

Appendix C Environment Agency's Data and Information

From: UK Flood Risk ukfloodrisk@gmail.com 
Subject: Fwd: GMMC247658SW Response attached from the Environment Agency
Date: 8 February 2022 at 12:35
To: ukflood risk ukfloodrisk@gmail.com

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From: **GMMC Info Requests** <InfoRequests.GMMC@environment-agency.gov.uk>
Date: Thu, 27 Jan 2022 at 09:47
Subject: GMMC247658SW Response attached from the Environment Agency
To: ukfloodrisk@gmail.com <ukfloodrisk@gmail.com>

Dear Sohan,

Thank you for your enquiry which was received on 17/01/22.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

Please find attached the data requested and my colleagues supporting comments below;

We have no records of flooding affecting the site. However, this does not mean flooding has not occurred in the past or that it will not flood in future. We recommend that you also contact United Utilities and Manchester District Authority who may hold additional information (the former especially in relation to sewer flooding).

For further information on your property's flood risk, visit:

Long term flood risk website: <https://flood-warning-information.service.gov.uk/long-term-flood-risk/>

Flood Map for Planning: <https://flood-map-for-planning.service.gov.uk/>

For additional flood risk information, advice and support in your area, please visit: <https://thefloodhub.co.uk/>

The National Flood Forum also offers advice on obtaining insurance, particularly for those properties deemed at high risk. This is helped by the government-backed scheme 'Flood Re' which enables those at risk to shop around for affordable insurance. They also offer advice on property resilience, flood prevention and mitigation measures which we hope you will find useful. For this information please visit: <http://www.nationalfloodforum.org.uk/>

Please refer to the [Open Government Licence](#) which explains the permitted use of this information.

Please get in touch if you have any further queries or contact us within two months if

you'd like us to review the information we have sent.

Kind regards,

Sarah

Sarah Walters | Customer and Engagement Officer

Greater Manchester, Merseyside and Cheshire

Direct email: Inforequests.GMMC@environment-agency.gov.uk

Office address: Richard Fairclough House, Knutsford Road, Latchford, Warrington, WA4 1HT

From: UK Flood Risk [<mailto:ukfloodrisk@gmail.com>]

Sent: 17 January 2022 21:34

To: Enquiries, Unit <enquiries@environment-agency.gov.uk>

Subject: 220119/SRi04 - Request for Product 4 Flood Maps and Modelling data 22 Garthorp Road, Manchester

Dear Sir/Madam

Re: Request for Product 4 Flood Maps and Modelling data

I'm working as a Flood Risk Consultant for this site. On behalf of the clients I kindly request you to provide me the most up-to-date **Product 4 flood maps & Modelling data** for the following site:

22 Garthorp Road, Manchester M23 0AS

A Site Location Map with approximate boundary lines is attached for your reference. Please could you provide me the following information:

- Information on historic flood events and flood outlines if available around the site,
- Flood depths/water levels and velocity data at the site for a range of events,
- Flood Extent maps (fluvial/tidal),
- Information on flood defences if present,
- Modelled flood maps and flood extents for a range of events including the 1 in 20 year, 1 in 100 year, 1 in 200 year and 1 in 1000 year events,
- Flood depths/levels from breaching and overtopping scenario if available,
- Modelled flows and water levels for a range of events including different scenarios of climate change,
- Flood Hazard Mapping if available,
- Surface water flooding issues and flood maps,
- Reservoir flood maps,

- Any flood-related information that would be useful for the flood risk assessment of this site.

I look forward to hearing from you in due course.

Yours Sincerely

Sohan

Sohan Ghimire

Flood Risk Consultant

UK Flood Risk

55 Shepherds Lane

Dartford DA1 2NL

t: 020 3797 6380 m: 07411 924733

e: ukfloodrisk@gmail.com

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GMMC247658S
W_Auto.pdf

Flood risk assessment data

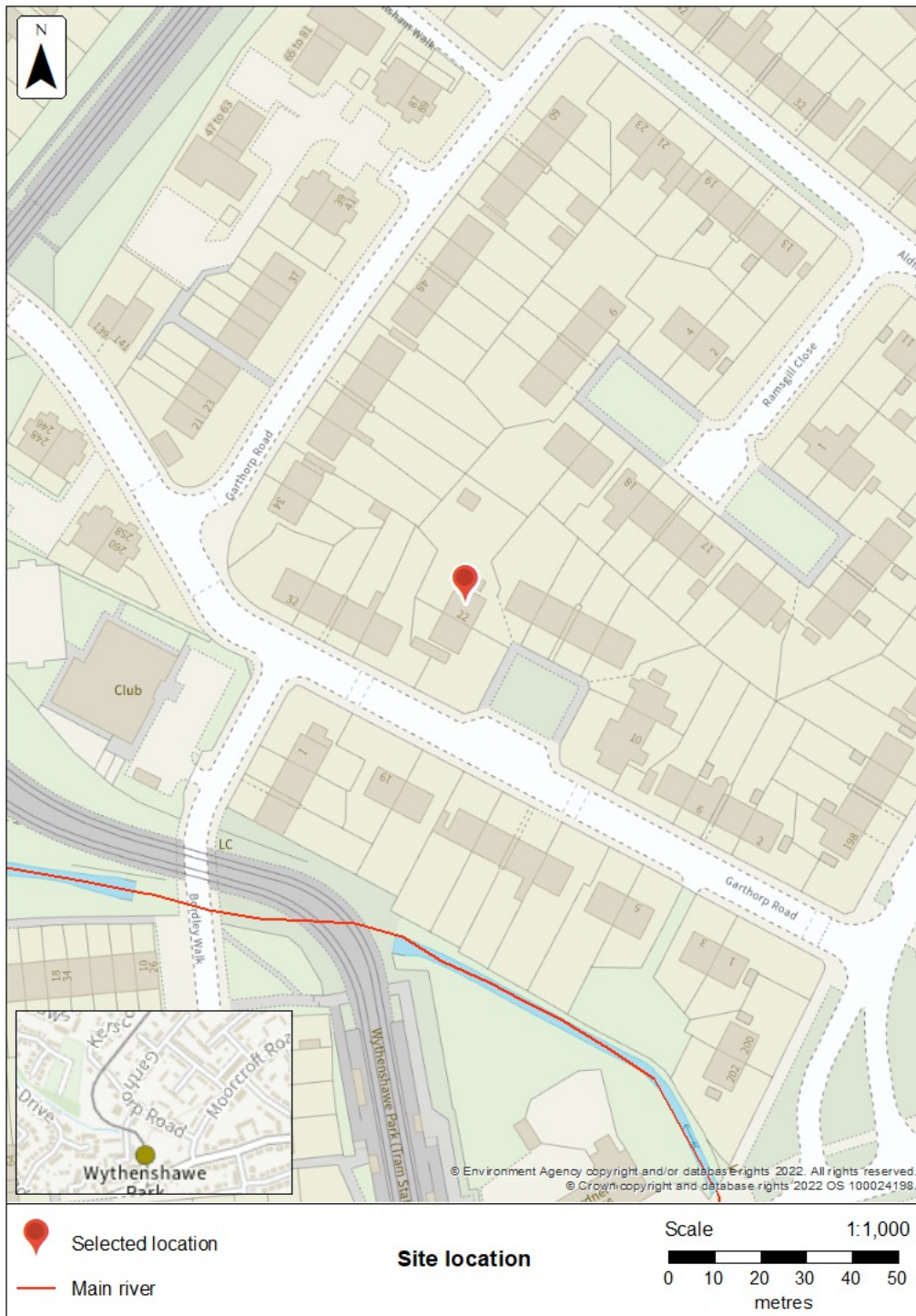
Location of site: 380455 / 390257 (shown as easting and northing coordinates)

Document created on: 26 January 2022

This information was previously known as a product 4.

Customer reference number: GMMC247658SW

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

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. 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: Altrincham_2009
Scenario(s): No defences exist fluvial
Date: 22 December 2009

Model name: Altrincham_2009_D
Scenario(s): Defended fluvial
Date: 22 December 2009

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 development is in flood zone 1.

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

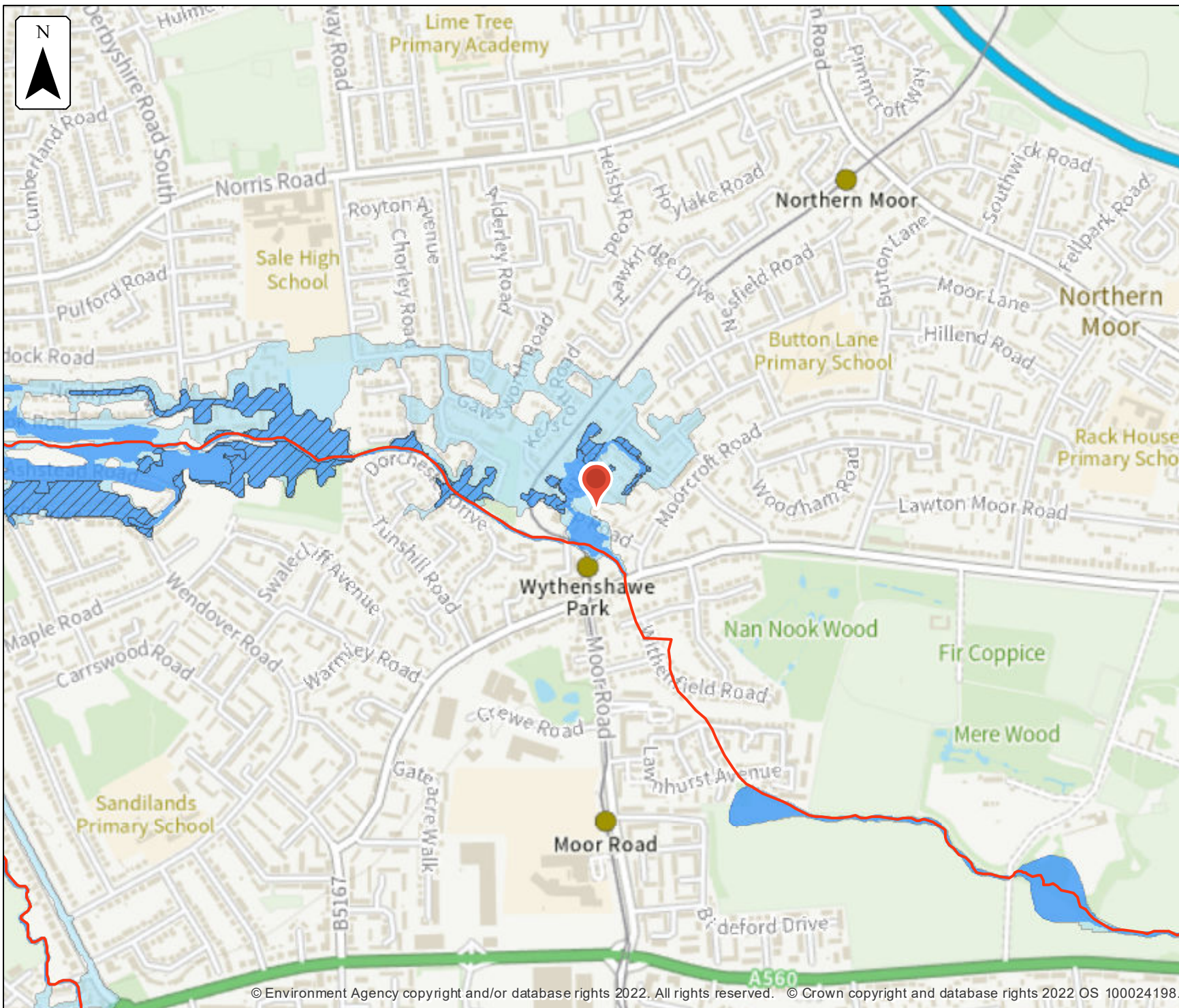
This data is updated on a quarterly basis as better data becomes available.

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](#)



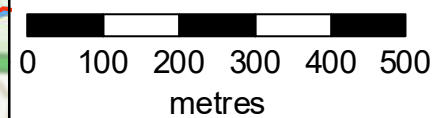
Flood map for planning

Location (easting/northing)
380455/390257

Scale
1:10,000

Created
26 Jan 2022

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

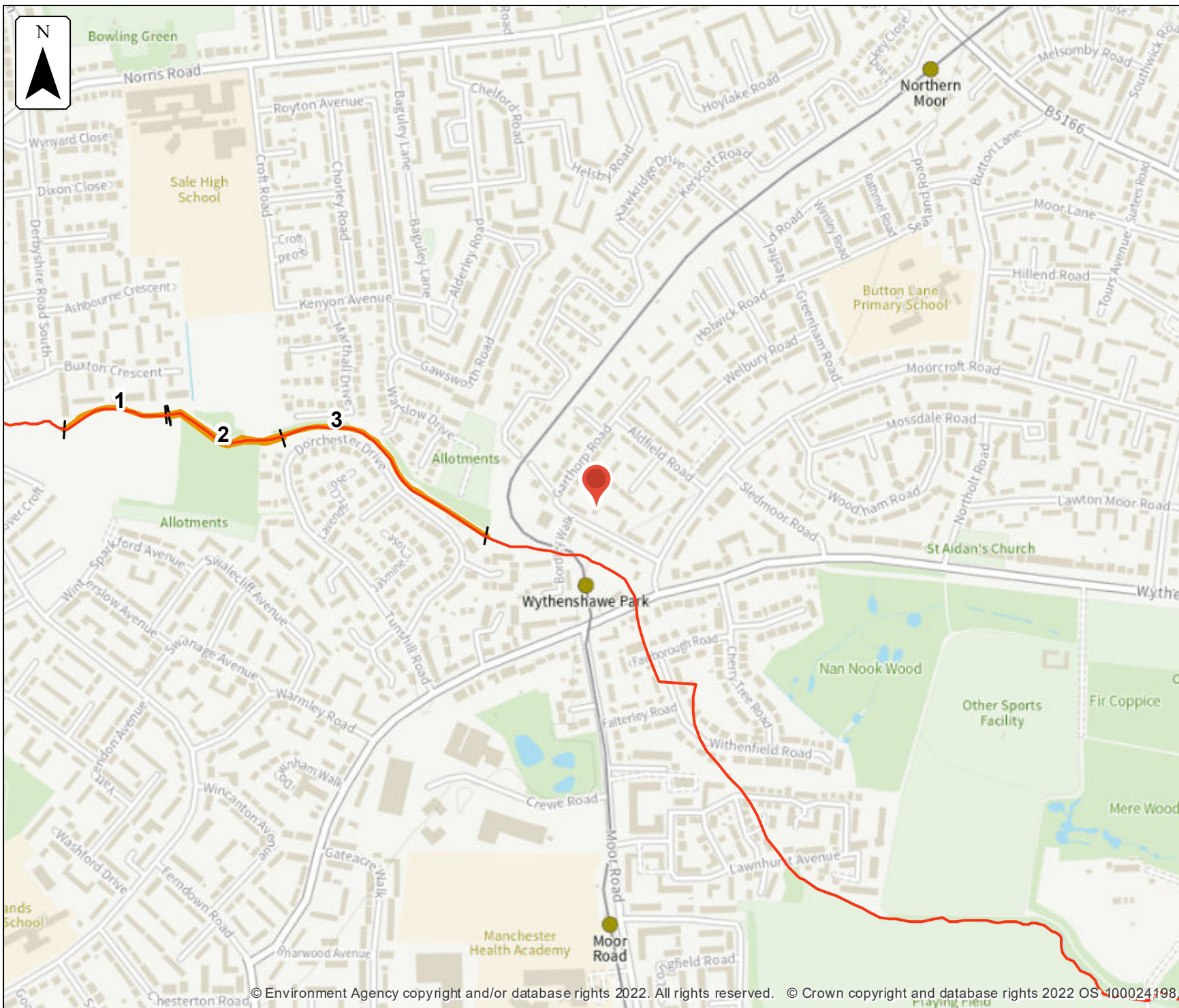


Flood defences and attributes

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.



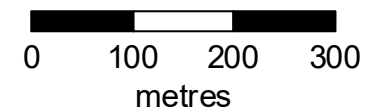
Flood defences

Location (easting/northing)
380455/390257

Scale
1:7,500

Created
26 Jan 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	132173	embankment			26.99	28.18	
2	132161	embankment			28.20	28.60	
3	132162	embankment			29.56	28.18	

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

Modelled data

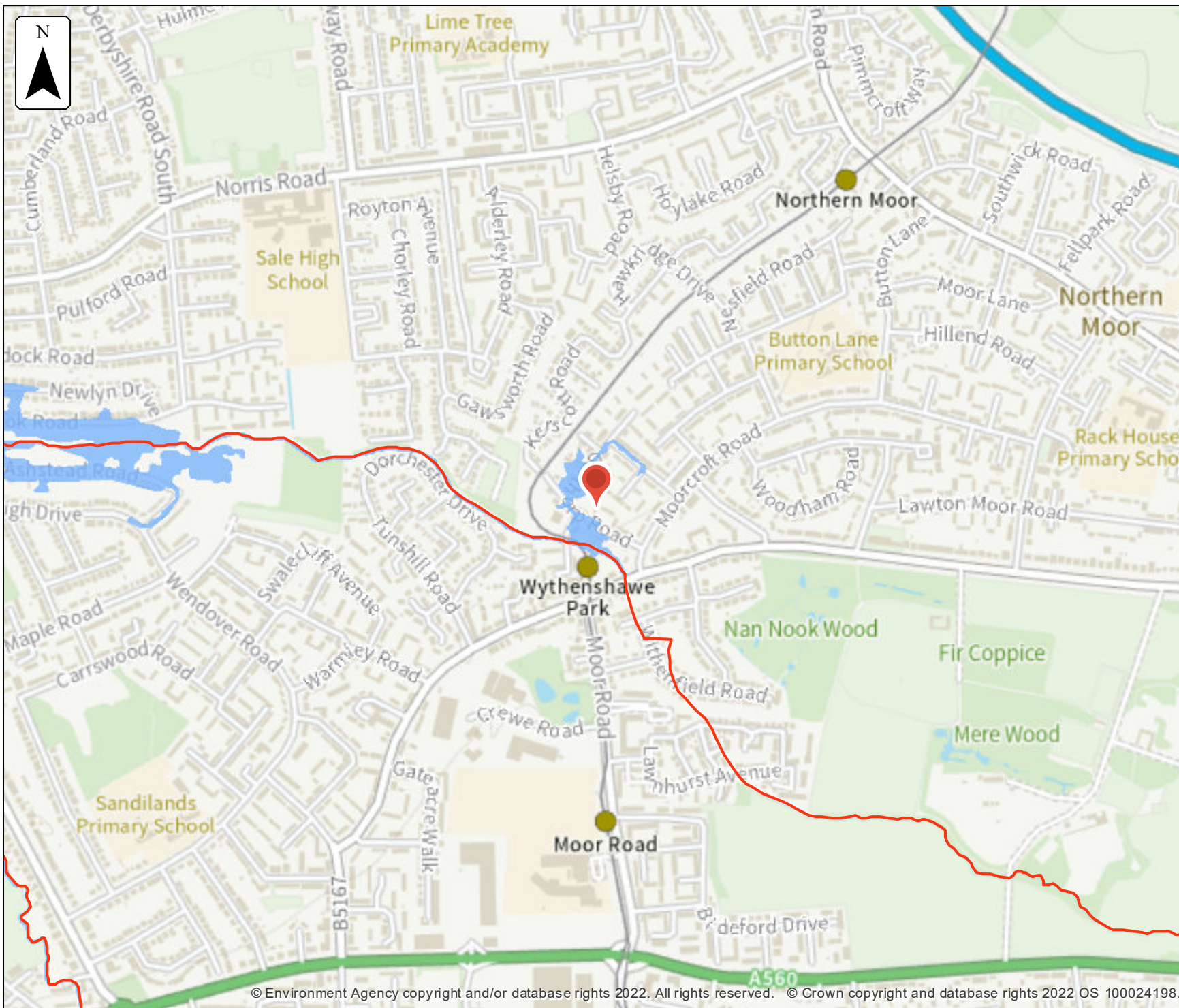
This section provides details of different scenarios we have modelled and includes the following (where available):

- 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

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences



Defended modelled fluvial extent

Location (easting/northing)
380455/390257

Scale Created
1:10,000 26 Jan 2022

Model name
Altrincham 2009 D

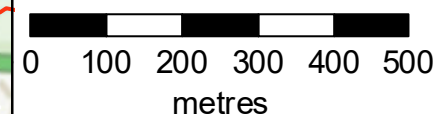
 Selected location

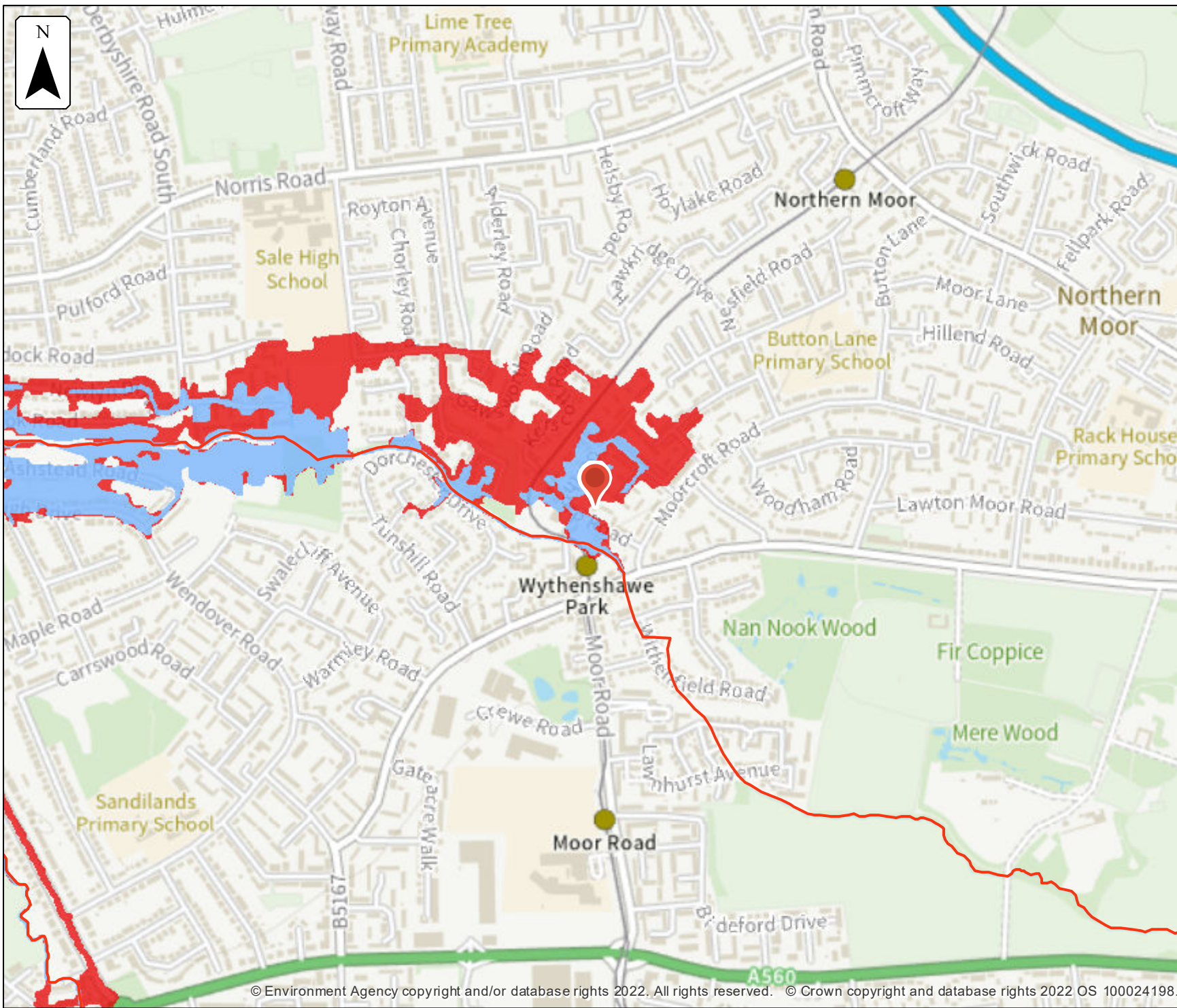
 Main river

Modelled flood extent

 1% AEP

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





No defences exist modelled fluvial extent

Location (easting/northing)
380455/390257

Scale Created
1:10,000 26 Jan 2022

Model name
Altrincham 2009



Selected location

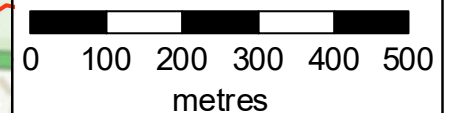
Main river

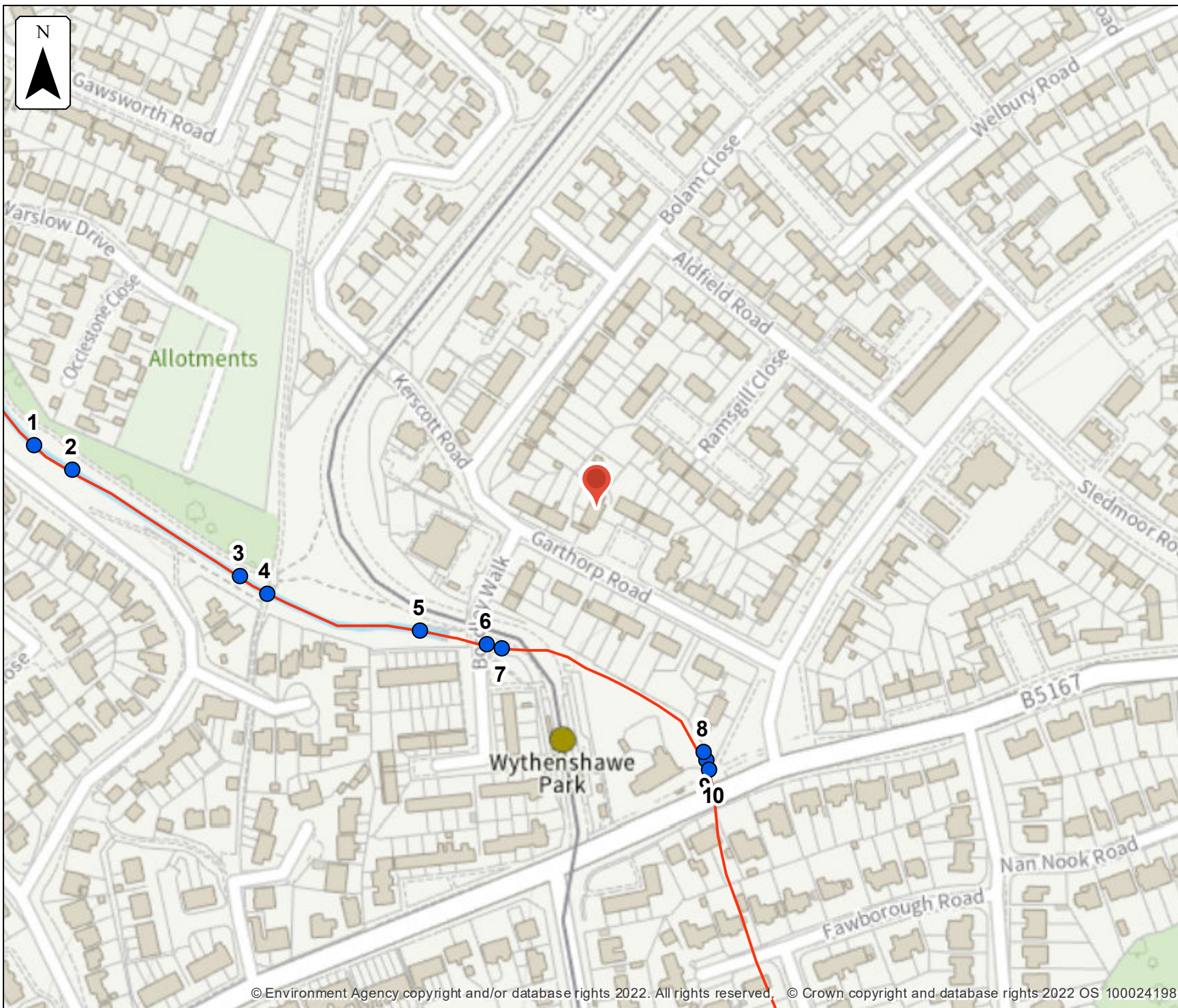
Modelled flood extent

0.1% AEP

1% AEP

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





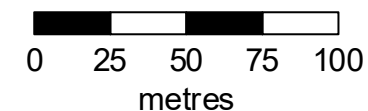
Defended modelled fluvial node locations

Location (easting/northing)
380455/390257

Scale Created
1:2,500 26 Jan 2022

Model name
Altrincham 2009 D

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

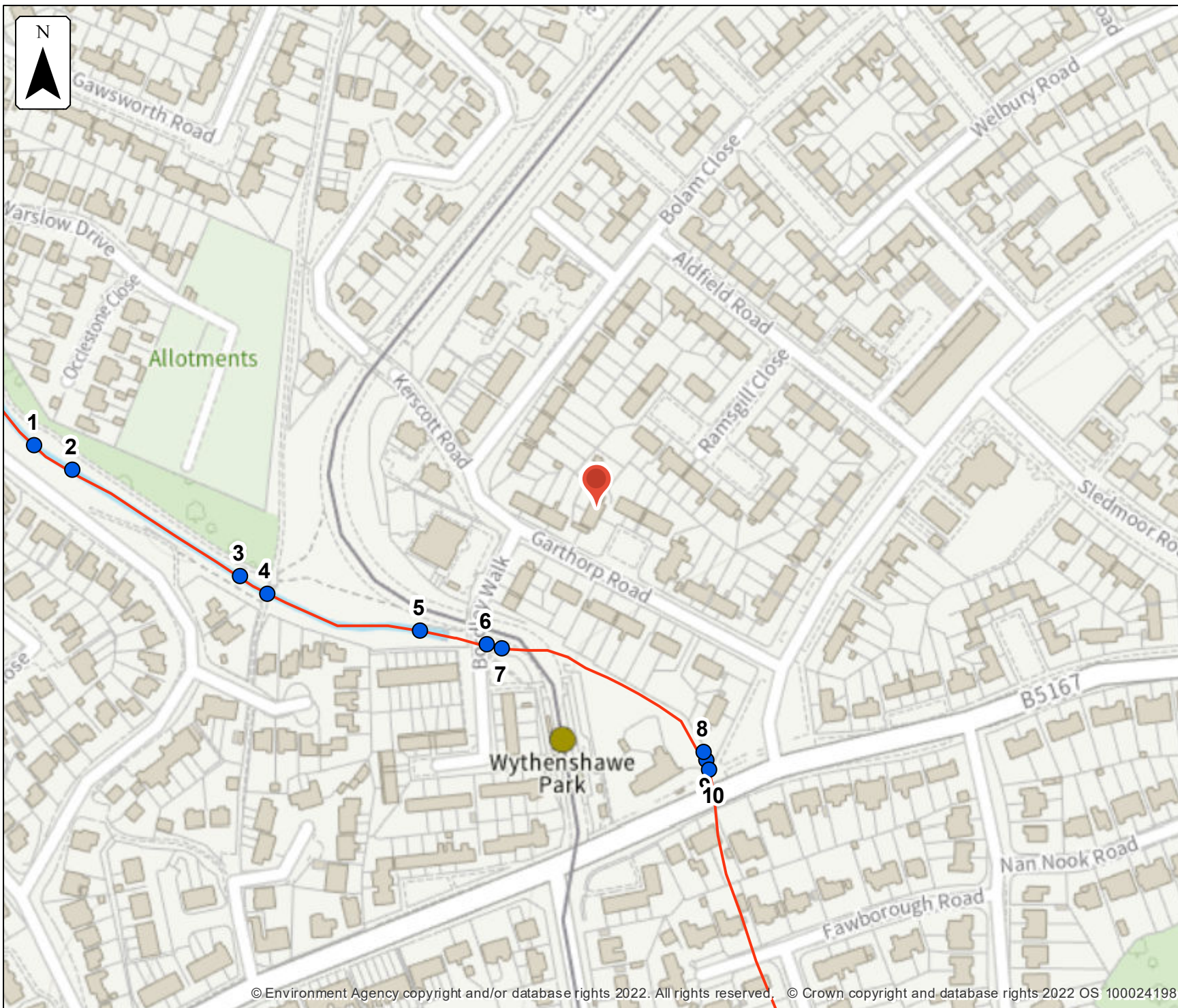
Defended

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	282158	380182	390287							28.54	4.91				
2	177659	380200	390275							28.59	4.90				
3	298569	380282	390223							28.95	4.90				
4	340086	380295	390215							29.14	4.90				
5	327843	380369	390196							29.46	4.93				
6	173573	380401	390190							30.0	4.95				
7	170590	380409	390188							30.08	4.33				
8	354790	380507	390138							30.20	5.18				
9	76120	380508	390134							30.20	3.14				
10	182558	380509	390129							30.21	3.04				

Data in this table comes from the Altrincham 2009 D 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.



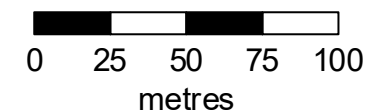
No defences exist modelled fluvial node locations

Location (easting/northing)
380455/390257

Scale Created
1:2,500 26 Jan 2022

Model name
Altrincham 2009

-  Selected location
-  Modelled location
-  Main river



Modelled node locations data

No defences exist

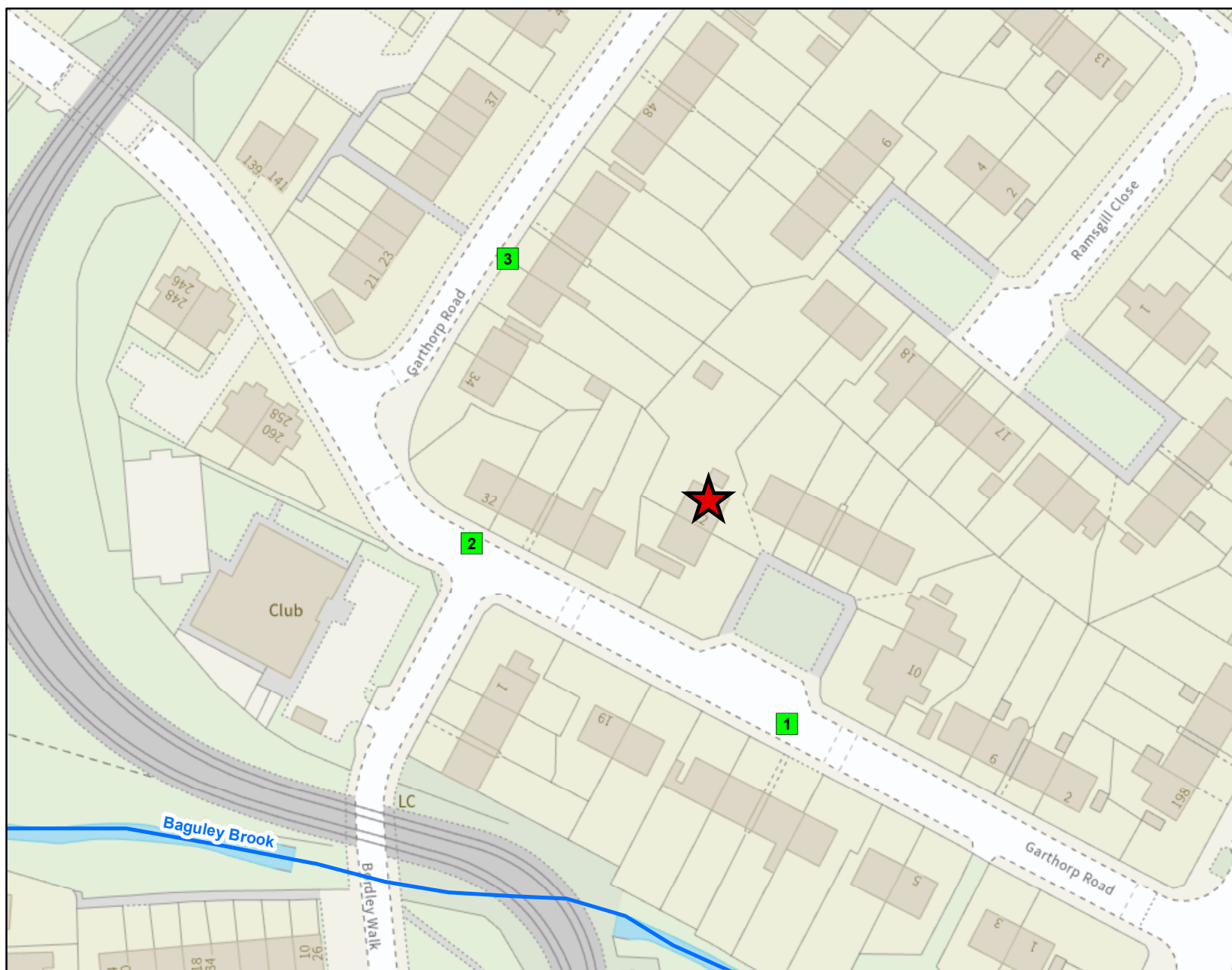
Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	282158	380182	390287							29.05	4.50			29.13	4.62
2	177659	380200	390275							29.08	4.72			29.16	4.82
3	298569	380282	390223							29.19	4.77			29.25	5.0
4	340086	380295	390215							29.29	4.76			29.36	5.03
5	327843	380369	390196							29.52	4.79			29.57	5.03
6	173573	380401	390190							30.03	4.78			30.18	5.07
7	170590	380409	390188							30.11	4.16			30.26	4.25
8	354790	380507	390138							30.20	5.24			30.29	7.35
9	76120	380508	390134							30.20	3.20			30.29	3.05
10	182558	380509	390129							30.24	2.93			30.33	2.91

Data in this table comes from the Altrincham 2009 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.

Detailed Flood Map centred on 22 Garthorp Road, Manchester M23 0AS [GMMC247658SW]



1:1,000



Legend



Site Location



2D Measurements



Main River

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Map Reference	Model Node Reference	Easting	Northing	Data	Undefended			Defended
					1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 20% Increase flow	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year)
1	2D Measure	380470	390218	Modelled Water Level (m aodN)	29.98	30.02	30.04	
2		380415	390250	Modelled Water Level (m aodN)	29.72	29.81	29.88	29.69
3		380421	390301	Modelled Water Level (m aodN)	29.71	29.77	29.81	29.69

Model data taken from Altrincham 2009

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

Notes: *Climate Change Scenario - We only hold climate change measurements based on the previous climate change guidance (20% increase in flow). The new climate change guidance is available at <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. 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