



Project Title: 00565 23 Sherbourne Street

Product: Level 3 Flood Risk Assessment

Date: 16 July 2025

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Report Revision Log

Report Reference	Date Issued	Issued To	Notes
00565	16/07/2025	Client	

1. INTRODUCTION

1.1. PURPOSE OF THE REPORT

FloodPlan have been commissioned on behalf of A. Kahsay to produce a Flood Risk Assessment for 22-24 Sherbourne Street, M3 1FE. This assessment has been conducted with the understanding that the document will be used as part of a planning permission proposal by A. Kahsay.

1.2. LOCATION OF SUBJECT SITE

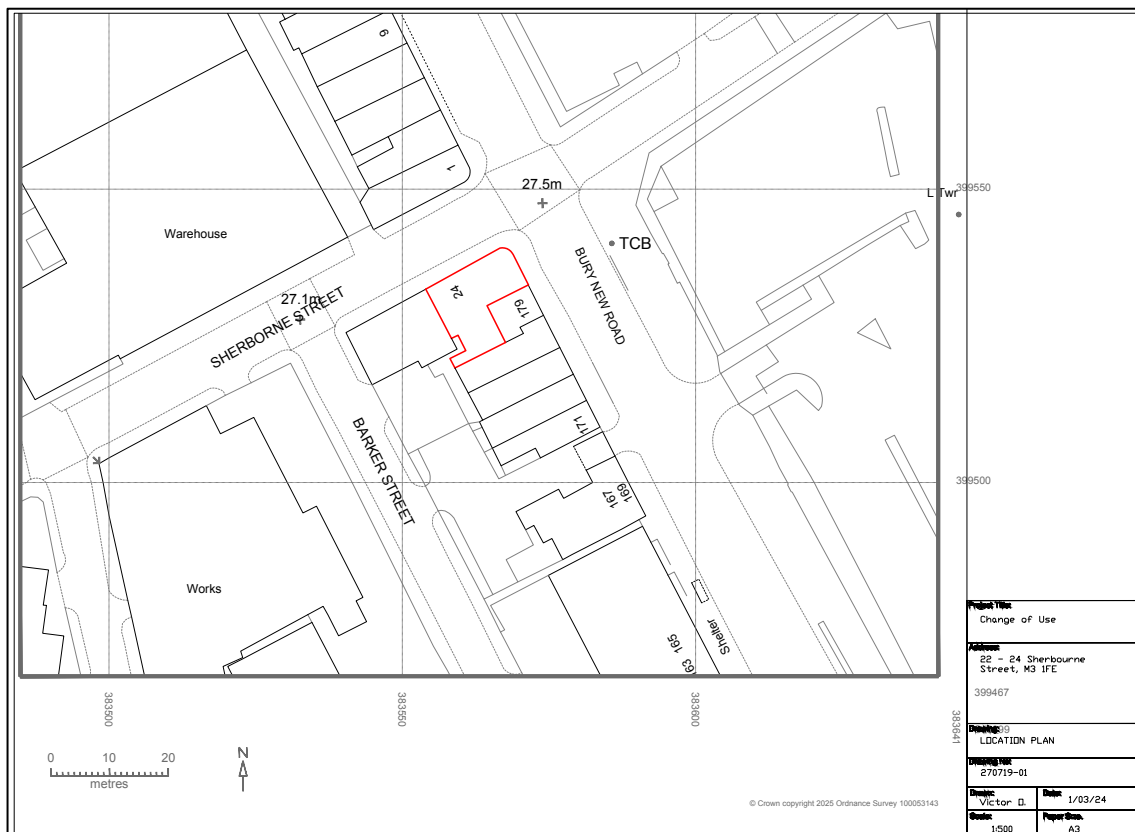


Figure 1: Site Location

1.3. SITE PROPOSALS

The project proposes the change of use of a first-floor property. Both the existing and proposed uses are commercial purposes.

2. INTRODUCTION TO NPPF

2.1. INTRODUCTION TO NPPF

The National Planning Policy Framework (NPPF) document provides guidance to local planning authorities to ensure the effective implementation of the planning policy. The policy seeks to direct development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. For these purposes:

- “areas at risk of flooding” means land within Flood Zones 2 and 3; or land within Flood Zone 1 which has critical drainage problems, and which has been notified to the local planning authority by the Environment Agency.
- “flood risk” means risk from all sources of flooding – including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers, and drainage systems, and from reservoirs, canals and lakes and other artificial sources.

Flood risk (from river and sea) are categorised into one of the below:

2.2. FLOOD RISK CLASSIFICATIONS

Flood Zone	Probability of flooding
Zone 1	Low probability
Zone 2	Medium probability
Zone 3a	High probability
Zone 3b	Functional Floodplain

2.3. FLOOD RISK VULNERABILITY CLASSIFICATION

NPPF categorises land by vulnerability. A summary of categories can be seen below:

Vulnerability Class	Infrastructure
Essential Infrastructure	Power stations, water treatment works, wind turbines etc.

Highly vulnerable	Police stations, basement dwellings, caravans, mobile homes etc
More vulnerable	Hospitals, residential buildings, landfill sites, drinking establishments etc
Less Vulnerable	Emergency services stations, shops and building that offer professional services etc
Water compatible development	Pumping stations, docks, marinas etc

2.4. SUITABLE DEVELOPMENT MATRIX

The below table outlines the suitable development type for the flood zone classification assigned by the Environment Agency flood maps.

Flood risk vulnerability classification	Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Zone 1					
Zone 2			Exception Test Required		
Zone 3a	Exception Test Required			Exception Test Required	
Zone 3b Functional floodplain	Exception Test Required				

Figure 2: Suitable Development Matrix

Key: Blue Development is appropriate; Red Development should not be permitted; Green Development is appropriate with the passing of an Exception Test.

3. NPPF SITE ASSESSMENT

3.1. FLOOD ZONE CLASSIFICATION

As per Figure 3, the site is entirely within flood zone 3.

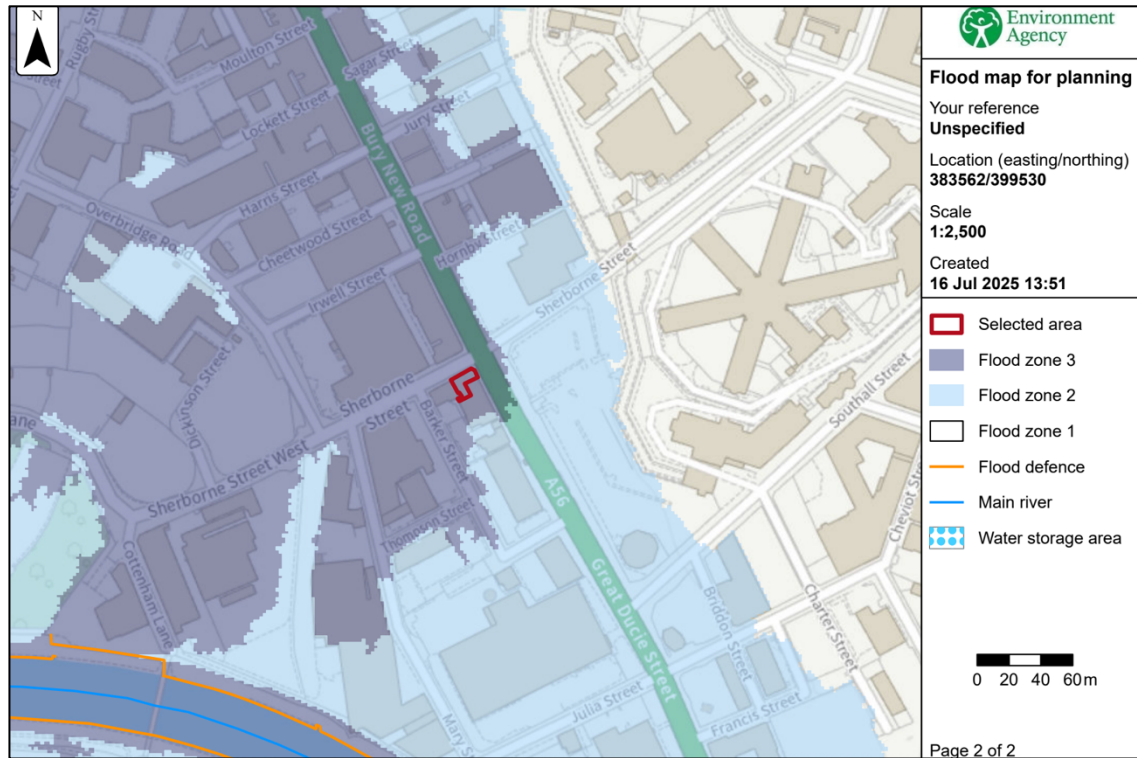


Figure 3: Flood Zone

3.2. LAND VULNERABILITY CLASSIFICATION

The site is currently used for commercial purposes. The proposed use classification of the site will also be for commercial purposes as per NPPF. Both the existing and proposed site will be classified as 'less vulnerable' development. The proposals retain the vulnerability classification of the first floor.

3.3. SITE SUITABILITY (NPPF)

'Less vulnerable' site use is suitable for flood zone 3, as per Figure 2.

4. SITE FLOOD RISK

4.1. THIRD PARTY FLOOD RISK DATA SUMMERY

A 'Groundsure' flood report has been acquired for advising this assessment. The full report can be found in Appendix B. The main findings are summarised below:

Type of Risk	Assessment of Risk
Overall Flood Risk	Moderate-High
Rivers and the Sea	Medium
Surface Water	Negligible
Groundwater	Moderate-High
Historic Flood	Identified
Flood Defences	Yes
FloodScoreTM – insurance rating	Very High

4.2. SURFACE WATER FLOODING

The Environment Agency surface water flood map Figure 4, shows the site to be at a 'high' risk from surface water flooding. The site is mapped to be at a 'high' risk of flooding between 2040-2060.

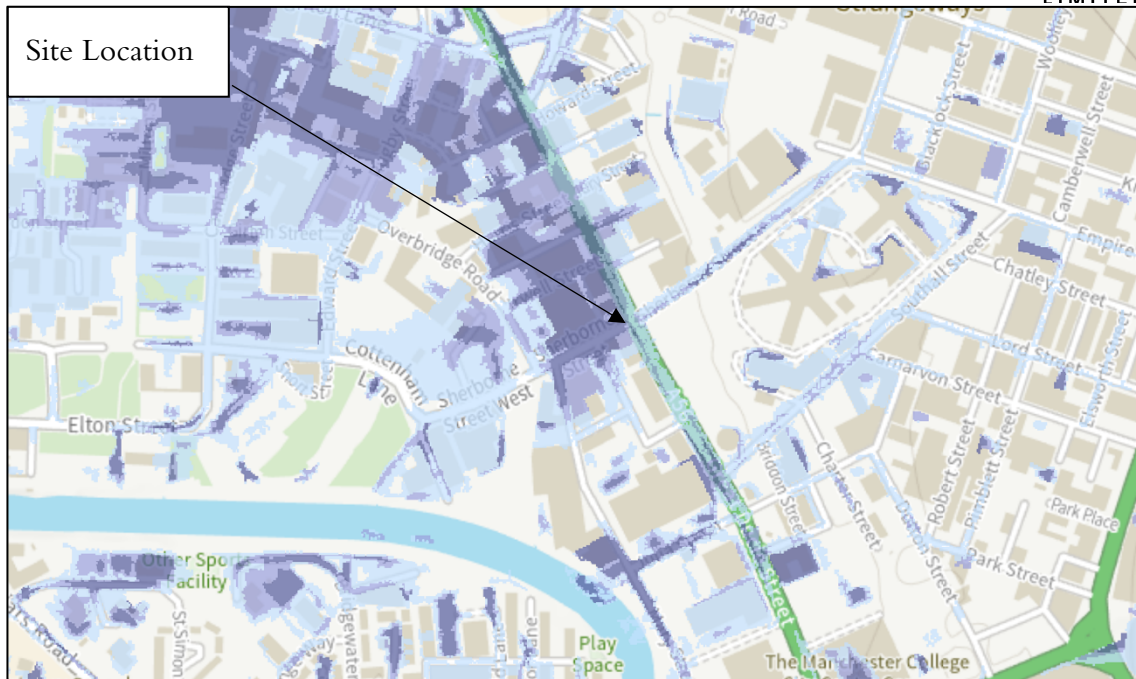


Figure 4: EA Surface Water Flood Map

Where the dark blue shaded area denotes high risk of surface water flooding; the light blue denotes low risk with white areas having very low risk of surface water flooding. The risk classification is comparable to the 'Groundsure' flood report.

4.3. TIDAL AND FLUVIAL FLOODING

The site is classified as having a 'high' risk of flooding from tidal or river sources by the EA mapping. The site is mapped to be at a 'high' risk from 2036–2069.



Figure 5: EA Tidal and Fluvial Flood Map

Where the dark blue shaded area denotes high risk of tidal and pluvial flooding; the light blue denotes low risk with the lightest blue areas having a very low risk of flooding.

4.4. FLOOD MODELLING DATA

As part of the commission, FloodPlan requested and received Environment Agency 'Product 4' dataset derived from the 'Lower Irwell 2017' study. The data displays model output flood level data at the property experienced during a series of synthetic storm events.

The Product 4 output details the site is expected to experience a flood level of 27.96mOD during the 1%AEP+35%CC defended event. Identifying a flood depth of 0.44m.

The Product 4 output details the site is expected to experience a flood level of 28.56mOD during the 1%AEP+35%CC undefended event. Identifying a flood depth of 1.05m.

The subject site is located on the upper flood only. The subject site is not modelled to be directly affected by flood risk. During times of extreme flooding, safe refuge is expected to be available within the first floor.

4.5. GROUNDWATER FLOODING

The 'Groundsure' flood report indicates that the site has a moderate-high risk of groundwater flooding.

4.6. RESERVOIR FLOODING

There is a risk of flooding from reservoir sources.

4.7. HISTORIC FLOODING

The 'Groundsure' flood identifies the site to have flooded in 1866 and 1946.

5. FURTHER SITE ASSESSMENT

5.1. SITE ACCESS AND EGRESS ROUTES

The site is at risk from fluvial flooding. Consideration should be given to adopting a flood evacuation plan.

5.2. FLOOD COMPENSATION

The proposals are not expected to displace floodwater during extreme flood events.

5.3. FLOOD WARNING AREAS

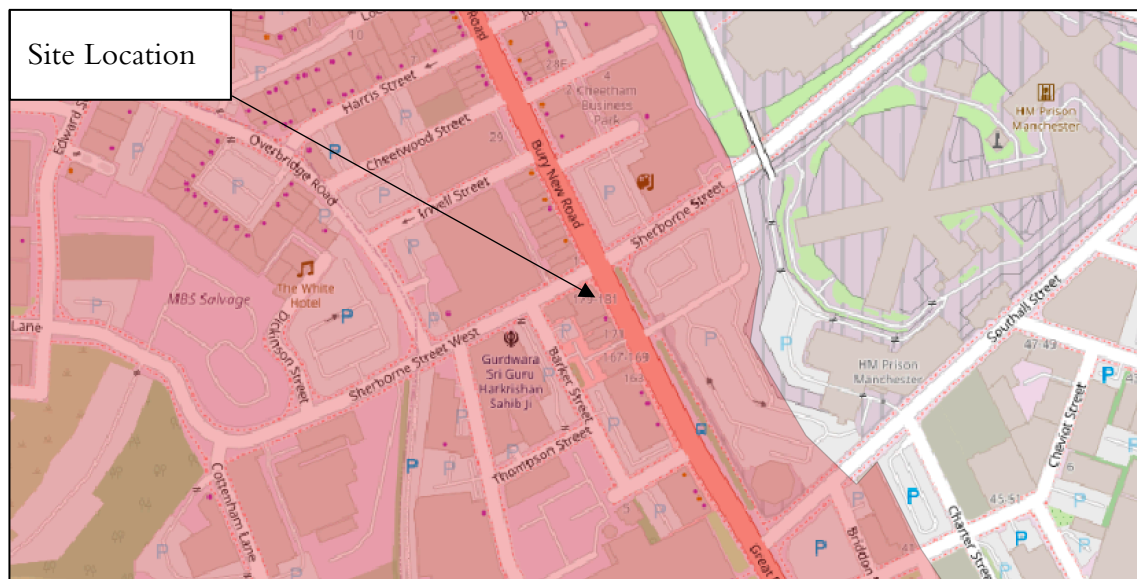


Figure 6: Flood Warning Areas

The site benefits from EA flood warning areas.

5.4. AWARENESS OF FLOOD RISK

The developer should be aware that the site is not immune from flooding. It is recommended that all residents take the opportunity to develop emergency and non-emergency plans.

5.5. SEQUENTIAL TEST

Not Applicable.

5.6. EXCEPTION TEST

Not Applicable.

6. FINDINGS AND RECOMMENDATIONS

6.1. FINDINGS

The project proposes the change of use of a first-floor property. Both the existing and proposed uses are commercial purposes.

NPPF categorises buildings used for commercial purposes as 'less vulnerable' development. Less vulnerable developments are suitable for flood zone 3.

6.2. RECOMMENDATIONS

This report recommends the following be considered to lower the risk and/or consequences that flooding may cause to the proposed development:

- A flood evacuation plan is recommended to be created and maintained.

List of Appendices

Appendix A: Development Plan

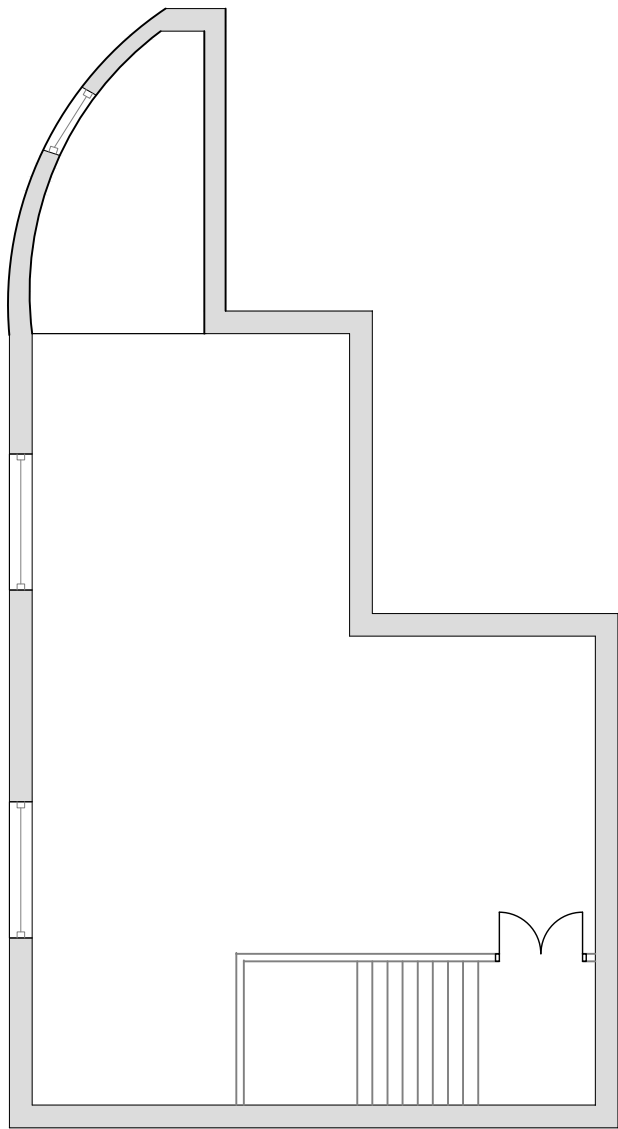
Appendix B: Groundsure Flood Report

Appendix C: Environment Agency Flood Modelling Data

Appendix A: Development Plan



Project Title: Change of Use	
Address: 22 - 24 Sherbourne Street, M3 1FE	
399467	
Drawing: LOCATION PLAN	
Drawing No: 270719-01	
Drawn: Victor □	Date: 1/03/24
Scale: 1:500	Paper Size: A3



Upper Floor Existing

Existing walls forming protected escape route down from the loft to the final escape door to be checked for their construction - walls must be half hr fire resistant. If walls are not masonry or 9.5mm & skim or 12.5mm plasterboard - walls are to be upgraded by the application of additional 9.5mm plasterboard & skim. Skirtings and architraves adjusted and replaced to suit.

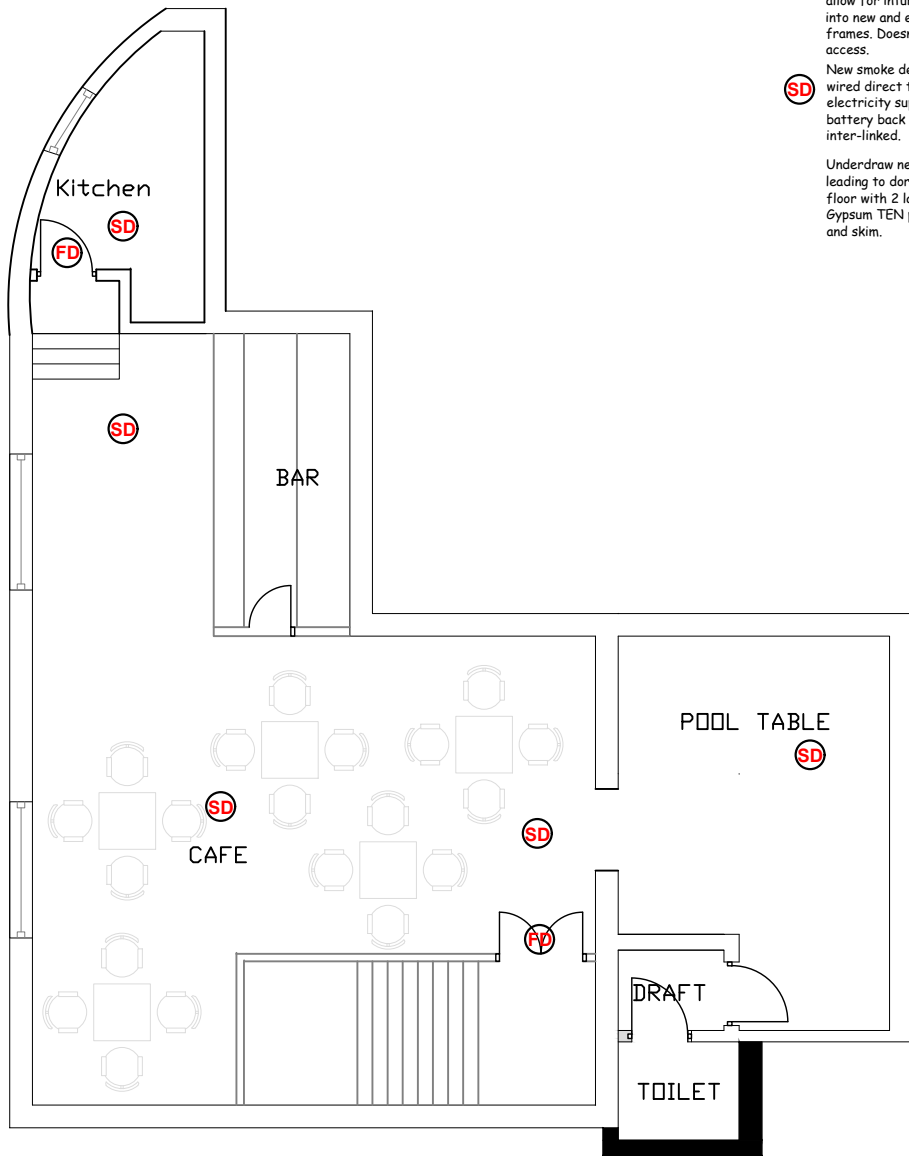
Existing first floor construction is to be checked for a modified half hr fire resistance standard ie. reduced performance of 30mins stability/15mins integrity/15mins insulation eg. 12.5mm plasterboard with joints taped or 9.5mm plasterboard & skim or lath & plaster with 16mm plaster finish over laths. Where construction is found to be substandard under-draw with 12.5mm plasterboard & skim.

Where floor joists do not continue the full width of the building ie where ceiling joists with no floorboards are provided particularly to eaves - the existing ceiling is to have continuous chicken wire mesh to & in-between the existing timbers and 100mm mineral wool quilt laid over. Note - 170mm additional insulation provided over 90 degrees where ceiling separates heated areas from unheated voids.

Spandrel of stairs forming protection to the escape route to be upgraded to half hr fire resistance by underdrawing with 12.5mm fireline board & skim. Where cellars exist - section of floor under the escape route to be upgraded to half hr fire resistance as above (full area of timbers to avoid premature collapse of structure).

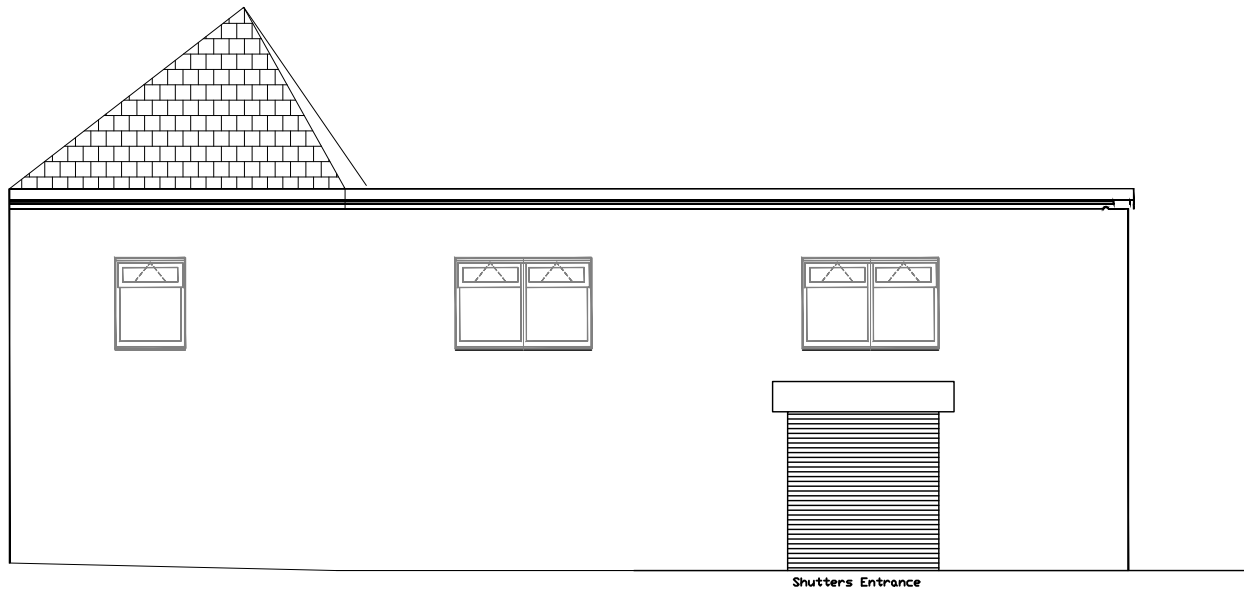
New floor construction to be underdrawn with 15mm fireline & skim to give full half hr fire resistance. All floor to be in-filled with 10kg/sqm sound mineral wool for sound deadening.

Fire Escape Window



Upper Floor Proposed

- Doors marked thus to be half hour fire doors and be self closing (ie. rising butt hinges), allow for intumescal stripping set into new and existing softwood frames. Doesn't require key access.
- New smoke detectors to be wired direct to the mains electricity supply with a battery back up system and inter-linked.
- Underdraw new staircase leading to dormer extension floor with 2 layers 12.5mm Gypsum TEN plasterboard and skim.



Elevation EXisting and Proposed

Project Title: CHANGE OF USE	
Address: 22 - 24 Sherbourne Street, M3 1FE	
Drawing: LOCATION PLAN	
Drawing No: 270719-01	
Drawn: Victor D.	Date: 01/03/24
Scale: 1:500	Paper Size: A3

Appendix B: Groundsure Flood Report

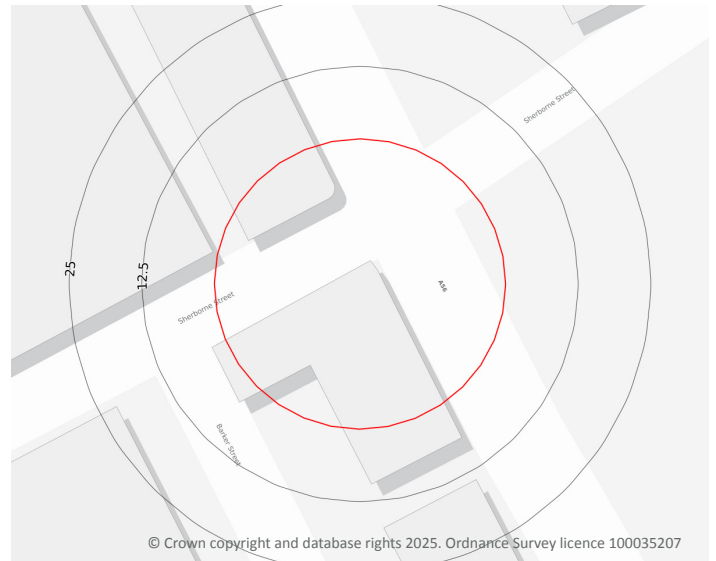
Overall Flood Risk



**MODERATE-
HIGH**

Groundsure Flood complies with relevant Law Society practice notes on flood risk in property transactions.

Site plan



Search Results



Rivers and the Sea

Medium

[page 3 >](#)



Surface Water

Negligible



Groundwater

Moderate-High

[page 5 >](#)



Historic Flood

Identified

[page 4 >](#)



Flood Defences

Yes

[page 4 >](#)



FloodScore™ insurance rating

Very High

[page 7 >](#)

Full assessments for other environmental risks are available in additional Groundsure searches including the Groundsure Avista 7 in 1 report. Contact Groundsure or your search provider for further details.

Overview of findings and recommendations

To save you time when assessing the report, we only provide maps and data tables of features within the search radius that we have identified to be of note. These relate to environmental risks that may have liability implications, affect insurance premiums, property values and/or a lender's willingness to lend.

You can view the fully comprehensive library of information we have searched on [page 6](#) >.



Flooding

Flooding

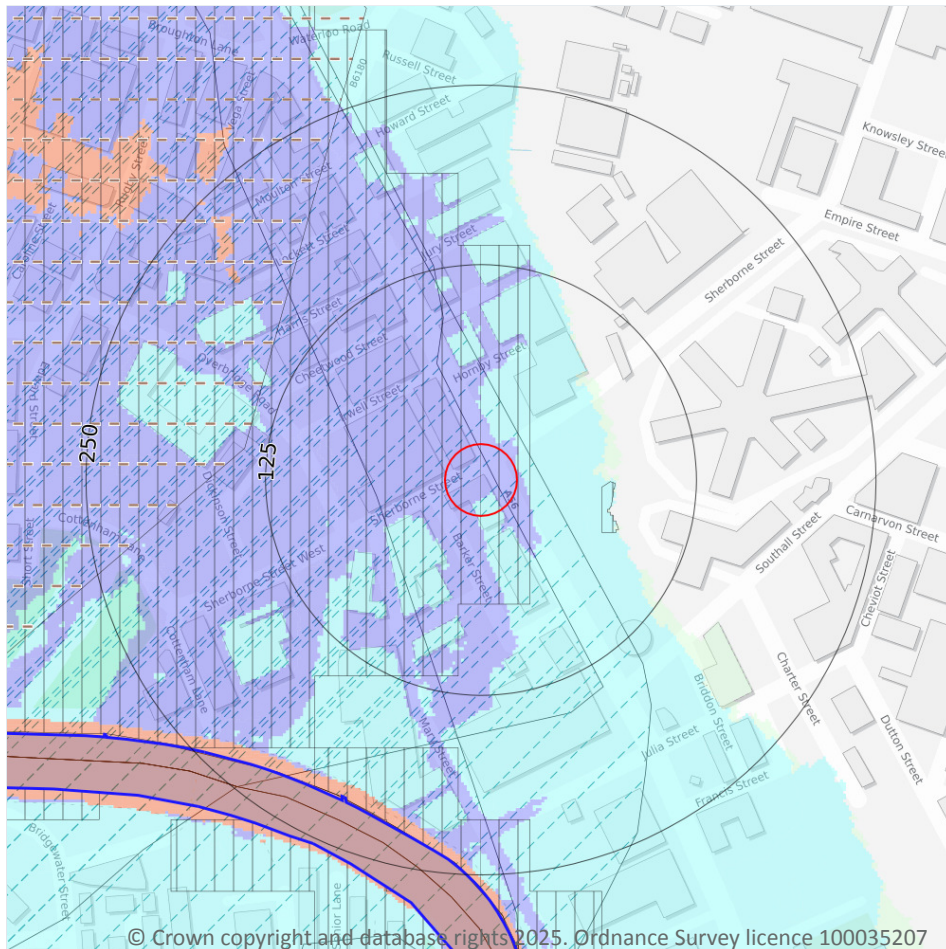
An elevated level of flood risk has been identified at the property.

Next steps for consideration:

- Ensure buildings and contents insurance covering flood risk is available and affordable;
- A risk of groundwater flooding has been identified at the site. This will be more of an issue for properties with a basement or other section below ground. Further guidance on groundwater flooding has been produced by the Environment Agency and can be found at <https://www.gov.uk/guidance/groundwater-flooding> ↗;
- Make enquiries of the seller (e.g. in the TA6) and other nearby residents on any flooding that may have occurred;
- Sign up to the government's Flood Warnings and Alerts <https://www.gov.uk/sign-up-for-flood-warnings> ↗;
- Investigate the various forms of flood resistance and resilience measures that will help protect your property in the event of a flood;
- Create a flood plan <https://www.gov.uk/prepare-for-flooding> ↗;
- The assessment is based on the highest flood risk found within the site boundary. Whilst the maps within the report provide a visual representation, we are able to provide a manual flood assessment breaking down the risk to the main dwelling/building and the outside areas. Please contact us at info@groundsure.com ↗;
- If the property has recently been constructed, the risk assessment within this report will not take into account measures put in place by the developer. This should be factored in when making any purchase decisions.



Flooding / Risk of flooding from rivers and the sea



— Site Outline

Search buffers in metres (m)

River and coastal flooding:

High

Medium

Low

Very Low

Historical Flood Events

Areas Used for Flood Storage

Reduced river/sea flooding risk due to defences

Proposed Flood Defence Scheme

Flood Defences

Risk of flooding from rivers and the sea

The property has a Medium chance of flooding in any given year, according to Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) data. This could cause problems with insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: www.floodre.co.uk/ ↗

RoFRaS/FRAW assesses flood risk from rivers and the sea in England and Wales, using local data and expertise. It shows the chance of flooding from rivers or the sea, taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk. [Click here](#) ↗ for explanation of the levels of flood risk.

Please see [page 2](#) > for further advice.

This data is sourced from the Environment Agency and Natural Resources Wales.



[Back to Summary](#)

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Your ref: CMAPS-CM-1232689-60191-160725
Grid ref: 383565 399536

Historical flood areas

Large scale flooding has been recorded in the area where the property is located in the past.

A record of a flood in previous years does not mean that an area will flood again, especially as this information does not take account of flood management schemes and improved flood defences. Equally, absence of a historic flood event for an area does not mean that the area has never flooded, but only that it doesn't appear in Environment Agency national data. This information is collated from a database showing the individual footprint of every historic flood recorded by the Environment Agency. Please note this doesn't include records held by individual local offices.

As flood risks may or may not have changed, this requires further investigation.

Distance	Direction	Date of Flood	Flood Source	Flood Cause	Type of Flood
0	on site	1946-09-20 1946-09-21	Main river	Channel capacity exceeded (no raised defences)	Fluvial
0	on site	1866-11-01 1866-11-02	Main river	Channel capacity exceeded (no raised defences)	Fluvial

Flooding / Flood defences



Reduction in Risk of Flooding from Rivers and Sea due to Defences

The property is located in an area whereby the risk of flooding from rivers or sea is reduced due to the presence of flood defences. These areas would flood if the defence were not present, but may not do so as it is.

We recommend discussing all flood defence in place as part of your discussions with insurance providers.

Details of flood defences and any areas of reduced river/sea flooding risk due to defences can be seen on the Risk of Flooding from Rivers and the Sea Map.

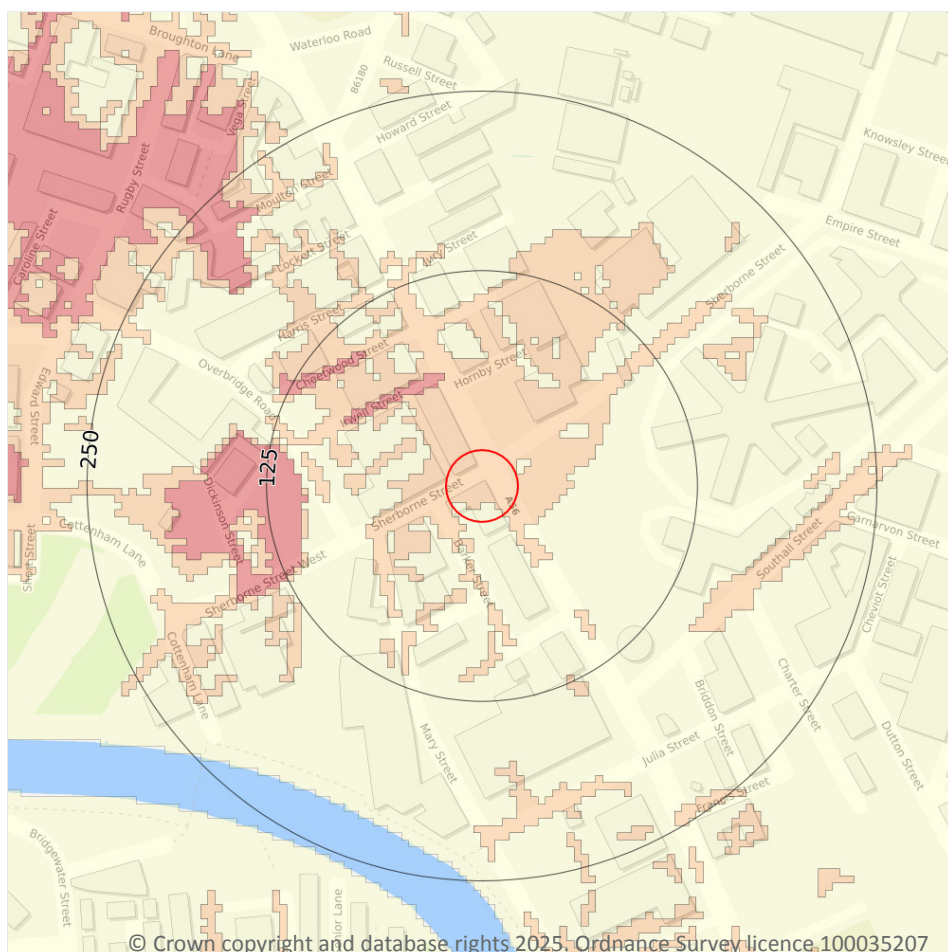
Flood defences

There are flood defences built in the vicinity of the property. Flood defences seek to reduce the risk of flooding and to safeguard life, protect property, sustain economic activity and the natural environment. Flood defences are designed to protect against flood events of a particular magnitude, expressed as risk in any one year.

Please see [page 2](#) > for further advice.



Flooding / Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

Ambiental data indicates that the property is in an area with a moderate to high risk of groundwater flooding. Should a 1 in 100-year groundwater flood event occur, groundwater levels could rise above ground level to depth of up to 25cm. Basement areas may become inundated.

Some of the responses contained in this report are based on data and information provided by the Natural Environment Research Council (NERC) or its component body British Geological Survey (BGS). Your use of any information contained in this report which is derived from or based upon such data and information is at your own risk. Neither NERC nor BGS gives any warranty, condition or representation as to the quality, accuracy or completeness of such information and all liability (including for negligence) arising from its use is excluded to the fullest extent permitted by law. Your use of the data/report/assessment constitutes your agreement to bring no claim against NERC or BGS in connection with it.



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Grid ref: 383565 399536

Datasets searched

This is a full list of the data searched in this report. If we have found results of note we will state "Identified". If no results of note are found, we will state "Not identified". Our intelligent filtering will hide "Not identified" sections to speed up your workflow.

Flooding	
Risk of flooding from rivers and the sea	Identified
Flood storage areas: part of floodplain	Not identified
Historical flood areas	Identified
Reduction in Risk of Flooding from Rivers and Sea due to Defences	Identified
Flood defences	Identified
Proposed flood defences	Not identified
Surface water flood risk	Not identified
Groundwater flooding	Identified



Methodologies and limitations

Groundsure's methodologies and limitations are available here: knowledge.groundsure.com/methodologies-and-limitations ↗.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information in your Flood report. To find out who they are and their areas of expertise see www.groundsure.com/sources-reference ↗.

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- a charity with an annual income of less than £3 million;
- a Trust with a net asset value of less than £3 million.

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If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

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COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com

↗ If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk ↗ We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

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Grid ref: 383565 399536



Appendix C: Flood Modelling Data

Flood risk assessment data



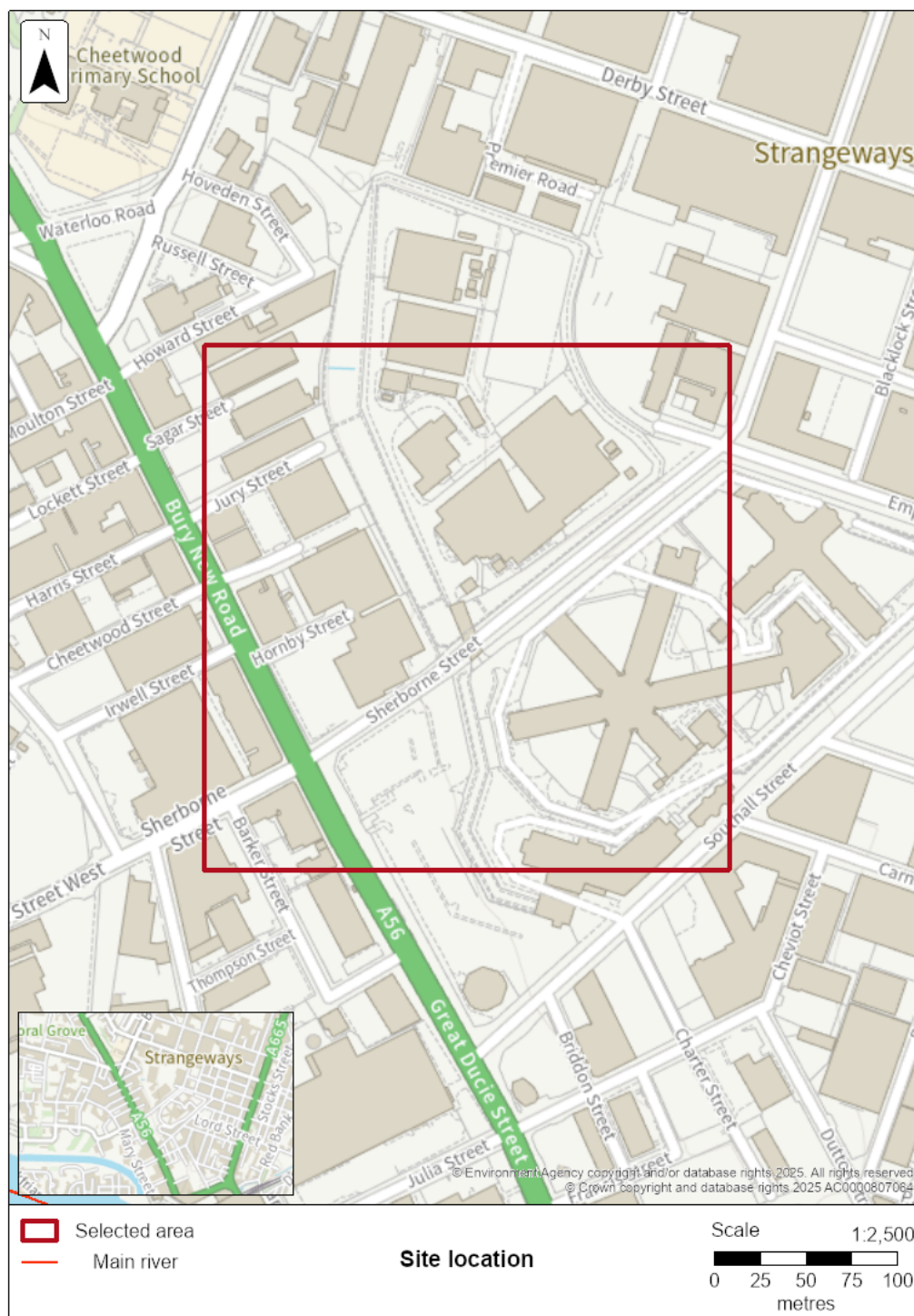
Location of site: 383662 / 399634 (shown as easting and northing coordinates)

Document created on: 30 June 2025

This information was previously known as a product 4.

Customer reference number: 2UJ78X42CDVJ

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)
- past floods
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- 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

When using the surface water map on the [check your long term flood risk service](#) the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- [reservoir flood risk](#)
- groundwater flood risk - you could use the [British Geological Survey groundwater flooding data](#), [groundwater: current status and flood risk](#) and the guide on [mining and groundwater constraints for development](#) - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Manchester District.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Lower Irwell 2017

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

Date: 1 April 2018

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 3.

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

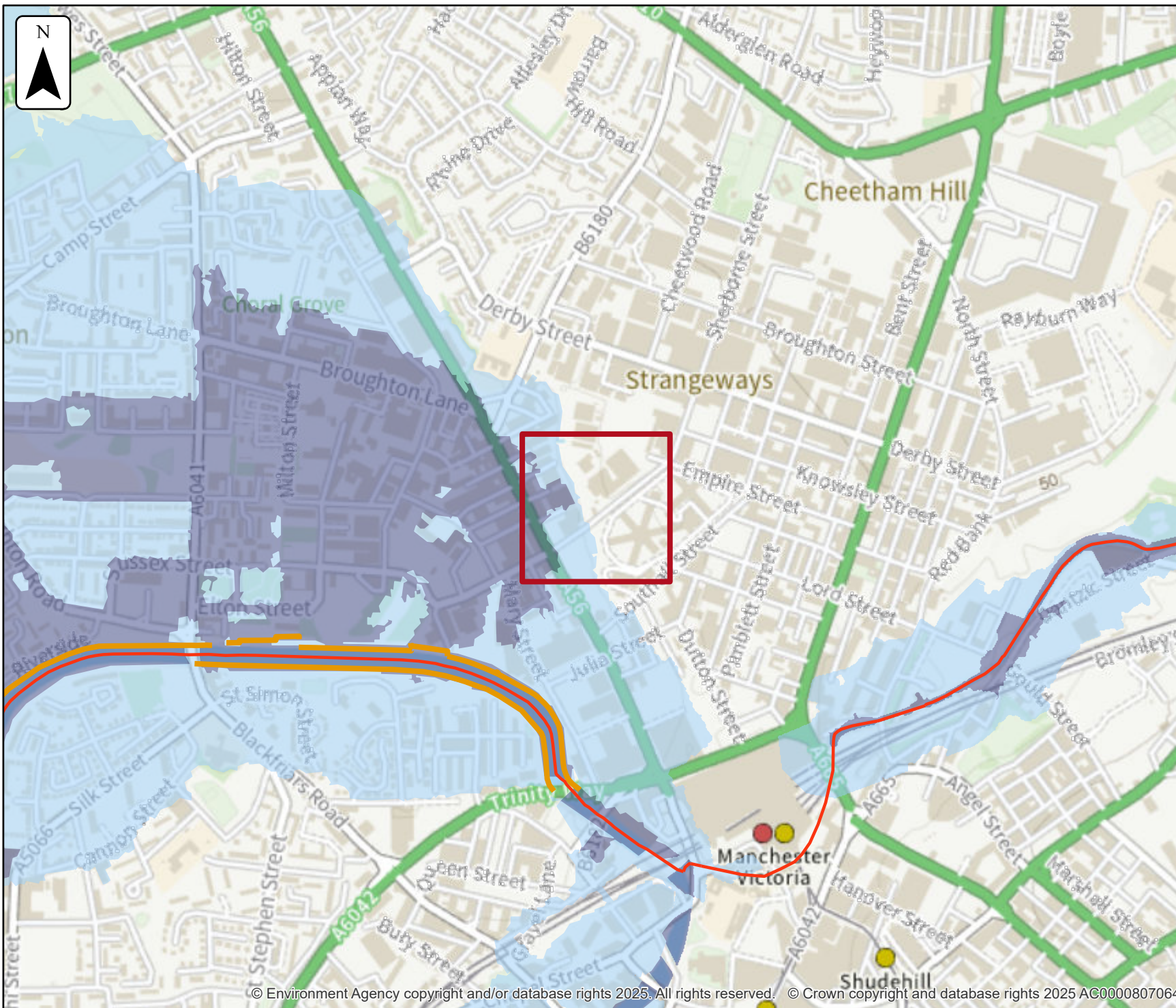
- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

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



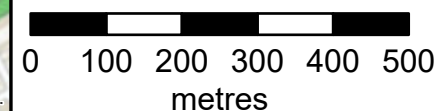
Flood map for planning

Location (easting/northing)
383662/399634

Scale
1:10,000

Created
30 Jun 2025

-  Selected area
-  Main river
-  Flood defence
-  Flood Zone 3
-  Flood Zone 2



Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

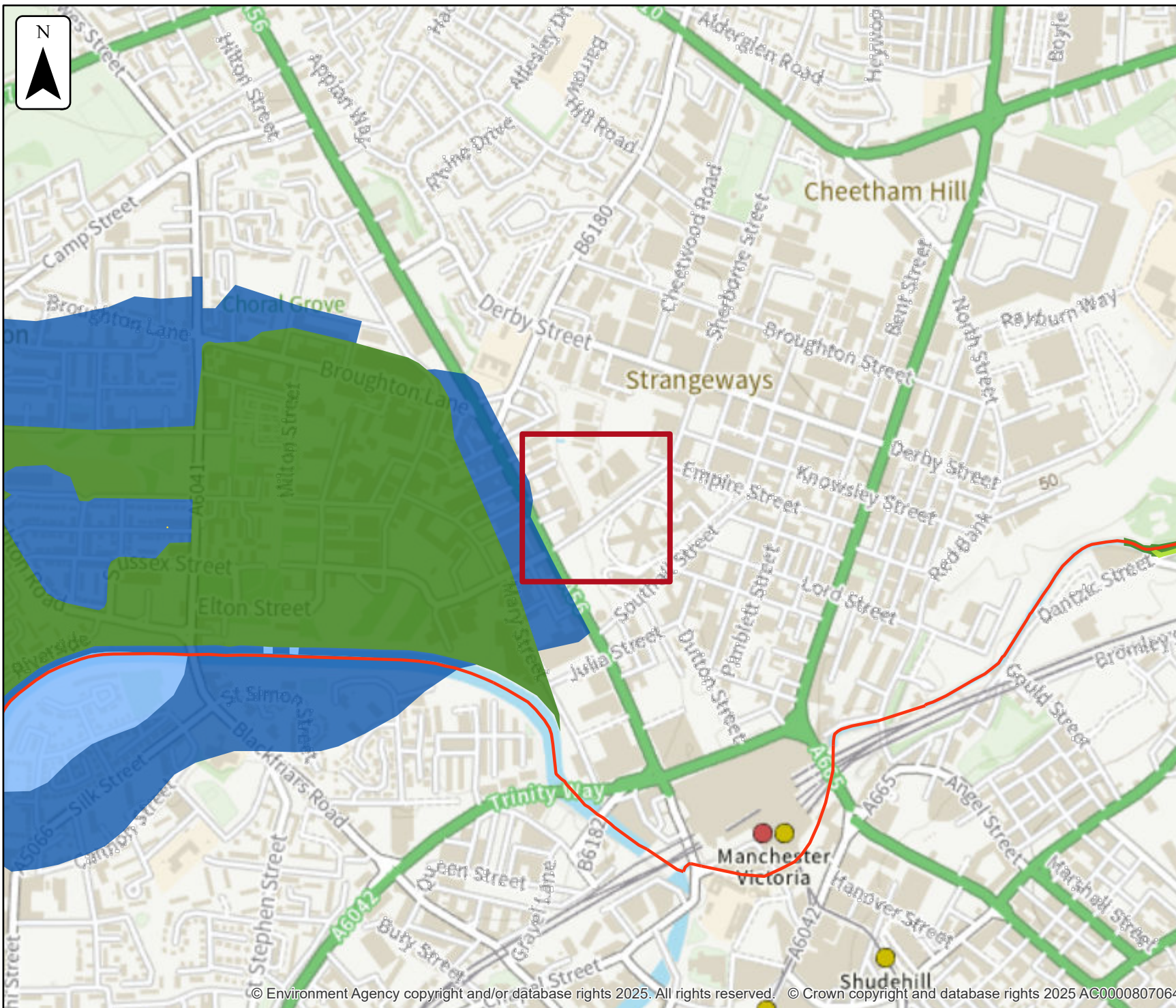
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

Get flood information from other organisations

Contact Manchester District Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



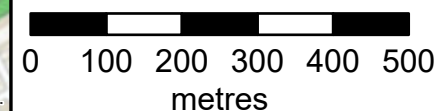
Past floods

Location (easting/northing)
383662/399634

Scale
1:10,000

Created
30 Jun 2025

-  Selected area
-  Main river
- Date of flood event
 -  March, 2019
 -  December, 2015
 -  October, 1998
 -  January, 1954
 -  September, 1946
 -  November, 1866



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
16 March 2019	16 March 2019	main river	channel capacity exceeded (no raised defences)	No
26 December 2015	26 December 2015	main river	overtopping of defences	No
23 October 1998	24 October 1998	unknown	other	No
21 January 1954	22 January 1954	main river	channel capacity exceeded (no raised defences)	No
20 September 1946	21 September 1946	main river	channel capacity exceeded (no raised defences)	Yes
01 November 1866	02 November 1866	main river	channel capacity exceeded (no raised defences)	Yes

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.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



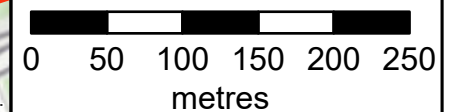
Flood defences

Location (easting/northing)
383662/399634

Scale
1:5,000

Created
30 Jun 2025

-  Selected area
-  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	89057	Embankment	75	Good	28.58	27.01	
2	452758	Embankment	75	Good	27.10	27.10	27.10
3	181081	Wall	75	Fair	27.07	27.10	
4	384247	Engineered High Ground		Fair	27.10	27.01	
5	88893	Engineered High Ground	75	Fair	27.20	27.44	
6	90728	Engineered High Ground	75	Fair	27.10	25.58	
7	88831	Engineered High Ground	75	Fair	27.44	27.66	
8	65452	Wall			31.01	30.31	

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

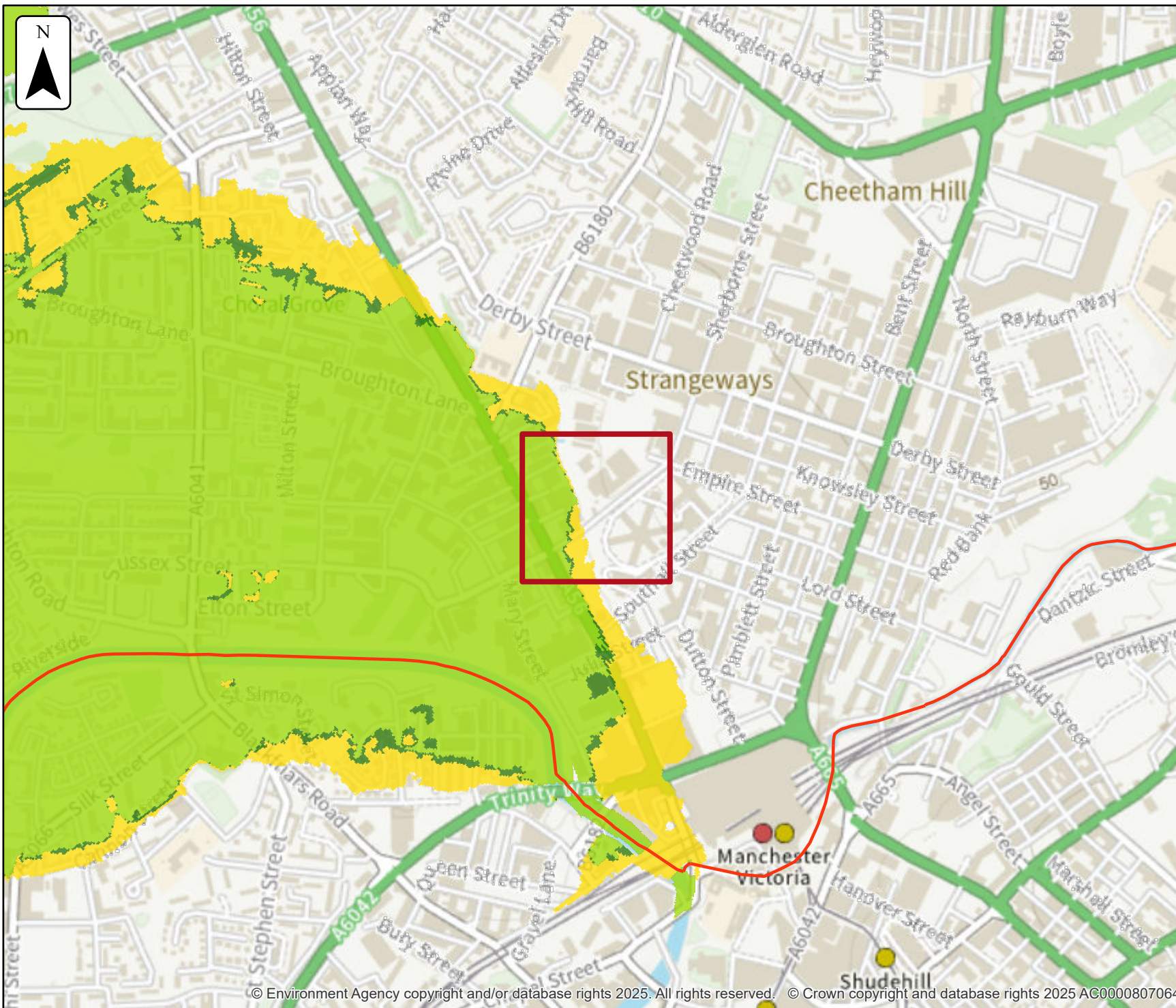
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



Defences removed climate change modelled fluvial extent

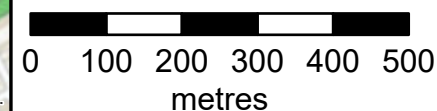
Location (easting/northing)
383662/399634

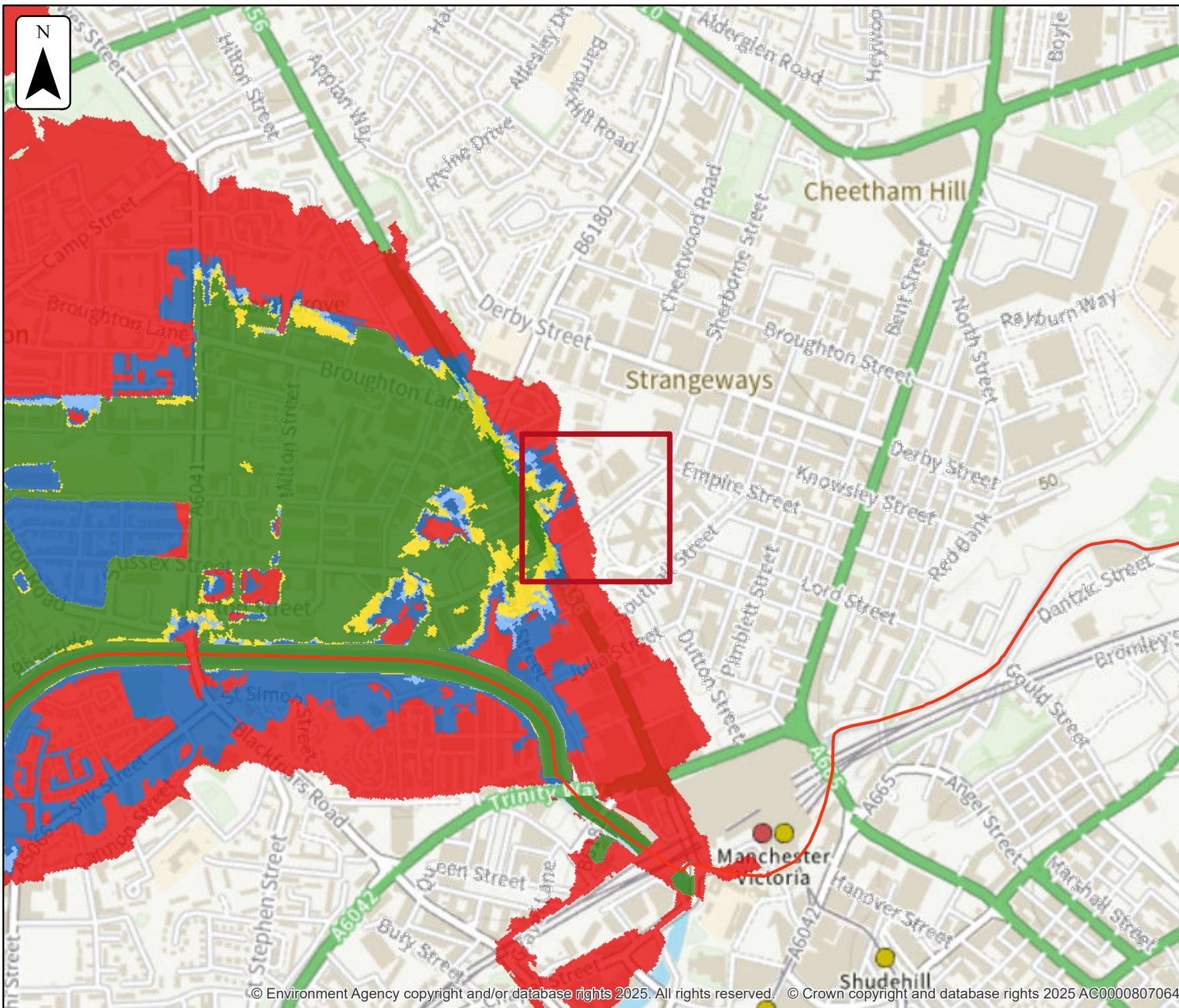
Scale Created
1:10,000 30 Jun 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP (+30%)
 -  1% AEP (+35%)
 -  1% AEP (+70%)

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





Defences removed modelled fluvial extent

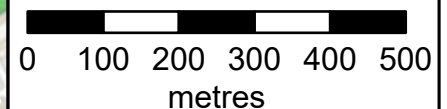
Location (easting/northing)
383662/399634

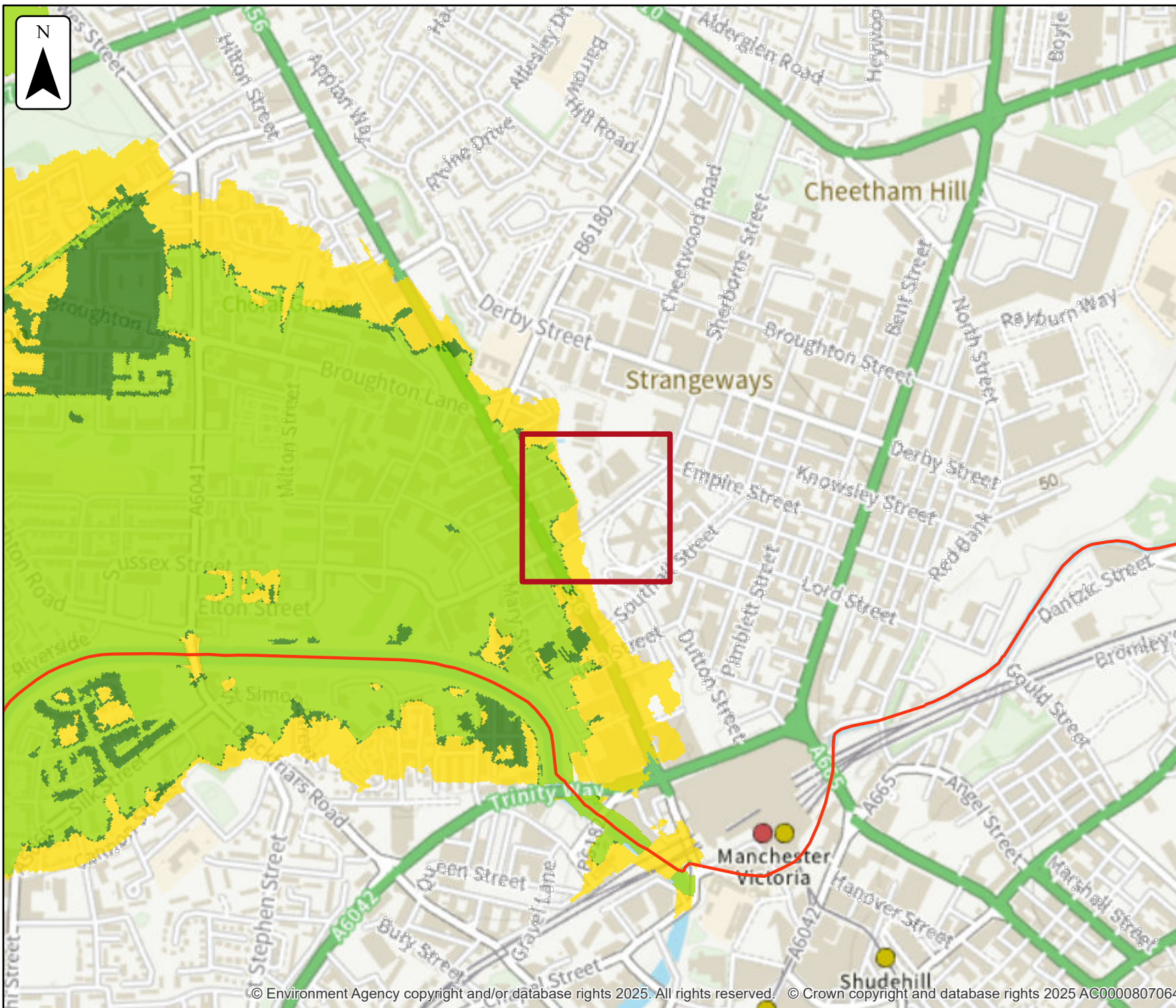
Scale Created
1:10,000 30 Jun 2025

Model name
Lower Irwell 2017

- Selected area
- Main river
- Modelled flood extent
 - 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

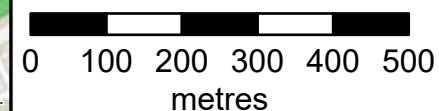
Location (easting/northing)
383662/399634

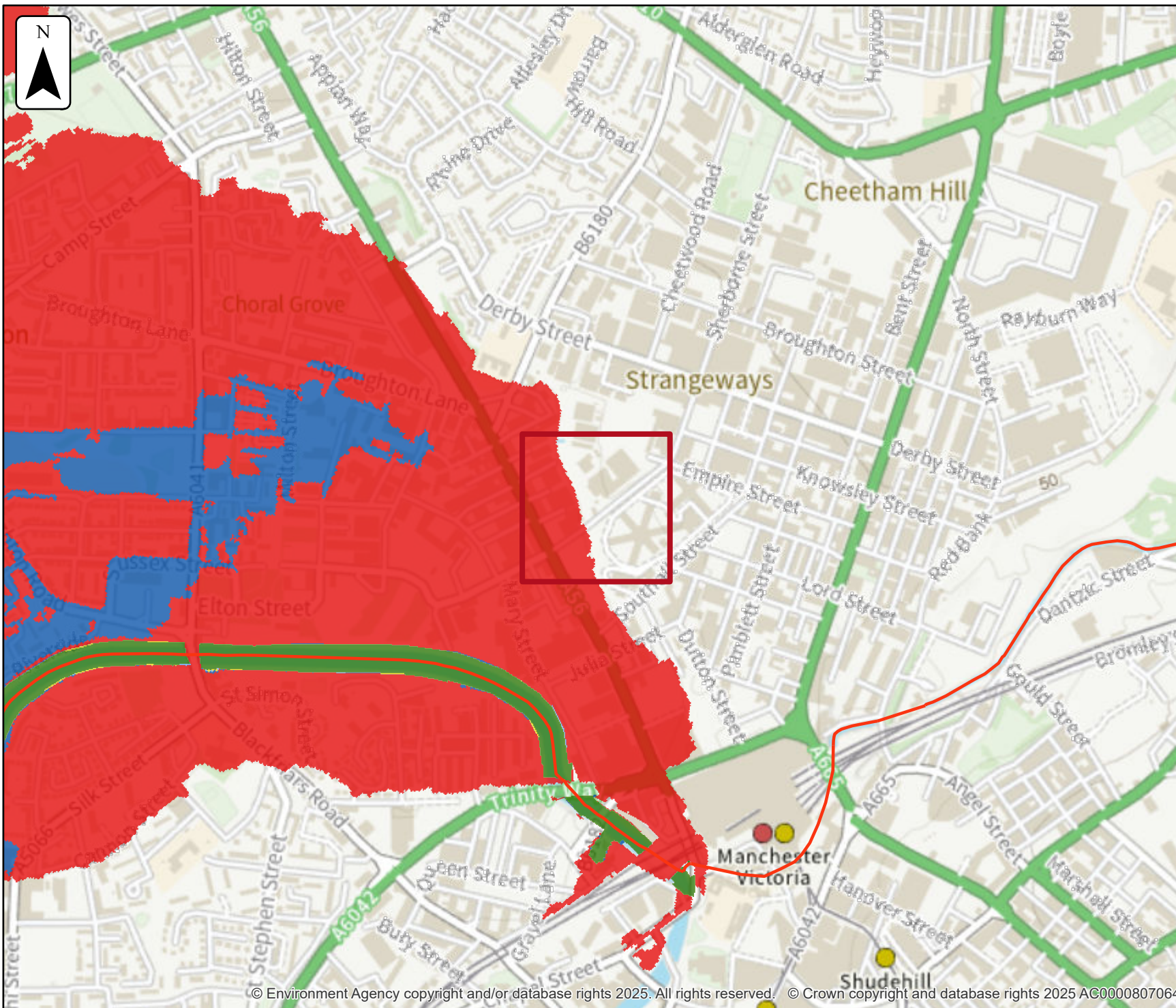
Scale Created
1:10,000 30 Jun 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP (+30%)
 -  1% AEP (+35%)
 -  1% AEP (+70%)

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





Defended modelled fluvial extent

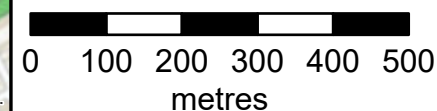
Location (easting/northing)
383662/399634

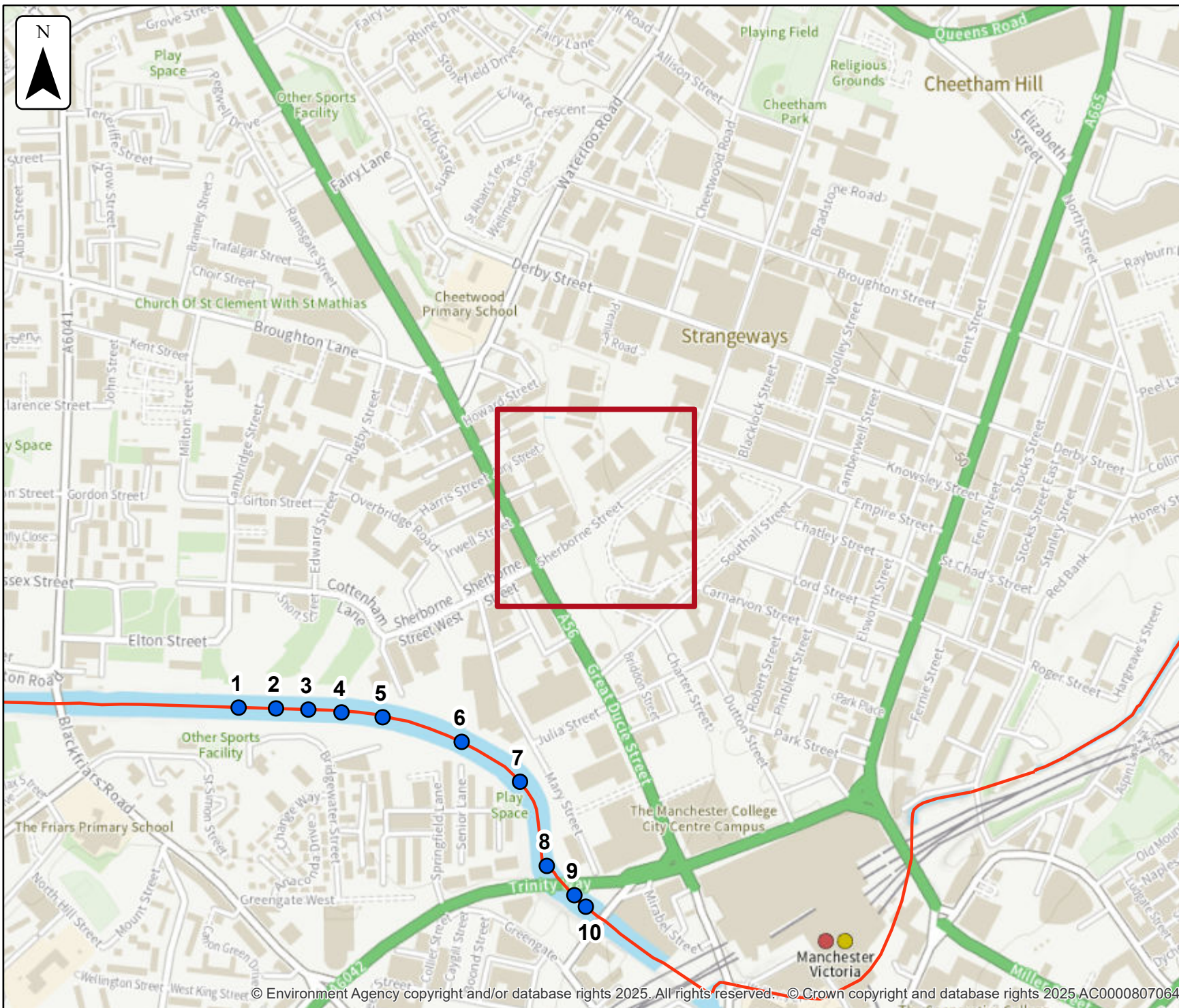
Scale Created
1:10,000 30 Jun 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  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





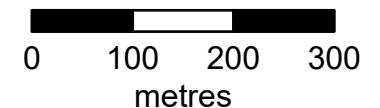
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
383662/399634

Scale Created
1:7,500 30 Jun 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

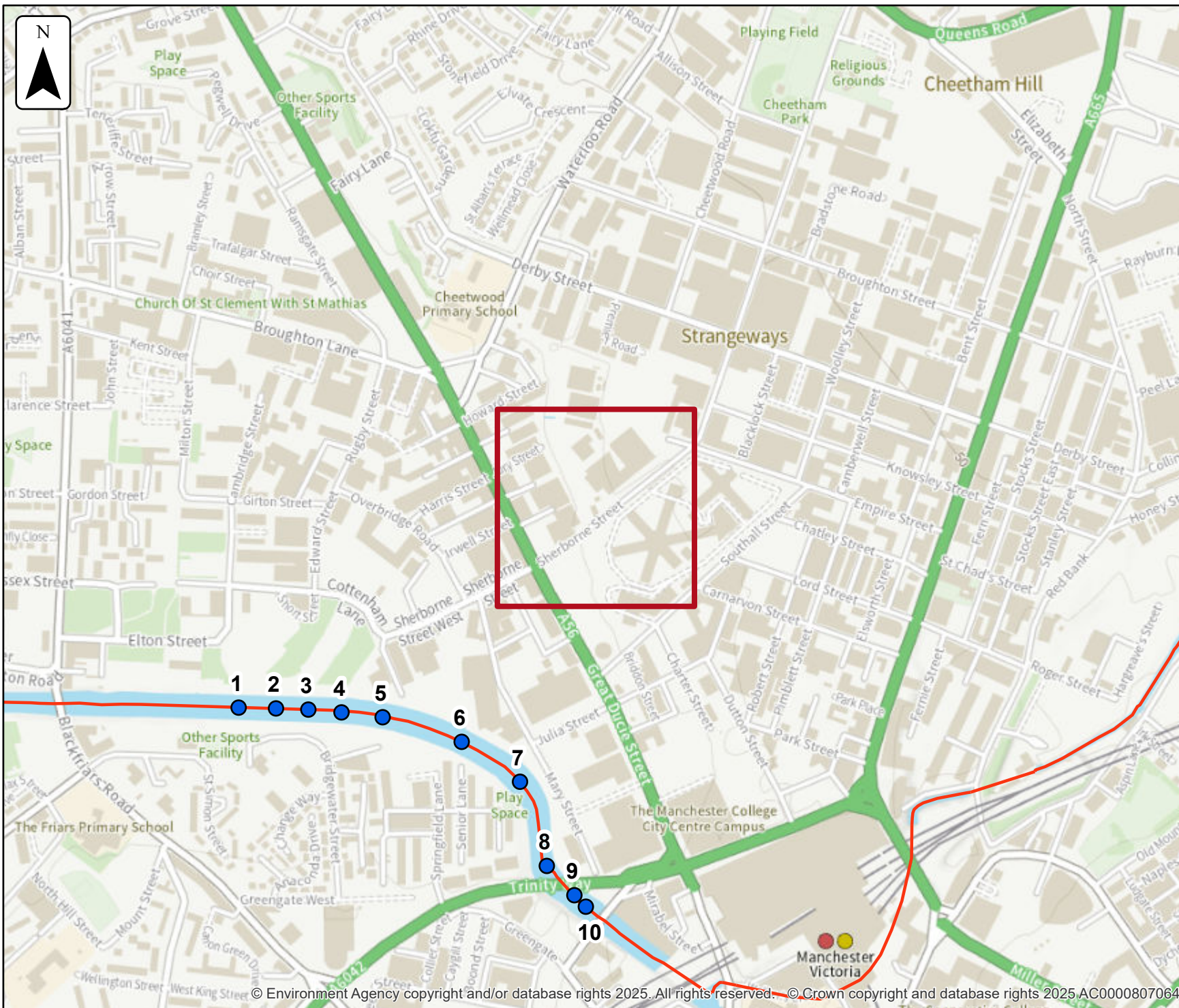
Defences removed climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1545295	383142	399344	28.33	28.57	30.01	463.96	461.90	457.02
2	1545266	383196	399342	28.30	28.55	30.01	474.76	472.64	461.79
3	1545219	383243	399341	28.26	28.52	30.0	484.19	481.16	467.52
4	1545210	383291	399337	28.22	28.48	29.98	492.24	489.0	469.35
5	1545342	383351	399330	28.18	28.44	29.95	508.89	506.19	480.96
6	1545231	383466	399294	28.02	28.30	29.89	548.53	545.82	530.36
7	1545238	383551	399236	28.04	28.31	29.89	561.16	560.45	548.31
8	1545347	383590	399113	27.93	28.19	29.72	587.62	606.70	684.94
9	1545343	383630	399071	27.73	27.94	29.15	587.62	606.70	684.94
10	1545312	383647	399054	27.71	27.92	29.14	587.64	606.72	685.04

Data in this table comes from the Lower Irwell 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.



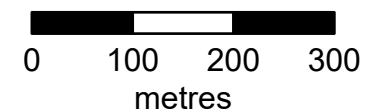
**Defences removed
modelled fluvial
node locations**

Location (easting/northing)
383662/399634

Scale Created
1:7,500 30 Jun 2025

Model name
Lower Irwell 2017

- Selected area
- Modelled location
- Main river



Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level
1	1545295	383142	399344	25.43	25.75	26.27	26.57	26.70	26.94	27.48	30.64
2	1545266	383196	399342	25.40	25.72	26.25	26.55	26.67	26.90	27.43	30.63
3	1545219	383243	399341	25.37	25.70	26.22	26.52	26.65	26.87	27.40	30.63
4	1545210	383291	399337	25.35	25.67	26.20	26.50	26.63	26.86	27.38	30.62
5	1545342	383351	399330	25.32	25.64	26.18	26.48	26.61	26.83	27.35	30.60
6	1545231	383466	399294	25.17	25.48	26.02	26.33	26.46	26.67	27.18	30.55
7	1545238	383551	399236	25.19	25.51	26.05	26.36	26.50	26.70	27.22	30.55
8	1545347	383590	399113	25.08	25.40	25.94	26.26	26.40	26.60	27.13	30.42
9	1545343	383630	399071	25.03	25.33	25.86	26.17	26.30	26.49	26.99	29.85
10	1545312	383647	399054	25.0	25.30	25.83	26.14	26.28	26.46	26.96	29.84

Data in this table comes from the Lower Irwell 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.

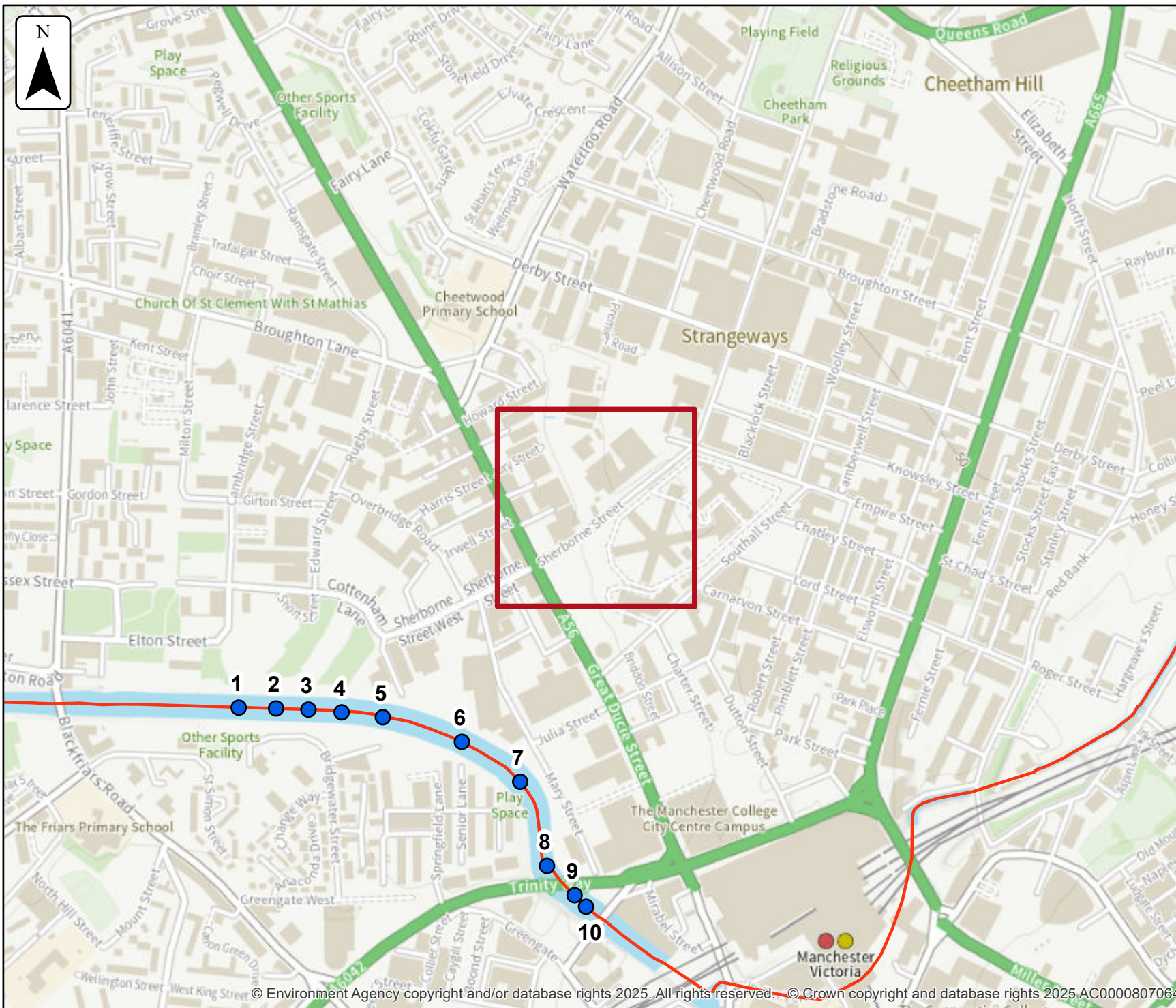
Defences removed

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1545295	383142	399344	294.43	332.97	387.94	416.54	427.80	443.18	464.63	440.40
2	1545266	383196	399342	294.46	332.98	387.96	416.56	432.01	451.54	478.80	434.91
3	1545219	383243	399341	294.48	332.99	387.97	416.62	432.83	453.49	485.19	438.68
4	1545210	383291	399337	294.51	333.0	387.99	416.66	432.81	453.95	487.55	443.73
5	1545342	383351	399330	294.54	333.01	388.01	416.70	433.33	457.32	498.71	466.21
6	1545231	383466	399294	294.60	333.04	388.06	416.74	434.28	460.28	509.27	517.98
7	1545238	383551	399236	294.65	333.07	388.10	416.77	434.30	460.30	510.35	535.83
8	1545347	383590	399113	294.76	333.14	388.18	416.88	434.37	460.32	511.71	672.42
9	1545343	383630	399071	294.76	333.14	388.18	416.88	434.37	460.32	511.71	672.42
10	1545312	383647	399054	294.78	333.15	388.19	416.90	434.38	460.37	511.67	672.60

Data in this table comes from the Lower Irwell 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.



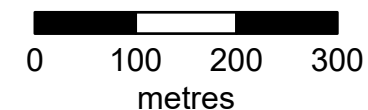
Defended climate change modelled fluvial node locations

Location (easting/northing)
383662/399634

Scale Created
1:7,500 30 Jun 2025

Model name
Lower Irwell 2017

- Selected area
- Modelled location
- Main river



Modelled node locations data

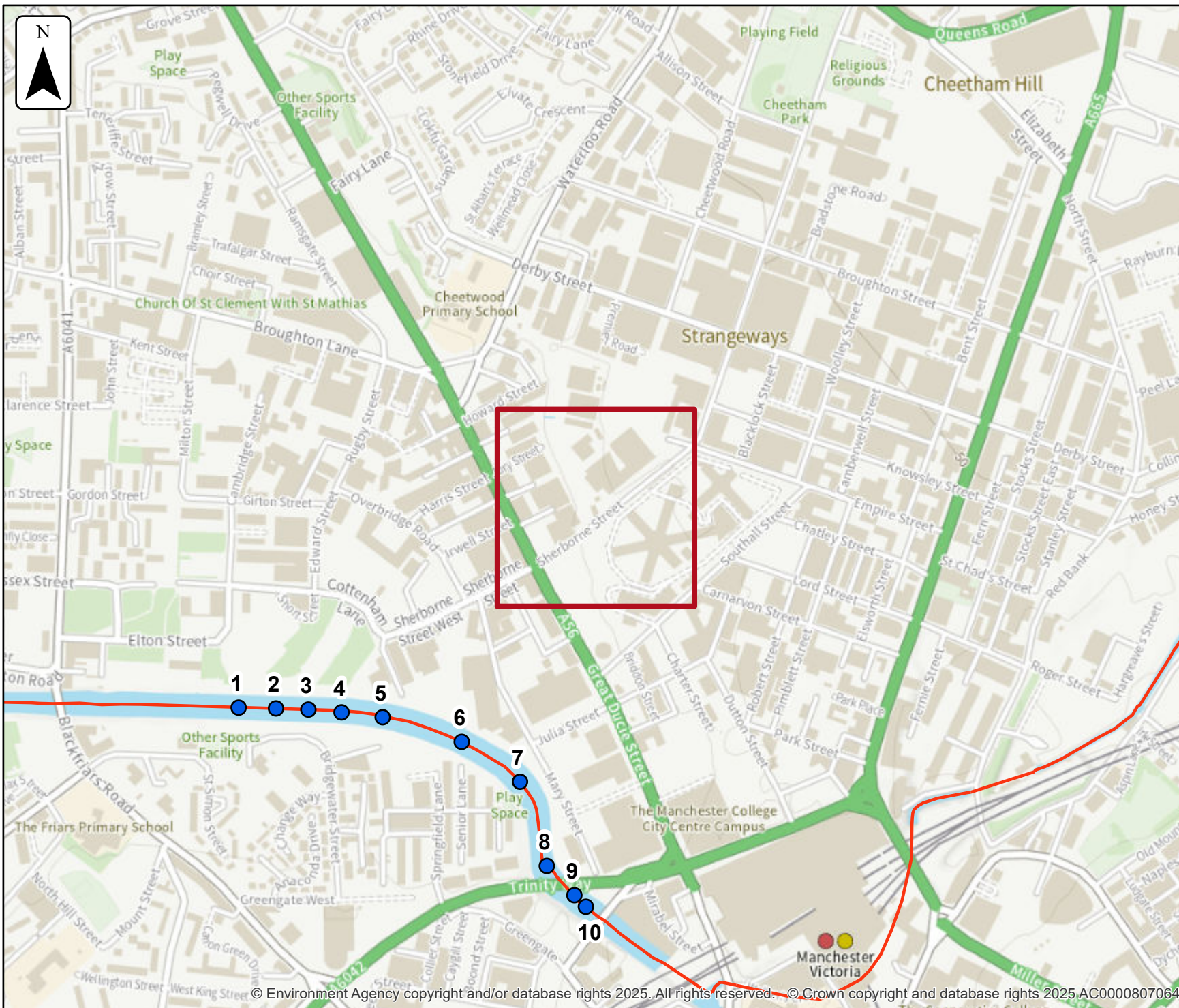
Defended climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1545295	383142	399344	27.66	27.84	29.60	482.72	481.0	461.07
2	1545266	383196	399342	27.62	27.79	29.59	492.54	490.72	470.83
3	1545219	383243	399341	27.58	27.75	29.58	497.49	497.68	483.80
4	1545210	383291	399337	27.56	27.73	29.56	501.37	502.26	490.74
5	1545342	383351	399330	27.52	27.69	29.53	516.71	518.61	509.23
6	1545231	383466	399294	27.36	27.52	29.45	528.87	539.41	541.44
7	1545238	383551	399236	27.40	27.56	29.43	530.93	543.69	575.55
8	1545347	383590	399113	27.30	27.47	29.26	533.15	547.35	678.72
9	1545343	383630	399071	27.16	27.31	28.77	533.15	547.35	678.72
10	1545312	383647	399054	27.13	27.28	28.75	533.15	547.37	678.74

Data in this table comes from the Lower Irwell 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.



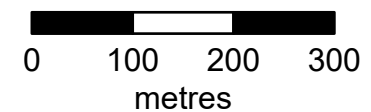
Defended modelled fluvial node locations

Location (easting/northing)
383662/399634

Scale Created
1:7,500 30 Jun 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level
1	1545295	383142	399344	25.65	26.02	26.35	26.57	26.69	26.76	27.06	30.29
2	1545266	383196	399342	25.62	25.99	26.32	26.55	26.67	26.74	27.04	30.29
3	1545219	383243	399341	25.59	25.97	26.30	26.52	26.65	26.72	27.02	30.28
4	1545210	383291	399337	25.57	25.94	26.28	26.51	26.63	26.70	27.0	30.27
5	1545342	383351	399330	25.54	25.92	26.26	26.48	26.61	26.68	26.98	30.24
6	1545231	383466	399294	25.39	25.77	26.11	26.34	26.47	26.54	26.83	30.19
7	1545238	383551	399236	25.41	25.80	26.14	26.37	26.50	26.58	26.87	30.19
8	1545347	383590	399113	25.30	25.69	26.04	26.28	26.41	26.49	26.77	30.04
9	1545343	383630	399071	25.24	25.62	25.96	26.19	26.32	26.39	26.65	29.46
10	1545312	383647	399054	25.21	25.59	25.94	26.17	26.30	26.37	26.63	29.45

Data in this table comes from the Lower Irwell 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

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1545295	383142	399344	318.32	356.63	387.12	406.65	417.38	425.09	472.40	435.80
2	1545266	383196	399342	318.35	356.66	387.16	406.70	417.44	425.15	472.42	433.58
3	1545219	383243	399341	318.37	356.69	387.20	406.74	417.49	425.20	472.45	437.52
4	1545210	383291	399337	318.39	356.72	387.25	406.80	417.55	425.26	472.48	449.06
5	1545342	383351	399330	318.42	356.75	387.29	406.85	417.61	425.33	472.52	474.40
6	1545231	383466	399294	318.47	356.83	387.40	406.98	417.76	425.47	472.59	519.73
7	1545238	383551	399236	318.52	356.89	387.49	407.09	417.87	425.58	472.65	558.03
8	1545347	383590	399113	318.63	357.02	387.65	407.28	418.08	425.77	472.76	673.98
9	1545343	383630	399071	318.63	357.02	387.65	407.28	418.08	425.77	472.76	673.98
10	1545312	383647	399054	318.65	357.04	387.68	407.31	418.12	425.80	472.77	674.11

Data in this table comes from the Lower Irwell 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)
383662/399634

Scale Created
1:2,500 30 Jun 2025

Model name
Lower Irwell 2017

 Selected area

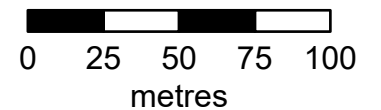
 Main river

Modelled 2D grid

Water level in mAOD

-  30 - 30.125
-  30.125 - 30.25
-  30.25 - 30.375
-  30.375 - 30.5
-  30.5 - 30.625
-  30.625 - 30.75
-  30.75 - 30.875
-  30.875 - 31.0
-  31.0 - 31.125

This map shows the
0.1% AEP height data



Sample point data

Defended

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
1	383527	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.26
2	383594	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.25
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.27
7	383594	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.26
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.28
12	383594	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.27

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.29
17	383594	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.29
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.30
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.30

Data in this table comes from the Lower Irwell 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.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defended

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
1	383527	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	3.05
2	383594	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.74
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	3.09
7	383594	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.31
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	3.33
12	383594	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.82

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.94
17	383594	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.41
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.26
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

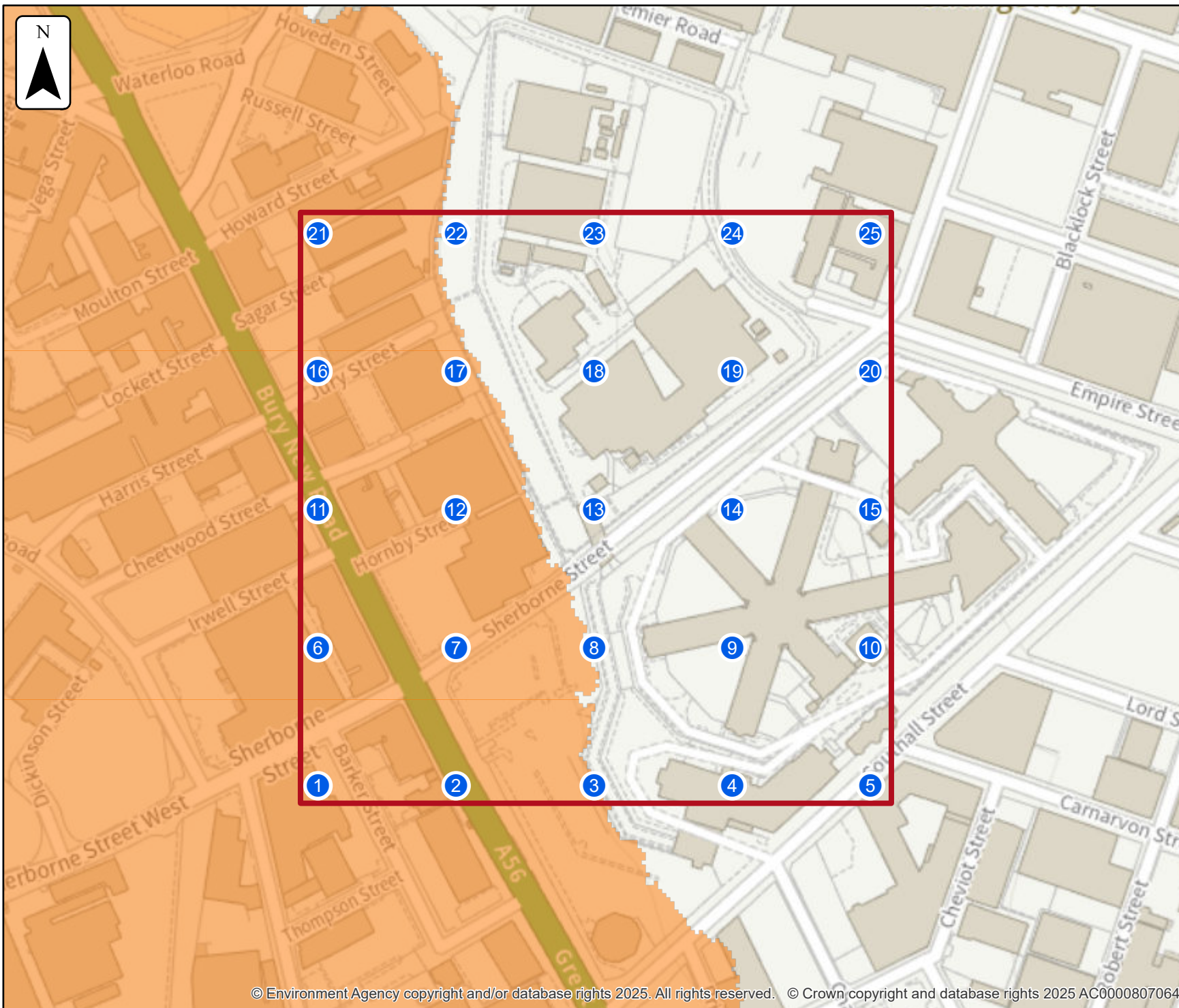
Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	NoData	NoData	3.51

Data in this table comes from the Lower Irwell 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.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defences removed modelled fluvial extent and height

Location (easting/northing)
383662/399634

Scale Created
1:2,500 30 Jun 2025

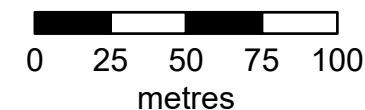
Model name
Lower Irwell 2017

- Selected area
- Main river

Modelled 2D grid
Water level in mAOD

- 0 - 3.875
- 3.875 - 7.75
- 7.75 - 11.625
- 11.625 - 15.5
- 15.5 - 19.375
- 19.375 - 23.25
- 23.25 - 27.125
- 27.125 - 31.0
- 31.0 - 34.875

This map shows the
0.1% AEP height data



Sample point data

Defences removed

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
1	383527	399500	NoData	NoData	NoData	NoData	27.40	27.49	27.74	30.61
2	383594	399500	NoData	NoData	NoData	NoData	NoData	NoData	27.75	30.60
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	NoData	NoData	NoData	NoData	27.40	27.49	27.74	30.62
7	383594	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.61
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	NoData	NoData	NoData	27.19	27.40	27.50	27.75	30.63
12	383594	399634	NoData	NoData	NoData	NoData	NoData	NoData	27.75	30.62

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	NoData	NoData	NoData	NoData	NoData	27.50	27.76	30.64
17	383594	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.63
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	30.65
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			NoData	NoData	NoData	27.19	27.42	27.52	27.78	30.65

Data in this table comes from the Lower Irwell 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.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defences removed

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
1	383527	399500	NoData	NoData	NoData	NoData	0.19	0.28	0.53	3.40
2	383594	399500	NoData	NoData	NoData	NoData	NoData	NoData	0.24	3.09
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	NoData	NoData	NoData	NoData	0.22	0.31	0.56	3.44
7	383594	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.66
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	NoData	NoData	NoData	0.24	0.44	0.54	0.80	3.67
12	383594	399634	NoData	NoData	NoData	NoData	NoData	NoData	0.30	3.17

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	NoData	NoData	NoData	NoData	NoData	0.15	0.41	3.29
17	383594	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.76
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.61
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

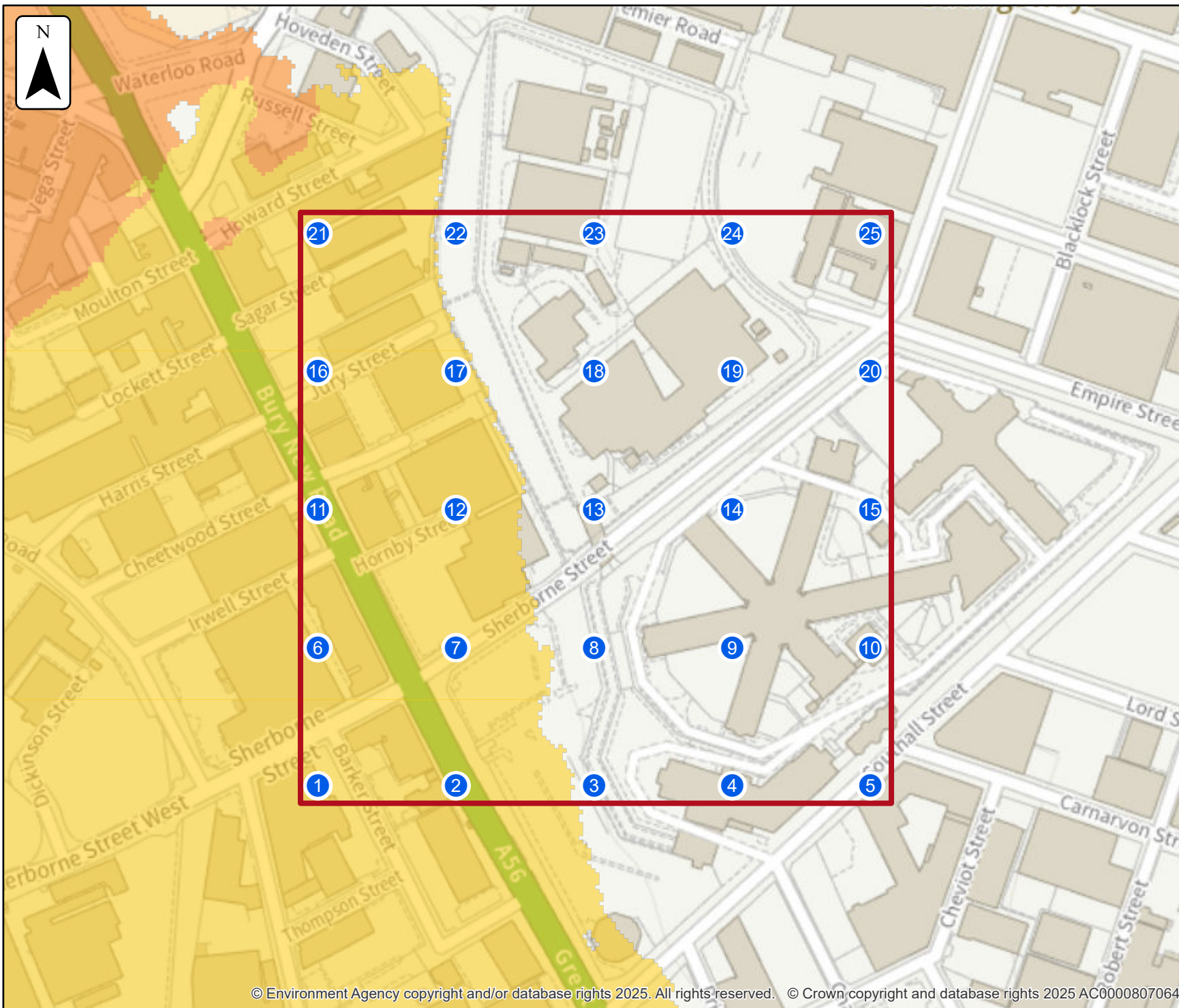
Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			NoData	NoData	NoData	0.43	0.63	0.73	0.99	3.86

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

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'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defended climate change modelled fluvial extent and height

Location (easting/northing)
383662/399634

Scale Created
1:2,500 30 Jun 2025

Model name
Lower Irwell 2017

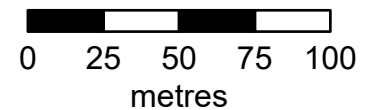
-  Selected area
-  Main river

Modelled 2D grid

Water level in mAOD

-  27 - 27.375
-  27.375 - 27.75
-  27.75 - 28.125
-  28.125 - 28.5
-  28.5 - 28.875
-  28.875 - 29.25
-  29.25 - 29.625
-  29.625 - 30.0
-  30.0 - 30.375

This map shows the
1% AEP +70% height data



Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	383527	399500	27.83	27.94	29.55	0.62	0.73	2.35
2	383594	399500	27.84	27.96	29.55	0.33	0.44	2.04
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	27.84	27.95	29.58	0.66	0.77	2.40
7	383594	399567	NoData	NoData	29.57	NoData	NoData	1.62
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	27.85	27.96	29.59	0.89	1.01	2.63
12	383594	399634	27.85	27.96	29.58	0.39	0.51	2.13

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	27.85	27.97	29.60	0.51	0.62	2.25
17	383594	399701	NoData	27.97	29.60	NoData	0.11	1.72
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	NoData	NoData	29.61	NoData	NoData	1.58
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			27.87	28.00	29.62	1.08	1.20	2.82

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

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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.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
383662/399634

Scale Created
1:2,500 30 Jun 2025

Model name
Lower Irwell 2017

 Selected area

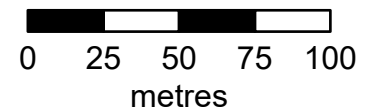
 Main river

Modelled 2D grid

Water level in mAOD

-  28 - 28.375
-  28.375 - 28.75
-  28.75 - 29.125
-  29.125 - 29.5
-  29.5 - 29.875
-  29.875 - 30.25
-  30.25 - 30.625
-  30.625 - 31.0
-  31.0 - 31.375

This map shows the
1% AEP +70% height data



Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	383527	399500	28.33	28.55	29.97	1.13	1.34	2.77
2	383594	399500	28.35	28.56	29.97	0.84	1.05	2.46
3	383661	399500	NoData	NoData	NoData	NoData	NoData	NoData
4	383728	399500	NoData	NoData	NoData	NoData	NoData	NoData
5	383795	399500	NoData	NoData	NoData	NoData	NoData	NoData
6	383527	399567	28.35	28.57	29.99	1.17	1.39	2.81
7	383594	399567	28.36	28.57	29.98	0.40	0.62	2.03
8	383661	399567	NoData	NoData	NoData	NoData	NoData	NoData
9	383728	399567	NoData	NoData	NoData	NoData	NoData	NoData
10	383795	399567	NoData	NoData	NoData	NoData	NoData	NoData
11	383527	399634	28.37	28.59	30	1.41	1.63	3.05
12	383594	399634	28.37	28.59	30.00	0.91	1.13	2.54

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	383661	399634	NoData	NoData	NoData	NoData	NoData	NoData
14	383728	399634	NoData	NoData	NoData	NoData	NoData	NoData
15	383795	399634	NoData	NoData	NoData	NoData	NoData	NoData
16	383527	399701	28.38	28.60	30.01	1.03	1.26	2.67
17	383594	399701	28.38	28.60	30.01	0.50	0.72	2.13
18	383661	399701	NoData	NoData	NoData	NoData	NoData	NoData
19	383728	399701	NoData	NoData	NoData	NoData	NoData	NoData
20	383795	399701	NoData	NoData	NoData	NoData	NoData	NoData
21	383527	399768	28.40	28.62	30.02	0.37	0.59	1.99
22	383594	399768	NoData	NoData	NoData	NoData	NoData	NoData
23	383661	399768	NoData	NoData	NoData	NoData	NoData	NoData
24	383728	399768	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
25	383795	399768	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			28.41	28.63	30.03	1.60	1.82	3.23

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

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'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

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

Your Lead Local Flood Authority is Manchester District.

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