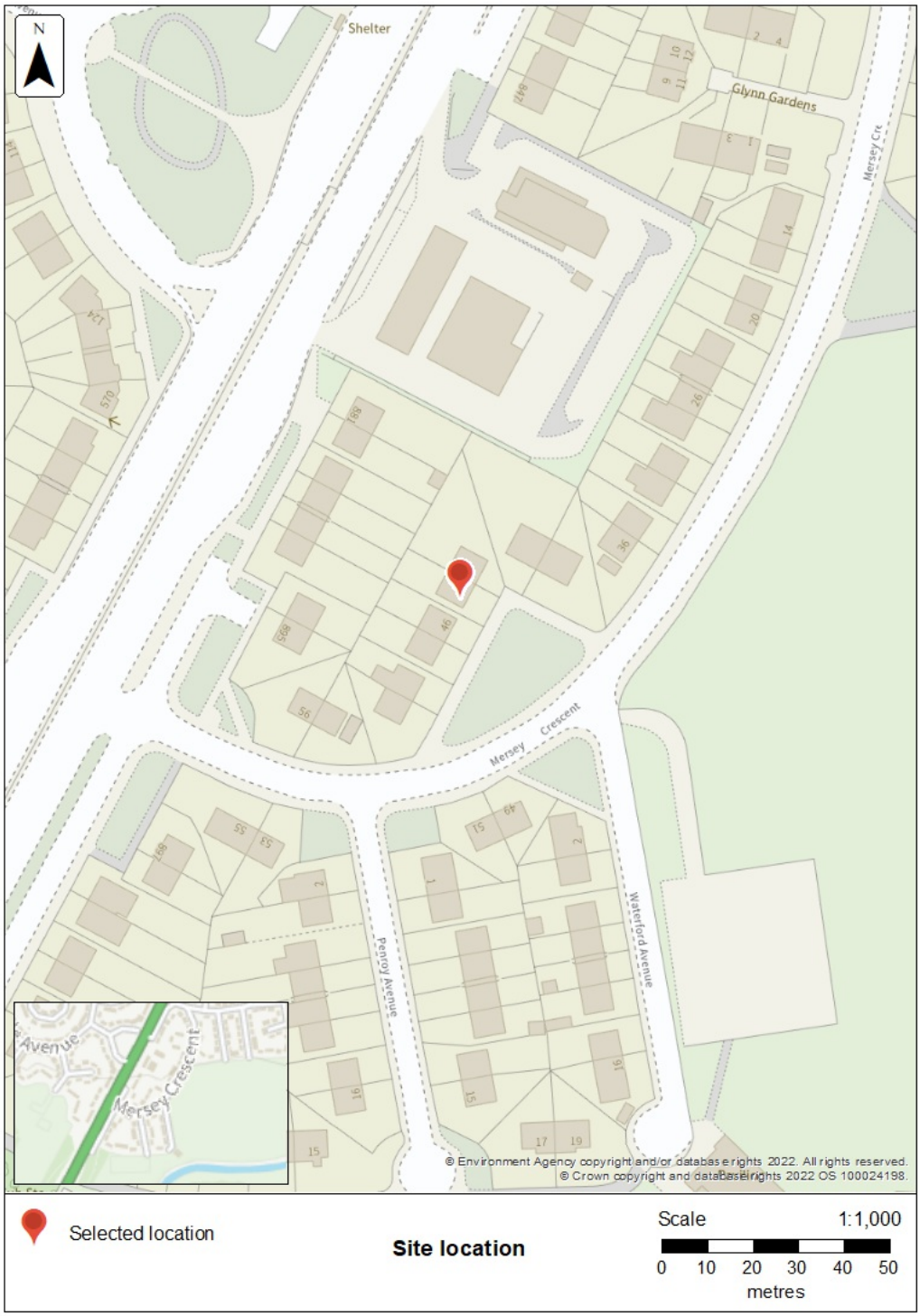
# Flood risk assessment data

**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

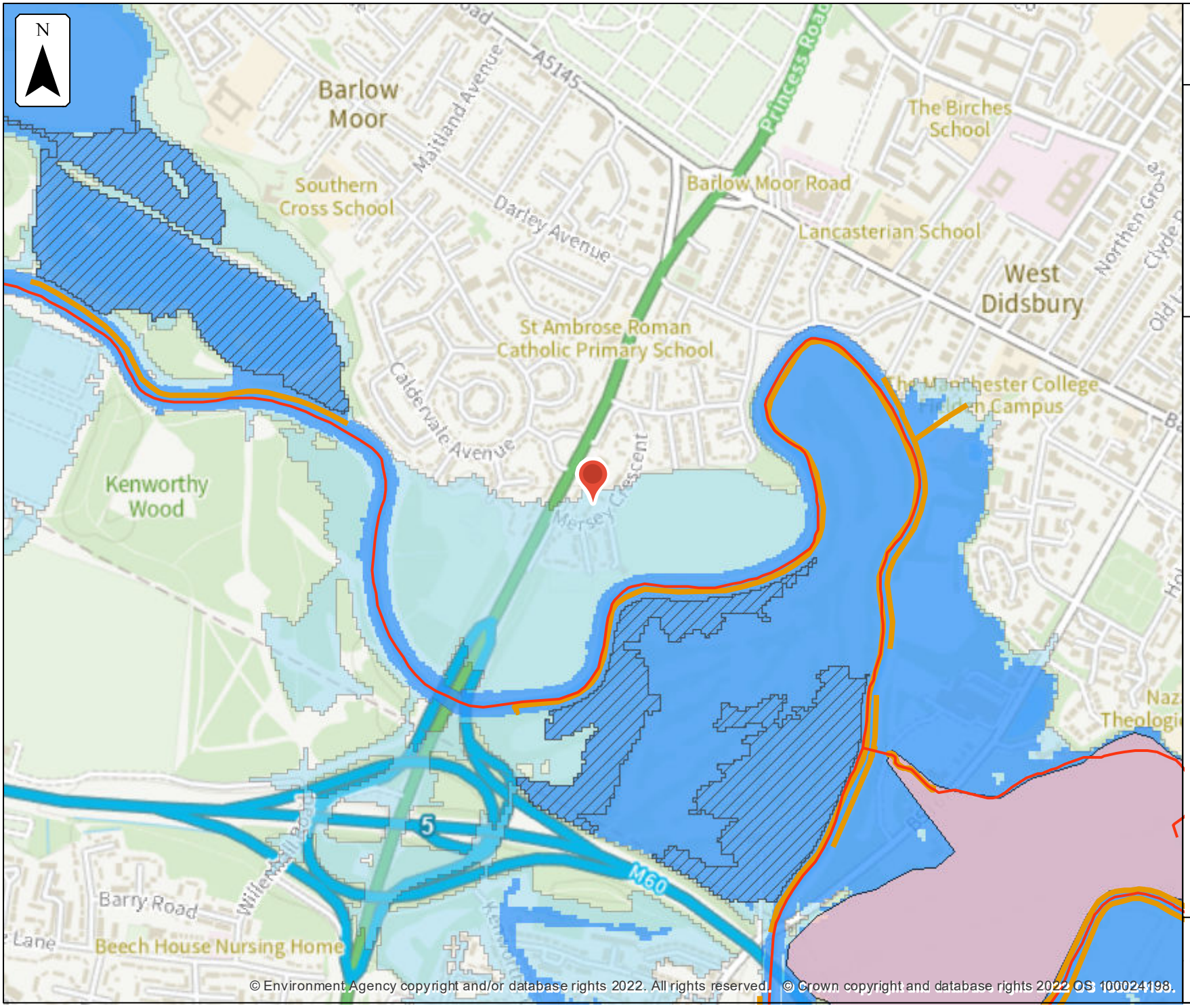
This data is updated on a quarterly basis as better data becomes available.

## 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

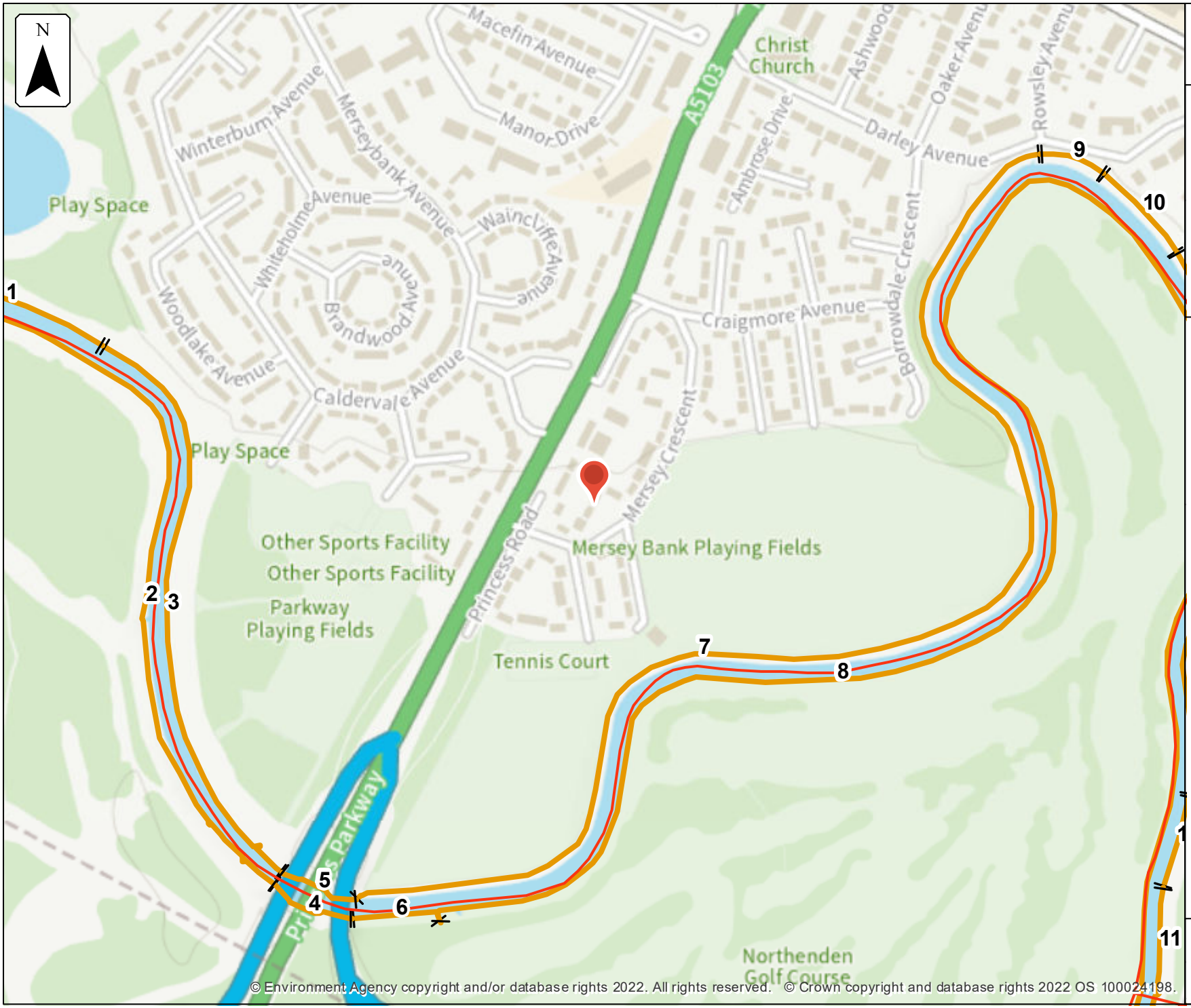
0 100 200 300 400 500
metres

## 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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## Flood defences

Location (easting/northing)
**382863/391448**

Scale
**1:5,000**

Created
**12 Jun 2022**

Selected location

Main river

Flood defence

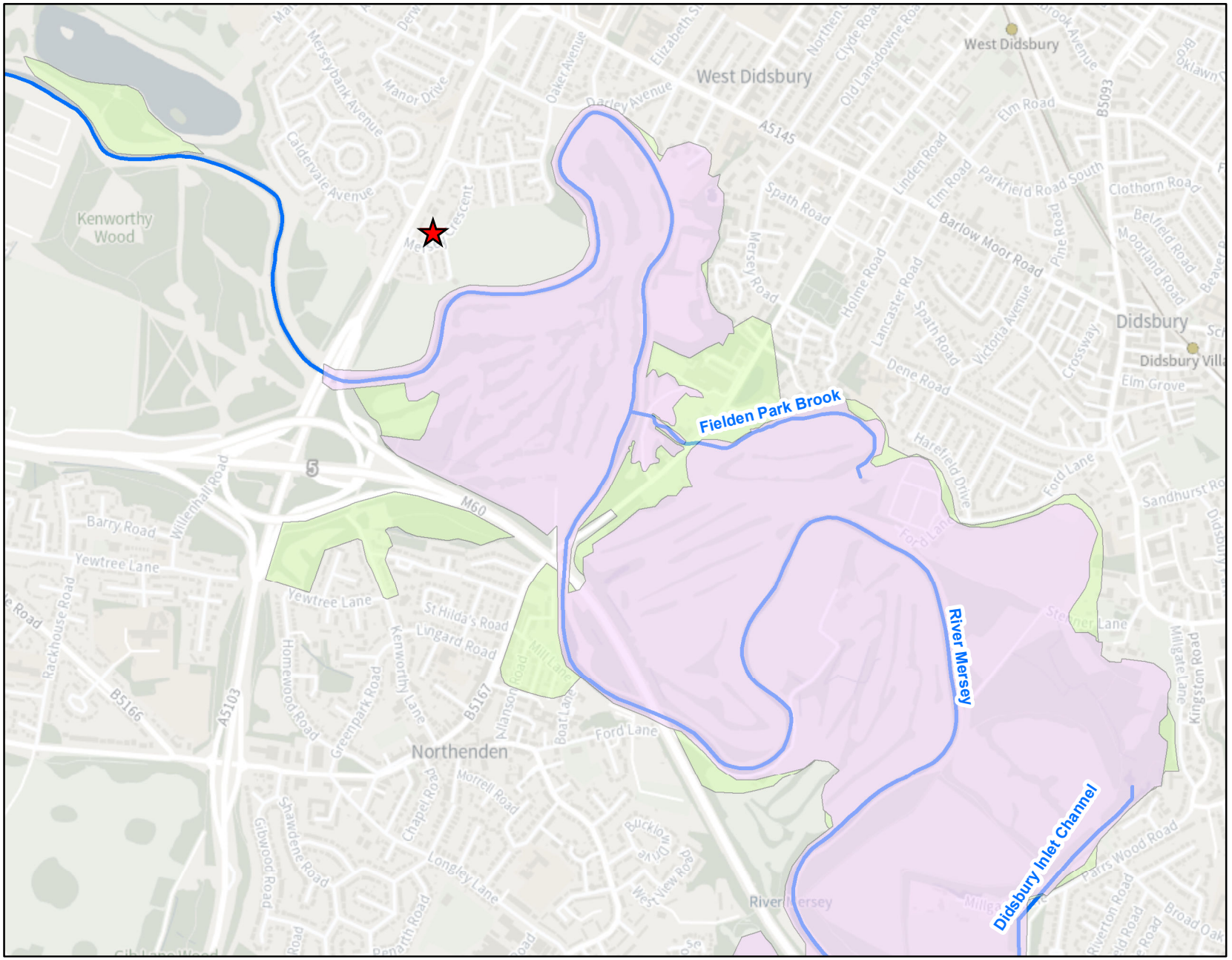
0 50 100 150 200 250
metres

## 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]

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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

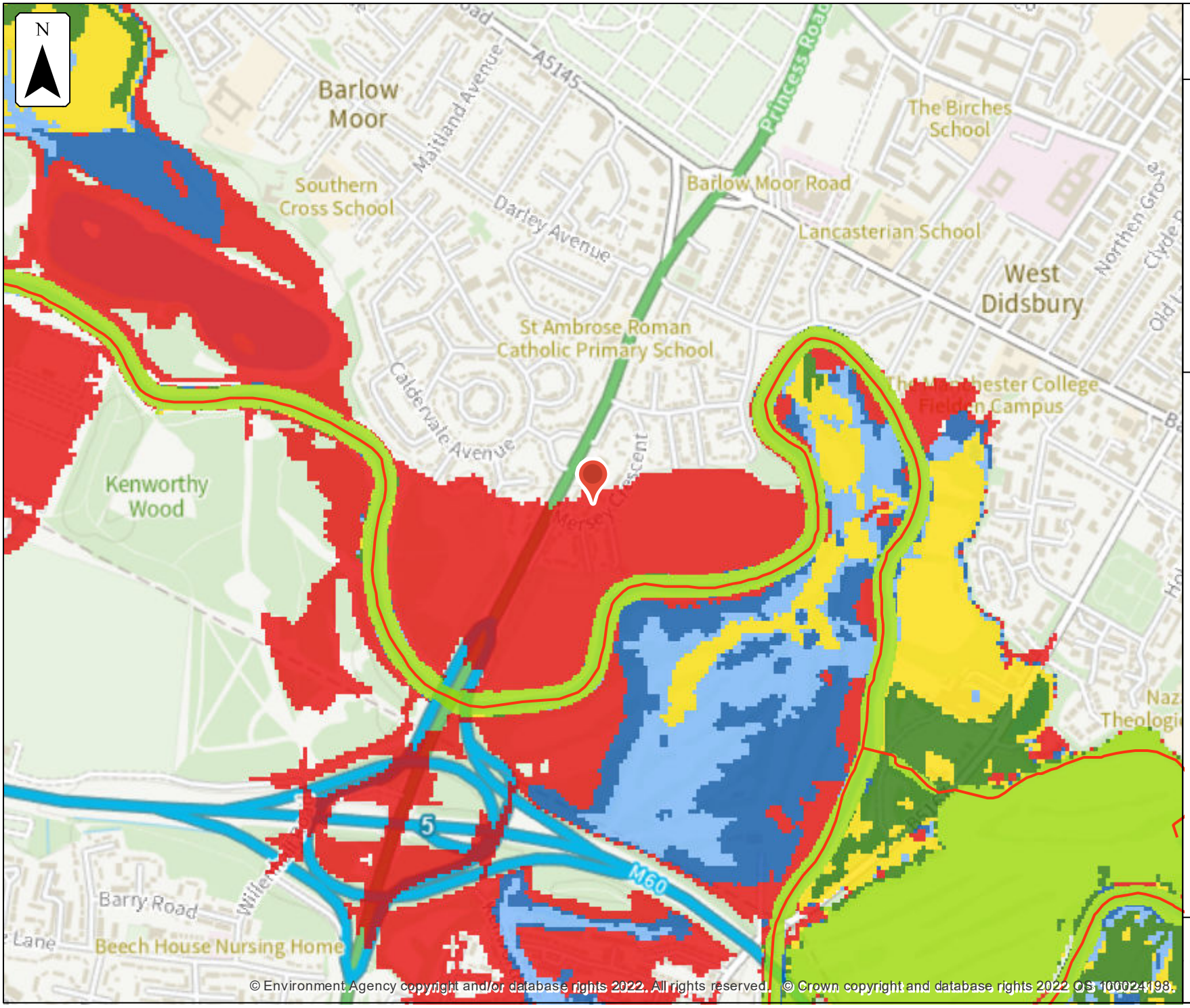
This section provides details of different scenarios we have modelled and includes the following (where available):

- 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

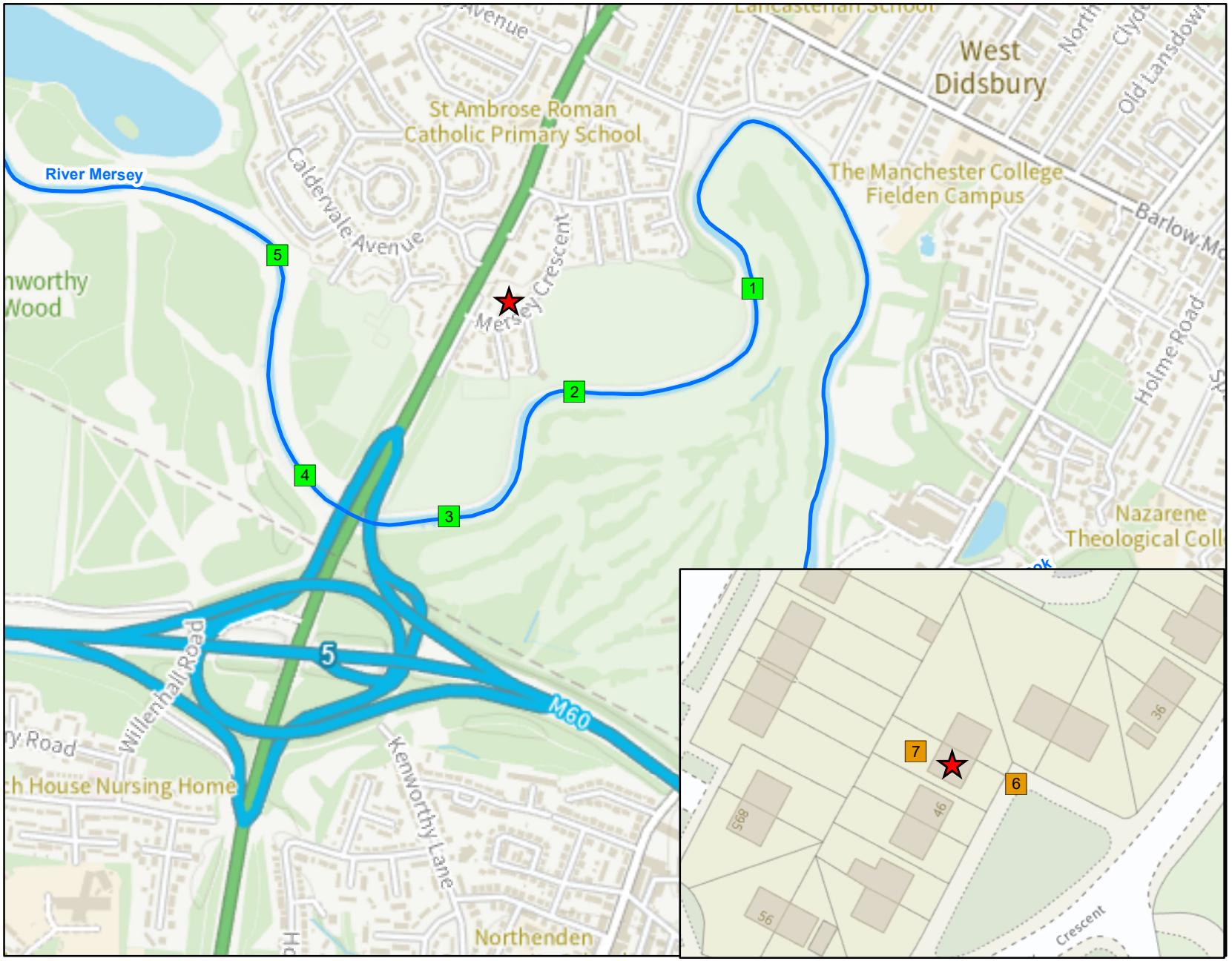
Modelled flood extent

- 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]

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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