mAOD



This map shows the
0.1% AEP +30% height data



Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)		0.1% AEP (+30%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	384543	389564	NoData	NoData	NoData	NoData	0.18	31.97	1.36	33.15
2	384568	389564	NoData	NoData	NoData	NoData	0	32.07	0.88	33.14
3	384593	389564	NoData	NoData	NoData	NoData	0.01	32.24	0.91	33.14
4	384618	389564	NoData	NoData	NoData	NoData	NoData	NoData	0.78	33.14
5	384643	389564	NoData	NoData	NoData	NoData	0.19	32.33	1.00	33.15
6	384543	389589	NoData	NoData	0.07	31.74	0.27	31.95	1.46	33.14
7	384568	389589	NoData	NoData	NoData	NoData	NoData	NoData	1.08	33.13
8	384593	389589	NoData	NoData	NoData	NoData	NoData	NoData	0.74	33.14
9	384618	389589	NoData	NoData	0.02	32.09	0.22	32.33	1.02	33.14
10	384643	389589	NoData	NoData	NoData	NoData	0.19	32.34	0.99	33.14
11	384543	389614	NoData	NoData	0.06	31.74	0.27	31.94	1.46	33.13
12	384568	389614	NoData	NoData	NoData	NoData	NoData	NoData	1.32	33.13
13	384593	389614	NoData	NoData	NoData	NoData	0.04	32.27	0.89	33.13
14	384618	389614	NoData	NoData	NoData	NoData	0.20	32.32	1	33.13
15	384643	389614	NoData	NoData	0.09	32.10	0.33	32.34	1.12	33.13
16	384543	389639	NoData	NoData	0.03	31.74	0.22	31.93	1.41	33.12

Label	Easting	Northing	1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)		0.1% AEP (+30%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	384568	389639	NoData	NoData	0.01	31.81	0.14	32.01	1.24	33.11
18	384593	389639	NoData	NoData	0.28	31.87	0.48	32.07	1.52	33.11
19	384618	389639	NoData	NoData	0.10	32.07	0.30	32.27	1.14	33.11
20	384643	389639	NoData	NoData	0.10	32.08	0.33	32.31	1.14	33.12
21	384543	389664	NoData	NoData	0.02	31.65	0.22	31.90	1.42	33.10
22	384568	389664	NoData	NoData	0.10	31.82	0.28	32.00	1.39	33.10
23	384593	389664	NoData	NoData	0.20	31.91	0.35	32.06	1.38	33.10
24	384618	389664	NoData	NoData	0.06	32.04	0.26	32.24	1.12	33.10
25	384643	389664	NoData	NoData	0.21	32.08	0.43	32.30	1.24	33.11

Data in this table comes from the Upper Mersey 2017 model.

Height values are shown in mAOD, and depth values are shown in metres.

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Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
384593/389614

Scale Created
1:2,500 21 Nov 2022

Model name
Upper Mersey 2017

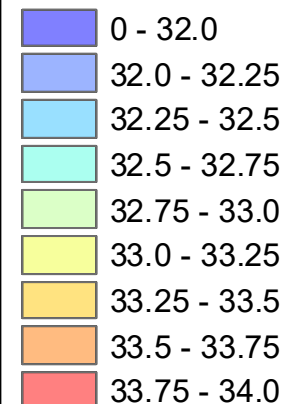


Selected location

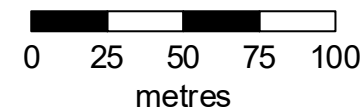
— Main river

Modelled 2D grid

Water level in mAOD



This map shows the
0.1% AEP +30% height data



Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)		0.1% AEP (+30%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	384543	389564	0.36	32.14	0.44	32.23	0.83	32.61	1.46	33.24
2	384568	389564	0	32.17	0.01	32.24	0.35	32.62	0.98	33.24
3	384593	389564	0.01	32.23	0.05	32.28	0.39	32.62	1.01	33.24
4	384618	389564	NoData	NoData	NoData	NoData	0.25	32.61	0.88	33.24
5	384643	389564	0.11	32.25	0.15	32.30	0.46	32.61	1.10	33.24
6	384543	389589	0.43	32.11	0.52	32.20	0.92	32.59	1.55	33.23
7	384568	389589	NoData	NoData	0.14	32.19	0.54	32.59	1.18	33.23
8	384593	389589	NoData	NoData	NoData	NoData	0.19	32.59	0.83	33.23
9	384618	389589	0.06	32.17	0.11	32.23	0.47	32.59	1.12	33.23
10	384643	389589	0.04	32.20	0.09	32.24	0.44	32.59	1.08	33.24
11	384543	389614	0.41	32.08	0.50	32.17	0.91	32.58	1.55	33.22
12	384568	389614	0.28	32.08	0.37	32.17	0.77	32.58	1.42	33.22
13	384593	389614	NoData	NoData	NoData	NoData	0.34	32.57	0.99	33.22
14	384618	389614	0.03	32.16	0.07	32.20	0.45	32.58	1.09	33.22
15	384643	389614	0.16	32.17	0.20	32.21	0.57	32.58	1.22	33.22
16	384543	389639	0.35	32.06	0.44	32.15	0.86	32.56	1.51	33.21

Label	Easting	Northing	1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)		0.1% AEP (+30%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	384568	389639	0.17	32.04	0.27	32.13	0.69	32.55	1.34	33.21
18	384593	389639	0.45	32.04	0.54	32.13	0.97	32.56	1.62	33.21
19	384618	389639	0.15	32.12	0.20	32.17	0.59	32.56	1.24	33.21
20	384643	389639	0.15	32.13	0.19	32.17	0.58	32.56	1.23	33.21
21	384543	389664	0.35	32.02	0.44	32.12	0.86	32.54	1.52	33.19
22	384568	389664	0.31	32.02	0.40	32.11	0.83	32.54	1.48	33.19
23	384593	389664	0.31	32.03	0.40	32.11	0.82	32.54	1.48	33.19
24	384618	389664	0.11	32.09	0.16	32.14	0.57	32.55	1.22	33.20
25	384643	389664	0.25	32.11	0.29	32.16	0.69	32.55	1.33	33.20

Data in this table comes from the Upper Mersey 2017 model.

Height values are shown in mAOD, and depth values are shown in metres.

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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