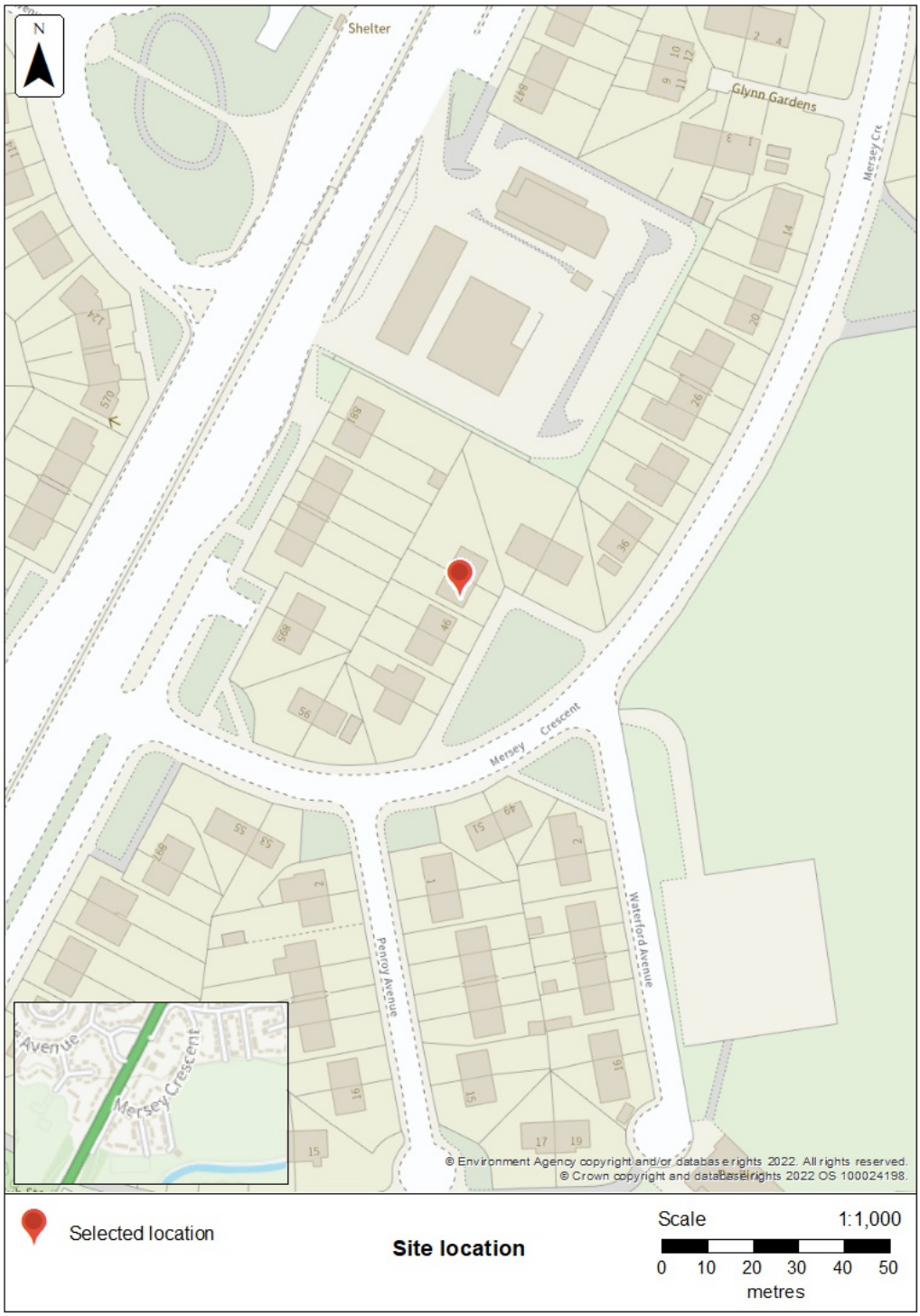
Flood risk assessment data

Location of site: 382863 / 391448 (shown as easting and northing coordinates)
Document created on: 12 June 2022
This information was previously known as a product 4.
Customer reference number: GMMC266766AB/Y2MGF7GWTEB8

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
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

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.

There is not any modelled climate change data for this location. This is because detailed modelling hasn't been carried out in this area. You will need to consider the latest flood risk assessment climate change allowances and factor in the new allowances to demonstrate the development will be safe from flooding.

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
Date:

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 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

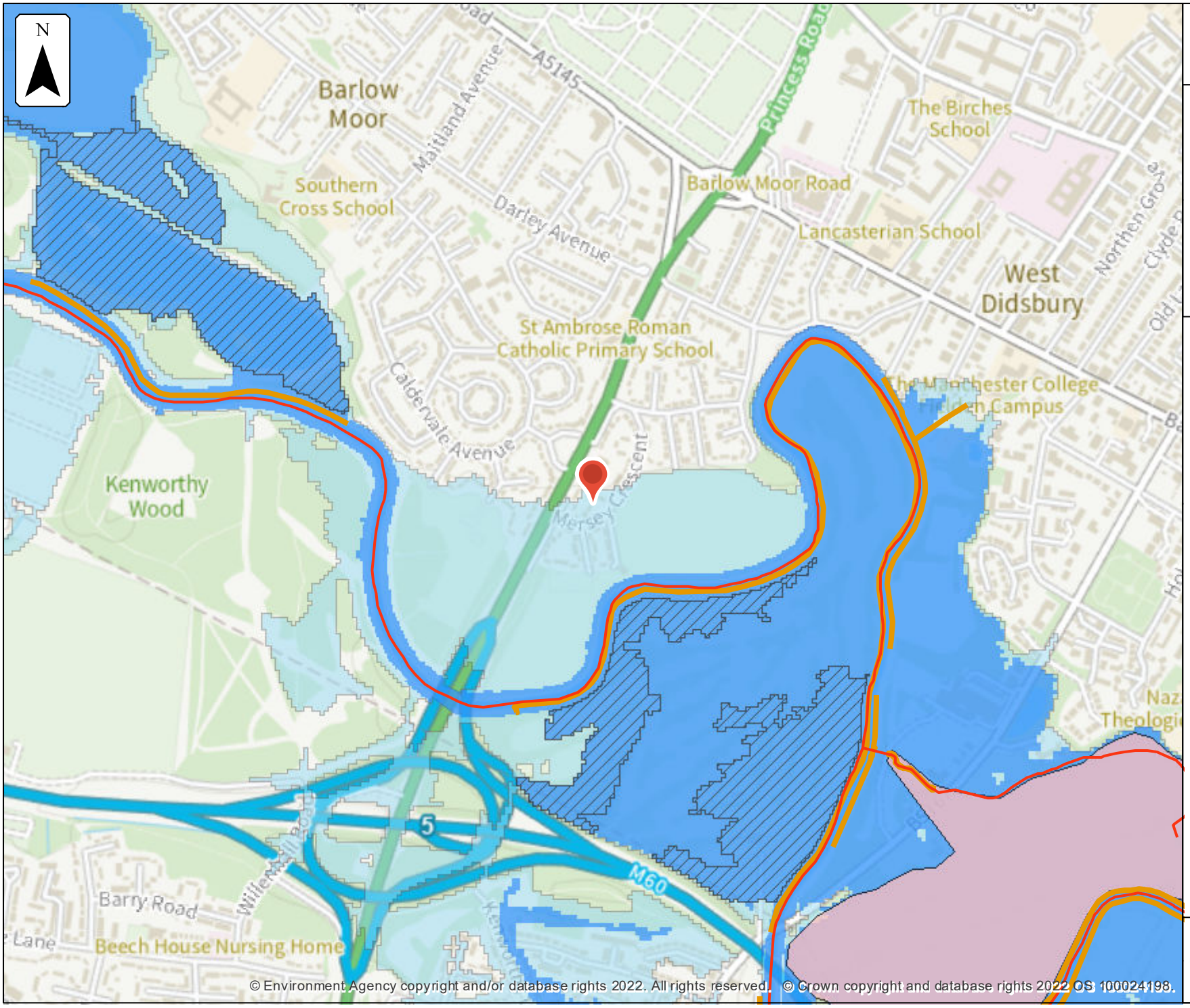
This data is updated on a quarterly basis as better data becomes available.

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



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Flood map for planning

Location (easting/northing)
382863/391448

Scale
1:10,000

Created
12 Jun 2022

Selected location

Main river

Flood defence

Water storage area

Areas benefiting from flood defence

Flood zone 3

Flood zone 2

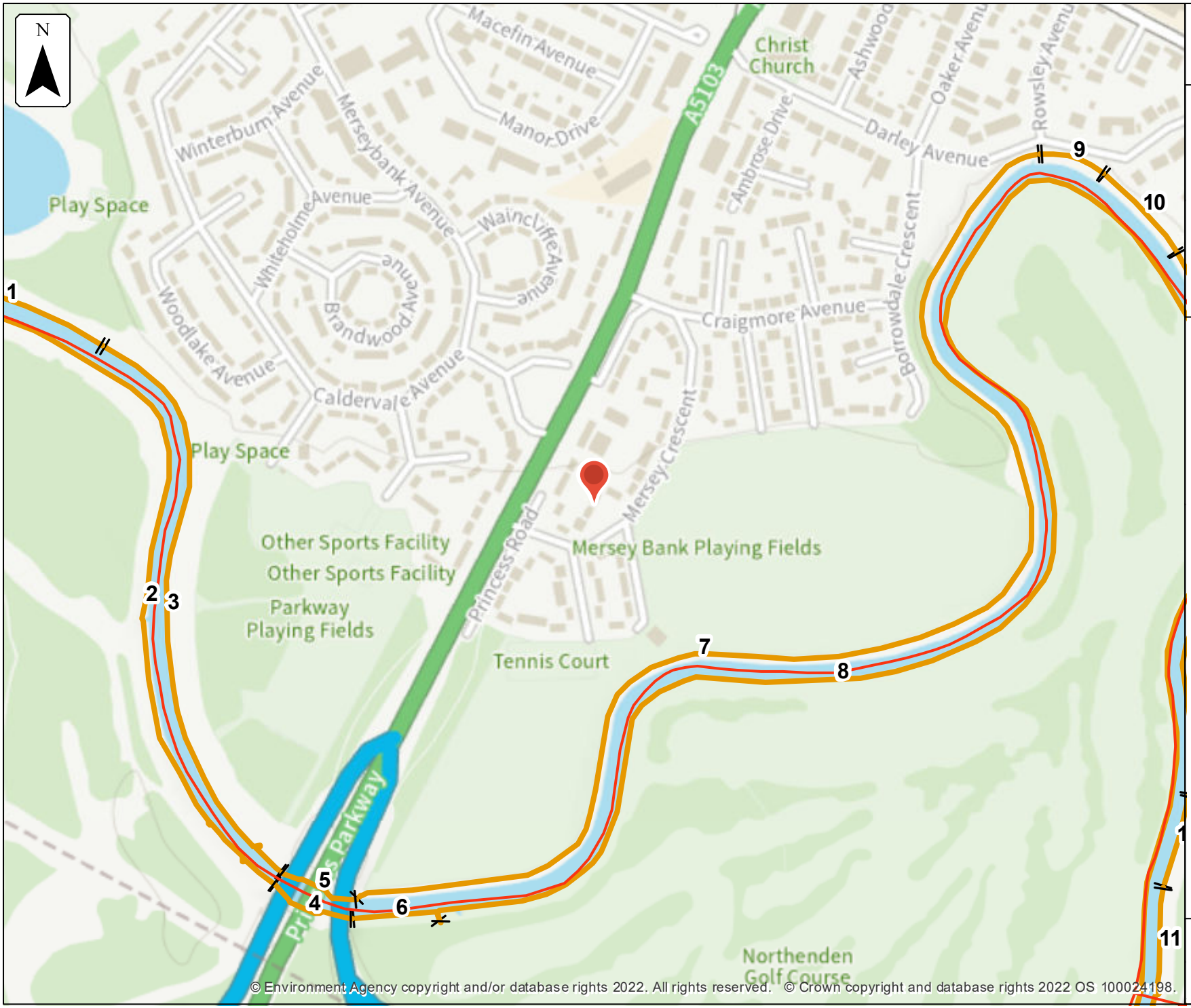
0 100 200 300 400 500
metres

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.



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Environment Agency

Flood defences

Location (easting/northing)
382863/391448

Scale
1:5,000

Created
12 Jun 2022

Selected location

Main river

Flood defence

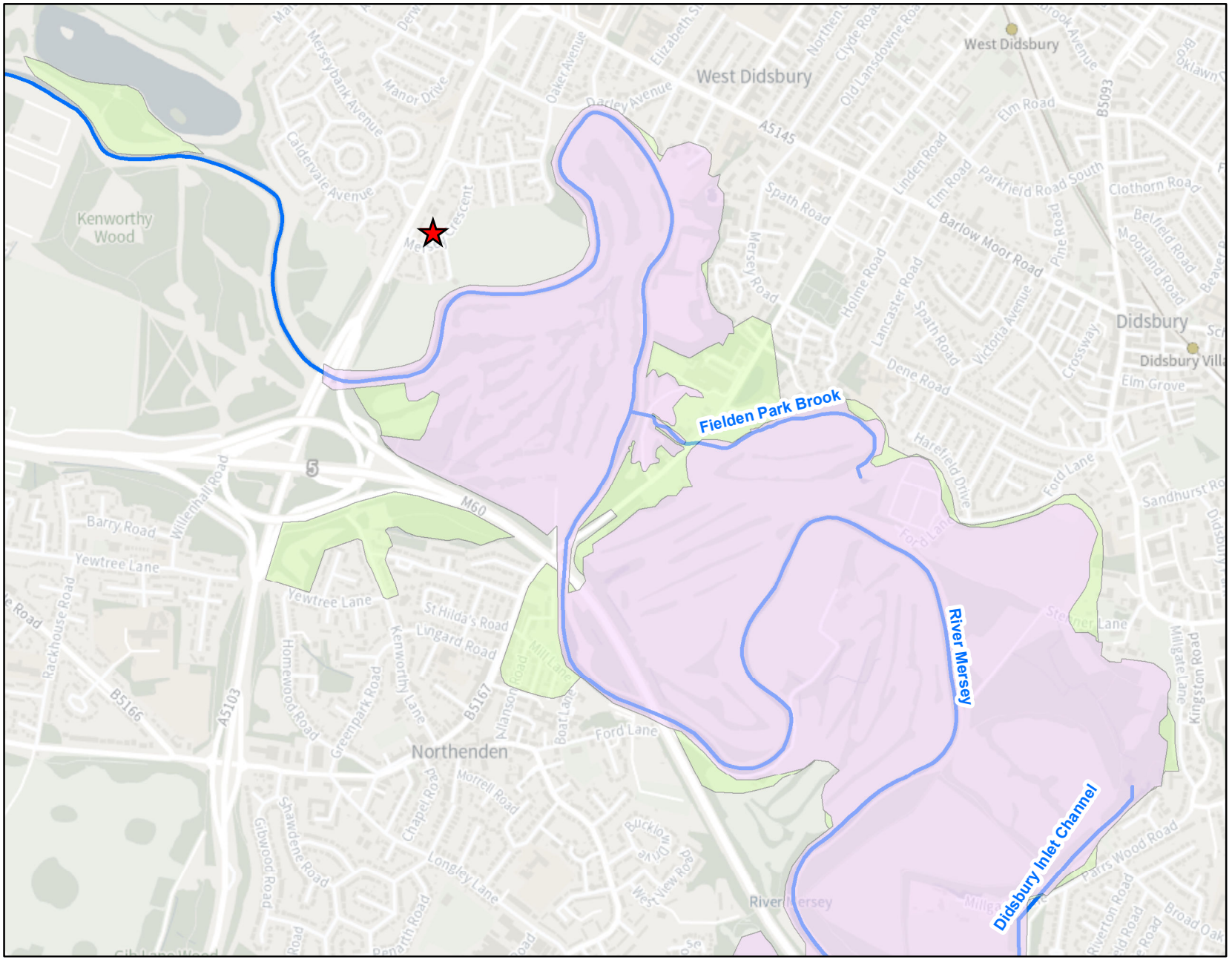
0 50 100 150 200 250
metres

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	121964	Embankment	100	Fair	27.19	28.11	
2	121963	Embankment	20	Poor	26.57	28.93	
3	120549	Engineered High Ground	100	Fair	30.22	28.50	
4	120550	Engineered High Ground	100	Poor	28.73	28.73	
5	59246	Engineered High Ground	100	Fair	30.22	30.22	
6	59245	Engineered High Ground	100	Very poor	28.73	22.71	
7	120564	Embankment	100	Poor	30.22	23.74	
8	120551	Embankment	100	Fair	27.48	29.16	
9	410312	Embankment	100	Fair	29.69	29.69	
10	120552	Embankment	100		24.84	23.74	
11	121970	Wall	100		29.49	29.06	
12	121969	Engineered High Ground	100	Fair	23.64	29.14	

Any blank cells show where a particular value has not been recorded for an asset.

Recorded Flood Outline Map centred on Mersey Crescent. Created on 18/07/2022 [GMMC266766AB/Y2MGF7GWTEB8]



Environment Agency

1:15,000

N

Legend

Site Location

Recorded Flood Outlines

START_DATE

01/01/1964

20/01/2021

Main River

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Recorded Flood Outlines

Flood Event Code	Name	Start Date	End Date	Source of Flooding	Cause of Flooding	Comments
FEB01426	MERS	01/01/1964	02/01/1964	Unknown	Unknown	Amalgamation of outlines from 3 events (1964, 1965 and 1973). Mixture of fields and properties flooded. Chorlton Water park, Northenden and Didsbury Golf Clubs, and playing fields at East Didsbury (where Waterside Hotel is now).
4094956	Didsbury	20/01/2021	20/01/2021	Main River	Other	

Modelled data

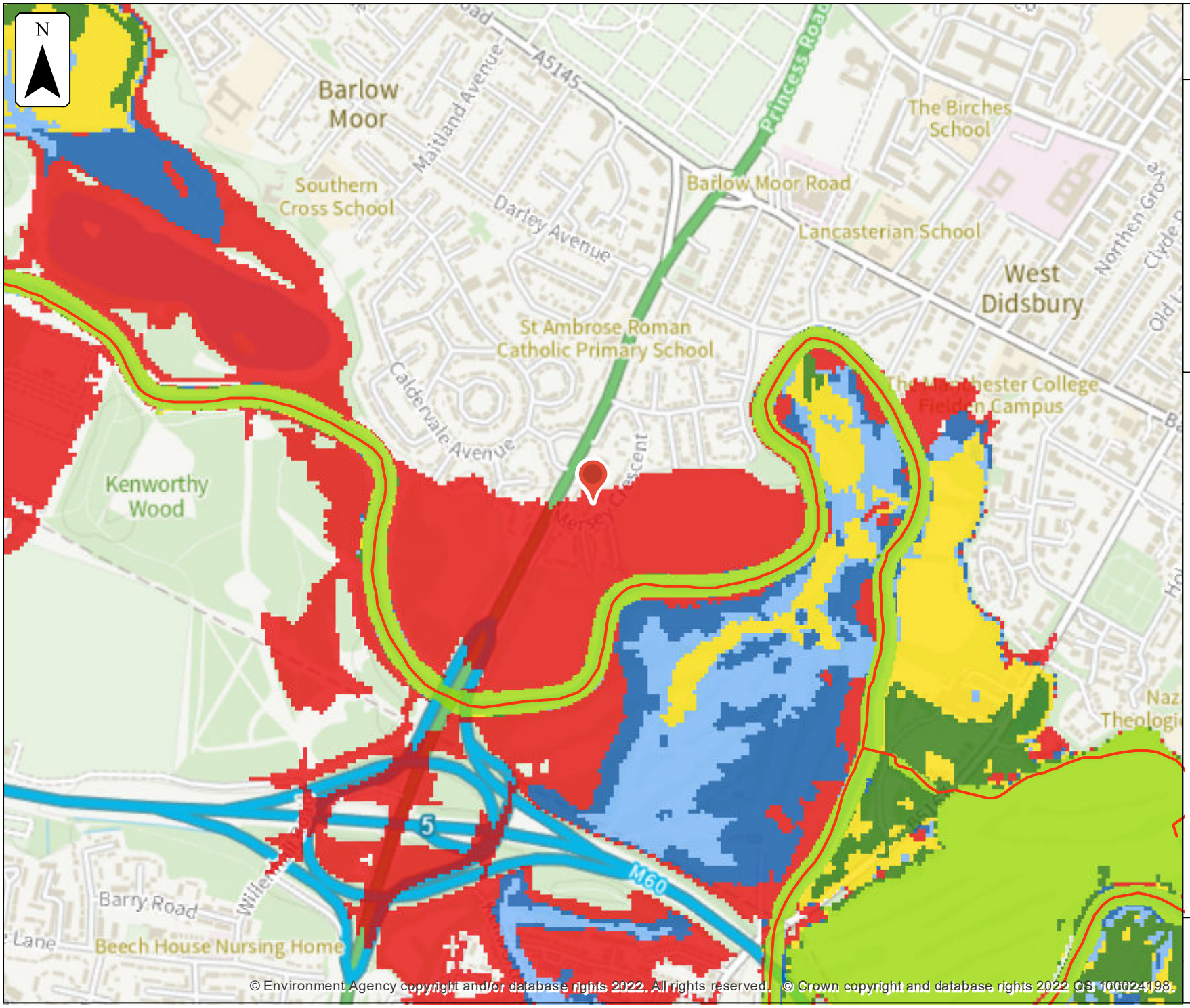
This section provides details of different scenarios we have modelled and includes the following (where available):

- 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

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 there are no flood defences



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Defended modelled fluvial extent

Location (easting/northing)
382863/391448

Scale
1:10,000

Created
12 Jun 2022

Model name
Upper Mersey Model Update - Defended

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

0 100 200 300 400 500
metres

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Defences removed modelled fluvial extent

Location (easting/northing)
382863/391448

Scale
1:10,000

Created
12 Jun 2022

Model name
Upper Mersey Model Update - Undefended

Selected location

Main river

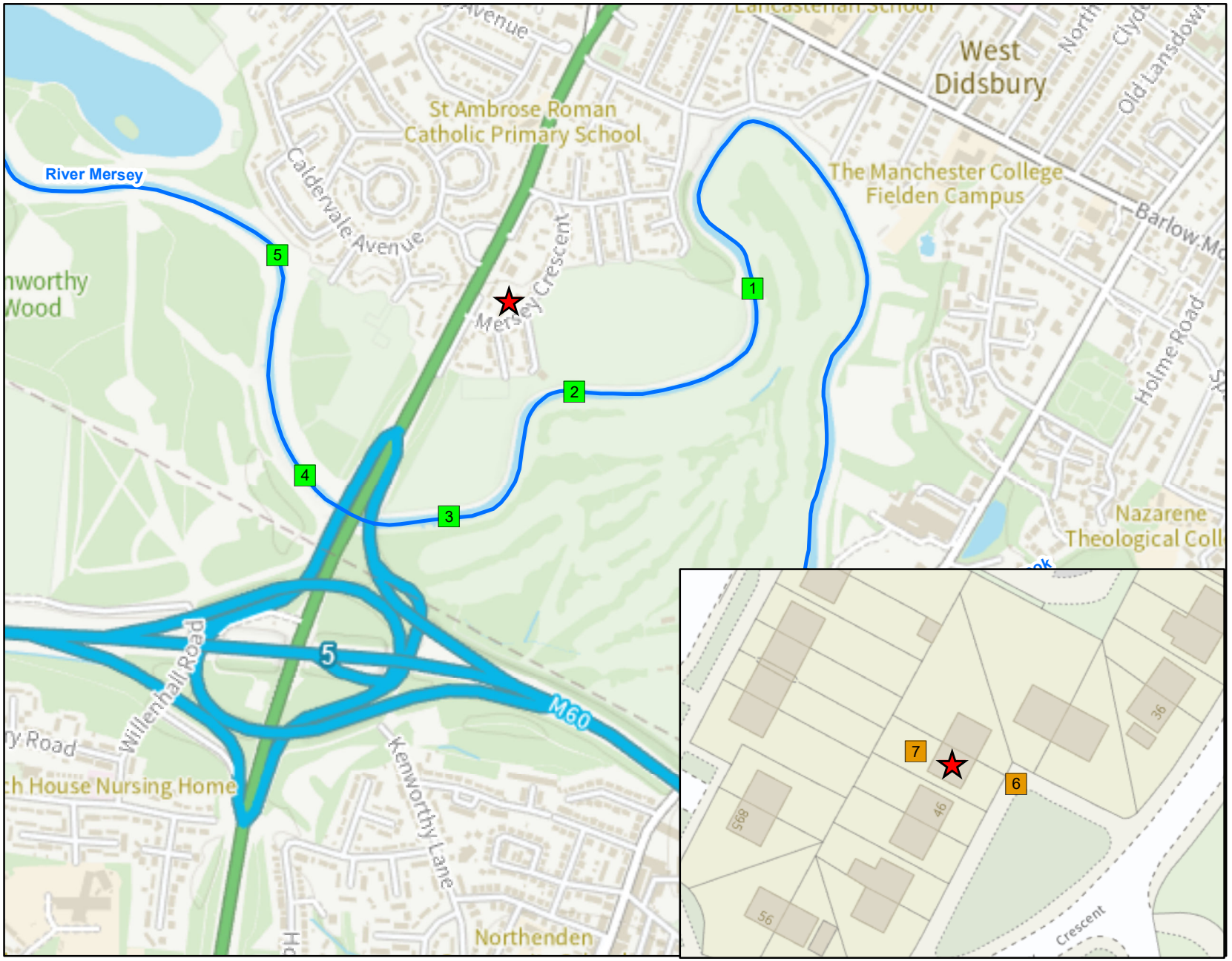
Modelled flood extent

- 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

0 100 200 300 400 500
metres

Model Measurement Map centred on Mersey Crescent. Created on 18/07/2022 [GMMC266766AB/Y2MGF7GWTEB8]



Environment Agency

1:10,001

N

Legend

- Site Location
- Model_Measurements
- 2D Measurements
- Main River

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					Undefended																Defended															
Map Reference	Model Node Reference	Easting	Northing	Data	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	4 % AEP (1 in 25 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% Increase in flow	1 % AEP (1 in 100 year) + 35% Increase in flow	1 % AEP (1 in 100 year) + 70% Increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	0.1 % AEP (1 in 1000 year) + 30% Increase in flow	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	4 % AEP (1 in 25 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% Increase in flow	1 % AEP (1 in 100 year) + 35% Increase in flow	1 % AEP (1 in 100 year) + 70% Increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	0.1 % AEP (1 in 1000 year) + 30% Increase in flow
1	osG13_SD43_MR5501_1755x	383297	391472	Modelled Water Level (m ausDN)	26.24	26.69	27.00	27.27	27.36	27.63	27.80	27.92	28.72	28.82	29.33	28.23	29.41	29.86	26.55	27.06	27.21	27.51	27.57	27.68	27.74	27.88	28.60	28.82	29.45	27.95	29.56	29.96
				Modelled Flow (cumecs)	125.50	127.02	128.02	129.48	129.63	130.13	130.51	130.65	131.43	131.65	132.10	131.09	132.42	133.16	183.95	233.57	247.15	260.18	287.11	298.82	306.68	312.35	361.92	366.63	379.34	332.18	361.26	366.67
2	osG13_SD43_MR5501_1343	382986	391289	Modelled Water Level (m ausDN)	25.94	26.54	26.91	27.21	27.31	27.58	27.77	27.89	28.71	28.81	29.27	28.21	29.36	29.81	26.10	26.59	26.72	27.03	27.09	27.20	27.26	27.39	28.43	28.69	29.36	27.46	29.48	29.87
				Modelled Flow (cumecs)	134.03	138.12	138.93	139.94	139.79	140.48	149.77	149.90	141.94	142.02	173.85	141.37	179.56	186.62	184.04	233.36	247.13	260.13	287.04	298.80	306.58	323.22	358.23	361.70	379.29	332.07	371.95	386.17
3	osG13_SD43_MR5501_2885	382755	391065	Modelled Water Level (m ausDN)	25.61	26.11	26.42	26.68	26.77	27.04	27.20	27.31	28.29	28.40	29.13	27.63	29.24	29.77	25.80	26.39	26.51	26.82	28.88	27.00	27.06	27.18	28.03	28.36	29.28	27.26	29.42	29.88
				Modelled Flow (cumecs)	169.81	218.56	253.85	298.83	298.58	334.82	356.58	372.83	426.58	427.18	429.78	412.36	430.61	432.77	183.99	233.29	247.10	260.09	298.99	299.79	306.46	323.18	417.00	423.07	431.63	332.03	433.63	439.88
4	osG13_SD43_MR5501_0650d	382498	391139	Modelled Water Level (m ausDN)	25.42	25.90	26.19	26.42	26.50	26.71	26.84	26.92	27.56	27.68	28.48	27.16	28.63	29.44	25.76	26.26	26.39	26.70	26.76	26.87	26.91	27.02	27.63	27.82	28.79	27.07	29.08	29.57
				Modelled Flow (cumecs)	186.77	240.41	279.23	315.51	328.44	368.26	392.23	410.09	534.44	546.62	569.68	456.74	572.40	580.00	252.28	258.56	271.76	308.05	315.67	329.77	337.02	355.46	478.83	518.88	551.06	365.23	565.47	574.52
5	osG13_SD43_MR5501_0283	382450	391532	Modelled Water Level (m ausDN)	25.13	25.58	25.86	26.06	26.15	26.34	26.45	26.53	27.13	27.23	27.76	26.74	27.91	28.54	25.55	26.02	26.14	26.46	26.50	26.62	26.67	26.77	27.33	27.51	28.57	26.91	28.87	29.71
				Modelled Flow (cumecs)	186.76	240.40	279.21	315.50	328.44	368.17	392.21	410.03	534.81	554.95	579.64	456.73	558.04	620.91	252.18	258.55	271.70	307.97	315.63	329.76	336.98	355.43	478.82	518.86	688.04	365.21	725.84	834.96
6	2D Measurements	382873	391447	Modelled Water Level (m ausDN)									29.69	29.79	29.28	29.15	29.37	29.84									29.36	29.46	29.36		29.48	29.92
7		382956	391452	Modelled Water Level (m ausDN)									29.69	29.79	29.28	29.15	29.37	29.84									29.36	29.46	29.36		29.48	29.92

Model data taken from Upper Mersey 2017

AEP - Annual Exceedence Probability

m ausDN - metres above ordnance datum New lyn

cumecs - cubic metres per second

Notes: *Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

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